Fighting Justly in the XXth century

Why do weapons disappear from the battlefield?

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ABSTRACT

Fighting Justly in the XXth century: Why do weapons disappear from the battlefield?

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This dissertation addresses the rarely examined issue of disqualification of weapons from the battlefields. Most literature in International Relations and War studies take for granted the fact that weapons disappear from the battlefield due to their lack of tactical/strategical utility or because of their relative cost/efficiency vis-à-vis available alternative. This study challenges the rational character of these answers, arguing that they do not fully capture what explains variations in states weapons utilization. It suggests that, contrary to what these common views assume, laws of war play a crucial role in states decisions to use or not a weapon. More specifically, the core principles of laws of war are deeply rooted in military culture and underpin common representations of war. Therefore, perceptions of what laws of war should ban or allow (conceptualized in the book as the notion of “fighting justly”) constitute the normative framework which underpins tactical, strategic, cost effective decisions with regards to weapons utilization. As such, the laws of war range of effects are wider than what is suggested by the dichotomous notion of “compliance”. Moreover, because the key principles of laws of war are profoundly ambiguous, their effects have greatly varied depending on how they have been understood over time, actors and levels (national, international, transnational).

Through a carefully crafted historical account combining tools borrowed to ethics, security studies, sociology, phenomenology and anthropology, this dissertation retraces the different conceptions of fighting justly that have prevailed over the twentieth century and demonstrates how they highlight the trajectory of three weapons: chemical weapons, incendiary weapons, unarmed aerial vehicles. It thus presents an innovative re-reading of the impact of laws of war
in states weapons utilization, and a more nuanced understanding of why certain weapon
disappear from the battlefield.
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Introduction

“To introduce the principle of moderation into the theory of war itself would always lead to a logical absurdity”
Carl von Clausewitz, On War

“No doubt the moral reality of war is not the same for us as it was for Genghis Khan; nor is the strategic reality. (...) Even when world views and high ideals have been abandoned – as the glorification of aristocratic chivalry was abandoned in early modern times – notions about right conduct are remarkably persistent: the military code survives the death of warrior idealism.”
Michael Walzer, Just and Unjust War

Examples of weapons which suddenly disappear from the battlefields are not rare, and some of them have even been widely discussed by the International Relations literature. The most discussed case is, undoubtedly, that of chemical weapons: their massive utilization during World War I sharply contrasts with their absence on the European battlefields of World War II. The non-utilization of this weapon, yet at the disposal of, and massively produced by, all the belligerents, constitutes, in the eyes of many, an enigma. Other examples could be provided. The US dramatically decreased its napalm utilization after the Vietnam War, and even destroyed its extant stockpiles in 2001. This occurred several months before the US declared war against Afghanistan, a war during which they deployed significant quantities of incendiary weapons with identical properties to those of napalm. Similarly and much earlier, the destruction of all extant firearms by Emperor Hideyoshi in 1560, in spite of the knowledge that crucial battles were soon to be waged, and in spite of having already and successfully deployed them, seems to follow the same surprising pattern. These cases of a sudden decrease in weapon utilization first appear as counter-intuitive, for they occur in contexts which suggest that actors could have largely benefited from their utilization. All these examples finally raise one fundamental issue, at the core of the present work: why do belligerents cease, at a certain time, to use a weapon that is still at their disposal?

The first goal of the proposed study is to understand these striking variations in weapons utilization. More precisely, it seeks to address the problem with a perspective which is rarely endorsed when it comes to understanding weapons variations, through the following research question: do the laws of war, and more specifically the perceptions actors have of the laws of
war, explain or highlight why, at a certain time, actors cease to use a weapon that is still at their disposal?

Before I lay out my argument and my proposed theory to answer these puzzles, I explain why I decided to focus, out of all the possible explanations of variations in weapons utilization, on the laws of war.

**Why focus on laws of war to explain variations in weapons utilization?**

A focus on the laws of war to explain variations in weapons utilization may indeed appear surprising, in many respects. This perspective first seems counter-intuitive because actors hardly mention the laws of war as a decisive factor in their weapons utilization. Interviews with militaries and historians generally reveal a common tendency to rapidly dismiss the impact of the laws of war, *as if* actors on the battlefields could not be subject to perceptions regarded as ‘moral’.

The belief that war is antithetical to any sort of regulation is deeply rooted in the collective imagery of war, and Clausewitz, one of the most taught and read theorists in military strategy, perfectly illustrates why.¹ For him, the theory of war cannot suffer any moderation: introducing restraint, or any principle which could tie soldiers’ hands, makes no sense. War represents the ultimate political goal that has to be won by any means. Even if every means will not necessarily bring victory, restricting the range of means is absurd (even a “logical absurdity”), because it reveals a profound misunderstanding of the nature of the war: an uncertain, total enterprise. This belief is also reinforced by a whole literature, commonly called realist, which generally assumes that, when survival is at stake, any attempt at moderation or restraint just fades away.²

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² Realists often refer to several ‘founding figures’ who they believe share the main assumptions of the realist theory (such as the belief that material power supersedes normative considerations and that anarchy is an inherent and permanent feature of international relations). These authors are, *inter alia*, Thucydides, Machiavelli, Hobbes and Clausewitz. For example, Richard Betts wrote an article mentioning why, contrary to what liberals suggest, Thucydides could *only* be qualified as a realist author, in BETTS, Richard K. “Not with My Thucydides, You Don’t.” *The American Interest* 2, no. 4, January 2007, 140.
However, slowly a paradox emerges. If actors are prompt to declare that the laws of war do not really constrain their actions on the battlefields, they do acknowledge that military culture is profoundly hierarchized and regulated. Hierarchy, military doctrine, rules of engagement (ROE), military tribunals, and medals are, \textit{inter alia}, practices which regulate and frame soldiers’ behaviors and actions in war. These practices tend to confirm what Michael Walzer explains: military codes, whichever the military culture is, remain. More specifically, as Walzer puts it, they \textit{survive}: they are indeed, for a majority of extant armies, a direct reminiscence of the chivalric codes. And here the dual paradox stands out. First, war is not an unregulated activity. Second, it is ruled by codes which share a common basis with the laws of war. Indeed, laws of war, like military codes, are reminiscent of chivalric and aristocratic society. How could it then be possible, with regards to this common basis, that the laws of war have no impact on practices of war? If we agree with Clausewitz that it makes no sense to introduce restraint in war \textit{in principle}, does this mean that \textit{in reality} there is no form of restraint in war?

It is in this inherent tension, between, on the one hand the belief that no rule can \textit{really} regulate war, and, on the other hand, the acknowledgment that some codes are \textit{always} followed and enforced in war, that the core of my initial interrogation lies. This is the reason why I have decided to focus more precisely on these military codes: their relations with the laws of war, their constraining power on weapons utilization and whether they are decisive, or not, in explaining variations in weapons utilizations.

\textit{The literature review}

While many International Relations studies analyze war, very few explore the question of why certain weapons disappear from the battlefields. When they do, they rarely mention the laws of war as a decisive factor driving variations in weapons utilization. In chapter I, I more specifically discuss why the extant literature overlooks this ‘potential explanation’, by reviewing how the three dominant paradigms of International Relations – realism, liberalism and constructivism - answer the research question. I come to the following conclusions. Realist literature fails to acknowledge, or investigate, that the technical characteristics of a weapon, even of those perceived as particularly efficient or deterrent, are always perceived through a normative prism. Liberals reduce the wide range of effects that the laws of war have on actors’
decisions, by using the dichotomist concept of compliance. If constructivists are more interested in the social process attached to weapons (why do actors come to believe that weapons are efficient?) and the impact of the perceptions of the laws of war thereon, they generally focus on the role of ‘norms entrepreneurs’, and their strategies of naming and shaming through international institutions.¹ By doing so, they tend to exclude states and militaries from the social process, and miss the fact that their justifications, based upon their own perceptions of the laws of war, directly participate in shaping perceptions actors have of the weapons.

**Realists**

Traditionally interested in national security issues, realist scholars indirectly answer the proposed puzzle through the concepts of deterrence, balance of power and interests. They generally contend that weapons are used when they enable states to balance with other states, or to achieve their national interest. Having said that, they only very cursorily question why certain weapons would be more suited than others to achieve these goals. Three reasons explain this lack of interest. First, the abundant literature on nuclear weapons fundamentally structures how realists approach the question of all other weapons in international relations. Realists rarely discuss how weapons impact practices of war without mentioning deterrence. But this concept prevents them from understanding why certain weapons, especially weapons other than nuclear weapons, deter more than others, and why their technical capacities give rise to more aversion or fear than others. Second, realists do address the question of the variations in weapons utilization in the concept of ‘offensive/defensive’ weapon, at the core of the security dilemma theory.² Theorized by Jervis, this assumes that under certain conditions, states are ‘trapped’ in a spiral which ineluctably leads them to go to war against each other. The “*advantages conferred by technologies*” are one of these conditions. Weapons with offensive advantages ‘create’ an offensive context in which states are more likely to go to war. When the context changes and becomes defensive, weapons with offensive advantages cease to be used (and the spiral effect decreases). Yet, several authors, including realists, stress that the distinction offensive/defensive is problematic. Indeed, they acknowledge that the technical capacities of

¹ Norms or moral entrepreneurs are briefly defined in the ‘constructivist section’ of this chapter, and more thoroughly discussed in the theoretical chapter (chapter II).

weapons are not inherent: they are underpinned by normative considerations of what is a cost-effective or an efficient weapon. Yet, realists do not discuss, nor do they question, how these normative considerations are shaped, and whether the laws of war participate in this social process. Furthermore, realists generally share a profound skepticism toward the constraining power of international law and institutions, and the laws of war make no exception. Because they are epiphenomena of power, because they reflect the extant hierarchies and relationships of power, because they are shaped by the most powerful, the laws of war do not constrain states when they have to use weapons. In a nutshell, the reasons realists dismiss the impact of the laws of war are rooted in a threefold skepticism. Because war is inherent, states have to use efficient weapons. Efficient weapons are deterring weapons. And laws, or any form of institution, cannot prevent the strongest from doing what they want in war.

Liberals

In the first chapter I develop an explanation of how both liberalism and constructivism offer a different and sometimes complementary approach to the realist perspective, which obviously fails to provide satisfying answers to the opening puzzles of this chapter. To the threefold skepticism of realists, liberals answer with a threefold ‘optimism’. War can be neutralized, weapons can be controlled by laws, and laws (as institutions) can constrain states not to use their weapons. Liberals propose to evaluate the constraining power of laws of war through the notion of compliance, and assume the following: if states comply with the laws of war, then they are necessarily constrained by them. The problem of such an approach is that it implicitly assumes two problematic points. First, the evaluation of whether a state complies or not with the laws of war can be objectivized. This might be true for certain rules which are extremely clear (for instance treaties which ban the utilization of a weapon per se) but it is certainly a different story for ambiguous rules. In certain cases, two equally legitimate interpretations of the same rule can be regarded as legal, and it becomes hard to say which is the one that really complies with the extant rule. Secondly, liberals do not tackle the issue that actors can be constrained by the laws of war even though they do not comply with it. They reduce the myriad effects of the laws of war to the mere dichotomist notion of compliance. Yet,

1 Ambiguous rules are rules which “are open to or having several possible meanings or interpretations”. The ambiguity of the laws of war is more thoroughly discussed in the theoretical chapter of this thesis.
the rule can be violated and still be constraining, and *vice versa*. Liberals, by framing their analysis to the issue of “compliance”, necessarily reduce the scope of the possible effects of laws of war on actors’ weapons utilization. This scope also tends to exclude from their analysis the customary norms, on the basis that they are too broad, and that they are anyway reflected by the legal treaties. This exclusion is problematic because customary norms entail many obligations that are not necessarily translated into legal treaties. Because liberals overlook the study of these obligations, they necessarily have a limited approach to the wide scope of rules which constitute the laws of war.

**Constructivists**

I then conclude the chapter by demonstrating that constructivists address the two main limits of the previous rationalist theories. First, they investigate why certain weapons are perceived as more deterring than others: they retrace the social process which attributes them a specific quality. By doing so, they complement the realist approach, which only studies variations in weapons utilizations *once* the perceptions are enshrined. Second, they do not believe that the constraining impact of the laws of war can be explained and measured through the notion of compliance. Constructivists, especially those who endorse a genealogical perspective, investigate how norms impact actors’ practices in many different ways which go way beyond mere ‘compliance’ with international treaties. Indeed, actors sometimes cease to use weapons not because a legal treaty compels them to do so, but because there is a strong social opprobrium, or even taboo, attached to using it.

And yet, despite all these contributions from constructivism, which, I argue, play a vital part in the full understanding of weapons variations, the constructivist literature too is limited, and this for three reasons. First, it often suggests that practices change because of the *irruption* of a *new* norm.¹ This model prevents them from seeing that extant norms which are *already* deeply internalized by actors can endorse a different meaning over time, and that it is a shift in their meaning (and not an irruption of a new norm) which explains the shift in practices. This bias prevents them from having a clear understanding of the impact of customary norms (for example of distinction and proportionality), which yet constitute the basis of the laws of war.

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Secondly, constructivists tend to focus on non-state actors, mostly because they believe they are the ones who initiate the change.\(^1\) This focus on non-state actors is made to the detriment of the analysis of the state and its actual impact on norms. Finally, only a very small body of the constructivist literature acknowledges the key role of the deliberative process: when states use their weapons, they justify their utilization and are caught in an arguing process in which they constantly refine the understanding of the customary norms of the laws of war.\(^2\) Once internalized by actors through the logic of appropriateness, this new understanding of the dominant norm changes their practices. If a limited number of constructivist studies do unveil and study this decisive arguing process, none of them studies it with the object of understanding how this impacts actors in their weapons utilization. This is precisely what this present work proposes to do.

This dissertation is therefore part of a growing body of scholarly literature which acknowledges that norms, and more precisely norms of laws of war, do impact on practices of war. I seek, further, to contribute to our understanding of precisely how they can affect weapons utilization. I argue that when engaged in war, states constantly justify their weapons utilizations on the grounds of the laws of war. These justifications transform, under circumstances I will detail in my theoretical chapter, the dominant understanding of what the customary norms of the laws of war ban and allow. This new understanding will, in turn, transform the perceptions actors have of weapons. Should the new perceptions convey the idea that weapons are illegitimate, inefficient or costly (and we will demonstrate that these three perceptions are often interdependent), actors will cease to use the weapons. My research thus contributes to the ongoing debates in IR about the conditions under which the logic of arguing (when actors argue over norms in international institutions) is more likely to bring about change in actors’ practices.

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\(^1\) A large part of their literature notably focuses on the role of transnational actors and transnational advocacy group.

A ‘theory’ of arguing over the meta-norm of fighting justly

Pursuing this line of analysis in Chapter II, I propose to study more specifically the modalities of the arguing process (i.e. how states argue over weapons utilization), and how this process finally constrains states to decrease or conceal their weapons utilization. My argument is indeed that the collective perceptions actors have of what the laws of war ban or allow (also called meta-norm of fighting justly) do impact upon their evaluation of their weapon as an efficient, cost-effective or legitimate means of warfare. Because I assume that, when militaries and governments start to perceive that their weapons are non-efficient, costly or illegitimate, they will try to either stop using them, or to hide their utilization, I ultimately argue that the collective perceptions of the laws of war do impact on weapons variations.

Why study the meta-norm of fighting justly (and not the laws of war)?

Before detailing the arguing process, I want to first define the normative basis upon which states draw their main justifications when they argue over their weapons utilization. In this dissertation, I refer several times to this normative basis with the expression ‘collective perceptions of what the laws of war ban and allow”, and I conceptualize them in chapter II as the ‘meta-norm of fighting justly’.

The concept might look overly ‘complex’ when compared to the expression ‘laws of war’ which I use, for the sake of clarity, at the beginning of this chapter. Yet, I prefer to refer to the meta-norm of fighting justly rather than laws of war, because I believe this difference in semantics is crucial. ‘Laws of war’ mainly refer, in the academic literature, to ‘International Humanitarian Law’, that is a set of legal treaties (including, inter alia, the Geneva and Hague Conventions) which restricts not only weapons utilization but also many other practices of war (from treatment of prisoners of war to the status of civilians and combatants). Yet, and it is often overlooked, the laws of war also include, in addition to the formal legal treaties, three customary norms (military necessity, proportionality, and distinction).

In contrast with legal treaties, these customary norms are not formalized and clearly explicated in a text: their definition is not formally specified and their meaning is thus very broad. Moreover, customary norms are attached with a form of ‘subjective obligation’, also called ‘opinio juris’, which convinces states that they are obligated by the norm and that they have to act in accordance with it, even though they have not signed any legal treaty to ‘guarantee’ it.
In chapter two, I explain that unlike liberals, I believe that there is not one unique and ‘right’ understanding of the laws of war. Because the customary norms of the laws of war are ambiguous, there is a variety of possible interpretations that can be drawn from them. Actors can develop conflicting understandings of them, without seeing their interpretations as violating the laws of war. When states argue about the laws of war, they argue, in reality, about their own understanding of the laws of war. This distinction is crucial and underpins my choice not to refer simply to the ‘laws of war’.

Moreover, I demonstrate that these collective perceptions of what the laws of war ban or allow are similar to a “standard of appropriate behavior for actors with a given identity”.\(^1\) These perceptions of fighting justly indeed define what is a legal and thus acceptable means of warfare, and what are the acceptable and thus legal conditions of weapons utilization. For this reason, the perception of fighting justly can be defined as norms.\(^2\) I then use the concept of ‘meta-norm’ instead of norm, for two reasons. First, customary norms are strongly ‘internalized’ by states (opinion juris), but also by militaries and ‘international actors’ (NGOs and members of International Organizations). This strong internalization is a characteristic of the meta-norm. Then, I observed that, once actors (especially members of NGOs but also militaries) believe the laws of war have been violated, they want both to punish the violation and to shame those who do not denounce this alleged violation. The belief that not only the alleged violation, but also those who do not denounce the violation must be punished is also specific to the ‘meta-norm’. Moreover, the concept of meta-norm also refers to foundational norms, that is central norms, which, when they are transformed, also impact other norms. As I explain in chapter II, the laws of war are constituted of several bodies of law which are mutually interdependent. I demonstrate that transformations in the laws of war which frame the weapon (jus in bello) can also lead to transformations in the laws which frame the rights for a state to go to war (jus ad bellum). It is for these two reasons that I refer to the ‘perceptions actors have of what the laws of war ban or allow’ with the concept of the ‘meta-norm of fighting justly’.

\(^1\) This definition is the common definition used in International Relations literature to designate the norms.

\(^2\) This definition is the one used by Kathryn Sikkink and Martha Finnemore in FINNEMORE, Martha, SIKKINK, Kathryn. “International Norm Dynamics and Political Change.” International Organization 52, no. 4, Autumn 1998. This is a consensual definition in the field of International Relations.
Arguing over the meta-norm of fighting justly

In the remaining part of chapter II, I focus on the process of arguing, defined as “a process of argumentation, deliberation and persuasion” which “constitutes a distinct mode of social interaction” and as a “truth-seeking process with the aim of reaching a mutual understanding based on a reasoned consensus.”¹ I show that the arguing process reveals many crucial aspects of how states justify their weapons utilizations when they are engaged in war, how they transform the meta-norm of fighting justly at the international level, and how the meta-norm of fighting justly in turn constrains their weapons utilization. I show that when they wage war, states are engaged in a constant argument, where they defend, articulate and promote their own conception of fighting justly. In this 'battle for legitimacy', states are more likely to enshrine their own conception as the most legitimate one, under two conditions: namely, when it does not foster the inherent contradictions of the laws of war, and when their argument does not disrupt the extant symbolic order.

Then, I study how the shift in the meta-norm is translated into a shift in action: that is, how this refinement ‘constrains’ states to change their weapons utilization. I develop the concept of ‘rhetorical entrapment’ and show that once states accept that another argument is more persuasive than their own, and provided that this argument condemns their weapons utilization, they have no other choice but to either decrease their weapons utilization or to conceal it.

Finally, I detail in chapter II what I conceptualize as the ‘logic of symbolic power’. After having noted that the symbol is considerably understudied by the International Relations literature, I propose a definition: a symbol can be defined as an “object vested with social power beyond its physical, material power, which produces strong and distortive representations, which become part of the collective memory”. I then show that arguments that are underpinned by a logic of symbol tend to be more likely to be enshrined at the international level. In a word, when weapons are attached with a symbol, it is easier to condemn their utilization and force states either to cease to use them or to conceal their use. Through I do not aim to clarify how a symbol becomes attached to a weapon, I show some recurrent features which might explain why certain weapons are more likely to be attached with a negative symbol than others.

The Approach

Before detailing my research methodology, I will briefly explain the reasons underpinning my choice to construct my research object the way I did.

I was first interested in understanding why certain weapons were attached with a certain form of collective opprobrium while others were not. Why do certain weapons look more terrible than others, even, as my interviews revealed, in the eyes of those who use them? Why such a hierarchy in the perceptions attached to the means of warfare?

Rapidly, this question became more puzzling because further investigation revealed that there was no immediate relationship between the opprobrium attached to the weapon and, in contrast with what the common view suggests, the number of persons it kills, or, even more puzzling, its capacity of destruction. Not that I want to imply that there should have been an immediate relationship. But this revealed that the relationship between the weapon and the opprobrium was not as straightforward as we might have thought. The relationship was necessarily the product of a certain form of contingence, of a specific history. The question became then: what, in this specific history, explains the opprobrium, or the lack of opprobrium, attached to a weapon?¹

In order to answer this question, I had to compare different ‘histories’ of weapons. From this comparison decisive factors emerged, which explained why one weapon is more attached with opprobrium than others. I first left open the scope of weapons that I could possibly look at, from those attached with strong opprobrium to those which do not seem to raise any form of social reprobation. The ideal case studies to compare would be a variation of weapons with strong, with medium and with low opprobrium. The extant literature already proposed several factors or independent variables (non state actors, lack of efficiency, international humanitarian law) and I could have observed which one seemed to be the most decisive in the three different ideal-types. But rapidly I decided to proceed differently.

I indeed became very puzzled by the idea of opprobrium, and how I could exactly measure it. As with the notion of legitimacy, which I consider as the other side of the same

¹ This question is similar to the perspective at the core of the work of Richard Price on chemical weapons, in PRICE, Richard M. The Chemical Weapons Taboo. Ithaca, N.Y.: Cornell Paperbacks, 2007.
coin, I could define it, but quantifying it was more complicated. I found one possible solution: If a weapon is attached with strong opprobrium, then actors do not use it. But, and this represented the crucial difficulty of my work, actors might also not use the weapon for many other reasons. The extant literature on this topic proposes and studies many other explanations of shifts in weapons utilization¹. How can we single out opprobrium from the other reasons? When is opprobrium the sole reason for the non-utilization of a weapon?

Seeking to find cases where I could ‘isolate’ the opprobrium as the main reason for the non-utilization of the weapon, I relied on both a specific literature (from social history of weapons, to military history and history of conflicts) and on approximately thirty interviews (with militaries, NGOs and UN members, historians), to finally decide to focus on three case studies: chemical weapons, incendiary weapons and unmanned aerial vehicles (colloquially called drones). I first assumed that the perceptions of those who used the weapons could be a strong indicator that opprobrium played an important role in their decreasing utilization. In my interviews and my readings, I discovered that the range of weapons perceived as being particularly attached with opprobrium was not so wide. Four of them were constantly mentioned: napalm, chemical, biological and nuclear weapons. I chose to select napalm and chemical weapons for two reasons. First, napalm and, more generally incendiary weapons, were, unlike the three other weapons, largely understudied by the extant literature. This lack of interest in this weapon appeared to me as puzzling, especially considering the apparent strong repulsion the weapon is attached with. I chose to study chemical weapons because they appeared to me as the ‘ideal type’ of a weapon attached with strong opprobrium. In contrast with both nuclear and biological weapons, chemical weapons were widely used (especially in WWI) before almost disappearing from the battlefields. There is therefore a quantifiable decrease in weapons utilization. Its attached opprobrium is still very strong, and the recent events in Syria proved it. For these two reasons, I decided that the case of chemical weapons could be particularly illuminating, to understand how this opprobrium arose, and whether this could explain why the weapon has since been so rarely used on the battlefield. I finally decided to include a third weapon: unmanned aerial vehicles. The reasons for this choice were twofold.

¹ The theoretical chapter develops the majority of the dominant explanations of why certain weapons disappeared: shifts in military culture, logic of efficiency, cost-effectiveness and logic of scrutiny. Generally, there is a form of consensus that weapons cease to be used because they became inefficient or costly. This thesis aims at proving that this answer fails to consider many aspects, including the meta-norm of fighting justly.
First, the weapon started to hit the headlines just as I was beginning my dissertation, as if the opprobrium started to be attached to it. Secondly, its utilization then seemed to slowly decrease after 2010, and several official reports advocated for less reliance on drones, and more reliance on men. Could it be that drones were being less used because of this nascent opprobrium? Because I thought it could be interesting to study this question, and to contrast this case with a weapon with “already strong opprobrium”, I decided to integrate the drone as my final third case.

The scope and the limits of my approach

Shed light on a blind spot

If I ask in my dissertation “why do certain weapons disappear from the battlefields?” I do not intend to single out one reason as more decisive than the others. Rather, I aim at showing that singling out one theory, proposing one causal pathway to account for variations in weapons utilizations cannot capture the multiplicity of reasons explaining why militaries and states are reluctant to use certain weapons. The theory I propose does not aim to supersede the other extant theories founded on the logics of military strategy, economic arbitrage, international pressure, etc. Rather, it aims at providing a complementary approach to them: the norms and the perceptions actors have of the laws of war also shape these logics, which are interdependent. Therefore and to clarify, I do not conclude that weapons disappear because of the norms of fighting justly. Rather, I associate the two terms in the dissertation title in order to shed light on a blind spot, or impensé, in International Relations literature: if weapons disappear, this is not only because of material factors or military doctrines. The meta-norm of fighting justly might also affect why certain weapons are at a certain time perceived as less efficient, less cost-effective and less legitimate, and this makes their utilization on the battlefields less likely.

Between two ‘worlds’

During my research, I had the opportunity to study in two universities which tend not to value the same kind of approaches. I first started my research journey at Sciences Po, and discovered there the value of an inter-disciplinary approach which, when applied to one specific object of research considerably expands our understanding of it. Rather than discovering rules
and variables, the researcher has to understand and reveal the complexity of the object enmeshed in a social context. I then discovered a different approach to studying International Relations at Columbia University, which relies more heavily on a rational positivist approach, either based on a large-N quantitative research or on a multiplicity of case studies. The social context becomes measurable, quantifiable, and the impact of each factor (or independent variable) stands out more clearly, in a causal pathway. I explain how I perceived my research journey at these two institutions, and I admit these two descriptions do not capture the variety of approach proposed in either institution, because I believe that they both impacted my research approach. I felt often torn when I had to decide which perspective could provide a better answer to my question. While the first perspective is criticized for not drawing theories and revealing causal mechanisms, the second is accused of considering social phenomena as if they were objectifiable. In front of these alternatives, I decided to endorse a qualitative and inter-disciplinary approach, which I apply not to one, but to three different case studies.\footnote{1 In this research, I borrow several tools and concepts to anthropology, sociology, legal studies, and history.} I also look for variations which are common in the three cases and which might provide some explanatory factors as to when a weapon becomes attached with opprobrium, and when this opprobrium explains the non-utilization of a weapon. I do not contend that there is a causal mechanism here, and therefore that the factors I single out are always decisive. I demonstrate however that these factors are closer to being correlatory or reinforcing factors, than causes. Such a choice is not without risk because it might, in the end, not entirely satisfy any of the approaches, but it is a (modest) opportunity to propose a compromise and a middle way which could also enrich the extant approaches. I discuss more thoroughly in the conclusion the theoretical contribution this approach might bring.

Finally, before detailing the methodology I use for each case-study, I want to explain the choice of the language used to think of and write on my research object. The reasons for the choice to write in English were twofold. First, English was the language of the great majority of my interlocutors. During my interviews, but also while I pursued my preliminary research and defined my research object, I read and discussed in English. This therefore deeply impacted the way I approached my object. Second, and more importantly, the literature I am referring to
in my work is mainly written in English. Many concepts I mobilize are drawn from the literature on norms in international relations, ethics of war, and military studies. These fields are for a large part constituted of works written in English, using concepts that are not always easy to translate, with an approach that is also very specific. If there is undoubtedly a growing field of Ethics in International Relations in France, and a solid tradition of sociological perspectives focusing on norms (and my work refers to many studies from these two fields), the fact that I was immersed in an English environment, and that most of the studies I refer to were in English finally made me decide to use this language in my research. ¹

**Weapons and the meta-norm of fighting justly**

As explained in the previous paragraphs, this thesis proposes to study when and why three weapons, namely chemical weapons, incendiary weapons and unmanned aerial vehicles disappear, or at least are decreasingly used on the battlefield. It studies more specifically three aspects. First, each chapter retraces the trajectory of these weapons, and, by doing so, identifies a ‘significant shift’ in their utilization. It then studies more thoroughly the reasons underpinning this shift, notably whether a form of opprobrium was attached to the weapon. It then more specifically attempts to determine whether the arguing process over the meta-norm of fighting justly explains, or highlights certain aspects of the decreasing utilization of the weapon.

**Chemical weapons (CW)**

Chemical weapons were massively used for the first time on the battlefields of World War I, in a quantity never reached before or after this war. Chapter III ‘deconstructs’ and describes this ‘significant shift’, or this ‘abnormal peak’, in CW utilization. It reveals that CW had been increasingly used throughout the war, in a ‘race’ for lethality and quantity. This increasing and massive CW utilization might be regarded as a failure of the meta-norm to restrain actors’ weapons utilization, and, conversely, as the success of realpolitik and the logics of efficiency.

Yet, a careful retracing of the decision-process reveals that the meta-norm of fighting justly did constrain states in their CW utilization, in two specific ways. First, it constrained them during the war: the resistance of soldiers to deploy the ‘anti-chivalric’ CW, and the delivery method they used (though canister, in accordance with the Hague Conference) can directly be interpreted as the consequence of the constraining power of the meta-norm of fighting justly. Second, the meta-norm of fighting justly constrained the actors after the war: the post WWI arguing process over CW utilization enshrined the image of a barbaric and cowardly weapon at the international level. At the same time, it also refined the up till then broad notion of unnecessary suffering, to include the effects of gas, and led to the Protocol of 1925 which formally banned the utilization of chemical weapons, regardless of their delivery method. Chapter III concludes that, for these two reasons, it can be argued that the arguing process largely contributed to the subsequent rarity of chemical weapons on the battlefield.

**Incendiary weapons (IW)**

Incendiary weapons have never been used as systematically and as massively as they were by the United States during the historical period ranging from World War II (especially after 1944 and the creation of napalm) to the Vietnam War (especially until 1971). The aftermath of the Vietnam War coincided with a significant decrease in the US utilization of napalm, and several factors seem to signal that the incendiary weapon had been attached with opprobrium: napalm ceased to be at the core of US military strategy; Protocol III framing the conditions of its utilization was signed by many states (with the exception of the US until 2009); domestic and worldwide opinion denounced its utilization and even led actions against the Dow Corporation (the then unique producer of napalm). This massive “wave of criticism” stopped when the US announced the destruction of its remaining napalm stockpiles in 2001.

A closer look at the ‘trajectory’ of incendiary weapons yet reveals a paradox: not all incendiary weapons followed the trajectory described above. More particularly, only napalm was attached with such a strong opprobrium. Other weapons with incendiary properties (such as the white phosphorus weapon) continued to be used, even if in lower quantities than before the Vietnam war, without giving raise to the same level of criticism. In order to understand this variation in opprobrium, and, correlatively, the process of construction of legal categories, the chapter aims to compare how the two weapons were discussed at the international level. It identifies two key moments. For napalm, the arguing process took place from 1971 to 1980,
after the Vietnam War. It was 30 years later that important discussions on the legality of white phosphorus weapons took place within the United Nations, notably in the aftermath of Operation Cast Lead.

Comparing these two moments, chapter IV underlines several aspects specific to the arguing process over napalm after the Vietnam War, such as, \textit{inter alia}, a strong symbolic power attached to the weapon, a strong military resistance to using the weapon, willingness to condemn the US for its implication in Vietnam, role of the Secretary General, significant shifts in military culture. These variations might explain why the arguing process over napalm utilization did refine the meta-norm of fighting justly, and subsequently attached a strong opprobrium to napalm, and why the arguing process over the WPW utilization during Cast Lead led to more mixed conclusions.

**Unmanned Aerial Vehicles**

Unmanned Aerial vehicles, commonly called drones, have recently hit the headlines, and ‘invaded’ collective imagery, as a result of their massive utilization from 2009 to 2010. The number of drone strikes and of missions of surveillance led by these weapons indisputably reached a peak at this moment, before slowly decreasing. At the same time, voices opposed to its utilization were becoming more and more audible. NGOs and independent groups of researchers multiplied their reports to document these utilizations, legal advisor Koh (specially hired by Obama to create a legal doctrine for drone utilization) quit, and several important officials started to criticize a policy which preferred to heavily rely on drones, rather than on men.

Chapter V aims to understand this ‘nascent opprobrium’ and more thoroughly investigates the peak and the decrease of UAV utilization during Obama’s first mandate. It reveals that there is a temporal coincidence between the decreasing utilization and the first official justifications of the drone strikes by the Obama administration. After demonstrating that the three common theories (efficiency, cost-effectiveness and international pressure, further detailed in chapter II) highlight the reasons for the decrease in UAV utilization, it details how the arguing process illuminates the \textit{timing} of the shift in UAV utilization. It analyzes the arguments of the Obama administration and underlines three important flaws: inconsistency (their justifications confuse the legal frameworks, \textit{jus in bello} and criminal law), paradoxes (the paradox of precision, or how weapons become more precise while the status of their target is
even more unclear) and the spill-over effect (the UAV utilization also transforms the notion of last resort and thus modifies not only jus in bello but also jus ad bellum). It then argues that these flaws might explain why, realizing that they were entrapped by limited justifications, the Obama administration preferred to decrease their UAV utilization. Ultimately, the chapter also demonstrates how the arguing process over UAV utilization and the meta-norm of fighting justly might explain why weapons are less deployed on the battlefield.

**Methodology**

For each case-study (chemical weapons, incendiary weapons and unmanned aerial vehicles) I developed the following methodology. I first retraced the trajectory of the weapon: that is when, how, and in what quantities the weapon was used on the battlefields. I then more specifically focused on what I call a ‘significant shift’, that is a significant decrease or increase (i.e. the climax or peak in weapons utilization). To proceed, I gathered information from numerous sources in English and French. I relied on historical and military studies, public reports from NGOs or independent sources (especially from the independent research group SIPRI) transcripts of relevant IO deliberations, contemporaneous newspaper reports (mainly from the New York Times). Finally, memoirs of militaries were also particularly useful in that they provided insights into how the weapons were used.

After having retraced the trajectory of the weapon, I proceeded to ‘theory testing’ and a more careful examination of how the three extant theories (efficiency, cost-based, international pressure) highlight the shifts in the weapon utilization. To test both efficiency and cost-based theory, I largely used data from independent sources to estimate the ‘cost’ and the ‘price of the weapons’. Interviews with militaries helped me to understand how the weapon was perceived within military culture, during the war in which it was used. These interviews were semi-directed, and lasted approximately 50 minutes each. I then complemented these findings by reading military manuals and studies in military history. In order to test the ‘international pressure’ theory, I relied on NGO reports and interviews with NGOs and UN members. I also studied selected United Nations archives, where I found records of the discussions within the international organizations, but also drafts of legal treaties that were discussed by the ‘international actors’.
I then tested my theory of the ‘meta-norm of fighting justly’, to determine whether it could also highlight variations in weapons utilization. To do so, I proceeded in two steps. I first ‘deconstructed’ the justifications that each actor (states, militaries, NGOs, United Nations) used to condemn or legitimate the weapons utilization. To do so, I used tools and approaches drawn from political theory. I wanted to understand which were the normative assumptions behind each justification, and which conception of fighting justly underpinned them. By discussing the different justifications, I could ‘denaturalize’ them and then understand with more acuity the contingency of the perceptions attached to them. I was then interested in understanding how these ideas were promoted, and which means actors used to do so. In order to understand this aspect, I referred to sociological tools (mostly drawn from sociology of deviance) to understand how the different actors finally enshrined norms at the head of an institution (militaries or international organization). To do so, I mostly relied on diplomatic cables, interviews (which gave me a good idea of the different strategies developed by actors), but also on secondary sources such as NGO reports and newspaper articles. In addition, I also relied on process tracing, to reconstruct the sequence of decisions leading to the decrease in the utilization of a weapon.

Finally, investigating the symbolic dimension of each weapon was probably the most challenging methodological approach to take. Because of the lack of previous studies on this topic, I mostly relied on inductive research. I studied the representations associated with the weapons (paintings, novels, poems but also movies and TV shows) in order to understand what these representations suggested and how they distorted the image of the weapon (to understand and measure the gap between the representations of a weapon and the actions actually accomplished by that weapon). I also tried to understand the impact of these representations on public opinion (by ‘objective’ measures such as polls) but also on actors (militaries and states), through the reading of memoirs and historical studies. I did not so much seek to measure the strength of the symbolic power, as try to see how a weapon was perceived by public opinion, and by militaries, and how these perceptions might constrain them not to use the weapon. To do so, I tried to understand, through the reading of military sociology studies and through my interviews, the role of symbols in military culture, and how they were hierarchized.
Roadmap

The rest of the present work is structured as follows. The first chapter reviews and critiques the principal existing explanations of significant variations in weapons utilization. It reveals that the extant literature largely omits consideration of the impact of the meta-norm of fighting justly (defined as the collective perceptions on what the laws of war ban and allow with regards to weapons utilization) on actors’ decisions and perceptions related to their weapons utilizations. While the rationalist literature only captures a limited spectrum of the constraining effects of the laws of war on actors’ decisions, social constructivists largely fail to consider that the meta-norm of fighting justly is also decisive in the social processes contributing to actors’ (especially both militaries and governments) perceptions on what is an efficient, legitimate or cost-effective weapon.

Chapter II builds on the first, and more specifically describes the three theories commonly used to explain variations in weapons utilizations (efficiency theory, cost based theory and international pressure theory). A thorough examination of each theory reveals that the meta-norm of fighting justly intervenes and shapes the logics underpinning these three theories, hence the necessity to study both the formation and the changing understandings of the meta-norm. The chapter then lays out the central theoretical argument: under certain conditions, states are more likely to impose, at the international level, their perceptions of fighting justly as the most persuasive ones. By doing so, states refine and remold the dominant meta-norm, which, subsequently and through the logic of ‘rhetorical entrapment’, will constrain them, to modify (either by diminishing or concealing) those weapons utilizations which do not fit with that dominant meta-norm.

The three subsequent empirical chapters (chapters III to V) are primarily devoted to highlighting the impact of the meta-norm of fighting justly on the use of, respectively, chemical weapons, incendiary weapons and unmanned aerial vehicles. Each chapter begins by retracing the entire trajectory of the weapon’s utilizations (i.e. when the weapon was deployed on the battlefields), before more specifically focusing on a ‘significant shift’ (either a sudden decrease or increase) in the weapon’s utilization. The central part of each chapter is then devoted to testing the proposed theory (arguing over the meta-norm of fighting justly), as briefly outlined above, and as presented in more detail in chapter two. After describing how the three ‘common’ theories account for important aspects of the variations in the weapon’s utilization, the central
part of the chapter demonstrates that analyzing the arguing process over the weapon (how states argue over their weapons utilization and, by doing so, promote a specific conception of the meta-norm of fighting justly, during and after the significant shift) and over the symbolic power attached to the weapon, provides us with a more comprehensive understanding of variations in its utilization.
Why, on the eve of the 20th century, did Europeans refuse to use machine guns against other well-equipped and armored Europeans, while, at the same time, they were deploying these very same machine guns, massively, against people of their current or former colonies? Europeans could hardly have believed that machine guns, with bullets capable of penetrating iron, were less efficient against armored militaries than against combatants devoid of strong and heavy protection. The ‘de-introduction’ of firearms in Japan, during the 16th century, also defies a ‘rational-utility explanation’. First perceived as decisive in several major battles won by the Japanese, firearms were removed and destroyed by Japan in 1560. Emperor Hideyoshi solemnly asked for this destruction, in spite of the knowledge that crucial battles (including against Korea) were soon to be waged. During the whole period of de-introduction, Japanese militaries never really questioned the efficiency of firearms, continuing to perceive them as decisive weapons. Why then did they accept and even advocate this de-introduction?

Each puzzle is ‘resolved’ if one analyzes the social history of these weapons. Ellis explains that Europeans did not want to use machine guns in Europe because the weapon “became associated with colonial expeditions and the slaughter of natives, and was thus by definition regarded as being totally inappropriate to the conditions of regular European warfare”3. Perrin attributes the eagerness of Japanese elites to get rid of firearms to their “social problem with guns”.4 Such puzzles in the variation of weapons utilization are multiple, and many other studies demonstrate, through the examples of chemical weapons, nuclear weapons,

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or even conventional weapons, how and why social history is actually decisive to the explanation of why particular weapons have disappeared from (and sometimes re-appeared in) the battlefields.¹

**National security, realism and weapons**

In contrast with what the starting puzzle suggests, focusing on the social history of a weapon is not the most common approach, especially in International Relations, in trying to understand why and when a weapon has disappeared, or not, from the battlefields. Instead, weapons are commonly regarded as a matter of national security, a domain largely ‘dominated’ by research endorsing a realist stance and a rational point of view (expected-utility logic). Two lenses dominate the analysis of the variations in weapons utilization: the balance of power and deterrence. If both concepts mainly explain weapons utilization and development through their material capability, they also indirectly acknowledge the necessity to take into account, with varying degrees, the social history of the weapon.

**Weapons that do not disappear are weapons that balance and deter**

Indeed, the concept of ‘balance of power’ assumes that states develop a weapon to increase their material dominance over, and to balance with, other states.² Yet, the concept does not clarify why certain weapons are perceived as a more decisive material factor than other weapons. The security dilemma, which elaborates upon the concept of balance of power, holds the “advantages conferred by technologies” as a crucial variable by which to explain when


states go to war.° Weapons are either defensive (a weapon that can keep the other side out of one’s own territory, without being able to penetrate the enemy’s land) or offensive (weapons capable of destroying the other’s army and taking its territory). Realists commonly admit that this classification is problematic, not only because it considerably simplifies the myriad technical capabilities of a weapon into two unclear categories, but also because it is flawed. There is no such thing as weapons’ “intrinsic performance characteristics” and a rapid glimpse at the history of technology supports this point. Therefore, even though many realist studies downplay, or fail to mention, social history as a factor shaping how actors perceive weapons, these studies indirectly acknowledge that a weapon is always evaluated through a normative prism, which shapes how actors perceive the technical capabilities attached to it.

The concept of deterrence assumes that weapons utilization varies depending on their capacity “to threaten the opponent to behave in desirable ways”. Weapons are thus studied as means to deploy a credible threat and to signal the state’s military capability. Perceptions of actors as regards the weapon, its capacity to shred opprobrium, its history, are of crucial importance in the negotiations. Why are certain weapons more feared than others? When do

2 Jack Levy points out that the concept of offensive/defensive technology is actually extremely problematic in LEVY, Jack S. “The Offensive/Defensive Balance of Military Technology: A Theoretical and Historical Analysis.” International Studies Quarterly 28, no. 2, 1984, p219. Jervis himself uses the distinction offensive/defensive, but recognizes that the classification is not made on a consistent basis. He even recognizes that it is sometimes impossible to distinguish if weapons are offensive or defensive, in JERVIS, Robert. “Cooperation Under the Security Dilemma.” World Politics 30, no. 2, 1989, p 167.
certain weapons ‘signal better’ than others? While these questions are decisive, they are only superficially addressed by the extant studies on deterrence.

The limits of this rapid review on the realist answer to why have weapons disappeared from the battlefield are numerous, but one particularly stands out. Fundamentally, realists are not interested in investigating this question. They generally focus more on close but different issues such as ‘Why are certain weapons developed? What for? Which weapons should be deployed?’ The origins of the perceptions attached to a weapon are largely left untreated, justified on the grounds that it does not really concern their field of research. If the review shows that realists recognize that weapons are always perceived via a normative prism, they do not really question how this normative prism has been shaped, how it influences actors and why. This neglect, unsurprising for a theory for which material forces take precedence over and drive norms, prevents them from investigating cases like the starting puzzles, in which rational utility and material capabilities apparently fail to explain variations in weapons utilization.

**Rational versus irrational perspective: the social history of the weapon still matters**

In sum, the ‘rational utility’ perspectives (and realism is one of them) implicitly assume that the social history of a weapon is important, and even sometimes equally crucial as the weapon’s “straightforward problems of technical efficiency”. When actors have to decide when and which weapons are going to be used, they weigh what they perceive as the technical efficiency of the weapon against the ‘social status’ attached to it. It is from this trade-off that their final decision emerges. In contrast, irrational or ideational perspectives differ from this approach, as they assume that actors cannot distance themselves from social meanings, including those attached to weapons. Yet, social context eventually shapes what actors perceive as ‘rational’ (including what they perceive as efficient). Whichever the perspective, the social meaning attached to the weapon remains crucial, hence the necessity to analyze how social history finally affects weapons utilization.

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Does social history affect the utilization of weapons?

“Military history, like everything else, is a social phenomenon, and even the weapons themselves have their social history”. Indeed, “technology is never just technology” because every weapon “has a socially constructed meaning and a socially oriented objective”, therefore “the significance of technological development can never be fully understood independently from their social contexts”. This is why specific attention has to be given to the social context in which a weapon is embedded in order to unveil which specific social perceptions are attached to it. It is by retracing the social history of a weapon that we can understand when and why actors perceive a weapon as efficient, or, conversely, obsolete. These perceptions are, in fine, decisive to the analysis of variations in weapons utilization.

Puzzles and variations in weapon utilization: the key role of social history

The extant literature on weapons offers several examples demonstrating the key role of social history, and, correlativey, highlighting the limits of the unique lens of ‘efficiency’ (i.e. only efficient weapons are developed and used) to explain variations in weapons utilization. European machine guns in the 19th century, or firearms in Japan in the 16th century are compelling examples, offering an intriguing puzzle that the sole lens of expected-utility cannot explain.

Which factors or facets of social history really matter?

If social history does matter, how does it matter? The extant literature stresses three key explanations of why social history has to be studied in order to understand the trajectory of weapons.

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First, the social pre-conceptions of what is regarded as an honorable practice of war, shared by those who use the weapon, are decisive to an understanding of how they will use the weapon. The more the weapon is perceived as harmful or at odds with militaries’ conception of honor, the stronger their reluctance to use the weapon (1). Second, the social position of militaries determines the strength of the social meaning attached to the weapon. The more highly militaries are regarded by the rest of the society, the more they tend to be independent of civilian control, and the more latitude they have to impose their own conception of honor (2). Finally, other facets of the ‘normative landscape’, including ideology and identity, also affect the conception of honor shared by militaries, and, ultimately, their perception of a weapon (3).

‘Pre-conceptions on honor’ shared by the ‘class’ or the ‘group’ who are in charge of ‘military affairs’ are decisive in explaining variations in the utilization of weapons

Several authors emphasize the crucial role of the conception of honor shared by those who use the weapon. Their perception of what is an honorable practice of war is the lens through which they are going to judge any new weapon. Because European militaries “clung on to their old beliefs in the centrality of man and the decisiveness of personal courage and individual endeavor”, neither did they develop machine guns with enthusiasm, nor did they, initially, work to improve the weapon and its technical capacities.

Through his “theory of honor”, Appiah demonstrates that what is deemed as honorable practice has varied considerably over time, and this variance explains why certain moral revolutions happened, first within ‘honor groups’ (i.e. groups of people who acknowledge the same code of honor), then at the national and international level.¹ Several studies support the hypothesis that honor has played a cardinal role in explaining why soldiers, and even states, have behaved in a certain way rather than another.²


² Very few authors analyze honor as a motive for war, see LEBOW, Richard Ned. Why Nations Fight: Past and Future Motives for War. Cambridge, UK; New York: Cambridge University Press,
The social position of the group that shares this preconception of honor is also decisive in explaining variations in the utilization of weapons

If studies emphasize the crucial impact of the conception of honor shared by militaries, showing that not every conception of honor is decisive in explaining variations in weapons utilization, it is equally the case that militaries’ conceptions of honor are not under all circumstances decisive. Two conditions have to be met: conceptions of honor are decisive only when they are shared by heads of militaries (1) and when militaries dominate civil-military relations (2).

First, the hierarchy within armies highlights why and which conception of honor actually matters. Groups at the top of hierarchies are the ones who design and decide on many key aspects with regards to armies’ functioning: recruitment, promotion, training, codes of conduct, etc. This predominance allows them to impose upon the rest of the army their own conception of honor, and of what is an honorable weapon. The composition of these groups differs over time and between places: aristocratic military officers in 19th century Europe, feudal lords in the 16th century in Japan, members of the General Staff in the post 1903 US Army, etc. 1 Several studies investigate how this composition eventually influences the behavior of militaries, including their culture (i.e. military or organizational culture) and their practices.

While these studies certainly highlight why militaries perpetuate, favor or forbid specific practices rather of others, they often focus on practices in general, and not on weapons variations in particular. Moreover, these studies do not question the social status of weapons, but rather assume that a certain weapon logically corresponds with a certain culture. They thus leave unquestioned why one weapon in particular, rather than another one, is more likely to be perceived as honorable for a specific group.


1 Before 1904, the US Army had no ‘decent and functioning’ General Staff. This lack of a powerful administration explains why the US Army waited more than thirty years before including machine guns in their weaponry, finally superseding ‘horse cavalry and smooth-bore artillery’ in ARMSTRONG, David A. Bullets and Bureaucrats: The Machine Gun and the United States Army, 1861-1916. 1st ed. Contributions in Military History, no. 29. Westport, Conn: Greenwood Press, 1982.
Second, the conception of honor shared by the dominant group within the military is more likely to impact on the utilization of a weapon if the military dominates the civil-military relationship. The literature on “the cult of offensive” demonstrates that, at the beginning of the 20th century, militaries could only impose their belief that “the offense had the advantage in warfare” to the rest of European society because of the lack of a civilian control over their actions, civilians being then unable to impose their preferences for prudent and defensive behaviors.1 The opposition between militaries, “oversocialized to war” and “seeing it more likely than it really is”, and civilians, prone to prudence, is yet extremely debatable.2 It is not clear why being oversocialized to war would lead militaries to believe that war is desirable and should be waged with the specific strategy of offense, with a specific weapon.3

Once this cult of offensive is accepted by the entire society, weapons with technical characteristics thought of as fitting with the cult of offensive are widely promoted, developed, and, in fine, considerably increase their likelihood of being used. The higher and the more prestigious the social status of militaries (especially with regards to the rest of the society), the more likely it is that their conception of honor will influence weapons utilization. Other factors might also impact on the dominance of the military in the civil-military relationship: the proportion of militaries in comparison with civilians, the proportion of militaries in each social class, the presence and modalities of a military service might all be decisive elements by which to gauge to what extent militaries do dominate the civil-military relationship.45

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3 Richard Betts demonstrates that, in contrast with what the common wisdom suggests, the members of US Army are extremely cautious when they have to decide to go to war, in BETTS, Richard K. Soldiers, Statesmen, and Cold War Crises. Morningside ed. with new pref. and epilogue. New York: Columbia University Press, 1991.

4 The ‘de-introduction’ of firearms is also thought of as having been possible because of the highly significant representation of the warrior class, ‘much larger than in any European country, amounting to somewhere between 7 and 10 percent of the entire population’, in PERRIN, Noel. Giving up the Gun: Japan’s Reversion to the Sword, 1543-1879. Boston: D.R. Godine, 1988.

Other facets of the normative landscape, beside the military class’s preconceptions of honor, are also decisive in explaining variations in weapons utilization.\(^1\) International norms, that is norms formed by international institutions, reinforce or contradict preconceptions of honor, and ultimately play a key part in shaping how actors perceive and use weapons.\(^2\)

Several studies demonstrate that a division between norms that would emanate from the domestic level and those from the international level is extremely artificial, because each level constantly reshapes the other, and \textit{vice versa}.\(^3\) The artificial distinction is though used in this chapter because it reveals the tendency of the extant literature to focus either on norms thought of as coming from domestic groups of militaries, or on the impact of norms built by international institutions. It also helps us to sketch a more detailed review of the contribution of each perspective on the question of the variations in weapons utilization.

\textit{The international social history of weapons}

If the impact of ‘international’ norms was rapidly tackled by the studies reviewed so far in this chapter, other studies investigate this aspect in-depth.\(^4\) According to them, the

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\(^1\) Social perceptions of what constitute a people’s identity and a people’s ideology have been crucial to explain certain practices of war and uses of force, such as ‘the changing patterns of humanitarian intervention’ See FINNEMORE, Martha. \textit{The Purpose of Intervention Changing Beliefs about the Use of Force}. Ithaca: Cornell University Press, 2003.

\(^2\) Norms are commonly defined as “\textit{collective expectations for the proper behavior of actors with a given identity}” as having both a constitutive and regulative power.” They will be more defined in the theoretical chapter.


international social history of weapons directly influences states utilization of weapons for three reasons:

First, weapons ‘attribute’ to their owners an identity within an international institution that is acknowledged by the rest of the members of that international institution (also called ‘the constitutive impact’ of the social norms attached to the weapon) (1).

This ‘social international identity’ enables the weapons’ owners to distinguish themselves from, or to group with, other states. Consequently, weapons acquisition and utilization are decisive for states to be accepted by, or to differentiate themselves from, other members of the international institutions (the logic of distinction) (2).

Because international institutions are embedded in relations of power and hierarchy, the acquisition or refusal to deploy a weapon also becomes an instrument to perpetuate relations of power. The extant IR literature more specifically focuses on relations of domination inherited from the ‘century of Empires’ (i.e. 19th century) during which the ‘standard of civilization’ was created (3).

**Weapons define states in the eyes of international institutions**

When states apprehend weapons acquisition or utilization, they also consider what the weapon will mean, signal and reveal about them, in the eyes of the other states. Ultimately, weapons ‘seal’ states with an identity that defines not only who they are, but also who they are standing against.

Richard Price convincingly demonstrates that, since World War I, chemical weapons have been marked with a ‘taboo’, defined as a “particularly forceful kind of normative prohibition’ associated with ‘widespread popular revulsion”, creating “expectations of awful consequences or sanction” in case of a violation.1 This extremely negative social attribution transforms the user of the weapon as a state ‘unfit for membership in civilized international

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society’.\(^1\) The destruction of firearms in Japan was ‘part of a general reaction against outside ideas – particularly Christianity and the Western attitude toward business’.\(^2\) The Japanese Emperor re-introduced swords to reaffirm ‘Japan’s identity’ (or more specifically what the Emperor perceived as fundamental to Japanese identity), in opposition to what he perceived as central to the identity of the Western powers. \(^3\)

**Weapons as the ‘entry card’ or the ‘distinguishing feature’ of international institutions**

Because weapons provide states with a specific ‘international identity’, states deliberately choose to produce and deploy certain weapons in order to gain this identity and join, or signal their distance from, powerful groups. The case of nuclear weapons is fascinating because contradictory identities have been attached to the weapon. On the one hand, using a nuclear weapon makes its users ‘barbaric and uncivilized’.\(^4\) On the other hand, nuclear weapon acquisition is “part of what modern states believe they have to possess to be legitimate modern states”.\(^5\) ‘Third World’ States tend to develop a very expensive set of ‘four or five advanced aircrafts’. These ‘high-tech’ weapons’ are too few to allow these states to gain ‘substantial strategic or tactical benefits’ but they are perceived as a means for them to join the ‘modern

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\(^3\) According to Perrin, the value of identity (i.e. who we are as a people) partly explains the ‘de-introduction’ of firearms in Japan. Even though Japanese were producing their own firearms, they could not help perceiving this weapon as a capitalist Western means of warfare. In a context of increasing tensions with Western Empires, in which reaffirming its identity is often perceived as necessary to win, the value of identity significantly influences which means of warfare are going to be chosen to wage war. The value of identity, especially in reaction to a threat, is generally perceived as being extremely powerful in international relations, and weapons utilizations are not an exception. See PERRIN, Noel. *Giving up the Gun: Japan’s Reversion to the Sword, 1543-1879*. Boston: D.R. Godine, 1988. The literature on civil war and nationalism also suggests that the ‘identity card’ is a powerful instrument with which to go to war and/or to mobilize against a threat.

\(^4\) Nina Tannenwald shows how, in World War II, using the nuclear weapon was first seen as being legitimate (nuclear weapon being seen as a ‘conventional weapon’), and how having recourse to nuclear weapons after Hiroshima and Nagasaki was perceived as illegitimate and barbarian, in TANNENWALD, Nina. *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons*. Cambridge University Press, 2007.

nation-state club’.1 Iraq justifies its chemical weapons utilization against Iran by its outsider status (i.e. a non Western state that regularly violates international law). Iraqi utilization of chemical weapons, called ‘the weapon of the weak’, is justified by, and at the same time reinforces, the Iraqi status of ‘weak’ state.

In sum, two questions are fundamental to an understanding of why a state develops, acquires or uses a weapon: how the weapon is internationally socially perceived (1), and how the weapon distinguishes states within international institutions (2).

**Weapons, standard of civilization and imperial order: perpetuating hierarchies inherited from the ‘century of Empire’**

In a hierarchical society, the logic of distinction entails the logic of discipline. Several authors demonstrate that, because weapons enable states to distinguish themselves from others, they are powerful instrument in maintaining or disrupting extant hierarchical relations of international institutions.2 In that sense, weapons acquisition is not only a means by which to define who a state is, which other states it is close to or different from, but also a means to determine whom it will dominate and whom it will obey.

Price explains that post World War I international debates denounced the utilization of chemical weapons as violating the standards of civilization defined and inherited from European empires. Several studies demonstrate that, because ‘civilized’ empires used the standards of civilization to justify their domination of the ‘non civilized periphery’, standards of civilization have a disciplining power.3 Because chemical weapons define who reaches the standard of civilization, they are “implicated in the hierarchical operation of ordering war and

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international relations”. Price mentions the Italo-Ethiopian war of 1935-1936, during which the Italians used chemical weapons on the grounds that “Ethiopians have repeatedly shown she is not worthy of the rank of civilized nation”. Because Ethiopians allegedly fail to meet standards of civilization, Italians do not have to conform to a “civilized” behavior, hence their utilization of the ‘non-civilized’ chemical weapon.

The three limits of the literature on the social history of weapons

The extant literature which retraces the social history of weapons is limited for three reasons:

First, and surprisingly, it fails to consider that the conception of honor is closely linked to the laws of war. Several historical and critical studies demonstrate the idiosyncratic nature of the laws of war, formalized by the European aristocracy and referring to Christian philosophers and theologists. Therefore, the chivalric codes shared by aristocrats, based on Christian values, not only define the conception of honor but also what “fighting justly” is (laws of war). The laws of war are not solely composed of legal conventions, but of norms that are so deeply embedded in actors’ perceptions that they are called customary. This interdependence between the two bodies of norms (honor and laws of war) means that any shift in one body immediately affects the second body. Consequently, studying conceptions of honor without acknowledging their entanglement with laws of war (the meta-norm of fighting justly), and vice versa, necessarily delivers a limited understanding of how social history actually impacts on weapons utilization.

Second, almost all the authors demonstrate that weapons acquisition is also driven by the ‘logic of distinction’: weapons are an instrument used to label and classify the user. The

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notion of symbol is recurrently mentioned to prove the validity of the claim that weapons distinguish not only their users, but also their non-users, from the rest of the actors. A weapon can thus be a “powerful symbol”, with a “highly symbolic nature” or “value”. It needs a “symbolic supporter”, which creates a “symbolic connection”, and which “expresses an identity”. In sum, a weapon can distinguish because it can symbolize. Yet, these studies never really engage this aspect: What is a symbol? How is a weapon transformed into a symbol? How does being a symbol influence weapons utilizations? These questions are never explicitly tackled, as if the definition and the impact of the symbol on weapons variations should be taken for granted.

Third, studies I identify as interested in understanding the impact of the social history of weapons rarely confront their own perspectives with the others. Studies focusing on the impact of honor only superficially analyze how international social norms might also affect weapons utilization, and vice versa. This lack of confrontation prevents authors from building a broader theory, mixing the domestic and international levels, explaining how and when social history explains shifts in weapons utilization.

From social history to laws of war

As mentioned in the former paragraph, studies on the social history of weapons overlook the fact that the laws of war shape, and are shaped by, the two conceptions of honor and civilization. This neglect explains why studies evaluating the impact of laws of war on practices of war (including weapons utilization) remain largely closed to studies on social history, and vice versa. The following paragraph will detail how this perspective highlights weapons

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utilization, and, why it makes particular sense to combine it with the perspective of social history.

**Do laws of war constrain states’ weapons utilization?**

The extant literature studies the impact of laws of war on weapons utilization through three lenses:

1. The constraining impact of legal texts limiting either the nature of, or the conditions for the utilization of the weapons
2. Shifts in the organizational culture of democratic armies, especially the increasing role of Judge Advocate Generals (JAGs) and the development of ethics in military trainings,
3. The rising legal consciousness of democratic societies since the end of the Cold War and the decisive role of laws of war in winning strategically

The following paragraphs explain how each of these lenses helps us to understand how laws of war constrain states’ weapons utilization.

**The constraining impact of legal texts on states’ behaviors (measuring states’ compliance with laws of war)**

Several authors, classified as institutionalists, propose to measure the influence of laws of war on state practices by inventorying all the legal conventions, and verifying states’ compliance with them. This ‘observation’ enables them to draw possible conclusion as to which type of legal rules a specific type of state is more likely to comply with, and when.. For instance, Morrow and Hyeran measure states’ compliance with what they define as the nine existing issue-area of *jus in bello*, during all the interstate wars of the 20th century.  

Their findings outline that legal texts with ‘legal clarity’ are more likely to restrain states in their actions; that

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states do not equally comply with each “issue-area”; and are more likely to comply with some domains (eg the area of chemical weapons) than others (such as the treatment of civilians).

If studies on compliance are extremely useful to have a specific picture of which laws of war seem to be accepted by the majority of states, they have three important limits.

First, they do not take into account the fact that some violations are harder to define than others. As we will discuss at the end of this section, laws of war are inherently ambiguous. When studies measure states’ compliance with laws of war, they compare whether the states’ practices of war conform to their own understanding of the legal rule. This understanding might vary over time, and, more importantly, it might conflict with the understanding of the state which ‘operates’ the practice. (It is therefore not surprising that they mention legal clarity as a decisive factor of compliance, because it is easier for them, and also for actors, to determine when a violation occurs, and when it does not).

Secondly, the measure of compliance does say in fact very little about the constraining power of laws of war because it does not take into account the ‘preexisting conditions’ of states. For example, it will be extremely hard for a state that possesses rare low technologies to strike precisely, and not hurt civilians. The same operation will be much easier for states with sophisticated drones. Because compliance is a descriptive (who complies to what?) rather than a dynamic notion (what has the state actually done because it felt constrained by the laws of war?), it fails to provide an accurate picture of how laws of war eventually constrain states.

Finally, a state might refuse to sign legal conventions despite the fact that it complies in practice with what the very same legal conventions preconizes. Legal rules of laws of war might have other types of impact than merely ‘ruling power’. This ‘sort of impact’ will be analyzed in the following section.

Shifts in the organizational culture of democratic armies: the (new) role of JAGs and a new organizational culture of restraint

Several authors document the increasing involvement of JAGs within the armies of democratic countries.¹ Since the end of the Cold War, JAGs, whose “primary function and

¹ As Dunlap explains, “At an increasing pace, military lawyers are becoming more involved in operational issues” in DUNLAP, Charles J. “It Ain’t No TV Show: JAGs and Modern Military Operations.” Chicago Journal of International Law 4, 2003, p479–92.
responsibility (...) is to recommend legally acceptable courses of action to the operational branch of the chain of command “, contribute significantly to establishing the rules of engagement (ROE) that define, inter alia, which weapons can be used and when. In recent conflicts, including that in Iraq, US JAGs engineered the enforcement of several mechanisms, one of these being the so called ‘mitigation technique’, which is designed to preempt US soldiers from using certain weapons in certain conditions.¹ Some of these authors even believe that because of the important role played by JAGs, many states have experienced a radical transformation, a ‘Revolution in Legal and Military Affairs’, “transforming laws of war into a major concern in modern war”.²

If the presence of JAGs on battlefields is not a new feature, several studies stress that democratic states have changed their way of apprehending laws of war. Ariel Colonomos points out that the US Military Academies’ education program has recently included a core curriculum course of ethics of war, mandatory for each student.³ Robinson, de Lee and Carrick show, through the comparison of the military ethics education programmes of ten democratic states, that, if all these states used to develop ethics “on an ad hoc basis”, they now include the subject much more rigorously.⁴

In sum, many authors seek to shed a different light on the impact of laws of war, by means of the analysis of the role of the military lawyer, as an agent who introduces into the army new limitations to weapons utilization, and by analysis of the increasing development of

⁴ See ROBINSON, Paul, DE LEE, Nigel, CARRICK, Don, eds. Ethics Education in the Military. Aldershot, England; Burlington, VT: Ashgate Pub. Company, 2008. The ethics education policies of ten states are studied in this book, including United States, United Kingdom, France, Germany, Netherlands, Norway, Australia, Canada, Japan, and Israel. This study is extremely interesting and shows variations in how each state relates to ethics education. Indeed, the British are perceived as ‘more pragmatic’, the US have a ‘balkanized approach’ to the teaching of ethics in military academics, France has recently placed ethics at the core of officer trainings, etc.
ethics education, which has raised soldiers’ awareness of laws of war.¹ Many of these authors believe that military lawyers have been increasingly included in military operations in reaction to an event, as a consequence of a deeper cause. US JAGs saw their contingent significantly increased after the Vietnam War. Israeli military lawyers would have ‘seen their operational legal advice ‘ being ‘popular’ only after the Six-Day War in 1967.² Why should a state want to acquire, at a specific time, agents who, through their legal advice, might influence and restrict its weapons utilization?

The rising “legal consciousness” of public opinion

For these authors, a possible cause of the particular timing is public opinion. Proponents of lawfare (law as a mean of warfare) believe that, since the end of the Cold War, and the consequent development of international commerce, public opinion in democratic states has developed a ‘legal consciousness’, vaguely defined as a popular public aspiration to see one’s state abide by the laws of war.³ This legal consciousness directly conditions the support of public opinion. Should public opinion learn that the militaries have violated the laws of war, it ceases to support them in that war.⁴ Devoid of the support of public opinion, militaries are doomed to lose the war on the strategic level.⁵


⁴ Lawfare is defined as “the strategy of using – or misusing – law as a substitute for traditional military means to achieve an operational objective”. Charles Dunlap, who coined the term, wanted to find a term that could be easily accessible to a non-military audience, hence his choice of lawfare, which is a contraction between law and warfare DUNLAP, Charles J. “Lawfare Today: A Perspective.” Yale Journal of International Affairs 146 (Winter 2008). He also explains that “The sobriquet of lawfare was meant to impress upon military audiences and other non-lawyers that law is more than just a legal and moral imperative; it is a practical and pragmatic imperative intimately associated with mission success.⁴” in DUNLAP, Charles J. “Lawfare Today... and Tomorrow.” In International Law and the Changing Character of War, US Naval War College International Law Studies. Vol. 87, 2011.

⁵ Dunlap refers here to the theory elaborated by Clausewitz on the ‘trinity’ between the politics, militaries and civilians.
Several assumptions underpin this theory, the most salient one being that the *perception* public opinion has of what happens on the battlefield is held as central, and much more decisive than what actually happens on the battlefield. This belief echoes the distinction, notably theorized by Becker, between transgression (i.e. an action that violates the laws of war happens on the battlefield) and violation (i.e. a transgression that is publicized and denounced).\(^1\) For proponents of lawfare, it is only violations of laws of war that break the moral support of public opinion for their military lawyers, and ultimately lead to strategic failure. But how does a transgression become a violation? Who publicizes the transgression, to transform it into a violation?

**Media and legal consciousness**

A whole literature questions the ‘capacity’ of the media to inform and ‘raise awareness’ in public opinion. Several studies assume that the increasing involvement of the media in war is the direct cause of the rise of legal consciousness in public opinion.\(^2\) Yet, this assumption is underpinned by the belief that more media coverage would automatically lead to more awareness of what constitutes a violation of the laws of war, and, more importantly, to more objection to the violation of laws of war. This relationship is not however as straightforward as it seems.

First, media coverage operates an upstream treatment of the ‘fact’, a treatment which eventually impacts on how public opinion perceives this very fact. Concepts of, *inter alia*, priming (directing significant attention to a fact), framing (‘selecting some aspects of a perceived reality and making them more salient’) and agenda setting (hierarchizing the issues) show that there is a wide range of types of media coverage.\(^3\) Depending on how the fact is treated, the capacity for the media to raise awareness of it might considerably vary.

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1 See BECKER, Howard S. *Outsiders*, Free Press, 2014.

2 Several studies tackle the issue of how the increasing media coverage might have lowered public support. Yet, the findings are often mixed, showing that the media were also used for ‘propaganda’ and promoting a positive view of the war; See HAMMOND, William M. *Reporting Vietnam: Media and Military at War*. LAWRENCE, Kan.: University Press of Kansas, 1998. Other studies tackle how media influence most recent wars in CARRUTHERS, Susan L. *The Media at War: Communication and Conflict in the Twentieth Century*. New York: St. Martin’s Press, 2000.

3 The agenda setting “reflects the impact of news coverage on the importance accorded to issues” in IYENGAR, Shanto, SIMON, Adam. “News Coverage of the Gulf Crisis and Public Opinion: A Study
Moreover, even if it is assumed that the type of media coverage does not affect (either positively or negatively) the capacity of the media to raise awareness, public opinion is far from being versatile or subject to ‘mood swings’, driven by information it receives from the media.¹ Public opinion indeed does not necessarily adhere to the treatment of a fact by the media, showing that media coverage is often perceived as an alternative rather than as an ultimate source of information.²

**Moral entrepreneurs: recognizing when there is a violation of the laws of war**

If public opinion is more exposed to images of war that it was previously, because of the extension of media coverage, it still needs to understand, and *to be taught*, what constitutes a violation of the laws of war. Several authors underline the crucial role of “moral entrepreneurs” (also called norm entrepreneurs) who “consciously set out to change the perception and values of others’ by deploying ‘the tools and techniques to accomplish this task of Agenda-Setting, Priming, and Framing.” Communication Research 20, no. 3, June 1993, p365–83.

The exhaustive definition of framing used in the literature on media is “to frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation” in ENTMAN, Robert M. Projections of Power Framing News, Public Opinion, and U.S. Foreign Policy. Chicago: University of Chicago Press, 2003. Finally, the priming “addresses the impact of news coverage on the weight assigned to specific issues in making political judgments (...) The more prominent an issue in the national information stream, the greater its weight in political judgment” also in IYENGAR, Shanto, SIMON, Adam. “News Coverage of the Gulf Crisis and Public Opinion: A Study of Agenda-Setting, Priming, and Framing.” Communication Research 20, no. 3, June 1993, p365–83.


of persuasion”.¹ Price demonstrates how a transnational network of NGOs (gathered in the International Campaign to Ban Landmines, also called ICBL, network) successfully constrained certain states to sign a ban on landmines, but also to destroy their landmine stockpiles, through the utilization of various techniques. By ‘naming and shaming’ states who did not sign the ban, but also by providing information to the public and international actors, NGOs succeeded in making states ‘accountable’ for their landmine utilization, in the eyes of public opinion, but also in the eyes of international institutions.² In this process, the laws of war played a crucial part because they generally formed the common basis upon which actors struggled to justify why landmine utilization was or was not legitimate.

The two limits on the literature studying how laws of war impact weapons utilization

First, studies that analyze the impact of laws of war on weapons utilization through the notions of compliance and lawfare do not take into consideration the ambiguity inherent in laws of war. Indeed, most of these studies ‘suffer’ from the same bias: they assume that the laws of war are an unambiguous body of laws and that, consequently, states can only either comply with or violate them. There is no grey area between these two possibilities (one situation excludes de facto the other). This ‘dichotomic perspective’ explains why proponents of lawfare implicitly assume that the increasing involvement of JAGs in operational decisions automatically means more weapons utilization in compliance with the laws of war, and ultimately, more constraining impact of laws of war in states’ weapons utilization. The problem with this bias, and this conclusion, is that they fail to perceive that ambiguity is at the core of laws of war. They dismiss or simplify (often with a dichotomy) the multifarious interpretations

¹ The definition provided herein is the definition of ‘norms entrepreneurs’ sketched by Martha Finnemore in FINNEMORE, Martha. The Purpose of Intervention Changing Beliefs about the Use of Force. Ithaca: Cornell University Press, 2003. The concept of moral entrepreneurs was first coined by Howard Becker in BECKER, Howard S. Outsiders, Free Press, 2014. The distinction between norms and moral entrepreneurs depends on the content of the discourse used by the ‘entrepreneurs’. Moral entrepreneur tend to believe and make believe that they wage a ‘moral crusade’ wherein morality is at stake, while norms entrepreneurs emphasize the necessity to change a collective behavior or a collective expectation that is not necessarily perceived as ‘moral’.

of laws of war (states either violate or comply). Thinking with this bias prevents us from questioning which interpretations of the laws of war (and therefore which conceptions of fighting justly) actors (states but also JAGs) share and abide by. Because “the ambiguity is fundamental and irresolvable”, “contradictory and plausible interpretations about the legality of any act (...) exist simultaneously, and neither can be eliminated”, which explains why there is no definite and absolute consensus among international society on the legality of weapons utilization.¹ The fact that a state reaches a greater compliance with a certain interpretation of laws of war does not mean compliance with other equally acceptable interpretations of laws of war.² It is therefore crucial to study the content of the conceptions of the laws of war internalized and applied by actors. Very few studies are actually interested in this aspect, or propose a methodology by which to understand which conception of fighting justly JAGs share, learn from, and apply on the battlefield.³ States’ interpretations of laws of war are also recurrently absent from the analyses on compliance.

Second, this inherent ambiguity is a sort of ‘window of opportunity’ for states to use laws of war as “a resource to influence the political context of their actions”. ⁴ When states use force against other states, they also use international law ‘to define and defend, argue and counter-argue, explain and rationalize their actions’.⁵ This ‘strategic utilization of laws of war’ is decisive to understand the impact of laws of war on weapons utilization. The ambiguity of


³ Following this perspective, the article of Kenneth Anderson that points out the gap between the official “lawyerly language” “devoid of references to an underlying moral vision of the laws of war” and a “private moral background that is rarely articulated in public” is extremely interesting. See ANDERSON, Kennth. “The Role of the United States Military in Projecting a Vision of the Laws of War.” Chicago Journal of International Law 4, no. 2, Fall 2003. Andrew Bell is though proposing to analyze the impact of ethics on US practices of war in his current dissertation.


laws of war offers a grey area that states can use to justify the legality of their weapons utilization. The decisive matter is less ‘does the state’s weapon utilization comply with laws of war’, than ‘can the state’s weapon utilization be justified as complying with laws of war?’. The literature on lawfare does raise this question when it shows how weaker actors ‘provoke’ powerful states and ‘force’ them to violate laws of war in order to publicly denounce their actions as violations of the laws of war, and ultimately win the strategic war of ‘hearts and minds’ (human shield is a perfect example of how weak actors ‘force’ more powerful states to kill civilians). Yet, because it focuses on the strategic utilization of laws of war by the ‘weak’ (terrorist groups or combatants who fight with low-tech weapons), it fails to seriously investigate how the process of justification of weapons utilization is, in fact, at the core of the variations in democratic states’ weapons utilization. Surprisingly, authors repeatedly tackle issues indirectly related to the ‘logic of arguing’ (necessity for states to frame or ‘graft’ their discourse on former norms, importance of rhetorical techniques, influence of the legalization of the discourse), but without ever really engaging it and demonstrating how this ‘logic’ highlights weapons variations.

**Conclusion**

This chapter explores how International Relations questions, and answers, the issue of why certain weapons disappear from the battlefield. The realist paradigm, the most common International Relations approach for ‘national security’ issues, answers our puzzle with the following explanation: weapons cease to be used when they cease to deter and/or balance with other states. This answer is partial, because it does not consider how actors think of the weapons’ technical and material capabilities. More precisely, if realists acknowledge that actors always regard weapons’ technical capabilities through a prism of perceptions, social history

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being one of them, they considerably overlook and fail to investigate how social history actually affects actors’ perceptions of weapons’ efficiency.

‘Ideational perspectives’ fill the gap and, drawing concepts and methods from sociology, investigate how the social perceptions attached to a weapon eventually influence its utilization on the battlefields. Social perceptions of honor, but also of civilization, decisively influence militaries and states in their choice of weapons utilization. Whether these studies are rational or irrational, all of them convincingly demonstrate that what constitutes an ‘efficient weapon’ considerably varies over time, and that the social perceptions attached to the weapon are decisive to an understanding of why there is this variation. Yet, and surprisingly, this literature fails to recognize, or at least to explicitly assess, the crucial role of the laws of war, both as regulative and constitutive norms. This exclusion, and correlatively this lack of communication, between studies focusing on the social history of weapons and these interested in the impact of the laws of war, constitutes a grey area that has to be clarified, to improve our understanding of weapons utilization.

The third part reveals that the extant literature provides valuable insights on how the laws of war impact certain weapons utilization, especially through the concepts of lawfare, military organization, accountability and moral entrepreneurs. Yet, these studies do not recognize the fundamental and inherent ambiguity of the laws of war. By overlooking this ambiguity, these studies miss the crucial role of states’ justifications of their weapons utilization on the grounds of laws of war. States use the laws of war to legitimate their weapons utilizations. By arguing over the laws of war, states (and all the actors engaged in the process of justification) also participate in reframing these very laws of war. In fine, their justifications also constitute a decisive driver in the process of social attribution of weapons, and this ultimately shapes how weapons are perceived and used by actors.
II - The Theoretical Argument: Arguing Over Fighting Justly and Changing Weapons of War

Explaining the puzzle

Why did the first Obama Administration decrease its UAV utilizations against targets it considered as terrorist, while, at the same time, maintaining that the ‘terrorist threat’ was still at the core of its foreign policy? Why did chemical weapons almost disappear from European battlefields after WWI? More surprisingly, why their absence in WWII, while each belligerent had significant stockpiles of them at its disposal? Why did the US dramatically decrease its napalm utilization precisely after the Vietnam War?

Three common explanations and their limits

The literature review outlines the different explanations proposed by the extant studies in answer to our puzzle. Three ‘ideal-types’ of theories, or three approaches, stand out. Below, a brief outline of them is sketched out. They will be further detailed in the second part of this chapter.

First, actors cease to use an available weapon when they believe that the weapon is less efficient than it used to be, or than other weapons also at their disposal. This theory, called ‘efficiency theory’, mainly relies upon two logics. First, to be used, the weapon has to be perceived by its users as tactically or/and strategically useful. Second, a weapon promoted within the military culture (i.e. a weapon positively perceived as efficient in the manuals, integrated in the dominant doctrines, whose utilization is not problematic for militaries) is also more likely to be deployed on the battlefields.

1 Even though I call these explanations “theory”, they are really approaches by which to highlight aspects of weapons variation, rather than mono-causal explanations of the phenomenon.
Another theory states that actors cease to use a weapon because the costs associated with its utilization are too high with regards to the stakes they want to achieve. This logic is derived from the ‘cost-utility’ paradigm, widely used in economics and rationalist studies. Roughly, ‘actors use the weapon they can buy, when they can afford its utilization’. The logic which determines if they can buy the weapon is the ‘logic of arbitration’: that is, how a state evaluates the cost of using a weapon in comparison with other weapons. The logic of substitution, which holds that actors are more likely to use a weapon which shares the same technical characteristics but which is less costly, also underpins this cost theory.

Thirdly, actors cease to use weapons because they feel constrained by pressure from international organizations and influential international non-state actors (such as prominent NGOs). Both produce legal treaties and use specific techniques (for instance ‘naming and shaming’) to constrain states in their weapons utilization.¹ This constraint works through the logic of scrutiny: states prefer to avoid international scrutiny, which might limit the scope of their actions and invite criticism of their actions, and therefore are more likely to use weapons in conformity with what international actors expect from them. Moreover, states are not hermetic to moral considerations: they also internalize the dominant norms of the world order, built by so-called ‘moral entrepreneurs’, and therefore eventually choose weapons which do not violate these norms and are not regarded with opprobrium.²

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¹ NGOS do not have the power to produce legal treaties, yet they are sometimes included in the process of formalization, work with international jurists and circulate drafts of potential bans. The formalization process of the Ottawa Convention banning landmines did, for example, include many NGO members.

² The concept of moral entrepreneurs is defined in the literature review.
Answering the puzzle with the three extant theories: a summary chart

<table>
<thead>
<tr>
<th>Why do weapons disappear from the battlefields?</th>
<th>Efficiency Theory</th>
<th>Logic of Tactic/Strategic Utility</th>
<th>A weapon is more likely to disappear when it is not perceived as tactically and strategically useful.</th>
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<tr>
<td></td>
<td>Logic of Military Culture</td>
<td>A weapon is more likely to disappear when its utilization is not promoted within the military culture.</td>
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<tr>
<td>Cost Theory</td>
<td>Logic of Arbitration</td>
<td>A weapon is more likely to disappear when its utilization is more costly compared to other weapons.</td>
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<tr>
<td></td>
<td>Logic of Substitution</td>
<td>A weapon is more likely to disappear when there is a less costly substitute (i.e. weapons with identical technical characteristics).</td>
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<tr>
<td>International Pressure Theory</td>
<td>Logic of Scrutiny</td>
<td>A weapon is more likely to disappear if its use gives rise to international scrutiny.</td>
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<td></td>
<td>Logic of Appropriateness</td>
<td>A weapon is more likely to disappear if militaries and governments believe that the weapon ought not to be used because it is illegitimate.</td>
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What about the meta-norm of fighting justly?

This present work does not contest the validity of these theories. As our empirical part demonstrates, they undoubtedly highlight crucial aspects of the variations in weapons utilizations, and, ultimately, why certain weapons cease to be used on the battlefields. Yet, after a closer examination, two limits seem to stand out from these ideal-types.

The first limit concerns the ‘malleability’, or the ‘wide range of meanings and significations’ one can attach to each of the logics at stake in each theory. Similarly to Katzenstein, who explains that, because “interests are constructed through a process of social interaction”, it is important to “define”, not “defend” them, we do not contest that actors are
interest-driven and prefer to use efficient, cost-effective and legitimate weapons.¹ Yet, we regret the insufficient attention devoted to understanding and defining what these terms mean, and, more importantly, how these perceptions of efficient, cost-effective and legitimate weapons are shaped over time.

The second limit, corollary to the first one, is that none of the logic clearly refers to the role of the meta-norm of fighting justly. As defined in the introduction, the meta-norm of fighting justly refers to collective expectations for a proper understanding of methods of warfare, especially weapons utilisations, banned or allowed by the laws of war (jus in bello). The extant theories do not investigate the impact of this meta-norm, either as data or a given fact which challenges and modifies the actor’s calculus of an efficient, cost-effective or legitimate weapon (rational perspective), or as a norm which is at the core of the process of social interaction that ultimately shapes actors’ perceptions on weapons (irrational perspective).² This omission is surprising because several studies investigate how actors understand and refer to the other body of laws of war (jus ad bellum) when they have to intervene abroad.³ In the so-called rational theories, many authors study how actors comply with the extant legal rules to assure the success of their intervention. Constructivist works also analyze how the interests of states in intervening have changed over time, and how the

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² The work of Richard Price on the ‘taboo’ stands out as an exception, even though he does not entirely clarify whether the powerful norms which create the taboo (upon which actors can graft their norms) are part of the meta-norm of fighting justly, or whether they are independent from it. See PRICE, Richard M. The Chemical Weapons Taboo. Ithaca: Cornell University Press, 1997.

‘evolution’ of these interests is due to shifts in the conceptions of humanitarian concerns, or more generally, to shifts in norms of world order (such as sovereignty). \(^1\)

In short, the underestimation of the impact of the meta-norm of fighting justly on the overall variations in weapons utilization, shared by the three theories, constitutes a gap that needs to be bridged.

**The theoretical argument**

**Roadmap**

In the remainder of this chapter, I first briefly recall how the three paradigms of International Relations (realists, liberals and constructivists) answer to the research question, and then explain why their answer is limited.

Secondly, I review and test each of the common and aforementioned theories (cost-utility, efficiency and international pressure theory). I show that when applied to the case of three weapons (chemical weapons, incendiary weapons and unmanned aerial vehicles), these theories are insufficient to explain the variations in these three weapons’ utilizations. The main reason is that they fail to consider the role of the meta-norm of fighting justly (i.e. their perceptions of what the laws of war ban or allow) as decisive in actors’ practices of war, including when actors have to decide which weapons they are going to deploy, and how. *In fine*, they dismiss the impact of this meta-norm of fighting justly on variations in weapons utilization.

Thereafter I lay out an alternative theory, which suggests that the meta-norm of fighting justly ultimately contributes to shaping what actors perceive, or evaluate, as an efficient, cost-effective and legitimate weapon. I hypothesize, specifically, that the ‘arguing process’, at the international level, over the meta-norm of fighting justly is decisive in explaining why and when

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states cease to use certain weapons. When actors fail to prove that their weapons utilization does not violate the dominant meta-norm of fighting justly, and when they fail to demonstrate that their weapons utilizations does not disrupt the extant symbolic order, states have no other choice but to diminish or conceal their weapons utilizations.

The fourth part of this chapter restates the argument and demonstrates to what extent the proposed theory highlights the three examples we chose to analyze: the decreasing use of chemical weapons after WWI, the removal from, respectively, the US and Israeli arsenals of napalm after the Vietnam War and white phosphorus after Cast Lead (2009), and the sharp decrease in the use of Unmanned Aerial Vehicles after the first Obama Administration.

Finally, I clarify the scope and the limits of my theory, and set out the conditions under which the theory is more likely to explain the variations in weapons utilizations.

**Extant theories and limits**

**IR theories and limits**

The previous chapter outlined and demonstrated that the puzzle, which constitutes the core of this study, has been tackled by the three dominant paradigms of International Relations literature, namely realism, liberalism and constructivism. Each of the following paragraphs summarizes how these theories answer our question, and why, in the light of the three cases we studied (chemical and incendiary weapons, unmanned aerial vehicles), the answers are only partially satisfactory.

**Realists**

As a reminder, realist theory presumes variations in weapons utilization to be exclusively based on the capacity of the weapon to deter, and to achieve specific goals (operational or strategic), depending of the international context (in the case of structural realists, the nature of the structure, offensive or defensive, determines the nature of the weapon that states will choose to employ). In sum, realist theorists do not so much refute the impact of actors’ perceptions, including those on the legality of the weapons, as just neglect them, to focus on what happens between states once actors’ perceptions on weapons are established or
This neglect partly explains why realists do not consider laws of war as decisive in explaining states’ practices of war.

Another explanation can be found in the roots of classical realism, which maintains the primacy of material capabilities over ideational factors. This theoretical premise explains why realists generally assume that the laws of war, like any kind of law or norms, only reproduce extant power relationships (law reflects “policy and interests of the dominant group in a given state at a given period”), and, in fine, only have an epiphenomenal impact on state’s practices of war.\(^1\) The examples studied in the dissertation do not fundamentally contest that the laws of war are used by the most powerful states as a means to reproduce and perpetuate an extant hierarchy. Weak or non-powerful states participate in the arguing process, but the empirical cases suggest that their arguments are less likely to be regarded as persuasive by the rest of the members of the international organization. Ultimately, they are less likely than are powerful states to remold the meta-norm of fighting justly, to fit with their own dominant conceptions. And the paradox of precision explored in the chapter on drones highlights this tendency: the tightening of the accepted standard of precision (strikes have now to be extremely precise, with a very limited firepower, to be regarded as abiding by the customary norms of distinction) might be interpreted as the expression of the more powerful (the United States and the European states which have in their arsenals high technologies able to strike extremely precisely) to the detriment of the less powerful states. The latter do not have the technical capabilities to reach such high standards of precision, and are somehow condemned to violate the laws of war (which ultimately prevents them from using the laws of war to their own advantage).

\textbf{Liberals}

The liberal view stands out from the realist perspective in that it does consider, and investigates the impact of the laws of war on states’ practices. More specifically, several studies

\(^1\) See the chapter on The Foundations of Law, in CARR, Edward Hallett. \textit{The Twenty Years’ Crisis, 1919-1939; an Introduction to the Study of International Relations}. New York: Harper & Row, 1964. Also, as John Mearsheimer famously put it, for realists, institutions (and therefore laws) are “basically a reflection of the distribution of power”, “have no independent effect on state behavior” and “matter on the margins”. Institutions are “mere epiphenomena of power” in MEARSHEIMER, John J. “The False Promise of International Institutions.” \textit{International Security} 19, no. 3, Winter 1994, p 5–49.

The reason why liberals only partially answer our question is that they generally develop a ‘black and white’, or dichotomist approach of how the laws of war constrain actors. By reducing the impact of the laws of war to a mere alternative (comply/not comply), they underestimate the inherent ambiguity of the laws of war, and the capacity for states to develop multifarious yet equally legitimate interpretations and justifications of the very same rule. This inherent ambiguity is constantly exploited by actors, both as an instrument to legitimize or delegitimize their practices of war, and as an opportunity to reshape the spirit, if not the letter, of the extant laws to their own advantage. Finally, because liberals generally study the impact of the laws of war merely through the lens of ‘compliance’, they fail to see that, even though actors may not comply (or are said to not comply) with the law, their behaviors and justifications are still shaped with regards to, in function of, the laws of war (i.e. actors still want to justify the alleged violation, and might also restrict the conditions of their weapons utilisations, even though they are seen as violating the laws).

The three case studies developed in this thesis will explore and illustrate this point more thoroughly. Even though all the actors used projectiles with gas during WW1, and therefore unequivocally violated the 1899 Hague Convention, all of them were at a certain point constrained in their gas utilization because of their understanding of what the laws of war banned or allowed. The Germans, indeed, first used cylinders (or canisters) to deploy the gas, and mainly justified this technical choice by the fact that, in contrast with projectiles, this means of delivery was not banned \textit{per se} by the extant laws of war. This ‘concession’ or ‘resistance’ is not captured by the liberal principle of compliance, because the latter does not aim at understanding the spectrum of possible reactions to the extant legal rules, and focuses solely on whether actors finally violate or comply with the extant treaty. Consequently, and this is the second limit of the liberal theory, the propensity of actors to use the laws of war as a strategic resource is considerably downplayed. The notion of compliance does not enable us to measure how actors try to use the legitimizing power of the laws of war in order to legitimize their
practices, or delegitimize the opponent’s practices. During Operation Cast Lead, Israel and the Commission led by the Judge Richard Goldstone argued over WPW utilization. On the one hand, the report published by this Commission denounced the utilization of WPW in an attack on a UN school. They considered that the WPW utilization against civilians, even if accidental, constituted a violation of the laws of war. In answer to this, Israel insisted that the UN school was in fact hiding terrorists and rockets. Israel argued then that, if the WPW did hurt civilians, this was collateral damage, to achieve a high military gain. This disagreement or dispute demonstrates the two failures of the notion of compliance: its incapacity to determine how actors attempt to instrumentalize the laws of war to legitimate their actions, and how the ambiguity of the laws of war blurs the judgment over compliance.

**Constructivists**

The constructivist approach is probably, among the three International Relations theories, the most interested in investigating the role and the impact of actors’ perceptions on practices of war. The previous chapter reveals that constructivists refuse to consider the defense domain as ‘hermetic to moral considerations’. They demonstrate that certain norms constitutive of the normative landscape of actors do matter, and do restrict actors’ ranges of possibilities when they prepare for and wage war. The question becomes then: how is the dominant normative landscape constituted? More precisely, when and why is a norm internalized and reproduce, by the actors? In the light of our particular puzzle, do constructivists analyze why and when the norms of the laws of war become dominant to the extent that they directly impact actors’ practices of war? Their answer generally evokes three

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2 In WENDT, Alexander. “Anarchy Is What States Make of It: The Social Construction of Power Politics.” *International Organization* 46, no. 2, March 1, 1992, p391, Wendt explains “500 British nuclear weapons are less threatening to the US than 5 North Korean nuclear weapons”. Why? British are friends and North Korean are not”. Wendt underlines that interaction among nation-states can lead to the development of identities such as competitor and rival, or friend and ally, which are confirmed and reinforced by continued interactions. This process reinforces the identity of friend or enemy.

3 Norms are generally defined as “collective expectations for the proper behavior of actors with a given identity” as having both a constitutive and regulative power. They will be more defined in the ‘proposed theory’ part of this chapter.
concepts: military culture, taboo, and moral or norms entrepreneurs. We use two of these to build the ‘international pressure theory’, which, we argue, is one of the commonly advanced explanations by actors as to why they cease to use a weapon at their disposal.¹

**The international pressure theory: states cease to use a weapon when they are pressured by international actors (namely international institutions and NGOs) to do so.**

The theory of international pressure assumes that states’ weapons utilization varies with the strength of the constraining pressure of international actors. It relies on two ‘mechanical effects’ or logics: the logic of scrutiny and of appropriateness.

**The logic of scrutiny**

The ‘scrutiny effect’ is defined in the following terms: states are more likely to develop practices which will not give rise to scrutiny (from international organizations or NGOs). Scrutiny is problematic, especially for democratic states, because it increases their chances of being criticized, and therefore of losing the support of their own population or of their own allies. Chances of being criticized in the domain of war are even higher than in many other domains, because of the “fog of war”: this irreducible uncertainty inherent in war, which prevents actors from relying on a clear “theoretical guide” which could assure them of winning in the way they initially planned to.²

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¹ We will use the concept of ‘military culture’ to discuss the ‘efficiency theory’.

² Clausewitz defines the “fog of war” as “the great uncertainty of all data in war”, which is “a peculiar difficulty, because all action must, to a certain extent, be planned in a mere twilight, which in addition not infrequently – like the effect of a fog or a moonshine – gives to things exaggerated dimensions and an unnatural appearance. What this feeble light leaves indistinct to the sight talent must discover, or must be left to chance. It is therefore again talent, or the favour of fortune, on which reliance must be placed, for want of objective knowledge.” in CLAUSEWITZ, VON J. GRAHAM, Carl, J. J, WILLMOT, Louise, MAUDE, F. N. *On war*. Ware: Wordsworth, 1997, p90, 24. See COLONOMOS, Ariel. *The Gamble of War: Is It Possible to Justify Preventive War?*. The Sciences Po Series in International Relations and Political Economy. New York: Palgrave Macmillan, 2013 for a more thorough explanation of the impact of this inherent uncertainty in actors’ conduct and justifications in war.
Proponents of lawfare (i.e. the belief that laws of war are a means of war) share the majority of their theoretical assumptions with this theory. In fine, both heavily rely on a Clausewitzian view of war and the belief that the “remarkable trinity” is the key to winning.\(^1\) Clausewitz believes that three entities, namely the people, the military and the government, have to remain close and supportive if a state is to strategically win a war. If the people stop supporting their militaries, the “center of gravity” of this trinity is broken and, eventually, leads the state to strategic defeat. The following sentence, quoted by Dunlap in his decisive article on lawfare, perfectly summarizes the theoretical implications of the logic of scrutiny: “That support can erode or even reverse itself rapidly, no matter how worthy the political objective, if people believe that the war is being conducted in an unfair, inhumane or iniquitous way.”\(^2\)

**The logic of appropriateness**

The logic of appropriateness, or rule-guided behavior, is the other logic which underpins the international pressure theory. This logic does not necessarily consider as decisive the fact that states are scrutinized by other international actors, in explaining their shifts in practices of war. Rather, this logic holds that states, just like humans in society, are “imagined to follow rules that associate particular identities to particular situations”, and which are “of appropriate or exemplary behavior, organized by institutions”.\(^3\) Indeed,

“Rules are followed because they are seen as natural, rightful, expected, and legitimate. Embedded in a social collectivity, they do what they see as appropriate for themselves in a specific type situation.”\(^4\)

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Offering a complementary approach to the logic of scrutiny, this logic proposes the following explanation: regardless of the degree of scrutiny by other international actors, states change their behavior when they contend this behavior violates the dominant norm, or when they believe that their behavior is not right. In other words, states cease to use a weapon when they believe that the weapon either contradicts their identity (who they are), or contravenes what they ought to have done. The concept of taboo, defined as a “particularly forceful kind of normative prohibition” associated with “widespread popular revulsion”, creating “expectations of awful consequences or sanction” in case of a violation, particularly exemplifies how the logic of appropriateness might constrain actors not to deploy, and then to cease using weapons.¹

The limits of the constructivist perspective: the laws of war as an on-going process

The international pressure theory, and the two associated logics of scrutiny and appropriateness, highlight many aspects of weapons utilization. Our proposed theory builds upon many of their key insights. The logic of scrutiny arguably explains why the US preferred not to explicitly acknowledge that they were using napalm in Afghanistan. Because, since Vietnam, napalm is associated with very negative representations, acknowledging that the US was using it in Afghanistan increased the risk of losing domestic and international support, and of increasing the pressure upon US soldiers to abide to the extant laws of war.

The logic of appropriateness is compatible in many respect with the logic of arguing, and therefore with our proposed theory. Indeed, both recognize that actors and social structures are mutually constitutive (i.e. actors are enmeshed in specific social contexts that they both reproduce and transform), and this explains why we have to study with great care the constitution of the social process. Yet, the proposed theory differs from the extant social constructivist literature on two points, which are briefly explained in the following paragraphs, and which will be more thoroughly detailed in the ‘proposed theory’ section.

First, the constructivist theory mostly focuses on the impact of transnational non-state actors. There is an implicit bias, which suggests that these actors are the only ones who can really introduce changes: even though the studies acknowledge that these moral entrepreneurs have to go through state channels to change the international norms, they are pictured as those who really trigger the beginning of the shift. Our empirical chapters contrast, and sometimes contradict, this implicit idea that non-state actors are the driving forces of the shift in normative structure. The chemical weapons ban signed in 1925 did not significantly involve any non-state actors, with the exception of the ICRC. But the ICRC has always intervened in the creation of the laws of war. We can find no movement of international NGOs or activists who denounced the napalm utilization in Vietnam at the international level. Yet, it was in the aftermath of this war that the US significantly decreased its utilization. In sum, our argument is the following: the triggering factor in the shift in the dominant meta-norm of fighting justly is less the role of non-state actors such as the NGO, than the opportunity states see in reshaping the inherent ambiguity of the laws of war to their own advantage (legitimize their practices or delegitimize other states’ practices of war).¹

Moreover, and subsequent to the previous points, the proponents of the logic of appropriateness also fail to integrate within their theory the fact that actors constantly reshape the norms (or meta-norms). In the case of the laws of war, the arguing process did not really impose new norms. Rather, it refined the extant ones, by clarifying the ambiguity of the extant principles (such as the customary norms of proportionality and distinction) and treaties. Helen Kinsella indeed explains, “The laws of war have admitted the possibility of collateral or unintentional damage since Thomas Aquinas first wrote of an act of ‘beside intention’”.² Therefore, the logic of appropriateness does not sufficiently examine that laws of war are an on-going process, driven and shaped by states’ justification, which are constantly dynamic (when states justify their actions, they create precedents which constitute the basis for judging the next actions). This dynamic aspect of the laws of war is crucial, the main reason being that

¹ In this respect, we agree with Wayne Sandholtz when he explains that he wants to reintroduce power in the study of norm, in SANDHOLTZ, Wayne. International Norms and Cycles of Change. Oxford ; New York: Oxford University Press, 2009.

it might lead to the erosion to its constraining aspect (including on weapons utilization), and, ultimately, to its collapse.

The strategic efficiency theory: states cease to use a weapon when the weapon lacks strategic utility

The ‘efficiency theory’ presumes that states slowly cease to use a weapon when they believe that the weapon is less efficient. A weapon becomes less efficient when its users start to believe that the weapon is not as tactically or/and strategically useful as it was, or as other weapons could be. Second, a weapon which is not promoted within the military culture (i.e. a weapon not positively perceived as efficient in the manuals, not integrated in the dominant doctrines, whose utilization is regarded as problematic for militaries) is also less likely to be deployed on the battlefields.

The efficiency theory arguably highlights most of the variations in weapons utilization. The proposed theory in this dissertation does not aim to supersede it, but rather to complement it, notably by showing that the definitions of both the strategic goal and the military culture include considerations on fighting justly.

Logic of Tactic/Strategic Utility

The strategic utility theory assumes that states, and more particularly militaries, are more likely to use a weapon which enables them to achieve their strategic goal. In order to fully understand this logic, it is important to first distinguish strategy from tactics. Indeed, militaries always evaluate the efficiency of their weapons in the light of these two standards. Before detailing them, I want to stress that what these concepts mean and should mean is widely debated in the military literature (especially by the theorists of war). Indeed, there are controversial debates on what strategy should be, and how the two (strategy and tactics) are related to each other.¹ I will not engage these debates, but will use definitions that are both consensually and commonly used by the militaries I interviewed.

The notion of ‘tactics’ is generally defined as “the art or method of deploying the best weapons in a military battle”.¹ A tactical weapon enables its users to fight with the highest possible degree of efficiency. In sum, tactics is the art of the battlefield. A tactical weapon is efficient on the battlefield. In the dissertation, I sometimes refer to tactic with the word ‘operational’. Indeed, tactic defines an operational goal (take a position, push away the enemy, breach the opponent’s front) and determines which weapon can achieve this operational goal with the highest efficiency rate (measured differently depending on the context: time, number of soldiers killed etc.)

The notion of strategy is quite different. Strategy is commonly defined as the “art of using force in order to reach one’s political goals”. This definition is largely founded upon a Clausewitzian perspective of war (war is politics by other means) which holds that strategy is not the art of the battlefield, but the art of decision making.

In a nutshell, military strategy is the art of defining the goals that need to be achieved in war, while military tactic is the art of defining the goals that need to be achieved on the battlefields. For each of the weapons studied in the dissertation, I questioned whether it was regarded as a tactical or a strategic means. Yet, I also largely assume that militaries favor the strategic dimension to the tactical dimension, and that strategy largely dictates which weapon is going to be used on the battlefield. This assumption is debatable, but it seems to be widely shared by the militaries I interviewed, and, more broadly, in the military doctrine of the states I studied.

The theory on the arguing process does not aim to override the logic of strategic theory, which, we argue, is central to explaining weapons’ variations. Rather, the theory completes it by offering new insights into how militaries conceive their strategy, and the central role of laws of war, when they conduct war. It reveals that the meta-norm of fighting justly is often perceived as a strategic tool for militaries to gain the support of both their domestic population and the population they invade. This seems to be particularly true in the context of counter-insurgency, when the meta-norm of fighting justly seems to be even more important in the definition of both the tactical and the strategic goals.

Logic of Military Culture

The second logic, which underpins the efficiency theory, is the logic of military culture, or military organization. Put differently, a weapon starts to disappear because the weapon is not promoted within the military culture. The concept of military culture is here defined as “collectively held semi-conscious or unconscious images, assumptions, ‘codes’, and ‘scripts’ which define the external environment.”¹ In his excellent article on strategic culture, Ian Alastair Johnston uses the definition of culture provided by the anthropologist Clifford Geertz: “system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate and develop their knowledge about and attitudes toward life”². This concept, very close to the notion of norm, suggests that the ‘military rationality’ is also shaped by a specific set of conceptions, institutions and social meanings.

Efficiency theory and meta-norm of fighting justly: an undertheorized relationship

The most compelling example we can provide is that of chemical weapons. Many historical researches show that many soldiers, at the beginning of WWI, used chemical weapons with an extreme reluctance. This reluctance was moral, but also ‘practical’: chemical weapons were extremely difficult to manoeuver, the first offensives with it often resulting in soldiers being gassed by their own gas, and its utilization forcing the soldiers to keep a gas mask on, considerably reducing the scope of their actions. Therefore, the CW was an extremely unpopular weapon. Napalm raised the same types of concerns when used in massive quantities in WWI, Korea and Vietnam: napalm was very volatile and could harm US, or South Vietnamese soldiers, and civilians who were very close to the targets. Moreover, many testimonies reveal how US soldiers felt a form of deep moral revulsion about deploying napalm. Again, the proposed theory does not aim to challenge this explanation, and the empirical examples prove that the military culture is a powerful factor in understanding weapons variations. Yet, the literature often fails to see that the meta-norm of fighting justly is deeply

enmeshed in the military culture. Military manuals are full of references to the laws of war. Symbols in the US and European militaries reproduce hierarchies and practices inherited from chivalric codes, which, in fine, promote a specific conception of the meta-norm of fighting justly. The recent growing increasing contingents of Judges (Judge Advocate Generals), and the implementation of very precise rules of engagement (ROE) valuing restraint in weapons utilization, are often interpreted as demonstrating that the laws of war are increasingly becoming included within European and US military organization. Yet, references to the laws of war and chivalric codes were also numerous during WWI, WW2 and the Vietnam War. The difference is that the then dominant meta-norm of fighting justly was different, valuing military necessity instead of restraint.

**The cost-utility theory: a weapon ceases to be used when it is regarded as expensive**

The cost-utility theory is based upon the simple, even simplistic, premise that actors are more likely to choose a weapon because using it is less costly for them than the other weapons at their disposal.

**Logics of arbitration and substitution**

At first sight, it seems that testing the relevance of this theory requires a very clear idea of the totality of the costs associated with a weapon, ranging from the costs involved in its conception, creation, acquisition, development and utilization. Traditionally, this ‘task’ is at the core of several subfields such as the Political Economy of International Relations or the Defense Economics (also call the Economics of Defense).¹ This field, flourishing in the 1980s, was less invested after the Cold War and the alleged end of the race for armaments. Yet, the interest for this field has been lately rekindled: the recent cuts in the defense budgets of

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¹ Several handbook gathers the extant literature on this field, such as Sandler, Todd, Hartley, Keith, eds. Defense in a Globalized World. 1. ed. Handbook of Defense Economics, ed. by Todd Sandler and Keith Hartley; Vol. 2. Amsterdam [u.a.]: North-Holland, 2007. The two Journal of Conflict Resolution and Defense and Peace economics also regularly propose economic approaches to evaluate the cost of armament.
democracies inevitably raise the question of the arbitrages which need to be made in defense policies and in choices of armaments.¹

**The limits of the cost utility theory: highlighting weapons’ production more than weapons’ utilization?**

In the present work, we tried to measure and determine how the costs of using the weapon were perceived by the actors, especially those who have the power to buy them. As a reminder, the puzzle of this thesis is not to understand why states start to develop weapons, but rather why weapons disappear from the battlefields. The nuance in the formulation is crucial. We want to understand why states cease to use weapons which are already at their disposal, and, in fine, why weapons fall into desuetude while they are still being produced, in massive quantities, used, and while the majority of the costs associated to their utilization are already absorbed by the state. This framing of our research question considerably limits the potential explanatory power of the cost theory, because using a weapon already at disposal does not, apparently, entail more costs than before.

Moreover, the cases of incendiary and chemical weapons also seem to support the view that the cost theory is not decisive in explaining variations in weapons utilization. Indeed, napalm and white phosphorus are extremely cheap to produce and to use, especially if compared to other weapons such as thermonuclear bombs. The destruction of the US napalm stockpiles in 2001 was more costly than a deployment in the field. The chemical weapons were already produced, and at the disposal of both the Allies and Germany when WWII began. Their utilization could thus not be deemed as costly, and yet, the weapon was not used.

In sum, the two logics which underpin the cost theory – logic of arbitrage and of substitution – are illuminating, therefore, to the understanding of why one weapon is produced rather than another, but no so much to the understanding of why one weapon is used rather than another. Moreover, the example of the nuclear weapon shows that states are also ready to engage significant costs to assure their ‘national security, as long as they believe the weapon

will be efficient. The cost theory is therefore really insightful when combined with the efficiency theory.

The theory stated: arguing over the meta-norm of fighting justly and shifts in practices of war

The theory proposed in the present work aims to shed new light on how the laws of war influence practices of war, by investigating, more specifically, how the perceptions of actors on what these laws ban and authorize (i.e. the meta-norm of fighting justly) shape their weapons utilizations. This theory is based upon two logics: the logic of arguing and the logic of symbolic power. Before detailing more thoroughly the theory, and the two logics which underpin it, the following paragraphs will define the meta-norm of fighting justly (FJ). They also demonstrate why focusing on the meta-norm enables us to fully understand variations in weapons utilizations.

The meta-norm of fighting justly (FJ)

The meta-norm of fighting justly (FJ) has, so far, been defined as the “collective perceptions of what the laws of war ban and allow with regards to weapons utilization”. In our empirical chapters, we thus focus on how the different actors (essentially militaries and members of governments) perceived the extant laws of war, and, more specifically, understood what these laws of war allowed or forbade them to do while using three weapons (chemical and incendiary weapons, and unmanned aerial vehicles). In order to highlight the theoretical contributions of such a focus, the following paragraphs detail three distinctions crucial to understanding the notion: meta-norm and norm, meta-norm of fighting justly and laws of war, and meta-norm of fighting justly and meta-norm of waging just war.
The first distinction: Meta-norm versus norm

With the exception of several works, the concept of meta-norm is neither particularly discussed, nor widely used, in the International Relations literature.\(^1\) The meta-norm is yet defined by the sociological and game theory literature as follows: “a norm that one must punish those who do not punish a defection. This is what I call a meta-norm.”\(^2\)

The meta-norm is therefore a sub-category of the concept of norm, which might explain why it is rarely mentioned within the International Relations literature, even in social constructivist or/and liberal studies. As stated earlier, a norm is commonly defined as “collective expectations for the proper behavior of actors with a given identity. Norms thus either define (or constitute) identities or prescribe (or regulate) behavior, or they do both.”\(^3\) The meta-norm differs from the mere norm in three aspects: it is a very constraining norm (and therefore only represents a limited portion of the wide range of the norm), it is associated with the belief that the violation of the norm has to be punished (either by rewarding the one who denounces the violation, or by punishing the one who does not denounce the violation) and this is foundational (it underpins many other norms).

An extremely powerful norm

Therefore, the meta-norm is regarded as being an extremely powerful norm, for it is strongly embedded in actors’ perceptions and rationality. Actors do not only consider that they ought to follow the norm (which requires a high internalization), but they also believe that they

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ought to punish those who do not denounce the violations of the norm. In sum, the meta-norm is particularly powerful because it ‘entails’ the subject not only to think and judge with regards to the meta-norm, but also to act in order to spread and apply it (it bridges the gap, from the belief to the action). When the actors denounce both the violation and those who fail to denounce the violation, they feel rewarded, which, ultimately, reinforces the belief that the meta-norm has to be applied. The following example illustrates this mechanism:

“Meta-norms are a particular kind of norm that (...) reward those who appropriately punish deviance. When President George W. Bush visited the United Nations shortly after the U.S. invasion of Iraq in 2003, he was sharply criticized by French President Jacques Chirac. Chirac's criticism can be seen as enforcement of an international norm that nations ought to work together to solve global problems. Chirac's remarks were vigorously applauded by others in the room. That applause was a form of meta-norm enforcement—a reward given to someone who sanctioned a norm violator. Such rewards increase the incentives for individuals to sanction, leading in turn to stronger norms.”

As explained in the introduction, laws of war are composed of customary norms, that is norms attached with a ‘subjective obligation’ (opinion juris) which provides actors with a strong belief that they are obligated by a norm and that they have to act in accordance with it. Moreover, interviews with the different actors (NGOs but also militaries) reveal that actors also share the belief that they have to denounce a violation of the laws of war when they see it. For these two reasons, the concept of ‘meta-norm of fighting justly’ seems more adequate than the concept of norm.

Another reason explains this semantic choice. A meta-norm is also a foundational norm, that is a norm which shapes other norms. The following paragraph explores this aspect, and more precisely how the meta-norm of fighting justly is strongly linked to the meta-norm of waging just war (perceptions based on jus ad bellum).

The second distinction: meta-norm of fighting justly versus laws of war

I already explained at the beginning of this chapter why the study of the ‘laws of war’ (jus in bello) is currently limited. The majority of extant studies do not take into consideration

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the ambiguity of the laws of war, and the possibility for actors to develop two conflicting interpretations of the laws of war, yet considered as equally legitimate. More generally, studying the laws of war as an unambiguous and clear framework does not allow scholars to adequately evaluate the wide range of behaviors actors can deploy in front of laws of war. Another limit of the extant studies is that it restricts the scope of the normative framework which links the weapons utilization to the ‘salient’ legal treaties, and thus neglects all the other “background” norms (customary norms) that yet remain decisive. Even studies which criticize the notion of compliance fail to clearly take into account the impact of customary norms on variations in weapons utilization.¹

In order to overcome this difficulty, we decided to focus on the collective perceptions actors have of what the laws of war ban and allow (i.e. meta-norm of fighting justly). These perceptions include how they interpret the extant legal treaties, but also the extant customary norms, both of which constitute jus in bello. The name ‘fighting justly’ refers to the fact that jus in bello aims to frame the right conduct in times of war. It is commonly accepted that four customary norms constitute jus in bello: proportionality, distinction, military necessity and feasible precaution. It is also commonly accepted that the two norms of proportionality and distinction are the most important ones, in the sense that they are often decisive in judging whether the two other principles (military necessity and feasible precaution) are respected.

The principle of distinction promotes the necessity for a combatant to always distinguish civilians from other combatants, and never to intentionally and directly and attack civilians. The principle of proportionality affirms the necessity to make a calculation between military advantage and civilian casualties. Theorized with the Dual Doctrine Effect of Thomas Aquinas, this last principle requires that the “price” of achieving a military gain justify the number of civilian casualties, which are seen as “collateral damage”. If the price is too high, collateral damage becomes a crime of war. These two principles form the basis of the meta-norm of “fighting justly”.

A spectrum of interpretations of the meta-norm of fighting justly

The meta-norm of fighting justly is ambiguous because different, and even conflicting, interpretations of it can coexist while remaining equally valid and legitimate. This ‘legitimate coexistence’ of antagonist and diverging interpretations is possible because both the customary norms of distinction and that of proportionality are underpinned by normative calculus. Depending on the normative assumption underpinning the calculation, the outcome (and therefore the most acceptable interpretation of fighting justly) varies.

For the principle of distinction, the calculation is the following: did the strike intentionally target civilians or not? To be answered, this question requires a second normative evaluation, which is based upon the definition what a civilian is, and what the intention behind the strike is. The interpretations of ‘who is a combatant?’ have constantly evolved in the twentieth century. If soldiers during WWI did not really question the status of those they were facing on the battlefields, it is a whole different story for soldiers who launched napalm on the Vietnamese villages, or, even more strikingly, for the drone pilots in Pakistan under the first Obama Administration. The ambiguity of the extant boundaries which differentiate a civilian from a combatant became salient with the ‘decolonizing wars’. The ability of combatants to hide among civilians (human shield) and to use them to fight against the occupying power (for example bombs dropped by women in places full of civilians during the Algerian War) revealed the limits of a category which yet made full sense (and was not ambiguous) in ‘symmetric’ or ‘conventional warfare’. Chapter V on drone strikes also demonstrates how US drone pilots often endorse a very broad definition of what a combatant is, arguing that striking those who help those who fight against the US is legal. This interpretation conflicts with that shared by NGOs, and other states, who denounce a definition of combatant which is too lax.

For a strike to be proportional, one has to ask: does the expected military gain justify the killing of civilians? An answer to this question requires evaluation of the ‘human costs’ caused by the strike, as well as a determining of whether this cost is higher than the military gain the strike is expected to give. The classical case of the nuclear weapon utilization during WWII reveals all the problematic aspects of such a calculation: is a different means, less costly in terms of civilians killed, necessarily more just? How do we estimate a military gain when we are not sure of what it can achieve (counter-factual judgments)? Are there any sort of objective criteria (number of civilians, level of destruction, likelihood of ending and winning the war) to
gauge when a military gain outweighs a civilian cost (which is then transformed into collateral
damage)?

A rapid glance at history shows indeed that actors have understood these questions
differently and, directly or not, promoted very different interpretations of the meta-norm of
fighting justly. To summarize the variety of interpretations, the distinction operated by Colin
Kahl between the Jominian and the Lieberian perspectives is particularly interesting. Kahl
argues that these two interpretations constitute the two spectrums of the wide range of coherent
interpretations of fighting justly\textsuperscript{1}. Kahl defined the Jominian conception (derived from the
strategic thought of the French General Jomini) as an interpretation which promotes
annihilation and massive strikes, that justifies a huge amount of civilian casualties to achieve
one military goal. He then defined the Lieberian conception (drawn from Francis Lieber, who,
according to Kahl, introduced a form of restraint in war practices): this interpretation of fighting
justly values a restrictive understanding of the customary principles, advocating restraint, and
precise strikes causing very low numbers of civilian casualties, regardless of the expected
military gains (on the grounds that nothing really justifies the death of non combatants).

The empirical chapters demonstrate that actors’ conceptions of fighting justly
considerably varied over time, oscillating between conceptions close to the Jominian
perspective (arguments over the napalm bombing in Tokyo and in North Korea) to the
Liebierian conception (rationale of the drone strikes). The key question becomes then why, with
regards to the multiplicity of possible interpretations of fighting justly, does one interpretation
prevail over another at the international level (i.e. is regarded as legitimate or as complying
with the laws of war)?

\textbf{The third distinction: fighting Justly and Waging Just War}

Finally, we also call the norm of fighting justly a meta-norm because it can arguably be
defined as “foundational”, and as “underpinning a huge variety of other rules”\textsuperscript{2}. The meta-norm
of fighting justly refers to the perceptions of the means considered as just, in waging a war: that
is the perceptions of the rules framed by jus in bello. In contrast, jus ad bellum is the set of rules

\textsuperscript{1} See KAHL, Colin H. “How We Fight.” \textit{Foreign Affairs} 85, no. 6, 2006, p83.
\textsuperscript{2} Wayne Sandholtz mentions other meta-norms such as universality, equality, sovereignty in
which stipulate *when* a state can wage a just war, and more precisely under which *conditions* it is just for it to go to war. If practitioners generally refer to two bodies of law, as if they were normatively separate, many political theorists show that shifts in one body necessarily resonates in the other body.\(^1\) Our empirical studies show that one of the arguments advanced by the French and the British, to denounce the German CW utilization, was to stress that the CW utilization was as illegal as the invasion of Belgium. The fact that they transferred the qualifying adjective of ‘illegal’ from the act of going to war to the means of going to war is very revealing of the proximity, at least in the minds of actors, between the meta-norm of jus in bello (i.e. fighting justly) and that of jus ad bellum (which I call the ‘meta-norm of waging just war’). UAV utilization also demonstrates that the development of new means of warfare, framed by jus in bello, could impact on the relevance and coherence of the meta-norm of waging just war. UAV utilization lowered the threshold of when it was acceptable to go to war, by considerably undermining the last resort principle, and by lowering the costs associated with going to war.\(^2\) These costs were still major in the calculation of when it was just for states to go to war, that is in the interpretation of the acceptable meta-norm of waging just war. The UAV example, elaborated in chapter 5, reveals how an interpretation of the meta-norm of fighting justly (which means is just to use in war), which promotes very precise weapons striking with restraint (drones), eventually impacts on the perception of the meta-norm of waging just war (lowering the threshold of the acceptability of going to war).

**The proposed theory**

Based on our empirical research, I propose the following theory underpinned by a dual logic of both arguing and symbolic power. This theory aims to understand how the meta-norm of fighting justly is built at the international level, and how it ultimately impacts upon states’ weapons utilizations. I propose more a complementary approach using the three extant theories (international pressure, cost based and efficiency based) than an attempt to be the sole explanation of all the variations in weapons utilization.


\(^2\) Indeed, it becomes less costly to go to war than to develop a traditional last resort option, such as economic blockade or diplomatic discussions.
Restating the theory

When they use force, in a conflict or an intervention, states constantly justify their actions and practices. While arguing over weapons utilization, each actor reveals what it regards as the range of acceptable and unacceptable interpretations of which means should be deployed to wage war (i.e. meta-norm of fighting justly).

The theory suggests that under certain conditions, arguing not only reveals but also re-molds and re-arranges the acceptable interpretations of fighting justly at the international level. This switch (from revealing to re-molding) is more likely to occur in two circumstances.

First, international institutions are more likely to enshrine arguments which do not foster the original tension, inherent in the meta-norm of fighting justly, between humanitarian concerns and military necessity. Should they highlight the irreconcilability between imperatives of humanitarian and military necessity, they transform the arguing process into a ‘war of god’, and this not only antagonizes actors but also undermines the persuasiveness of each argument.

Second, an interpretation is more likely to be enshrined at the international level if built upon a powerful and univocal symbol, attached with powerful representations, which reinforces the extant symbolic order.

Should states’ arguments be revealed as flawed and unacceptable, actors are compelled to re-frame them, so they fit with the acceptable meta-norm of fighting justly. This reframing of their argument confronts them with a dilemma with regards to their weapons utilization: either they develop strategies to dissimulate their extant weapon utilizations, or they change them so they fit with the newly reshaped argument. In either case, the burden of justification incentivizes actors to change their practices so they do not blatantly violate the currently acceptable meta-norm of fighting justly.

Summary of the theory

The following chart retraces the five different steps of the arguing process of the meta-norm of fighting justly:

<p>| The different steps of the arguing process over the meta-norm of fighting justly |</p>
<table>
<thead>
<tr>
<th>Step 1</th>
<th>Revealing</th>
<th>By arguing over their weapons utilization, states reveal their meta-norm of fighting justly (FJ).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>Justifying</td>
<td>Caught in the ‘logic of arguing’, states develop rhetorical resources to justify their weapons utilizations with regards to the meta-norm of FJ.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Refining</td>
<td>The non-persuasive arguments have to be refined in order to win the battle for legitimacy. Non-persuasive arguments either reveal the contradictions in the meta-norm or disrupt the symbolic order.</td>
</tr>
<tr>
<td>Step 4</td>
<td>Enshrining or Constraining</td>
<td>The refined argument is legitimated by an international institution and enshrined at the international level (certain conditions have to be reunited: persuasive argument, legitimate arena, powerful enunciator) and starts to constrain states by changing the burden of proof of weapons users.</td>
</tr>
<tr>
<td>Step 5</td>
<td>Diminishing or Hiding weapons utilization</td>
<td>States face an alternative: they either change their weapons utilizations so they fit with the refined meta-norm of FJ, or they hide their weapons utilization to maintain an apparent coherence with the meta-norm of FJ.</td>
</tr>
</tbody>
</table>

**The logic of arguing in war**

**The logic of arguing**

The first logic at stake in our proposed theory is the logic of arguing, also called “logic of truth seeking”.¹ Our empirical research suggests that the way actors refer to, use and argue over the laws of war is very similar to the mechanisms at stake in the logic of arguing. This is defined as a third approach to understanding how actors relate to norms. Thomas Risse defines the logic of arguing as follows:

“I claim that processes of argumentation, deliberation, and persuasion constitute a distinct mode of social interaction to be differentiated from both strategic bargaining – the realm of rational choice – and rule-guided behavior – the realm of sociological institutionalism. Apart from utility-maximizing action, on the one hand, and rule-guided behavior, on the other, human

actors engage in truth seeking with the aim of reaching a mutual understanding based on a reasoned consensus, challenging the validity claims involved in any communication.”

The logic of arguing, discussed by a growing body of the social constructivist literature, seems to be particularly well-suited for describing how actors relate to the laws of war to justify their weapons utilization.2

The common world of the laws of war

First, the logic of arguing supposes the existence of a common world which gathers actors and creates common rules and understandings for them. In many respects, the laws of war constitute a common world for all the actors who use force at the international level, or against another state. When they justify their practices of war, states always base their justificatory discourse upon the customary norms and the extant legal treaties, which constitute the laws of war. The concepts of military necessity, distinction and proportionality are always brandished by actors when they have to justify their weapons utilizations. The existence of this common framework enables the actors to build and argue over coherent arguments. These arguments are coherent because they refer to principles which can be understood and discussed by all the members of the common life-world. Even if the laws of war are, for a large part, extremely ambiguous, states’ ranges of arguments remain limited: they cannot argue however they want, when they refer to the laws of war.3


3 The notion of “bad faith” is here particularly interesting. We differentiate the attempt to dissipate ambiguity (i.e. refining the meta-norm) from distorting the spirit and the letter of the law (i.e. demonstrating bad faith). States might argue that they do not violate the laws of war by demonstrating bad faith. Yet, arguments enounced with bad faith do not have the same degree of legitimacy as others, and are rapidly perceived as non persuasive, regardless of the social position of the ones who enunciates them.
The most revealing example is probably the reaction of both Allies and Germans, in the aftermath of WWI, concerning their massive CW utilization during the conflict. Neither side argues that its CW utilization did respect the extant legal treaty (i.e. the 1899 Hague Convention, at this time, banned CW utilization through projectiles, and all the sides of the conflict massively used shells with chlorine, starting from 1916). The actors did not propose an argument which would have been obviously flawed. Rather, they argued that the other side was the first to breach the laws of war. This breach in the extant laws of war, they argue, automatically broke the reciprocity principle, at the foundation of the moral contract, and their obligation to abide by the Hague Conference. *In fine*, both sides found a way to argue that their CW utilization was legal, and this argument remains coherent with the extant laws of war. The empirical chapter on UAV also illustrates the necessity to have a common world within which actors can argue. The propensity of Obama’s administration to refer to different frameworks, both of the laws of war and of criminal law, to justify their UAV utilization (eg as Pakistan) explains why their argument fails to persuade other states that their action is legal.

**The necessity to refine and reframe the argument in the face of a better argument**

A second feature which characterizes both the logic of arguing and the arguing process over the laws of war is what we call the research for the better argument. Indeed, when states start to justify their practices of war, they refer to the laws of war which constitute the common basis (or life-world). States propose an argument which articulates how their practices of war abide by the customary norms and the legal treaties. Because the laws of war are largely ambiguous, states propose an interpretation of them. By proposing this interpretation, states necessarily accept the possibility of being opposed by a better argument, by another state, an international organization or a NGO. This ‘necessary confrontation’ might explain why states are at first reluctant to acknowledge their weapons utilizations: once the weapons utilization is confirmed, states have to justify it, and, more importantly, have to provide the ‘best argument’, so as not to shed suspicion and illegitimacy on their practices.

The example of how Israel reacted after its WPW utilization during Operation Cast Lead (2009) illustrates this ‘race for the better argument’. Israel first denied having used WPW. Rapidly, confronted by the evidence that WPW shells had been used, Israel acknowledged the WPW utilization but explained that it was done in conformity with the laws of war. During the whole conflict, Israel slowly refined its argument, made it more sophisticated and more
compelling, and even published a complete report, nine months after the conflict, detailing the context of and the reasons for several WPW utilizations, and assessing their legality by arguing over the meta-norm of fighting justly. Israel was ‘constrained’ to provide all these arguments because several actors, including NGO (Amnesty International and HRW), but also the Commission led by Goldstone, constantly questioned and provided more sophisticated arguments to prove the illegality of their WPW utilization.

**The enigma of persuasiveness and the better argument**

By arguing over the meta-norm of fighting justly in order to justify their practices of war, states contribute to constantly refining the international meta-norm of fighting justly. Should a state prove that its argument (justifying or delegitimizing a weapons utilization) is the ‘best’, and should the international institution accept that this argument is the best, that state then creates a precedent. Because this precedent “establishes the context for subsequent rounds of actions and disputations”, it enshrines the state’s interpretation of the meta-norm of fighting justly at the international level: the interpretation becomes then the one which regulates and constitutes future practices of war.¹

**The better argument to denounce weapons utilizations**

The literature on the ‘logic of arguing’ particularly focuses on the problematic concept of “the best argument” and “the enigma of persuasiveness”.² Indeed, what makes one argument, proposed by a state or another actor (such as NGO), within an international institution, better than another one? Why and when do states consider that an interpretation of the meta-norm of fighting justly is ‘better’, or ‘more persuasive’ than the others?

If we restate this question through our empirical examples, why did states, by signing the 1925 Convention for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, agree that chemical weapons (whatever their conditions of utilization) provoked ‘unnecessary suffering’, while discordant voices, even

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coming from soldiers hit by CW, maintained that CW were actually more ‘humane’ than many other weapons, including shells? Chemical weapons inflict terrible suffering: there is absolutely no doubt on this point. But do they inflict more terrible suffering than that caused by shells? Even if we acknowledge that they do, does it mean that this suffering is “unnecessary”? Several soldiers underline the fact that contrary to the shells, CW kill rapidly and, therefore, shorten the conflict. Their argument is implicitly based upon the following rationale: when a means of war, even though it inflicts terrible suffering, shortens the war, that means is more humane than other means, as these, eventually, prolong the conflict, increasing the overall number of soldiers killed and the suffering they, but also the entire society, bear.\(^1\) What the chemical weapons example proves is that the different categories which constitute the laws of war (proportionality, distinction, unnecessary suffering) were not always taken-for-granted: they are the result of a long process of arguing during which actors fought to impose their own interpretation of the category, based upon their own understanding of the meta-norm of fighting justly, as the most persuasive one.

The empirical chapters provide supporting examples. They reveal that, in fine, the entire 20\(^{th}\) century can be interpreted as a process of slow and constant refinement of the notion of unnecessary suffering, from the very broad understanding seen in the 1899 Hague Convention to explicit references to the weapons which inflict this suffering (namely chemical weapons). This refinement is seen in both a clarification of the conditions under which weapons might be used, and in the nature of the weapons which can be used. In this respect, the debate retraced in the chapter on incendiary weapons, concerning the defining and the ranking of the qualities a weapon ‘needs’ in order to be qualified as incendiary, is particularly interesting.

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\(^1\) The normative considerations which underpin this ‘judgment’ are clarified in a ICRC report stating “The circumstance that a more severe wound is likely to put a soldier out of action for a longer period was evidently not considered a justification for permitting the use of bullets achieving such results. The concepts discussed must be taken to cover at any rate all weapons that do not offer greater military advantages than other available weapons while causing greater suffering/injury. This interpretation is in line with the philosophy that if a combatant can be put out of action by taking him prisoner, he should not be injured; if he can be put out of action by injury, he should not be killed; and if he can be put out of action by light injury, grave injury should be avoided“ in Weapons That May Cause Unnecessary Suffering or Have Indiscriminate Effects, Report on the Work of Experts. Geneva: INTERNATIONAL COMMITTEE OF THE RED CROSS, 1973.
Under which conditions are arguments persuasive?

The extant literature offers several features, or conditions, which clarify the “enigma of persuasiveness” and explain why and when an argument is regarded as more persuasive than the others. From our empirical studies which retrace the arguing process over chemical, incendiary weapons and unmanned aerial vehicles (colloquially called drones), three factors particularly stand out.

The social position of the one who argues

First, we agree with the extant literature on the logic of arguing: the position of the one who argues within the institution is decisive to determine whether an argument will be finally accepted at the international level. Sandholtz, who analyzes states’ arguing processes over a particular rule of the laws of war (i.e. the norm prohibiting plunder in time of war), explains:

“My framework recognizes, more explicitly than constructivist approaches usually do, the importance of power in altering norms. I distinguish between breaking rules and making rules; the power to get away with the former is not the same as the capacity to achieve the latter. A single great power cannot dictate norms, therefore, but agreement among the major states is usually a prerequisite for norm change.”

The chapter on incendiary weapons generally confirms Sandholtz’s hypothesis. One of the main variations that differentiates the arguing process over napalm from the arguing process over white phosphorus is the social position of the actors who decide to argue in favor of a ban. In the case of napalm, several European states, supported by UN Secretary General U-Thant, advocated for a clear ban on napalm. Several years after this mobilization, Protocol III of the Convention on Certain Weapons was drafted and signed by a vast majority of states (with the exception of the United States). This Protocol does not ban napalm utilization per se, but it considerably clarifies the definition of incendiary weapons and the authorized conditions of their utilization. The definition is so tight that napalm ‘cannot not’ be categorized as an incendiary weapon. In fine, even though the word napalm is not mentioned in Protocol III, the argument that napalm utilization has to be restricted ‘won’. In contrast, the arguments denouncing WP utilization during Operation Cast Lead did not lead to the creation of any kind

of legal treaty or additional remarks. The arguments denouncing WPW utilization were mostly put forward within the Human Rights Council, an organ of the United Nations generally considered as very much less influential and powerful than the Security Council. The denunciation of WPW utilization did not result in any form of international sanction, and actors continued to use the weapon after the denunciation (NATO in Afghanistan in 2009). In the end, the arguing process did not really clarify the status of WPW, as to whether it could be defined, or not, as an incendiary weapon (and thus as to whether WPW utilization should be more restricted than conventional weapons).

It can be objected that WPW and napalm differ not only because of the ‘social position’ of actors who argued over their utilization, but also in terms of technical capacities. We do not refute this objection. Indeed, to put it bluntly, napalm burns while white phosphorus burns and screens. Yet, what is particularly interesting is that the laws of war can be used to downplay, and even suppress, the way in which its technical capacities define the weapon. Indeed, the category of incendiary weapon could encompass all weapons which burn, including those which have additional secondary effects (such as screening, in the case of WPW). Yet, it does not. In fine, the extant Protocol III, which restricts incendiary weapons’ utilization, maintains and reinforces the already extant technical differences. Arguing differently over WPW and over the definition of incendiary weapons could have changed this, but the social position of those who argued (less influential than members of the Security Council or the Secretary General) was a disadvantage for the persuasiveness of their argument.

Finally, and to clarify the conditions under which arguments are “more persuasive”, the chapter on CW reveals that arguments are more likely to appear as persuasive and legitimate when enounced in a post war process, by states which won the war. In the post-war process, the winners of the war have the latitude to impose treaties aimed at judging and establishing the responsibilities of the different parties, and also at restricting the future actions of the ‘vanquished’. This is what happened in the aftermath of WWI with the Versailles Treaty, drafted by the French and the British to condemn Germany and limit its future actions, including the development and utilization of CW. This limitation on CW utilization (article 171 of the Versailles Treaty) was then used as a precedent, and thus facilitated, the 1925 Convention which bans CW utilization.
The coherence of the argument

The second feature that increases the ‘persuasiveness’ of an argument (i.e. why an argument is more likely to be enshrined at the international level) concerns the content of the argument. The meta-norm of fighting justly is based upon a fundamental contradiction between, on the one hand, humanitarian principles and, on the other hand, military necessity. This tension is inherent and latent in the meta-norm of fighting justly. It is also what explains why a large part of the extant legal treaties (and the meta-norm of fighting justly in general) is ambiguous: all actors need to reconcile military necessity (actors ultimately want to win the war they wage) with humanitarian principles (restraining the war). So far, we have only studied the ambiguity of the laws of war as an opportunity for actors to refine the extant rules, so they fit in with their interests (rationalist perspective) or/and they fit with what they think they ought to be (logic of appropriateness). Our empirical chapters also reveal that this ambiguity is the sine qua non condition of the coherence of the laws of war, and, ultimately, of its constraining power upon actors. The ambiguity creates the possibility for actors to believe that they can use the laws of war to their own advantage, and that, in fine, they can serve their interests. The ambiguity also gives them the possibility to impose what they believe is just, in war. In both cases, states accept being framed by the laws of war because they believe it can be in their interest to do so.

Can laws of war be unambiguous?

The paradox of the arguing process is the following: on the one hand, it constantly refines the meta-norm of fighting justly, and in that sense it dissipates ambiguity. The first treaty framing the use of chemical weapons, the 1899 Hague Convention, is for example extremely ambiguous: it does not clearly define what a “deleterious gas” is, and does not ban their utilization per se (apart from the method of delivery, through projectiles). The 1993 Convention, in contrast, considerably clarifies the nature of chemical weapons, and this clarification restricts any kind of CW utilizations, under any circumstances. Yet, the arguing process also has to maintain a certain ambiguity in order to conciliate both principles (military necessity and humanitarian principles) so that actors continue to accept to abide by the ban. In fine, the argument process dissipates ambiguities, but needs to keep some degree of ambiguity
in order to still have a constraining power. This is the paradox of the arguing process over the meta-norm of fighting justly: the necessity for a “deliberate ambiguity”.¹

The example of the ‘paradox of precision’ discussed in the chapter on unmanned aerial vehicles illustrates this point. The laws framing the drones’ utilization have increasingly emphasized the necessity for the weapon to be extremely precise (i.e. not killing civilians and not being too destructive). On the one hand, this ‘call for precision’ dissipates the ambiguity of the principle of distinction: it is increasingly acknowledged that killing civilians is extremely problematic and rarely constitutes a case of collateral damage. This belief is relatively new in the history of war. In March 1944, Tokyo was burnt to ashes by US bombs filled with napalm, killing 84,000 inhabitants. Le May was hailed as the new Nero. No argument denouncing this raid as a violation of the laws of war could be heard in the aftermath of WWII. In contrast, more than sixty years later, the killing of less than a dozen civilians caused by the Israeli utilization of white phosphorus was formally denounced by the United Nations’ fact finding mission on Operation Cast Lead as a ‘crime of war’.² The comparison between these two cases is revealing: standards on what constitutes collateral damage have been considerably tightened. Yet, if on the one side, the level of destruction a strike may achieve has been considerably clarified and tightened, on the other side, the arguing process has considerably obscured the status of the person who might be legitimately targeted by the drone (with a high level of restraint). This is “the paradox of precision”, which I also call ‘aporia’, because it reveals the fundamental contradictions inherent in the laws of war. Because the meta-norm of fighting justly is based upon a fundamental contradiction (reconciling military necessity with humanitarian principles), actors are always exposed to the risk of being caught in a “war of god”, where actors, because their views are blatantly irreconcilable, can never find an agreement and therefore can never obey a common set of rules to frame their actions:

“So long as life remains immanent and is interpreted in its own terms, it knows only of an unceasing struggle of these gods with one another. Or speaking directly, the ultimate possible attitudes toward life are irreconcilable, and hence their struggle can never be brought to a final conclusion”³

² Chapter V on incendiary weapons discusses more thoroughly these points.
Toward a dual laws of war?

Moreover, when actors dissipate the ambiguity by arguing over the meta-norm of fighting justly, they also create the risk of having a *dual* laws of war (or a dual standard law), one for states which possess high-technology weapons, able to strike precisely (namely UAVs) and one for states with low technology weapons which can never reach such a level of precision. The risk is of seeing the second category of states ceasing to abide by the laws of war, which, ultimately, could considerably undermine their constraining power. *In fine*, arguing over the *practices* of war might also lead to the entire collapse of the *laws* of war. This is why actors tend to favor arguments which will not foster the inherent contradiction between principles of military necessity and humanitarian concern, and which will not precipitate the existence of laws with dual standards, which would ultimately lose their constraining power.

How do arguments impact weapons utilization? Shifts in moral preferences and rhetorical entrapment

If the previous paragraphs explained how the arguments on the meta-norm of fighting justly are constantly refined by actors when they succeed in persuading their audience, and how this constant refinement transforms the dominant meta-norm of fighting justly at the international level, a question remains: how do these arguments impact the very practices of war? Put differently, do states always conform their practices to what the ‘best argument’ advocates, and to what the dominant meta-norm of fighting justly prescribes, and if yes, why?

This question is at the core of much research, especially that from ideational perspectives which studies the impact of norms on international relations: how do the norms and ethical arguments enounced at the international level impact states’ practices? As we discussed in the introduction and in the literature review chapter, the question is more salient when it comes to actors’ practices of war, generally perceived as of a realm hermetic to moral consideration. In sum, how does the meta-norm of fighting justly, and its arguing process, impact on states’ weapons utilization? More importantly, does the logic of arguing constrain
actors, in their use of weapons, in a specific and different way, compared to the type of constraint exerted by the other logics of appropriateness and rationality?

As explained in the introduction of this chapter, the theory we propose does not claim to invalidate the belief that actors are constrained both by the logic of appropriateness (by military culture but also by international pressure) and by the logic of rationality (by the regulative power of the laws of war and by the research for strategic efficiency). The logic of appropriateness can explain how the best argument ultimately transforms states’ utilization: because, in the United Nations, states constantly socialize with other states, and the arguing process can be defined as a means of socialization, they internalize the dominant meta-norm of fighting justly (contained in the best argument), which, in turn, slowly transforms the moral preferences of states, and therefore their practices of war.

The logic of rationality might also explain how arguments around the meta-norm of fighting justly ultimately impact weapons utilization. As the empirical chapters demonstrate, the arguing process creates emulation and the multiplication of increasingly sophisticated arguments. These arguments are available within the institution (and sometimes outside of it) and therefore can be used, refined, reinforced by the other actors, which, automatically, increases for other states the likelihood of being criticized. Because international actors, but also national and non-state actors, can use arguments, the state might feel more pressured to conform its practices with the dominant argument. The other previously described logics could also explain how the best argument compels actors to change their weapons utilizations. We demonstrated, earlier in this chapter, that the meta-norm of fighting justly shapes what states, and, we hypothesize, especially democratic states, perceive as strategically useful: because, if they want to win a strategic victory, they need to convince their population that their actions are legitimate, and because the United Nations is perceived by democratic populations as a legitimate institution, they try to conform their practices to what the United Nations deems as a legitimate practice of war. The logic of scrutiny ‘compels’ them to change their practices of war in order to increase their chances to finally win the war.

We finally propose a third type of constraint, specific to the logic of arguing, called the “rhetorical entrapment”, or self-entrapment. Thomas Risse defines this process as follows: “this
starts as rhetorical action and strategic adaptation to external pressures but ends with argumentative behavior resembling the criteria defined earlier.” ¹

Risse seems to suggest that, once engaged in the arguing process, states tend to feel constrained to change their practices in conformity with what the best argument suggests, whether they initially wanted to do so or not. Risse does not however really clarify the mechanism at work here, which explains why states finally feel compelled to change their weapons utilizations. Other authors compare the rhetorical entrapment to the logic of naming and shaming.²

The three different cases of weapons utilization studied in this dissertation suggest that the ‘arguing process’ does restrict the range of justifications states can provide, and, in fine, constrains them to modify their practices. First, the three cases reveal that actors always seek to justify the reasons underpinning their weapons utilization. From the post WWI period to that of post Cold War, actors constantly justified and provided rationales and expectations of their weapons utilization, if not in front of an international institution, at least in front of their domestic populations, their militaries or their governments. Curtis LeMay had to convince Roosevelt that the massive utilization of napalm made sense in both a strategic and moral sense. President Obama asked the Yale Law Professor Harold Koh to provide a solid legal doctrine for UAV utilization. The moral repulsion of soldiers before using chemical weapons in World War I stands out from all the testimonies, and many tried to find justifications to legitimate their utilization. Therefore, war, perhaps more than any other practice, draws its legitimacy from coherent and persuasive arguments. Should a state be deemed as illegitimate in its actions by an international institution, and should this institution be regarded as legitimate, that state is then trapped in a process where it cannot persist in justifying its practices on the same grounds, and either needs to refine its argument or to change its practices. In any case, it acknowledges that it is ‘trapped’ and that it needs to modify the situation. Once ‘trapped’, a state then faces a dilemma: either it decreases its weapons utilization, or conceals it. The timing of the decreasing utilization of UAVs by the Obama administration coincides with the first refinement of the legal


arguments justifying UAV utilization. WWI contributed to sealing the argument that CW were an inhumane means of warfare, and, following this, states no longer used CW in Europe, even during the terrible World War II.

A fourth logic explains how arguments impact on states’ practices of war: the logic of symbolic power or of distinction. The following paragraphs will detail its mechanism and how symbols influence weapons utilization.

The logic of distinction and symbolic power in war

An understudied object in International Relations

The concept of symbol has been only rarely studied as an object of research per se within the field of International Relations. Yet, it is mentioned in a wide range of studies, including these not commonly classified as interpretativist. When Robert Jervis, traditionally considered as a realist, proposed to study the fundamental role of images and perceptions in states’ relationships, he mentioned, even if briefly, that symbols influence strategic interactions between states: symbols also intervene in the calculations made by states when they engage with other states. Indeed,

“symbolic victory can lead others to see high resolve and risk-taking in a state’s behavior. This image is apt to make other states retreat or act cautiously in conflicts with the first state.”

Though Jervis underlines the impact of symbol, as a powerful signal, he is not interested in studying how these symbols emerge, how they are created and how they lead to such resolution. Several studies propose to clarify these points, and perceive a strong relationship

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2 See the literature review which provides several examples of the mentions of symbols in the International Relations literature.


4 Indeed, Jervis explains “But even if acknowledged that the image of a state is a major factor in determining other states’ policies toward it and that states therefore have good reason to try to project desired images, it can still be argued that there are no special ways the state can do this.” in JERVIS, Robert. *The Logic of Images in International Relations*. New York, N.Y.: Columbia University Press, 1989. p 8
between symbol and ‘legitimate institution’. Inis Claude reveals the capacity of the United Nations, “as a dispenser of politically significant approval and disapproval of the claims, policies and actions of a state”, to create a “collective legitimization”.\(^1\) Ian Hurd sees in this “collective legitimization” the permissive condition which enables the creation of symbol at the international level. He indeed defines the symbol as “an object vested with social power beyond its physical, material powers,” and this power is “exercised at a distance from its material source”, and as the product of “common beliefs shared by members within a same institution, and emerging in institutions that are politically powerful”.\(^2\) In sum, states might create a symbol with constraining power in the eyes of the members of the United Nations, through the United Nations.

The logic of symbolic power and the logic of distinction applied to the practices of war

The extant studies on symbolic power overlook three aspects which our proposed theory considers as crucial. First, the symbols attached to weapons have different impacts on the practices of war, and therefore cannot be all encompassed within a general category. Second, symbols differ from perceptions in that they are powerful shortcuts which considerably increase the persuasiveness of the arguments exchanged by actors. In sum, they enable those who use them to impose their argument at the international level. Third, symbolic power is decisive in understanding the practices of war, not only as an object which persuades, but also as an order which disciplines and regulates. This symbolic order disciplines international relations through a logic of both rewarding the one who respects the symbolic hierarchy (and military medals are one of the means of this logic), and punishing and delegitimizing the one who disrupts it (then regarded as the barbarian).

Symbol(s) and war

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First, as the literature review reveals, there is a clear lack of definition of what precisely a symbol is, in international relations: none of the studies which refer to symbols clearly engages in the questions of whether there are different types of symbols, and of how a symbol differs from the other perceptions at stake in actors’ decisions.\(^1\) They all share the implicit assumption that symbols are of one type, and that they are more powerful than other common perceptions. The proposed theory argues that there are different types of symbol which, in return, impact differently on the practices of war. The empirical chapter on incendiary weapon demonstrates that, in the aftermath of the Vietnam War, napalm was unanimously perceived as an univocal symbol of an unjust war and unjust suffering inflicted on civilians (especially children). The strong images associated with the napalm utilization were enshrined in the collective imagery, and attributed to the weapon a strong negative image. The efforts of the US to change these perceptions, to dissipate the negative symbol attached to the weapons, failed. In fine, napalm became a univocal symbol, which did not attract any contestation, and which could only give rise to one interpretation. The empirical chapter shows that this unambiguous negative symbolic charge explains why the US was reluctant to acknowledge that it used napalm in Afghanistan (2001), and why they publicized the destruction of its stockpiles in the very same year.

In contrast with napalm, the case of white phosphorus weapons (WPW) during the Cast Lead Operation (January 2009) reveals that some symbols might also be ambiguous because they can encompass two radically opposed perceptions. In the months following Operation Cast Lead, WPW became a dual symbol, either of an ‘unjust operation and a cruel means of warfare’, or as ‘symbolizing the unjust opprobrium attached to the Operation and the Israeli presence in Gaza’. As the chapter demonstrates, this dual symbol persisted and explained why, after Operation Cast Lead, democratic states did not cease their WPW utilization. NATO continued to use it in Afghanistan in 2009. Because the symbolic power was then not univocal, actors failed to impose, at the international level, a rule framing with more precision the WPW

\(^1\) Barry O’Neill proposes an interesting typology though: he distinguishes the value-symbols (that experiment and reinforce identity), from the message symbols (that contains a message understandable among actors) and from the focal symbols (that contain and invite to share common references and identities). See O’NEILL, Barry. *Honor, Symbols, and War*. Ann Arbor: University of Michigan Press, 1999.
utilization (in contrast with what several states succeeded, in doing in the aftermath of the Vietnam war, with napalm).

Symbol and arguing

Second, symbols differ from ordinary perceptions in that they are powerful shortcuts, which make arguments more persuasive and, ultimately, more likely to be enshrined at the international level. They also reactivate powerful images, enshrined in the collective imaginary, which make the burden of proof heavier, to justify a practice of war.

Our empirical research indeed reveals that symbols generally attached to a weapon convey powerful, clear representations which are ultimately enshrined in the collective imagery. Napalm is probably the most compelling examples of the powerful visual dimension of the symbol: the picture taken by Nick Ut of a little girl, hit and already burnt by napalm, running and screaming, is almost always reactivated when the Vietnam war is mentioned. What is interesting though is that, for each example, the representation attached to the weapon is a distortion of what happened in reality and of what represented the majority of the reality on the battlefield. The young running girl was in fact not hit by the US forces but by a South Vietnamese raid. Chemical weapons killed less than 3% of the overall number of combatants who died during WWI, and many of those exposed to it survived (soldiers were more likely to be killed by shells). The white phosphorus weapon killed less than 1% of the victims of Cast Lead and was used against a minority of combatants and civilians. Yet, somehow, these three weapons are strongly associated to the three aforementioned conflicts in which they were used. The representation associated with the weapon outweighs what really happened on the battlefields.

The symbolic order, the militaries and the international level: the disciplining power of the symbol and the perpetuation of the logics of the ‘ancient order’

The symbol is defined as an object vested with a particularly strong social power. If, so far, we have mainly focused on the symbol as an object, our empirical research shows that symbolic power is also exerted through a hierarchy of symbol, also called ‘symbolic order’.
‘Symbolic order’ can be defined as the ordering of the different symbols which organize, classify, hierarchize and discipline the social structures of a society.\(^1\)

Why focus on the symbolic order of both international society and national military culture, to study practices of war? We argue, and the empirical chapters support our hypothesis, that studying the symbolic order of these two ‘domains’ is particularly enlightening if we wish to understand the resistance of these actors (states and militaries) to using certain weapons, and also why certain arguments are more persuasive than others, and thus are more likely to be enshrined at the international level (and ultimately re-shape the utilization of certain weapons).

Our empirical research shows that the conception of honor is very strongly embedded in the military culture of the states we studied (France, Germany, United Kingdom, United States and Israel). This conception of honor, and of an honorable soldier, entails a hierarchy of the qualities a soldier has to have and demonstrate on the battlefield. This hierarchy of qualities is inherited from aristocratic values, which, for instance, promoted and valued physical engagement, strength, the capacity to sacrifice and risk one’s life. The fact that the chemical weapon killed without allowing the soldier to demonstrate these qualities was, undoubtedly, a profound breach in the extant symbolic order for WWI combatants, and might explain why many soldiers were at first particularly reluctant to deploy it. Moreover, the strong resistance of a large number of US Veterans against UAV utilization provides a compelling example of this disruption of the extant symbolic order. The pilots of UAVs, indeed, need to demonstrate very different qualities than those promoted by the chivalric codes, the most obvious of them being that they do not physically risk their lives on the battlefield. When the State Department proposed a medal for UAV pilots, the US Veterans manifested a strong opposition. More specifically, they criticized and deplored the ranking of this medal, as higher than the Purple Medal which rewards infantry soldiers wounded or killed on the battlefield. The idea of seeing the qualities and the role of UAV soldiers being more highly rewarded than the ‘traditional qualities’ of the chivalric codes was perceived as a profound transgression of the extant symbolic order, and increased the resistance against the militaries using UAV. The empirical research shows that it could be very interesting to develop our understanding of how military medals influence variations in the practices of war, by rewarding (or insufficiently rewarding) those using them. Because medals have the capacity to shape and refine the extant symbolic order.

\(^1\) This concept is drawn from sociological and anthropological studies.
order, analyzing which quality, whom and what they reward, their award could surely shed light on why certain practices of war are encouraged (and are thus more likely to increase) while others are delegitimized.¹

*Laws of war and logic of Empire: an issue to consider?*

Finally, our empirical researches study another type of symbolic order which is decisive in understanding practices of war, including weapons utilization: the international symbolic order. Several researches reveal that states’ practices of intervention somehow prolong logics inherited from the old empires.² States would still follow a ‘dual standard’ logic, which entails European states to act in a certain way (following certain rule or norms) with other European states, and in a different way (with different rules and norms) with non European states. Theorized by Christian Reus-Smit, the concept of ‘heteronomous order’ discusses and proposes an explanation of this ‘dual standard logic’: Europeans interact with each other following a specific norm based on a principle of equality and mutual interdependence, while they act with non-Europeans, and especially their former periphery, with a different set of norms (imperial paramountcy).³ This difference perpetuates a hierarchy inherited from empires.

It is not clear whether our empirical research absolutely supports this point. Yet, it is clear that while European states (such as Great Britain and Italy) condemned CW utilization in WWI, and never used them again in Europe in the aftermath of this war, they deployed it several years after against their former empires (respectively people from Iraq and the now Ethiopia). Their arguments are commonly underpinned by the following reasoning: the laws of war can be violated, and using a barbaric weapon is legitimate and does not transform them into barbarians, because they had to face barbarians. This paradox is puzzling, and explaining this dual-standard approach with regards to the laws of war and to the symbolic power of weapons obviously requires further attention. Yet, we propose, as a possible hypothesis to verify, that the

¹ Olivier Ihl proposes a stimulating study on how awards and medals are used as a means to discipline and organize a society. If, following Michel Foucault, many studies focus on the decisive role of punishment to hierarchize and administrate a society, Ihl underlines that “‘rewarding’ is the other side of punishment, literally the bright side of the same ‘coin’”(emphasis added). See IHL, Olivier. *Le Mérite et La République: Essai Sur La Société Des Émules*. NRF Essais. Paris: Gallimard, 2007.


disciplining power of a weapon (as a powerful negative symbol which delegitimizes the one who uses it) follows the lines of the extant symbolic order. This symbolic order replicates a hierarchy inherited from empires, and therefore does not consider that former peripheries have to obey the same logic as European states. This fundamental inequality explains why the negative symbolic power attached to a weapon is more likely to constrain European states in situations where they face other European states, and is less likely to constrain them when they face states which are not at the top of the hierarchy drawn by the empire at the beginning of the 19th century. In fine, it might highlight why Europeans feel less constrained in using weapons charged with negative symbolic power (such as napalm and chemical weapons) against their former empires.¹

¹ It could be objected, in the case of napalm, that European states did not fight against each other after WWII, which explains why they, logically, did not use napalm against each other. Yet, the case of chemical weapons is more puzzling because none of the European states used them during WWII while they had the opportunity to do so.
III - Arguing over Chemical Weapons during, and after, World War I
“The mission of poisoning the enemy as one would rats affected me as it would any straightforward soldier. I was disgusted.”
General Von Deimling

Introduction

A scrutinized weapon

Chemical weapons (CW) have been highly scrutinized since their first use during World War I (WWI). They have arguably been the object of more attention than many other weapons deployed in larger quantities on battlefields. This disproportionate focus on CW is puzzling: in WWI, not only were CW less deployed, but they killed only a marginal number of combatants (if compared to the overall number of soldiers killed or wounded in combat). Only 1% of the shells launched during the first six months of Verdun contained chemical gas. 2% of the soldiers killed during this period died because of their exposure to gas. 2 496, 200 men were killed by CW on the Western Front, which represents merely 3% of the entire number of victims of WWI. 3 Other historians underline the fact that gas killed less than 1% of the entire number of French soldiers killed in the conflict. 4 Yet, if CW killed and injured an extremely small percentage of overall victims (civilians or soldiers) they remain at the core of WWI

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3 See HABER, L. F. The Poisonous Cloud: Chemical Warfare in the First World War. Oxford [Oxfordshire]: New York: Clarendon Press ; Oxford University Press, 1986.According to Lepick, The total number of victims killed by chemical weapons varies, oscillating from 3 to 5 % of the total victims. In SPIERS, Edward M. Chemical Warfare. Urbana: University of Illinois Press, 1986. Other numbers are provided: gas shells, though responsible for some 85% of gas casualties, constituted a mere 4.54% of the artillery ammunition expended. Whether employed by gunners or by engineer-combat forces, gas comprised only a small fraction of the ordnance used and inflicted a mere 5.7% of nonfatal battle injuries and 1.32% of battle deaths.

historiography and collective representations. CW have been commonly quoted as the most vivid symbol of the quagmire and the escalation of WWI.¹

This gap between the quantifiable features of the weapon (i.e. a weapon that was marginally used and that did not kill many combatants or civilians) and the representations of it (i.e. a weapon that epitomizes WWI) is the starting puzzle of this chapter.

**From the aftermath of World War I to Syria: a weapon rarely used by democracies**

The contrast between the massive CW utilization during WWI and its quasi absence in the other conflicts of the 20ᵗʰ century is puzzling. Indeed, since 1918, CW have only briefly reappeared on the battlefields. Even though the extant literature does not entirely agree on when these ‘reappearances occurred, it is commonly assumed that CW were used in the wars between Italy and the Empire of Ethiopia in Abyssinia (1935-1936), between Yemen and Egypt (1963-1967), and also during the Vietnam War (1955-1975), and the Iran-Iraq War (1980-1988). More recently, in 2013, CW dramatically hit the headlines when Assad’s army gassed more than 1000 Syrian civilians with sarin. Some studies also denounce the CW utilization by the French in the Rif War (1925) and during the Algerian War (1954-1962). Finally, certain studies also mention the possibility that CW were deployed by the Japanese in China (1930-1940) and by the US and the Iraqis during the Gulf War (1991).

In any case, although the extant literature on CW differs on when exactly CW were used in the aftermath of WWI, all of these studies acknowledge that none of these utilizations reached the same level of intensity, magnitude and systematicness as during WWI: why did CW utilization by democratic states considerably decrease after WWI? Why, after having used it so massively during WWI, did democracies almost cease to use the weapon? Or, perhaps the question should be ‘reversed’: what if WWI was an *anomaly* in the history of CW utilization? Why were CW so massively used during WWI?

¹ Many historians, including George-Henri Sotou and Jean-Jacques Becker, picture the CW as the symbol of the horrors of WWI. See the last part of this chapter for further explanation.
Understanding the variations in CW utilization

This chapter proposes to highlight the reasons for this ‘anomaly’ of WWI, of why CW was so massively used, from 1915 to 1918, before appearing only episodically on the battlefield for the rest of the century. Following the hypothesis we propose to explore in this dissertation, we will more specifically address the following questions we assume as crucial to highlighting the variations in CW utilization:

(1) What specific aspects of CW utilization during WWI highlight the subsequent slow recourse to CW by democratic armies in the rest of the twentieth century?

(2) Why did the French and the Allies use CW during WWI? Which factors explain such a massive and increasing CW utilization during the conflict?

(3) Does the analysis of the meta-norm of fighting justly and of the symbolic power highlight the variation in CW utilization?

The difficult object of CW

A rapid literature review on the topic reveals that a myriad studies have retraced, discussed, and analyzed CW. This intense scrutiny, which ‘creates’ a wide variety of approaches (CW raise questions that come from different disciplines, such as law, ethics, science, military strategy, philosophy, etc.), offers the possibility, almost unique when it comes to studying a weapon, to explore many different facets of CW.\(^1\) Yet, this diversity of approaches and questions also makes the study of CW a *challenge*. CW utilization is at the core of many debates, some of which are still on-going, from the exact number of victims they caused, the exact quantity deployed, to the most relevant methodology with which to analyze the ‘phenomenon of war’. The following paragraphs do not confront all these different approaches, and do not attempt to be exhaustive on the issue of CW. They specifically address the ‘anomaly’ of WWI, and the reasons that might explain it.

\(^1\) See the literature review in the incendiary weapon chapter. In contrast with chemical weapons, very few studies focus on incendiary weapons utilization. This disproportionate focus is very intriguing, and somehow supports the common idea that CW is of a *special* nature.
Literature review on CW

The following literature review is divided in two parts. First, it proposes a rapid overview of the different extant approaches on CW and classifies them as using three lenses: historical, rationalist, and constructivist. Each of these lenses addresses the research questions of this chapter, but answers them only partially. The second part reveals the limits of the extant literature, in that it that does not sufficiently take into considerations the impact of the meta-norm of fighting justly and the symbolic power of the variations in CW utilization.

The historical approach to CW

This approach is arguably the one endorsed by the highest number of studies. Many historians have indeed analyzed CW, either by retracing their trajectory over time (‘comprehensive study’), or by focusing on their utilization during a specific conflict (‘conflict approach’).

Chemical weapons and WWI: a plethoric literature

The wide majority of these studies is based on the ‘conflict approach’ and more specifically analyses CW utilization during World War I (1914-1918). Yet, in the plethoric historiography on WWI, the ‘chemical warfare’, between the Germans and the Allies, is evoked but rarely constitutes a central object of research. Some exceptions stand out, and several important monographs describe with precision the CW utilization by the French, German, British and even Canadian armies during WWI.¹ These studies endorse a specific perspective which belongs to, or is very close to, the ‘culture of war’ or ‘war culture school’. Following the precursory works of John Keegan, this ‘war culture school’ brought together several historians who, around Jean-Jacques Becker, significantly contributed to the highlighting of WWI as an unprecedentedly violent and total phenomenon which profoundly impacted European

It studies actors and objects of WWI, including the chemical weapon, as an object ‘of the field of all representations of the war forged by contemporaries; of all representations that they construed for themselves of this immense trial, during the war, then after it’. Weapons have to be touched, tried out, ‘encountered’, because this is one of the only possibilities to ‘recapture’ the actors’ perceptions of the weapon, which are decisive in explaining their actual impact on the battlefields. In this respect, the ‘war culture school’ differs from that of military history, which prefers to focus on facts (numbers of victims, quantity of weapon used), technical capabilities, tactical and strategic benefits of a weapon, rather than on the individual and collective perceptions attached to that weapon.

These studies generally tackle one or all of the following four different tasks: providing a factual description of the CW utilization by each side (which ultimately provides clarification on the numbers of killed civilians and combatants) (1), describing the development of the national chemical industry and its relationship with militaries (2), evaluating the impact of CW utilization in terms of tactical and strategic utility (3), and finally discussing whether, because it would have specifically affected the mentalities and representations of the European societies of the 20th century, CW represents a specific means of warfare (4). The work of Olivier Lepick addresses these four points and sheds a new light on the ‘chemical warfare’ between the Allies and the Germans from 1915 to 1918.

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2 This definition is provided by the proponents of the ‘culture of war’ themselves in AUDOIN-ROUZEAU, Stéphane, BECKER, Annette, 14-18, retrouver la guerre. Paris: Gallimard, 2003.


Chemical weapons: the suspension of the “civilization process” or the proof of the “brutalization of war”?

The object of CW is also remarkable because it is at the core of several historiographical debates, which concern, *inter alia*, the choice of the most relevant methodology by which to analyze the war, the impact of individual and collective perceptions on practices of war, and more specifically whether WWI is the paradigmatic example of the ‘brutalization of war’, or just a momentary anomaly in the ‘civilization process’.¹

On the one hand, some historians agree with Norbert Elias, who believed that post-medieval European societies experienced a long ‘civilization process’ which transformed their social attitudes. This ‘civilization process’ spread and ‘instilled’ a form of ‘self-restraint’ in Europeans’ social habitus, which ultimately explains why societies were less violent than before. WWI is explained as a temporary exception that did not contradict the fact that the civilization process was still occurring.² From this perspective, CW utilization does not constitute a particular phenomenon, but is rather perceived as one of the ‘temporary’ transgressions of this abnormal moment that was WWI.

On the other hand, some historians – and the proponents of the ‘culture of war’ are one of them – agree with George Mosse, who believed that the civilization process did not resist the unprecedented outburst of violence that was WWI. With WWI, all the mechanisms of restraint and of ‘civilization’ collapsed, which explains why the violence reached a new threshold, CW utilization being one of those dramatic transgressions that are highly likely to re-occur, should any war reach the same level of ‘total violence’.

*CW and other wars*

The ‘imprint’ of World War I in the studies on CW is remarkable and unique (no other weapon, except perhaps the nuclear bomb and WWII, seems to be so tightly linked to a specific conflict). Yet, even though the rest of the literature on CW is less prolific, the other CW


² Studies such as PINKER, Steven, *The Better Angels of Our Nature*. Brilliance Audio, 2014, somehow prolong this analysis that a ‘civilization process’ is occurring and diminishing the violence of our societies.
utilizations remain fairly well documented by ‘conflict approach’ historical analyses. Three wars in which CW were used are particularly documented: the war between Yemen and Egypt (63-67), the Vietnam War (55-75), and the Iran-Iraq War (80-88).

Studies on chemical weapons trajectory

Other studies endorse a transversal approach to retrace the entire trajectory of CW utilization. They generally highlight four questions, which are: who used CW, when, in what quantities and which type of CW? These studies are extremely useful because they retrace the entire trajectory of CW, from WWI to its latest utilizations. They also help us to understand that the term ‘chemical weapons” refers to a wide reality of gases, from chlorine to sarin gas.¹

The rationalist literature: a deterrent but non-strategic weapon of mass destruction

What we call the ‘rationalist literature on CW’ encompasses studies that analyse CW utilizations through the prism of their ‘efficiency’. The implicit reasoning that is generally shared by these studies assumes that CW are produced and used when they are considered to be useful on the battlefields. They generally tackle three different types of questions: are they efficient because they deter? because they are tactically useful? and/or because they are strategically useful?

(1) Do CW deter?

This question is at the core of many studies which focus on CW utilization, and more specifically on why, although they were at the disposal of many states, CW were not used in the aftermath of WWI. The most documented case is the non-utilization of CW on the

battlefields during WWII. Why, in this war in which so many atrocities and violations occurred, did each side decide not to use the CW that they had massively produced? Studies on deterrence generally underline the following paradox: the non-utilization of CW does not mean the non-efficiency or the non-usefulness of CW. On the contrary, CW were not used because they were ‘too efficient’, too destructive. Afraid of the consequences the weapons might have, or afraid of having to suffer from retaliation with the weapon, states calculate that not using the weapon is in fine less costly for them.

This explanation is generally advanced to explain why CW were not used in WWII. If some studies explore different explanations (one of them proposes that, because Hitler was temporarily blind after having been exposed to CW during WWI, he developed a profound aversion against the weapon), the idea that both the Germans and the Allies feared having to face the other side’s CW utilization largely prevails.

Finally, studies focusing on deterrence also discuss the risks of seeing CW in the hands of terrorist groups. These studies often underline how the dissymmetry, between the non-state actors (who do not fear retaliation with gas) and democratic states, both undermines the possibility for democracies to use CW as a deterrent weapon and increases the risks of civilian populations suffering from CW utilization.

(2) Are CW tactical weapons?

Do CW achieve tactical goals? Studies tackling this question can be roughly divided into two categories. On the one hand, many analyses do not really question the ‘tactical advantages’ of CW because they seem ‘obvious’: CW massively kill whoever inhales them, and therefore may kill a large number of combatants in a very short time. Because very few weapons can achieve this, CW stand out as a weapon that appears to be of a special nature, and of a remarkably high efficiency. On the other hand, some studies question more thoroughly the

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1 Several studies notably refer to the attack with sarin gas led by terrorist groups in the Tokyo underground.

tactical benefits of CW. They believe that these benefits are considerably outweighed by three features of the weapon: CW remain weapons that are hard to handle (users of CW might be killed while deploying it), difficult to produce, and lose all their tactical benefits if the other side has proper protection (i.e. gas mask) against it.

For the case of CW used in WWI, some authors draw the trajectory of CW as a weapon initially thought of as tactically useful, before slowly losing its advantage and its decisiveness on battlefields. The initial shock of its first deployment by Germany during the Battle of Ypres gave rise to high expectations as to its tactical potential. CW seemed to possess three decisive advantages: introducing movement in a war desperately stuck in the trenches, breaking the morale of the enemy, and dispersing trenches rapidly without risking loss of men. Yet, this tactical advantage did not last for long – it eroded when the Allies started to expect gas attacks and systematically use gas masks. WWI revealed definitively the tactical limits of CW: without the ‘surprise effect’, CW lost all their tactical advantage.

The progressive transfer of CW, from the battlefields, where they were inefficient, to civilian areas (such as in Iraq and Syria), seems to support the drastic decline over time of their tactical efficiency.

(3) Are CW strategic weapons?

There is no consensus on this question, and the extant studies differ on three points.

First, CW are weapons of attrition: they are generally valued because they can create lassitude among those who face the attacks with gas. Yet, does this lassitude ultimately break the morale of soldiers, or does it reinforce their willingness and determination to fight? According to some historians of WWI, CW did break many soldiers but did not help to break their morale and the will to fight.¹

Second, CW are weapons that create a profound fear. Soldiers, but also public opinion, are extremely afraid of being gassed. Does this fear help to accelerate the end of the war (people are not ready to suffer gas attacks and prefer to surrender) or, on the contrary, does it reinforce the cohesion of the society and the will not to surrender?

Three, CW are weapons that, when they benefit from the surprise effect, might help to create a breach in a war of position, or might help to rapidly conquer a position. But does this tactical benefit outweigh the repulsion that democracies might feel toward the CW utilization? *In fine*, do the tactical benefits of CW outweigh the possibility that civil opinion might cease to support the war?

**The constructivist literature: a weapon with a taboo**

The final body of literature is called ‘constructivist’, and focuses on the role and the construction of norms in International Relations, including those norms associated with practices of war. A major contribution to this school of thought is Richard Price’s analysis of how perceptions attached to CW explain the variations in its utilization.¹

The constructivist perspective draws a picture of CW strongly embedded in moral considerations. The ‘breakthrough’ of the weapon at Ypres, during WWI, would have been perceived as an unprecedented moral transgression, first by soldiers and also several years after (once the propaganda and censorship was over) by public opinion. This moral transgression would have attached a strong opprobrium to the weapon – and set the seal of uncivilized device on it. This seal has transformed the use of CW into a taboo that cannot be transgressed. If actors discussed this taboo in 1899 during the First Hague Conference, 1925 (in the League of Nations) only the 1993 Convention on Chemical Weapons definitely formalized it by means of a legal text. This formalization considerably increased the strength of the taboo, which is the reason why states have been since extremely reluctant to use CW. The taboo makes the weapon unusable by states who claim to have a liberal reputation, or who value themselves as civilized. In contrast, it incentivizes states regarded as being outsiders (i.e. states regarded as deviant by the international community) to use it. Put differently, the taboo explains why the US, UK or France have officially been reluctant to use and to justify their use of CW since WWI, while Iraq, and more recently Syria, have not.

Literature blind spots

The extant literature captures some crucial points of the trajectory of chemical weapons. Yet, some aspects remain largely unstudied. This chapter more focuses on two of these points.

First, the impact of the laws of war on CW utilization during WWI is either largely overlooked or underestimated by the extant analyses. Only very few studies acknowledge that the laws of war did influence certain aspects of CW utilization. When they do so, they tend to look very superficially at this influence, which ultimately leads them to underestimate or neglect its importance to the understanding of how actors think about laws of war and about their weapons utilization. The reasons for this underestimation are twofold. First, many of the studies are historical and do not aim to develop a broader theory that highlights the impact of laws of war on weapons utilization. Secondly, many extant studies consider the laws of war as a ‘set of rules’ that is either respected or violated (a dichotomy). Because CW were used during WWI, they consider that the laws of war ultimately failed to constrain actors in their use.¹ This perception, as explained in the theoretical chapter, is flawed, because it ignores the possibility that, even though the laws of war were violated, they still constrained actors’ actions (including their weapons utilization).

Second, almost all the studies previously quoted mention the specificity of the perceptions attached to CW, as provoking a profound anxiety (and some spectacular panic movements within the troops), but also a violent repulsion among militaries. Historical studies describe these perceptions, and rationalists explain that they might influence the rational choice of actors when they decide which weapon they should use. Constructivists attempt to demonstrate how these perceptions influence CW utilization, but they use the concept of taboo, which is problematic for several reasons. In the case of CW, the most important weakness of this theory is that it does not really explain why the taboo on CW only appeared after WWI.² In fine, all these studies do not really discuss how these specific perceptions created during, and after WWI finally ascribed to CW a powerful symbolic power. This symbolic power is deeply embedded in European institutions, and is reactivated when European states argue over CW

¹ The Hague Convention prohibits the utilization of “projectiles” with CW. If both sides first respected this law because they deployed gas through cylinder (which was not banned by the Hague Convention). Yet, they rapidly started to launch shells with gas, and therefore violated the Hague Convention.

² See the theoretical chapter for further explanation on these points.
utilization. By missing this point, the extant studies fail to consider that arguing over CW necessarily reactivates striking images, strong feelings of repulsion, and a very negative reputation. Ultimately, it explains why actors have difficulties in justifying their CW utilization, and are thus reluctant to use them.

The four arguments of the chapter

The majority of the studies interested in CW does not investigate the impact of the laws of war in their utilization. The reason is pretty straightforward: all the belligerents did violate the extant prohibitions on CW utilizations and extensively deployed these weapons on the battlefields. The CW utilization slowly but surely escalated, becoming a ‘race for toxicity’, outweighing the first moral resistance. This escalation is then interpreted as the ‘failure of the law’. This chapter does not argue that actors did not violate the extant laws of war framing CW utilization. Nor does it contest its escalation. Rather, it demonstrates that the CW utilization cannot be interpreted a failure of the laws of war, and for three reasons.

First, the laws of war did constrain actors at the beginning of the conflict, when they had to decide how they would use CW. If the laws of war banned CW utilization by projectiles, it did not ban the deployment of gas through cylinders. Actors knew this, and acted accordingly: they first deployed CW through cylinders. If the goal of this chapter is not to exaggerate the impact of the laws of war – other factors such as industrial production, the technical challenges, also reinforced actors in their choice of using cylinders – it still wants to highlight the influence of the laws of war (especially as a framework by which to qualify and justify actions) on the variations in CW utilization during WWI. This influence is neglected by the literature.

This chapter also proposes a second argument. Actors argued intensively, during and after the conflict, as to who was the first to use CW on the battlefields. This insistence is intriguing at a time when the League of Nations was still absent (no institutions to punish them for their violations) and when the laws of war were limited to a pretty small number of customs. Yet, it directly contributed to reinforcing the constraining power of the laws of war. Actors constantly and indirectly reaffirmed the validity of these laws of war. Their argument was the following: they were not really violating them because they were outside of their realm, and they were outside this realm because the other side had ‘dragged’ them there. The discussions during and after the war reveal the constant desire, of each side, to reaffirm its legal conduct
and, *a contrario*, to denounce the illegal practices of the other. In this sense, the fact that the chemical warfare escalated did not *necessarily* represent a failure of the laws of war.

The third argument of this chapter shows that the CW utilization was the occasion for actors to reshape the meta-norm of fighting justly, and this refinement durably impacted the rest of the century. The Hague Convention, which banned CW utilization, was re-interpreted during and right after WWI. The deleterious gases were not the same thing as the tear gas used by the French. Moreover, the debates reshaped and specified the notion of superfluous injuries. They finally discussed the notion of proportionality and last resort. The chapter also reveals that the “winners” had a more powerful impact on the arguing process, and on the consequent refinement of the meta-norm of fighting justly, because they led the discussions. It also reveals that the post war process was a window of opportunity for actors to refine and enshrine their own conceptions of the meta-norm of fighting justly.

The fourth argument is that WWI transformed CW into a powerful symbol that still constrains actors today. The notion of symbol as a ‘distortion of reality’, a “metonymy which is thought to capture a broader and more complex reality” seems to apply perfectly to how actors perceived CW during and after WWI. CW is the paradoxical weapon that only killed a minority of WWI soldiers but that is yet perceived as representing the pain and the terrible conditions of every soldier. The CW was used very marginally if compared to other weapons of the artillery, but it represents the escalation of violence and the means of warfare of WWI. These strong paradoxes exist because CW deeply offended the preexistent chivalric codes. The violence and the fear that took hold of actors when they first saw the weapon can be explained by the fact that the weapon did not correspond to anything in their framework of what war, and what fighting justly, *should* be. First depicted as the anti-chivalric weapon, the CW became in the postwar debates a barbaric and uncivilized means of warfare. These qualifications became deeply embedded in the European conception of fighting justly. *In fine*, they framed and restricted European states’ ranges of actions with regards to CW utilization. If states use these weapons, they reactivity this strong and negative symbol, which considerably increases their burden of proof in the eyes of their society. In sum, WWI enshrined for the rest of the century, and even the 21th century, the belief that the CW is an uncivilized weapon: this is why those
states which did use CW after WWI either tried to mask their use, or claimed their ‘uncivilized nature’\(^1\).

**Definitions: what is a chemical weapon?**

It is very hard to distinguish which weapon should be qualified as CW for the following reasons: the fact that many weapons do contain chemical agents but are not qualified as CW (1), and the preconception that CW are necessarily lethal (2).

**A chemical weapon is not only a weapon with chemical agent**

If a weapon does contain some chemical substances, it is not always clear which effects kill or hurt the opponent: is it its chemical or its incendiary effects? Does this weapon kill because it suffocates or because it burns humans exposed to it? Despite their provocative tone, the questions show the blurred limits between what exactly separates an incendiary from a chemical device. Coleman argues that chemical weapons were used during the Siege of Constantinople, but then depicts their effects as comparable to those of Greek fire. Yet, Greek fire is commonly perceived as the ancestor of napalm. And napalm is qualified by legal conventions as an incendiary weapon. Does it thus mean that chemical agents used during the siege were incendiary devices? Thucydides describes the arsenic smoke as similar to “fire greater than anyone had ever yet seen produced by human agency”. This description weighs in favor of arsenic smoke as incendiary weapons. Yet, he then describes the effects of this smoke, such as pulmonary problems and blindness – that is, the same effects as the chlorine commonly qualified as CW during WWI. This example is thus a startling illustration of the elasticity of the category of CW. It shows that the categorization of the weapon is necessarily based on a hierarchy of effects, which is itself based on a normative judgment. This hierarchy has important political effects, as they influence historiography, discourses and historical retrospectives.

\(^1\) See the very interesting development on this point in PRICE, Richard M. *The Chemical Weapons Taboo*. Ithaca: Cornell University Press, 1997. p134. The author demonstrates how Iraq, in order to justify its CW utilization against Iran, explains that they are not “living on a civilized continent”. 

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Are chemical weapons necessarily lethal?

Another interesting aspect revealed by this retrospective is whether CW are necessarily lethal. The question has indeed to be considered: does a chemical agent have to kill, in order to be qualified as a CW? An implicit bias suggests that the chemical agent has to be highly lethal to be accordingly labeled as a chemical weapon. This bias explains why tear gas is commonly excluded from many monographs on CW. ¹

Yet, tear gas shares many similar qualities to those of chlorine or other gases commonly regarded as suffocating CW: they disable people, suffocate them, make them cry, and force them to stop what they are currently doing. The difference, commonly accepted, lies indeed in their level of lethality, and the frontier between killing and incapacity. But when does a weapon stop being a tear gas, to become a lethal weapon? The effects of a weapon can be classified on a spectrum from low intoxication to high lethality. If the extreme of this spectrum is easy to identify, this becomes more complex with weapons in the middle of the spectrum. What differentiates a gas with a low lethality rate from a gas with an extremely high suffocation rate is very hard to determine. And this problematic aspect is rarely tackled in studies on CW. As we will see in the following paragraphs, many suffocating grenades were used during WWI. If these grenades are not only regarded as incapacitating but as killing agents, then the French (and not the Germans) were the first to have used CW during WWI.

Finally, this lethality bias is further reinforced by the fact that it is very hard to measure casualties on the battlefield, especially those caused by gas. This difficulty makes the collection of data particularly complicated. It creates a selective bias: it is only the uses of lethal gas that are counted, and thus present in the theories. But this data problem should not elude the question of where the cursor between tear, irritant and chemical gas should be.

The definition of the CW used in WWI

This chapter focuses more specifically on the three types of CW used during WWI, which are (from the first to the last type of gas used during the conflict): chlorine, phosgene and yperite (or mustard gas). Except at certain specific moments, these gases were generally mixed with each other, especially during the last eleventh month of the conflict. The first two gases belong to the same category but vary in one crucial aspect: chlorine immediately affects the human body while phosgene causes very severe afflictions several hours after having been inhaled. Yperite or mustard gas is generally perceived as more lethal and more aggressive than the two other gases. The following paragraphs provide further detail on their composition (1), their appearance (2) and their effects (3).

Chlorine

Chlorine is the first gas used in WWI. In contrast with what the majority of the representations of chlorine attacks suggest, chlorine is not green or yellow, but transparent. The chlorine utilization during WWI was generally mixed with a green and opaque colorant, which explains why the first gas attacks took the form of big yellow greenish clouds.

Chlorine is classified in the category of suffocating gases. Inhaling a large quantity of chlorine causes deep lesions in the lungs, and in the whole respiratory system. It inflicts the same ‘effects’ as in drowning. The testimonies of French doctors who were assigned to treat the gassed soldiers describe their patients arriving as “laid down, asphyxiated, gasping for fresh air, their faces blue, restless, or pallid and distraught, murmuring.”¹ Victims of chlorine can also be recognized by the thin transparent or pink liquid coming from their mouth (caused by pulmonary edema).

Because chlorine was often mixed with oxygen, it is hard to measure how many soldiers it killed. Chlorine was the gas used at Langemarck during the first massive attack with CW. When inhaled, chlorine kills rapidly: its victims lose the capability to breathe, and have the sensation of drowning. Many soldiers suffered from their exposure to chlorine, and continued to have important problems in their respiratory system (many of these soldiers did not realize


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these problems were caused by chlorine, but rather attributed them to a persistent tuberculosis). Both sides from this point used chlorine less and less frequently: its use in 1915 being slowly supplanted by a mix of chlorine (80%) and phosgene (20%). This mix was then replaced by and sometimes added to yperite, which belongs to another category and produces different effects. This slow replacement might be explained by the fact that rapidly, each side developed gas masks. When worn correctly, these gas masks entirely neutralized the effects of the chlorine.

*Phosgene*

Phosgene is the second type of CW used during the conflict. Though its composition slightly differs from that of chlorine, phosgene is derived from it, but contains additional carbon monoxide. Phosgene is classified as a suffocating gas. It is transparent and has no particular odor. It is extremely hard to identify the presence of phosgene because its effects are delayed. When inhaled, phosgene has the same effects as chlorine: both cause very severe lesions in the lung and the rest of the respiratory system. Yet, the ‘delayed effects’ of phosgene are commonly depicted as aggravating the ‘harm’, for two reasons. First, soldiers often did not realize that they had been gassed because they did not feel the effects of phosgene. In contrast with chlorine, soldiers inhaling phosgene could not feel that they had to protect themselves with their gas masks. The phosgene was then a way to ‘bypass’ the neutralization of the gas mask. Several testimonies describe soldiers feeling very good after a gas attack with phosgene, and who rapidly died, in terrible pain, a couple of hours later. Second, some soldiers developed a profound fear of being gassed, and this constant fear was very painful to bear creating symptoms that we now call “Post Traumatic Stress Disorders”.

*Yperite*

Yperite or mustard gas is the third type of CW used during WWI. Its first utilization occurred in the “Chemin des Dames”, in July and December 1917. After this attack, each side increasingly used this gas, sometimes mixed with chlorine and phosgene. If yperite is also derived from chlorine, its effects are different, hence its categorization as a “vesicant” or “blister” gas. Yperite is said to spread an odor of mustard and garlic. It not only causes almost-immediate death, resulting from extremely severe lesions in the lungs and the rest of the respiratory system when inhaled, but also burns and causes severe skin and eye irritation. These
chemical burns are extremely painful and long lasting. Yperite is also very stable and remains for a long time in the air, increasing the risks of soldiers being burnt by it (and increasing the time during which the gas is still extremely harmful). Testimonies explain that soldiers gassed with yperite “were able to stand on their own, fleeing the air and the light, screaming, complaining about the pain in their eyes, or, dazed and in a stupor, going to sleep without any trouble in breathing”.¹ Some characteristic symptoms for soldiers gassed by yperite were their incapacity to speak for several days after the attack, and a persistent flow from their nose.

If gas masks could protect soldiers from the lesions in their respiratory system, they could not protect them from the severe burns. Moreover, at the end of the conflict, yperite was systematically mixed with chlorine and phosgene. Doctors in the front were then unable to distinguish who had been gassed with suffocating gas, and who with vesicant gas.²

The other gases of WWI

Other types of CW were used during WWI.

First, irritant (or tear) gas was first deployed by the French in grenades in 1914.³ Both sides massively used tear gas. Yet, we will not discuss their utilization in-depth. It is very hard to gather data on the quantity and the effects of these gases. Because they are extremely volatile, evaluating their quantity and their impact is extremely challenging. Moreover, the effects of tear gas generally lasted a dozen minutes, and were not severe (they did not cause death). Because the scope of our chapter is already large (i.e. the utilization of three types of gas during the WWI), we prefer to focus only on the particularly lethal gases used.


³ In March 1915, French possessed 10,000 grenades full of tear gas also called “Grenades Bertrand”, in VOIVENEL, Paul. La Guerre Des Gaz, 1915-1918. 1. ed. Paris: Giovanangeli, 2004. If tear gases are regarded as CW, then, in contrast with what the official history states, the French were actually the first to deploy CW on the battlefields.
Another type of gas used in the conflict was a gas categorized as “toxic”, which killed immediately, not by asphyxiation but by other means (for instance paralysis). Several authors mention that this type of gas as being used during WWI, but we could not find clear data on it.\(^1\) Testimonies of doctors mention this gas but do not say anything about its effects or about soldiers having been gassed with it. This category is yet interesting to note, because it is the ancestor of ‘neurotoxic” gases. These include sarin gas, which has been deployed on battlefields (for example by Iraq against the Kurds and against Iran in the 1980s).

**The chapter roadmap**

The first part of the chapter quantifies and describes the variations in the use of CW on the battlefields. Three different periods are analyzed: the pre-1914 period, the battle of Ypres (known for the first official massive use of CW) and the post-Ypres period (1). It will then more specifically focus on the shift in CW utilization during WWI, and detail the increasing recourse to CW, by the Allies and the Germans, from the occasional gas attacks of 1915 to the systematic and massive CW utilization in 1918 (2). The third part reveals why the traditional three hypotheses of efficiency, cost and international pressure, only partially explain the trajectory of CW utilization during and after WWI. (3) The fourth part demonstrates that the meta-norm of fighting justly – and more specifically the arguing process over it – highlights why actors were initially reluctant to use the weapon, why they first used it in cylinders and why, after this first utilization, they started to increasingly use CW during the conflict. (4) The fifth and final part details how WWI transformed CW into a powerful threefold symbol: the weapon of fear, the weapon of the weak, and the weapon of the barbarian. This symbol explains why democratic states have difficulties in justifying CW utilization (i.e. the burden of proof to justify CW utilization becomes particularly ‘heavy’ after WWI), and why they were reluctant to use the weapon in the aftermath of WWI.

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\(^1\) Olivier Lepick mentions several ‘toxic gases’ used in WWI, including hydrogen cyanide, and cyanogen bromid, chlorure and iodure of cyanogene.
Part I- The Trajectory of Chemical Weapons, before, during and after World War I

The fourfold problems of tracing the CW trajectory

The problems in retracing CW utilization over history are fourfold.

First, in contrast with what the official history suggests, CW were already used on the battlefields before WWI. The first utilizations can be traced back to antiquity. Many studies dismiss this aspect, for two reasons. First, the ‘deep imprint’ of WWI on CW utilization concentrates the attention of the extant studies, which tend to underestimate or dismiss what happened before. Second, the difficulty in gathering reliable data on wars before WWI, because of the scarce and fragmented sources, explains, generally, the very sketchy descriptions of earlier CW utilization (and this chapter does not differ from this).

Secondly, CW are of different types and effects, from tear gases which momentarily incapacitate those who inhale them, to toxic agents which immediately kill anyone in contact with them. This wide variety of effects makes the retracing of the CW trajectory challenging for two reasons. First, as explained in the ‘description part’, studies often disagree on what exactly constitutes a CW: whether they only include chemical substances which kill, or whether CW also refer to gases that have non lethal effects, such as the tear gases. Studies also often hesitate to include poison utilization as a form of CW. Secondly, many of the deployed gases are extremely volatile. This volatility explains why it is very hard to prove the utilization of certain gas, to gauge the exact quantity of gas deployed, and to have a clear perception of when CW were deployed, and with what impact.

Third, the trajectory demonstrates that WWI does coincide with the first significant deployment of CW on the battlefields. 1915 constitutes a turning point in the CW trajectory. If CW was used before 1915, this year remains a turning point because this is the first time that each side produced and used such massive quantities of CW. The second part of this chapter more closely analyzes the variations in CW utilization during WWI. Briefly, we can mention that three types of CW were used during this conflict (chlorine, phosgene and yperite). Moreover, several authors explain that a ‘race for toxicity or lethality’ took place between the
Allies and the Germans, and that, from 1915 to 1918, states which took part of WWI used an increasing quantity of gas, with an increasing degree of lethality.

Fourth, CW were repeatedly used after WWI, and this trajectory briefly lists these utilizations. Yet, these utilizations differ from what happened during WWI, for three reasons. First, the wide majority of these CW utilizations occurred in an ‘asymmetric’ context, where only one side possessed a significant quantity of CW. The most striking exception is the Iran-Iraq war, which is very similar to the ‘chemical escalation’ observed during WWI. Secondly, the wide majority of these post WWI utilizations were made either with chlorine or with the more lethal toxic (or neurotoxic) agents. Unlike these neurotoxic agents, gas masks easily neutralize the dramatic effects of chlorine, and transform the gas into a weapon with a low level of lethality. Therefore, the fact that states still deploy chlorine (the recent CW utilization by Syria was with chlorine) contradicts the common assumption that states deploy increasingly more efficient gases. Finally, the post WWI CW trajectory also reveals that, if CW were still used on the battlefields, they were also increasingly used against civilians. This transfer, from the battlefields to civilian areas, gives rise to very interesting questions as to, inter alia, the reasons which might motivate this transfer, the meaning of this transfer with regards to the weapon’s strategic and tactical utility, but also in terms of what this weapon signifies.

The limits of knowledge about the CW trajectory

Knowledge of the trajectory of CW utilization is limited for two reasons.

First, in order to retrace the pre-WWI CW trajectory, we used secondary sources that describe and discuss the CW utilization. Generally, these sources rely on military studies that briefly mention the utilization of gas, without really providing more information on the reasons for its utilization, the exact quantity of CW at the disposal of actors, the number of victims and the representations associated with it. Therefore, the history of CW prior to WWI is extremely meager, fragmented, and inferred from debatable assumptions and sources. We yet decided to briefly retrace it, despite these obvious weaknesses, because it reveals that WWI was not the first conflict during which CW were deployed.

Secondly, it is very common that the different descriptions of CW utilization disagree on the exact quantity deployed and the number of victims killed. Lepick mentions the
“extravagant” numbers, mentioned by certain studies, of quantity and victims killed by CW killed during WWI. The trajectory depicted in this chapter does not aim at providing additional analyses based on archives. Rather, we will explain why there is some conflict over the numbers, and which numbers seem to be the most plausible ones.

Finally, states are extremely reluctant to communicate regarding their CW utilization. This reluctance is explained by the “légende noire” that is attached to CW, which is a weapon of bad reputation and opprobrium. These negative features highlight why it is very hard to have access to the exact conditions of CW utilization by states.

The roadmap of the CW trajectory

This first part attempts to retrace the trajectory of CW utilizations during the twentieth century (the designation “prehistory of WWI” refers to the fact that many studies believe that the history of WWI starts with WWI) (1). The second part briefly depicts the CW utilization during WWI and provides figures on the quantity of CW deployed. It demonstrates that WWI does constitute the first massive CW utilization on the battlefields (2). Finally, the last part briefly depicts the CW trajectory in the rest of the 20th century (3).

The “pre-history of Chemical Weapons”

This pre-history of CW is divided into two periods. The first period encompasses CW utilization during antiquity and the middle ages. During these two vast periods, CW were massively used in two ways: either they were used to create toxic fumes (1) or to poison the waters surrounding the “enemy” (2). The second period covers the 19th century. During this period, new “types” of CW emerged, as shells of gas were deployed on the battlefields. This period is also remarkable in that it coincides with the first premises of arguments in favor of limitations on CW utilization.

CW utilization in antiquity and the middle ages: poisoning the rivers and creating toxic smoke

Toxic smoke is probably the first type of CW utilization on the battlefields. Several studies mention that, in 600 BC, the Indians and the Chinese developed manuals that precisely detailed how soldiers could produce very efficient toxic clouds. In addition, the Chinese developed projectiles capable of launching  significant quantities of tear gas.\(^1\)

Several sources demonstrate that CW were used during antiquity, by the Greeks and then the Romans. CW were used to poison the waters which surrounded the enemy, in order to prevent them from fighting again. The poisoning of the River Pleistos by Solon is sometimes depicted as the first ‘important’ CW utilization on the battlefields.

Other studies trace the origin of the use of CW to several years after this, during the Peloponnesian wars: smoke screens, incendiary devices and toxic fumes were then used to cause sleep among enemies before the sieges. Thucydides also invoked the use of incapacitating agents (causing incessant diarrhea) and of arsenic smoke during these wars. Almost 400 years after the Peloponnesian war, the Romans used toxic smoke against the Charakitanes in Spain.

In the middle ages, during the siege of Delium, combatants initiated toxic clouds in support of their ground attacks. These clouds shared many characteristics similar to the chlorine clouds seen in WWI. It was also common for combatants to back their assaults with arsenic smoke. The Danish would have deployed hypnotic gases while attempting to invade Scotland. Finally, belligerents deployed toxic clouds to facilitate their siege of Constantinople.

Intuitively, it seems that the CW utilization in antiquity and the middle ages, with toxic clouds, is very much linked to a specific type of warfare: the ‘siege’. The slow replacement of this mode of warfare with the model of ‘levée-en-masse’ (two armies meeting on a battlefields and fighting there) might explain why the toxic clouds and the poison were less and less representative of the majority of CW utilizations on the battlefields.

The first international ‘accord’, to decide whether CW utilization was a legal or an illegal means of warfare, took place just after the end of the middle ages. Indeed, CW were officially mentioned for the first time in the modern era within a bilateral accord between France and Germany, called the Strasbourg Agreement (27 August 1675). This accord explicitly stipulates that neither side should use poisoned bullets, indirectly, revealing that poisonous bullets were probably used on the battlefields. If this ban was already discussed by the Romans (‘armis bella non venenis geri’), and by philosophers (Alberico Gentili), the Strasbourg Agreement is the first interdiction of CW (limited to the category of poison) to be discussed between two states.

Two centuries later, Napoleon III authorized the use of hydrogen cyanide for military purposes in 1865. Thirty-five years before, in 1830, Lefortier had created for France a weapon that delivered an odorless smoke that made people cough. Even though the French Artillery Committee rejected this weapon, its invention indicates that the use of gas was increasingly being considered as a potential means of warfare. Meanwhile, Cochrane proposed a military plan involving a ship carrying sulphur capable of creating clouds of noxious effluvia. The British Army rejected his plan. He re-iterated this proposition forty years later. On both occasions his proposition failed to convince politicians.

During the American Civil War, Ulysses Grant was offered “a plan” that “was devised to attack Confederate trenches with a cloud of hydrochloric and sulphuric acids”. In 1862, John Doughty made a proposal to the Secretary of State to launch the production of a shell full of liquid chlorine. He justified this request by the necessity to find a weapon that could rapidly end the escalating conflict. Both requests were refused. Yet, some records indicate that some chlorine shells were in fact launched during this conflict.

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1 ‘Armis bella non venenis geri’ literally means that ‘war is waged with weapons, not with poison’. This is a Roman adage which is depicted by Vattel as a customary law endorsed by the Roman Senate.


… did not preclude states from using CW in the 19th century

These first international ‘moral resistances’ against CW utilization did not prevent those who formulated them from continuing to use CW. During the Crimean War (1853-1856), organoarsenic bombs and shells were deployed. The French and British also used toxic bombs with cacodyle and soufre. The French continued to deploy CW. During the war in Kabyli in 1852, General Pelissier burnt branches of green wood to kill the tribes hidden in caverns.

During the second Boer War (1899-1902), the British used picric acid, that is an explosive device which produces toxic effluences. The Boers tried to protect themselves with handkerchiefs soaked in vinegar. This utilization is the last one to occur on the battlefield before the massive deployment of CW in WWI.

After WWI: CW utilization in the “periphery” of the world

The massive deployment of CW after WWI will be detailed in the second part of this chapter. The hypothesis we propose is that the CW utilization during WWI represents an ‘anomaly’ in the CW trajectory: that is both a dramatic novelty and a dramatic precedent. CW had never been used on such a scale before, and they were never used again with the same degree of systematicity and in the same quantities, after WWI. Therefore, the subsequent CW utilization (after WWI) will only be briefly mentioned in this trajectory, which does not aim at being exhaustive.

The post WWI utilizations seem to share two main characteristics: they never took place in a conflict between European states (if we exclude Russia from Europe), or in a conflict between the United States and European states. They always either opposed former empires against their former peripheries (the US utilization of CW in Vietnam being the exception) or two non-European states against each other. Three periods of utilization stand out: the interwar period (1919-1939), the Cold War period (1945-1989) and the post-Cold War period (1989-2014). As this classification reveals, the great enigma of the CW trajectory, largely studied by the literature, is the non-CW utilization during World War II.  

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During the interwar period (1919-1934), CW utilization occurred several times, largely in a similar context: an empire (or a former empire) used CW against their current (or former) colony. This was the case for the British utilization against Iraqi people under their mandate in 1919, for the French utilization of gas in the Rif War (1925) but also when the Italians invaded their colonial territories in East Africa in November 1935 (also called the War of Abyssinia). The Japanese also used chemical weapons during their war against China from 1930-1940.

During the Cold War period (1945-1989), the most remarkable CW utilization is the controversial deployment of orange agents and defoliants by the US in Vietnam. If not all actors agreed on the qualification of orange agent and defoliant as CW, the utilization of this chemical in Vietnam is recognized, and condemned by several members of the United Nations. Another well documented CW utilization is the one which occurred in the war between Yemen and Egypt (also called North Yemen Civil War) which lasted from 1962 to 1970. Nasser is said to have helped the supporters of the Yemen Arab Republic by providing them with chemical weapons. Finally, the utilization which probably gives rise to the greatest number of analyses and studies is the massive CW deployment ordered by Saddam Hussein, on two occasions. First, he massively deployed them against the Iranians during the Iraq-Iran war (1980-1988), and against the Kurdish village of Halabja (March 1988) in which approximately 4,000 Kurdish civilians died, gassed by yperite (also called mustard gas). Finally, two CW utilizations were highly documented during the post-Cold War period (1981-2014). The first concerns the First Gulf War, and the alleged CW utilization by both Saddam Hussein and the United States. There is no official version which acknowledges that CW were used. Yet, many serious newspaper articles and studies claim that a hundred US soldiers were injured by gas. The presence of CW during this war is viewed as a fact by several analyses, the only uncertainty remaining whether these gases were used in combat or not, and who used them. Finally, the most documented CW utilization of the period is undoubtedly the massive utilization made by El Assad against the Syrian civilian population in 2013. Several NGO and UN reports proved that Assad used sarin gas several times in March, April and August 2013, killing no less than 900 civilians (many of them children) and injuring 1080 civilians.

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In a nutshell, the trajectory of CW utilization does not stop after WWI. CW were used several times, and sometimes in high quantities, on the battlefields. It is very hard to measure the exact quantities of CW deployed, and whether these quantities did or did not meet the levels reached in WWI. It seems that the end of the Cold War, and the post-Cold war periods ‘inaugurated’ a new method of CW utilization, largely directed against civilians rather than combatants. Yet, it seems that we can confidently hypothesize that none of these utilizations approaches the overall number of 1,205,655 soldiers injured, and a total of 1,296,853 combatants killed by gas.¹ In sum, none of them reaches the scale and the quantity of CW deployed in WWI. Hence our focus on this war in the second part of this chapter.

Part II – Variations in the Chemical Weapons Utilization during WWI

Why focus on CW utilization during WWI?

This part focuses on CW utilization during WWI for three reasons.

First, it was during WWI that the first significantly massive CW utilization occurred. Though CW were deployed before this war, their utilization never reached the same level of systematicness, lethality and quantity as in WWI. WWI represents thus the peak of CW utilization. Although many states had many ‘opportunities’ to deploy as much WP as was deployed in WWI, and the absence of gas on the battlefields in WWII is paradigmatic of this ‘missed occasion’, they never did. Two questions logically derive from this observation: why then did states use so many CW (or such a high quantity of gas) on the battlefields of WWI? Is there an event or fact specific to WWI that explains why states, after the war, significantly decreased their CW utilization, while they had the ample opportunity to use them?

Second, this CW utilization also seems to be the last on European soil. If European states (France, UK, Germany) did not use the weapon against other European states (such as

during WWI and the Yugoslavia war), they did deploy it against their former colonies. This observation is also puzzling: why did European states cease to use CW in Europe after WWI?

Third, the case of CW utilization in WWI interests us because it provides a ‘counter-intuitive’ case study, with which to analyze the impact of laws of war and symbolic power in the practices of war. Indeed, the massive deployment of CW during WWI is often analyzed as proving the ‘failure’ of the laws of war, as being unable to stop the dramatic escalation in violence, the chemical warfare being paradigmatic of the violence. We have demonstrated that this analysis is partially wrong, partly because it only considers the constraint of the laws of war in a ‘dichotomic’ way (violation or compliance) while, we believe, it should instead consider other ‘dimensions’ or facets of the constraint (scope of possibilities, modalities of actions). In the case that the example of WWI supports our claim, then it would reinforce our theory, which holds that the laws of war do impact weapons utilization.

Fourth, as explained in the introduction, the imprint of WWI, as seen in the different studies that retrace the trajectory of CW utilization, is very important. It is as if the perceptions actors have of CW, from their strategic or tactical utility to the moral problems their utilization might evoke, have been formed with regards to what happened during WWI. The case of WWI is then interesting because intuitively it seems that the perceptions of the conflict and of the CW have reinforced each other, and ‘plagued’ the entire 20th century. Therefore, the case of CW utilization during WWI seems to be particularly interesting, if we try to measure whether the perceptions have actually influenced, or not, the trajectory of CW utilization during and after WWI. In fine, it will help us to test whether our hypothesis on ‘symbolic power’ (which is a particular type of representation) is relevant or not (i.e. certain weapons have a strong symbolic dimension that highlights their trajectory of utilization)

Roadmap

The extant literature dwells on the ‘anomaly’ of WWI, and on how the CW utilization increasingly escalated until 1918. This part will attempt to substantiate this claim and determine whether this ‘race for toxicity’ actually happened during WWI.

The first section describes the four phases of the ‘chemical warfare’ between the Allies and the Germans, from 1914 and the French use of tear gas, to the generalization of mustard gas.
gas in 1918 (1). The second section explores whether the three common explanations (the cost based, the efficiency-based and the international pressure hypotheses), laid out in the theoretical chapter, actually explain the shifts in CW utilization during WWI (2). The last section sketches a provisory conclusion, demonstrating that the meta-norm of fighting justly might explain the variations in CW utilization. (3)

The five phases of the chemical warfare

The “chemical warfare”, that is the deployment of CW during WWI, can be divided into five different phases, each of them corresponding either to a sudden increase in CW utilization, or to the introduction of a new type of CW: the 1914-1915 period during which only tear gas was deployed (1), the Battle of Ypres in April 1915 which is the first massive CW utilization on the battlefields (2), the Allies’ retaliation (end of 1915) (3), the escalation (1916-1917) (4) and the breakthrough of mustard gas (1918) (5).

First phase: The French shells filled with tear gas (1914-1915)

The French started to use CW with tear gas in 1914

When WWI started, the French already had at their disposal some “cartouches sufoquantes” (asphyxiating cartridges) which contained a tear gas named ethyl bromoacetate. Professors Kling and Florentin created these “cartridges”. The French used a thousand of these cartridges, through a launcher, from the very beginning of the conflict to the end of 1914. Rapidly, the ethyl bromoacetate, which filled these cartridges, was replaced with a substance derived from chlorine: chloroacetone. This replacement was because the French had a shortage of the previous chemical (ethyl bromoacetate) and not because of tactical or strategic considerations.

A second CW, a grenade filled with the same tear gas as the previous second version of asphyxiating cartridge (ethyl bromoacetate) was also used in 1914, but only in very small quantities. This shell, called “grenade suffocante” (asphyxiating shell), was mostly deployed during 1915. The only significant difference in this second version is that combatants who used
the shells could ‘trigger’ them with their own hands (and have a better control of when and where the tear gas could spread).

Starting from April 1915, a third CW was used by French soldiers: a new grenade with chloroacetone called “Bertrand numéro 1”. These grenades were supposed to be less volatile and therefore ‘more irritating’, but the quantity of chloroacetone was too low to inflict deadly effects. In February 1916, a fourth type of grenade was deployed. It looked very similar to the grenade ‘Bertrand numéro 1’, but contained a gas that was perceived as more irritating than chloroacetone: namely acroleine.

The British refused to use CW before the 22

If the British did consider the possibility of producing and using CW (especially CW with tear gas), they refused to do it for three reasons. First, they did not think that the CW they could produce would be efficient on the battlefields. Second, they feared that German retaliation could be massive and much more dangerous than the potential effect of their own CW utilization. Churchill himself feared the retaliation, and explained that he was reluctant to use a weapon that could trigger “inhumane reprisals”.¹

Third, they had a certain reluctance to violate the Hague Convention, which forbids the utilization of CW with projectiles. For all these reasons, the research on CW utilization which took place at the Imperial College were not very conclusive and not very supported until 1915. It is indeed only in March 1915 that a CW with a tea gas (i.e. ethyl iodoacetate) was deployed, notably on the impulse of Amiral Dundonal.²

The Germans had many CW at their disposal, but were not the first to use them

The German gas industry was flourishing in the years preceding WWI. Therefore, the Germans did have the capacity to develop and use a high quantity of CW when the conflict


erupted in 1914. Several sources mention that it is only after having lost the First battle of Marne (12 September 1914) that the Germans decided to use CW with tear gas. Major Bauer, who is said to have had a crucial influence in the development of the first German CW, was appointed to “develop one chemical shell capable of dislodging combatants hidden in inaccessible locations”. Several weeks after, on 27 October 1914, the Germans already had 3,000 of these shells filled with tear gas at their disposal. Even though the Germans deployed many of these shells, from 1914 to 1915, they remained very skeptical with regards to the efficiency of the weapon, which did not seem to have significant tactical effects on the battlefields (sometimes, the French did not even realize that weapons with tear gas had been deployed). This lack of efficiency ‘drove’ the Germans to consider a new CW. This new CW (containing xylyl bromide) called T-Stoff was first used at the end of January 1915 (against the Russians). These T Stoffs were used until the end of WWI.

**Provisory conclusions on the first phase**

The first phase of the ‘chemical warfare’ that took place during WWI is largely unknown (and rarely appears in CW trajectories traced by other studies) for two reasons. First, and as we will see in the last part of this chapter, CW became at the end of the conflict a “memory stake”: if each side acknowledged having used CW, each denied having been the one to initiate this chemical warfare. The Allies and the Germans both fought to prove that they used CW because they were retaliating against the other side which ‘hit first’. Because they won the war, the French could more easily enshrine the idea that they were not the first to hit, and that they could not be held as being responsible for having triggered the chemical warfare. Secondly, tear gases were not the most lethal gases deployed during WWI. Their effects on the human body are less aggressive than chlorine, or mustard gas. The fact that these gases did not directly kill soldiers, and that combatants sometimes did not even realize that they had been gassed, might explain why these gases are not “part” of the “official history of the chemical warfare of WWI”.

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Second phase: the Battle of Ypres (or Langemarck offensive) on 22 April 1915

The Battle of Ypres took place in 1915, which was also the most deadly year, with the highest number of victims. Since November 1914, both sides had been at stalemate, holding their trenches, unable to create a breakthrough and take the other sides positions. This is the context of the first massive utilization of CW.

The first massive use of gas: Ypres or the Battle of Langemarck

The first massive gas attack took place on 22 April 1915, around 5.00pm on the North-East side of Ypres. Several large green gas clouds rose from the German trenches before slowly moving toward the Allies, helped and guided by the wind stream. French, British and Canadian soldiers saw the green cloud coming straight at them. Even though many of them were wearing gas masks, they did not all start to wear them. Even though all soldiers knew they had to keep their gas masks close to them, a large majority of them did not know how to wear them properly (so that the mask achieved its task), or were not even aware that they had to put them on their mouth and nose.

According to several historical records, the dispersion of gas created a real panic, to the extent that some officers, such as General Mordacq, believed the soldiers suddenly became maddened. He depicts a “dérangement mental” (mental disturbance) that would have abruptly taken over the minds of his soldiers. Lieutenant Jules-Henri Guntzenberger testified 10 days after the attack in front of a Commission tasked with evaluating the actions of the enemy, in violating the Jus Gentium (in French, ‘Droit des gens’). His words capture the incredulity but also the ravaging effects of chemical weapons on the battlefield.

‘Le 22 avril vers 5 heures du soir (...) à 70 ou 80 mètres des tranchées avancées allemandes (...) mon attention fut attirée par un de mes soldats sur des vapeurs qui s'élevaient en avant de ces tranchées. J'ai vu alors un nuage opaque de couleur verte, haut d'environ 10 mètres et particulièrement épais à la base, qui touchait au sol. Ce nuage s’avançait vers nous, poussé par le vent. Presque aussitôt, nous avons été littéralement suffoqués (...) Nous avons du
The panic movements and death by suffocation

Once the Germans opened their cylinders of gas and saw the French soldiers starting to leave their positions, they moved toward the Allies’ trenches, aiming at breaching them. Because the gas was still in the air, German soldiers had to run with protection against it, in the form of artisanal gas masks, mostly composed of wet handkerchiefs. The humidity of the cloths allowed them to breathe rapidly, to run and break the enemy lines. While the Germans were moving forward, French soldiers hit by the gas were running away – desperately. They were trying to find fresh air to breathe or some kind of solution to ease their pain. The chlorine— that is the gas contained within the cylinders – had indeed disastrous effects on the respiratory system and eyes. As we mentioned earlier, soldiers affected by gas developed dire symptoms. Their eyes started to burn, preventing them from seeing. Their lungs hurt as if they were on fire. Gas made soldiers suffocate, vomit, and shed blood. Chlorine also caused very violent spasms and loss of body control. All these symptoms were extremely painful, to a degree that that once hit, soldiers could not help but lose their rationality. They could not resist, fight back, protect their trenches – or even retreat in a unified movement.

Soldiers killed by gas were identifiable by their green complexion, but also by a small trickle of white liquid at the corner of their mouths. Those injured by the gas vomited all night long, shedding blood, coughing – sometimes losing their sight and their ability to breathe deeply or even normally.

The human consequences of the first massive attack with CW

Drawing conclusions on the number of victims killed or hurt by CW, and on the quantity of CW used is complex for reasons previously described in the introduction. Both sides tended to increase or deflate the numbers, depending either on their willingness to shed opprobrium on the ‘first’ to use such an “atrocious method of warfare”, or on the desire to hide the potential

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tactical benefits of the weapon. It is therefore very hard to have a precise idea of the number of combatants killed by CW at Ypres. Yet, several testimonies explain that a high number of French soldiers were killed without one bullet having been shot by the Germans. This testimony helps us to conclude that more than the majority of the French soldiers killed and maimed that day was the direct result of the first massive use of chemical weapons on the battlefield. 1

The extant literature mentions a total number of victims killed during this specific attack that varies from 200 to 5,000 soldiers, while the number of casualties oscillates between 1,000 and 10,000. Several authors claim that these numbers are generally very unrealistic. One of the most serious authors on the topic, Olivier Lepick, estimates that a range of 800 to 1,400 soldiers killed is reasonable, with between 2,000 and 3,000 casualties. 2

The quantity of gas deployed at Ypres

Several studies provide similar numbers to evaluate the quantity of CW deployed this day. It seems that 5,830 cylinders, disseminated along a six-kilometer front from Streenstraete to the Yser canal, released 150 tons of chlorine. These cylinders represented half of the extant cylinders at the disposal of the Germans. The Germans also possessed, at this time, approximately 700 tons of chlorine for military use. This attack represents less than 5% of the entire quantity of gas deployed in 1915. 3

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3 In SPIERS, Edward M. Chemical Warfare. Urbana: University of Illinois Press, 1986., Spiers explains: “In Ypres, the Germans disposed 5,730 cylinders along a 6 kilometers front. The release of the gas opened a gap of some eight to nine kilometers, enabling the German infantry to capture some 50 guns, 2,000 prisoners and a substantial tract of the Ypres Salient. Chlorine gas was discharged from cylinders.”
The other attacks with CW which prolonged Ypres

Several days after this first ‘chemical attack’ at Ypres, the Germans decided to re-deploy cylinders filled with chlorine on two occasions: on 23-24 April near Saint-Julien and another attack on 2 May at Ypres. These attacks were carried out with less chlorine than the first chemical attack at Ypres, as only respectively 15 and 40 tons of chlorine were used. The first attack not only used CW through the cylinders filled with chlorine, but also deployed the T-Stoff. There is no number claimed as to the total victims of this attack, but several historians believe that very few soldiers were killed by the CW. Indeed, because the surprise effect no longer worked for these attacks (soldiers were aware of the first attack of Ypres), the soldiers were wearing protective pads, and thus did not really suffer from the attacks. The second attack post Ypres seems to have been more dramatic. The British Major Foulkes numbered 2,400 casualties and 227 dead. It is very likely that other German attacks with CW were waged from 22 April to 6 May. Lepick evaluates that a total of 400 tons of chlorine were deployed during this period, which represents approximately more than 10% of the entire quantity of CW used in 1915.

The third phase: the Allies’ retaliation (end of 1915)

Once the stupefaction provoked by these attacks with chlorine vanished, the Allies rapidly mobilized in order to find the most appropriate tactical and strategic answers. Their answer consisted in a four-step process: finding adequate protection to neutralize the effects of German gas attacks (1), developing an authority able to organize and wage chemical warfare (2), producing a weapon able to replicate to the German cylinders filled with chlorine (3) and planning a military retaliation (4). These steps sometimes overlapped, as the period between the first German attack at Ypres and the actual chemical retaliation by the Allies at Loos is only five months and three days long.

Because they rapidly identified the gas used by the Germans, they promptly dispersed the gas masks already at their disposal (in fact the gas masks were damp cloths which the soldiers had to wet) among their troops in the front. The British started to send damp cloths to the front, a few weeks after the battle of Ypres, and even ordered a national collection of damp cloths to offer the possibility for each of their soldiers to have one. The French also sent
approximately 50,000 rudimentary gas masks on 27 April 1915 (that is only 5 days after the first chemical attack).

Also, both the British and the French rapidly formed a bureau or an authority entitled to develop and wage ‘chemical warfare’. In France, this ‘bureau’ took the form of a Commission on 28 April 1915. In the United Kingdom, an Anti-Gas Department was created in May 1915 and included many members of the Royal Army Medical College. Both authorities worked under the authority of their own army. It is only in August 1916 that the UK and France decided to appoint a “special officer” to coordinate the two authorities.¹

The very day after the dramatic German chemical attack at Ypres, once the Allies were informed of it, each side agreed that they had to find an adequate military response. Rapidly, they agreed that a chemical retaliation was the most appropriate answer to what happened on 22 April, but they hesitated as to which type of CW they should develop and use. The French first tested shells with a tear gas in April 1915. Yet, because they were unsatisfied with the results (the tear gas was extremely volatile), they opted for the cylinders with chlorine (the same technique used by the Germans at Ypres). The British also discussed the best method with which to appropriately answer the Germans. They also tried to develop some shells, and allegedly sent a hundred shells with gas to the front in May. Yet, because they were very dissatisfied with these too, they concluded that, so far, the cylinders with chlorine remained the best method to “retaliate with CW”. This choice seems to have relied upon tactical and practical considerations. For instance, France did not produce high quantities of chlorine, and the French officers rapidly understood that they would not be able to sustain a chemical warfare with the Germans if they solely used chlorine.² So they found an alternative, and Joffre agreed to develop 50,000 shells with sulfuric carbon tetrachloride (a gas with almost the same effects as chlorine) in August 1915. The British gas industry was less flourishing than that in Germany, but the British continued to favor the ‘cylinder with chlorine’ option. Both the French and the British made a significant effort to develop their chemical industry, and they were able to produce

¹ This ‘special officer’ was appointed by the Chemical Warfare Department. This role disappeared with the end of WWI. See LEPICK, Olivier. La Grande Guerre Chimique, 1914-1918. 1re éd. Histoires. Paris: Presses universitaires de France, 1998.

almost the same quantity of chlorine by the eve of their military retaliation in the chemical warfare, also called “the Battle of Loos” (September 1915).

Once they realized they could develop cylinders with chlorine to counter the Germans, the Allies started to plan the “chemical retaliation”. From July to September, the British “chemical retaliation” was constantly delayed for several reasons: either they did not have enough gas to wage their chemical attack (the deliveries of cylinders and chlorine were not as fast as expected) or the weather conditions were not optimal and presented risks of undermining the potential tactical advantage of CW. Finally, after having trained for this attack for several months, and pressured by the French, the British decided to wage the chemical retaliation along a 5 kilometer front near Lille: the opening of the cylinder at 5.50 pm inaugurated the Battle of Loos on 25 September 1915.

The Battle of Loos

As explained in the previous paragraph, the decision to use the newly produced CW (approximately 5,500 cylinders of chlorine) was “in the air” since July 1915. For the next three months, the UK prepared their “chemical retaliation” and waited until they had a sufficient quantity of CW and the ‘perfect’ weather conditions to strike. It seems that these perfect weather conditions were never entirely united, which explains why the choice of waging the attack on 25 September 1915 gave rise to a strong skepticism among several military officers. At 5.50pm, despite the resistance of certain military officers, who observed that the wind streams were very erratic, the two troops in charge of the cylinders were ordered to open them. The British, and among them General Rawlinson, saw a huge white and yellow black gas, slowly rising in the air up to 60 meters, and slowly moving toward the German positions. Rapidly, approximately 1,460 British soldiers started to attack, each launching one of the 11,500 shells of tear gas at their disposal, and heading toward the German lines.

Was the Battle of Loos a tactical success?

The first massive ‘chemical attack’ waged by the Allies was not a tactical and strategic success for four reasons.\(^1\) First, the British did not succeed in creating the ‘surprise effect’, which had been so decisive at Langermarck. The Germans were expecting this attack, and a majority of them did have a rudimentary gas mask to protect themselves from the effects of the chlorine. If several authors mentioned some ‘panic scenes’ on the battlefields, the majority of the German soldiers did not leave their positions, and continued to fight. Second, the British waged the Battle of Loos and used the CW because they wanted to break the resistance of the Germans and breach their front. Yet, the breakthrough of the British soldiers did not go beyond the third line of the German front. Moreover, less than a week after the battle, the Germans reoccupied the positions they had left during the Battle of Loos. For these first two reasons, the first massive utilization of cylinders with chlorine by the British was not a tactical success. Third, there is no serious estimation of the numbers of Germans actually killed or wounded by the CW deployed by the British. Estimations differed from 106 to 2,500 casualties, and from 10 to 100 dead.\(^2\) It seems though that the ‘chemical attack’ of Loos did not ‘neutralize’ as many soldiers as the Battle of Ypres had done, several months before. Finally, the last and probably the most interesting ‘feature’ of the Battle of Loos is that the British CW killed their own troops: no fewer than 2,639 British were gassed by their own gas, and an addition number ranging from 7 to 10 British soldiers died. These casualties were caused by the CW, and more specifically by the wind, which changed direction during the battle. After having headed toward the German lines, the gas clouds came back to the British. Many of them were not prepared to face gas and therefore had no protection. This ‘turnaround’ is decisive in explaining why the Battle of Loos was a tactical failure: not only did the British fail to breach the lines, but they were also massively injured by their own weapons.

The beginning of the escalation

Despite the mixed results of the Battle of Loos, the British, and especially the head of the British ‘gas forces’, Major-General Foulkes, were convinced that the CW utilization by

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2. Indeed, “over the next three weeks of inconclusive fighting, some 2,000 British soldiers succumbed as casualties of their own gas, ten fatally and 55 severely wounded”. See SPIERS, Edward M. Chemical Warfare. Urbana: University of Illinois Press, 1986, p 37
means of cylinders would bring them decisive tactical advantages. The Battle of Loos was the starting point of a continuous, repetitive and massive deployment of CW with cylinders throughout the whole conflict. The following part will detail this escalation.

**The fourth phase: the intensification of the chemical warfare, between chlorine and phosgene (1915-1917)**

**The deployment of CW with cylinders**

From 1915 to 1918, 409 ‘CW utilizations’ (defined as the coordinated deployment of chlorine, or chlorine and phosgene, through cylinders) occurred.¹ In contrast with what the official history suggests, it was the British and not the Germans who launched the highest number of CW attacks with cylinders: almost 75% of the attacks through cylinders was the initiative of the British. The French and Germans each waged approximately fifty attacks with cylinders, which means that their CW attacks with cylinders were six times less frequent than the British attacks. Finally, Russia and Austria-Hungary also waged chemical attacks, but very rarely. The statistics are as follows:

<table>
<thead>
<tr>
<th>State or Empire</th>
<th>Number of CW utilization with cylinders</th>
<th>Percentage of the total “CW utilizations” with cylinders</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>301</td>
<td>73.5%</td>
</tr>
<tr>
<td>France</td>
<td>51</td>
<td>12.2%</td>
</tr>
<tr>
<td>Germany</td>
<td>50</td>
<td>12.2%</td>
</tr>
<tr>
<td>Russia</td>
<td>6</td>
<td>1.5%</td>
</tr>
<tr>
<td>Austria-Hungary</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>Total of ‘CW utilizations’ with cylinders</strong></td>
<td><strong>409</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

¹ Olivier Lepick did a remarkable work to number all the attacks with gas cylinders waged in WWI, and to detail the majority of them, in LEPIEC, Olivier. La Grande Guerre Chimique, 1914-1918. 1re éd. Histoires. Paris: Presses universitaires de France, 1998. chapter VI.
How can we explain that the British waged CW attacks with cylinders with a frequency six times higher than the Germans and the French? Three factors are decisive: the quantity of chlorine and phosgene at the disposal of each actor (1), the quantity of gas deployed per attack (2) and the parallel development (or absence of development) of a gas artillery (3). The following paragraphs will briefly describe the CW utilization by the British, the French and the Germans and show how the variations in these three factions mainly explain the variations in CW utilization with cylinders.

**The British: the Special Gas Units and the attacks with cylinders**

At first glance, there is an obvious paradox between the conclusions drawn by the British after the ‘failure’ of Loos and the high number of their subsequent attacks with cylinders (301 during the whole war). There are indeed many examples of chemical attacks delayed or cancelled because of the weather conditions. Yet, if the British understood at Loos that the weather conditions needed to be optimal to wage an attack with cylinders, why then did they decide to wage so many chemical attacks? It seems that three factors explain this ‘surprisingly’ high number of gas attacks with cylinders: density of the gas contained in the cylinders, the personality of the head of the Special Gas Unit and the British industrial production.

First, the quantity and the density of gas in the cylinders were then very low. If the British rapidly introduced some phosgene to increase the “lethal effects” of the gas contained in the cylinders (in June-July 1915), their attack with cylinders generally killed very few German soldiers. The British might have thought that increasing the frequency of the attacks could ‘balance’ this low lethality, and eventually break the morale of the soldiers.

The second factor, which explains why so many chemical attacks with cylinders were waged, lies in the specific personality of General-Major Foulkes. Foulkes, who was at the head of the Special Gas Brigade, was very reluctant to abandon the cylinder utilization, which he thought to be the best method to deliver gas. Because Foulkes had a strong influence on the Special Gas Brigade, he often had the final word on the tactical decisions on CW utilizations. His ‘bias’ toward cylinders, which is ‘unique’ after 1916 (neither the French nor the Germans believed, after having used the cylinders for a year, that spreading gas with cylinders was really efficient) might explain why the British waged so many attacks with cylinders. In 1916, after the first criticisms of other British officers of this ‘method’, Foulkes did not want to turn to
artillery but he understood that he could not continue to use cylinders without changing some aspects of the attacks. Therefore, he experimented (and favored the experimentation of) other ways to use cylinders. Among these technological innovations, he proposed the ‘mobile cylinders’ and the “beam” attacks.¹ The British only started to ‘practice’ ‘chemical artillery’, and to deploy shells with chlorine and phosgene on the battlefields in August 1917, that is two years after the Germans and the French.

Third, the British were rapidly confronted with a problem of industrial production of shells. In 1916, the British possessed very few shells that could contain gas because their national industry did not produce many of them. The production was mostly artisanal and did not really develop until the last year of the conflict.

In sum, British tried to compensate for the weak density of gas contained in the cylinders by multiplying the attacks and, in fine, by increasing the quantity of gas on the battlefield. Moreover, the powerful influence of Foulkes, a huge partisan of canister attacks, also explains why the British continued to only use cylinders almost two years after the French and Germans had already started to use shells with gas. Finally, the difficulties in producing shells also directly explains why the British were reluctant to develop their chemical artillery, which could have supplied their canister attacks, and, in fine, diminished the number of attacks.

The French: the “race for toxicity”

The first French gas attack with cylinders (which is also the first French attack with a massive utilization of gas) was waged six months after the first British gas attacks with cylinders (Battle of Loos), and ten months after the Battle of Ypres. This ‘delay’ in France joining the Germans and the British in the ‘chemical warfare’ of WWI is intriguing, especially as many French military officers, including Joffre, promoted a doctrine of ‘offensive’. This doctrine, which values conquest and attack, should have favored any weapon capable of creating a surprise effect and a breach in the enemy’s positions, including CW.

Two factors explain the delay. First, some French officers were very opposed to the utilization of a more lethal gas than the tear gas they were already deploying on the battlefields.

¹ Both techniques consisted in combining cylinders of gas with rail tracks. Cylinders were launched by means of rail tracks which stretched to the opposite side.
Second, the French national industries produced very low quantities of chlorine: this low quantity explains why the French were, in fact, unable to deploy many canisters of gas, and therefore joined the British and the Germans in the gas attacks *so late* in the conflict.

Yet, the trajectory of French utilization of gas canisters shows why, despite this delay, the French appeared to have launched more canister attacks than the Germans. The French rapidly realized that the canister attacks were not highly ‘efficient’, because of the volatility of the gas and of the degree of uncertainty with regards to the weather. Therefore, they started to slowly increase the density of the gas within the canisters, from July 1916 to January 1917. At the same time, they also developed the solution of ‘gas artillery’ in 1916. They started to massively use this type of CW utilization, to the detriment of the canister attacks. This development toward gas artillery is interpreted as a ‘race for toxicity’, in which the French constantly tried to increase the ‘capacity’ of the gas to kill. Finally, despite the fact that French industry produced only very low quantities of chlorine, the canisters were filled only with chlorine until 1917. They did not mix this chlorine with other gases until the last year of the conflict.

In sum, French gas utilization with cylinders is paradoxical for two reasons. Because the French ‘joined’ the chemical warfare of WWI very late, one would expect that the overall number of CW French utilization with canisters would be the lowest. Yet, it is almost equal to the number of German gas attacks with canisters. Why so? The ‘race for toxicity’ engaged by the French may explain this ‘equal position’ in the following way: the French used CW massively because they thought that it would provide them with a significant tactical advantage. The frequency of their recourse to CW might then have been extremely high and have allowed them to ‘catch up’ with the German CW utilization. Yet it is also interesting to see that the gap between the overall numbers of British and French gas attacks with cylinders is very significant (the British deployed six times more gas attacks with cylinders than the French). This gap might be explained by the fact that, rapidly, the French realized, in 1916 that the gas attack with canisters could not be their ‘decisive weapon’. They therefore slowly abandoned this method in favor of gas artillery.
The Germans: massive but rare CW attacks with cylinders

As explained in the previous paragraphs, the Germans were the first to wage a massive ‘chemical attack’ with canisters at Ypres in late April 1915. Rapidly, a succession of waves of gas attacks with canisters followed. Yet, the Germans soon realized that the gas attacks with cylinders was not as efficient as they had expected. In December 1915, the Germans realized that the soldiers on the opposing front lines were becoming less and less afraid and surprised by their gas attacks. They therefore started to question and rethink their delivery method of gas, and more specifically two aspects of this delivery: its timing (1) and its desired tactical goal (why use gas?) (2). The question of when to open the cylinders divided the German officers: should they open them before or during the attack of the artillery, at night or during the day? Secondly, the German officers rapidly realized that the cylinders were not breaching the opponents’ front. They tried therefore to increase the ‘lethal’ effect of the gas by increasing the density of chlorine contained in the cylinders, and then adding phosgene to it (in 1916, half of the gas contained in the cylinders was phosgene). Yet, the attacks with cylinders still failed to breach the front lines. Slowly, it seems that the Germans started to wonder: Should CW be used to kill, neutralize or harass? Depending on the answer, the method of delivery differs. On 28 April 1916, the Germans lost approximately 75 soldiers killed by their own gas because the weather conditions changed abruptly. This loss was the starting point of a wider movement aimed at replacing cylinders with shells. The Germans massively invested in their gas shells, and slowly abandoned the cylinders. The last attack with them took place in November 1917, in Minsk.

In sum, because the Germans were dissatisfied with the tactical utility of the attacks with cylinders, they quickly developed other delivery methods of gas. Unlike the British, they preferred to exploit the tactical possibilities of the chemical shells, rather than thinking of new way to use cylinders. This rapid lack of interest in cylinders might explain why, even though the Germans started to use them at least six months before the Allies, their overall number of gas attacks with cylinders is the lower of the three main actors of the ‘chemical warfare’ in WWI.
The fifth phase: the generalization of the ‘chemical artillery’ and the breakthrough of mustard gas in 1918

If the belligerents all used cylinders to wage their first massive gas attacks, they all finally developed their ‘chemical artillery’, even if at various times. After almost a year of using cylinders, the Germans and the French included chemical shells (i.e. shells containing chlorine, phosgene or mustard gas) in their artillery attacks against each other’s front lines. The British waited until 1917 before also deploying these chemical shells on the battlefields. Yet, in the last year of the conflict, all of them massively favored the choice of this delivery method instead of cylinders: 94% of the overall quantity of gas used on the battlefields was delivered through shells. Indeed, after 1916, the use of chemical shells in the battlefields rapidly increased. While shells with gas were rare in 1916 (1% of the shells launched by the French and Germans during Verdun were chemical shells) and 1917 (the two years representing probably less than 2% of the overall launched shells), 20% of the overall number of shells launched on the battlefields during the whole of the conflict contained chemical substances.¹

Two factors are generally advanced to explain why the number and the proportion of chemical shells increased in the last year of the conflict: the creation of launchers (a technological innovation that facilitates the launching of shells) (1), and the production of shells (2).

First, the chemical artillery largely benefited from the creation of a projector that increased the precision of shell launchings. This projector, called the Livens projector, played a crucial role in the last year of conflict, when both Germans and French were finally able to use this British invention of the summer 1916.² This technical innovation enabled militaries to launch gas shells from very far away, in a location that they could approximately determine (which decreased the volatility of the gas), and without alerting the opponents. Therefore, the latter had to wear gas masks all the time, which, in the end, deeply affected their morale. The invention of the projector explains why the chemical artillery really took off in the last year of

¹ This estimation is very approximate. Oliver Lepick explains that the overall numbers of launched gas shells represents 6.4% of the overall number of launched shells throughout WWI. In LEPICK, Olivier. La Grande Guerre Chimique, 1914-1918. 1re éd. Histoires. Paris: Presses universitaires de France, 1998.

² The British transferred 1,000 Livens projectors in 1917, and the French used them for the first time on 23 October 1917. The Germans successfully duplicated this launcher (after having found one left in the British lines) and used them in December 1917.
the conflict. Yet, the Germans and the French were already using chemical shells before obtaining the projectors. If the projector “revolutionized” the war in the trenches, it is not the sole factor that explains the variations in chemical artillery.

The second factor is also the capacity of each side to produce shells that could contain gas. The Germans and the French were able to produce these shells before the end of 1915. The Germans had already deployed their T-Stoff and K-Stoff (shells with chlorine: the chlorine in K-Stoff being more irritant and less volatile than the chlorine contained in T-Stoff) in June 1915, and these weapons gave several tactical successes. In December 1915, the Germans produced 24,000 shells with gas per month, while the French produced 15,800 shells per month and the British only 10,000. The British only started to produce them on a mass industrial scale, at the end of 1916.

Which gas in the shells? The increasing utilization of mustard gas (yperite)

The previous paragraphs demonstrated that, in the last year of the conflict, each side chose to use shells to disseminate their gas. But which gas did they put in their shells?

From 1916 to 1917, the Germans, French and British mainly filled their shells with chlorine, and then with a mix of chlorine and phosgene. The slow introduction of phosgene, a more irritating gas than chlorine, which had delayed effects, was supposed to compensate for the volatility of both gases. Indeed, the main challenge faced by all the parties of the conflict was to explode their shells without evaporating the gas contained in them. Yet, even when filled with phosgene, the shells remained inefficient (phosgene is also very volatile) and failed to largely affect the combatants hit by them.

The introduction of mustard gas: a German innovation

The year of 1917 is a turning point for the ‘chemical artillery’ because of the introduction of a new type of gas, a vesicant gas with a smell of mustard and garlic. This gas was quickly termed ‘mustard gas’ (because of its odor) or ‘yperite’ (after Ypres, where the first attack with this gas took place). The Germans were the first to use it on the battlefields. During the entire night of 12 July 1917, they launched shells of this gas against the British in the opposing lines, near Ypres. The British soldiers only realized the morning after this new gas
was used that they had actually been gassed. Indeed, mustard gas has terrible delayed effects. These are different from those of the previous gases used (chlorine and phosgene). Mustard gas is much more aggressive because it attacks the skin (it creates profound burns, painful bullae) in addition to attacking the respiratory system. It also attacks the soldiers’ gas masks. This day, gassed British soldiers had to face new, terrifying effects, and many of them died because of their casualties. The Germans continued to use this gas, especially at Verdun. After three weeks of utilization, mustard gas killed almost 500 soldiers and injured 14,200. In only three weeks, mustard gas killed as many soldiers as yperite and phosgene together, during the entire year of 1916.\footnote{See LEPICK, Olivier. La Grande Guerre Chimique, 1914-1918. 1re éd. Histoires. Paris: Presses universitaires de France, 1998.}

\textit{A gas with a high tactical efficiency}

The Germans rapidly considered mustard gas as being a particularly efficient gas. While 7.2\% of the overall losses of 1916 were inflicted by gas, the overall losses of 1917 by gas were 15\%.\footnote{See LEPICK, Olivier. La Grande Guerre Chimique, 1914-1918. 1re éd. Histoires. Paris: Presses universitaires de France, 1998.} Moreover, not only did mustard gas kill more people, but it also inflicted very severe burns and side effects which prevented 35\% of its victims from returning promptly to their positions. The Germans continued to use mustard gas, but they did so more sparingly. They indeed had difficulties in producing the gas, and therefore often reserved these shells for their most decisive attacks. The Allies rapidly identified these shells with mustard gas, and launched ‘scientific programs’ to rapidly replicate them. This process took a long time, and the French used them on the battlefields only in 13 June 1918 (almost one year after the Germans first deployed them), while the British had to wait until September 1918 (one month before the end of combat).

By the end of the conflict, all sides frequently used simultaneously shells with mustard gas, chlorine and phosgene. This form of attack was extremely difficult for soldiers, who did not know how long they should keep their gas masks on, and who were experiencing very different sorts of injuries (from severe injuries to their respiratory system to deep and painful burns).
Toxic agents and tear gas

Finally, mustard gas was not the sole gas contained in the shells. Each side continued to launch shells with chlorine and phosgene (they were marked with a blue cross). One interesting aspect of the chemical artillery was each actor’s attempts to develop a toxic agent in shells. Toxic agents are a different kind of gas because they have different effects than vesicants: they attack the nervous systems or poison humans by solely touching their skin (sarin, which was created in the thirties, is a toxic agent). Yet, all the attempts to develop shells with these toxic agents finally failed to convince militaries that this gas was efficient: the delivery method dispersed the gas and its extreme volatility considerably decreased the lethal effects of the gas. Belligerents used these shells, marked with a green cross, after July 1917, but their impact never reached the dramatic effects of mustard gas.

Summary of the variations

The previous paragraphs retraced two types of variation in CW utilization: the variations of CW utilization per state and the variations in the overall quantity of CW used in WWI. The variations of CW utilization per state can be summarized in three points:

First, the Germans did not hit first, but they were the first to massively deploy chlorine and mustard gas. They were also very prompt in developing chemical artillery. Second, the French were using tear gas at the beginning of the conflict but were the last of the three to deploy chlorine on the battlefields. They also promptly included phosgene in their CW, before developing artillery, at the same time as the Germans. They developed mustard gas after the Germans but massively used it in the last months of the conflict. Third, the British presented the higher resistance or reluctance toward the ‘race for toxicity’: they did not try to develop their artillery before 1917, and were the last of the three actors to develop mustard gas.

The variations in the overall quantity of gas deployed on the battlefields can also be summarized in three points. First, the overall quantity of gas deployed in the conflict increased each year. Second, not only the quantity but also the toxicity of the gas deployed increased. The CW utilization during WWI is indeed a ‘race for toxicity’ (expression coined by Lepick). Third, there was a quest for ‘mastering’ the CW utilization and increasing the precision of the gas
attacks. This quest explains why all the belligerents changed their delivery method of CW and abandoned cylinders for shells.

**Explaining the variations in the CW utilization during WWI**

The following section is concerned with explaining the variations in CW utilization during WWI. It proposes to analyze whether the three hypotheses commonly advanced to explain variations in weapons utilization (i.e. cost based, efficiency based and international pressure) highlight all the aspects of CW utilization in WWI.\(^1\) First, it will examine whether CW were increasingly used because actors believe these weapons were not costly (1). Second, did CW appear as being a particularly efficient means of warfare? This might explain this increasing utilization over the conflict (2). Finally, CW might have been increasingly deployed because their utilization did not give rise to strong international or domestic pressure (3).

Second, it will examine the second hypothesis, as to whether CW were used because they appeared to be an efficient means of warfare (2) Finally, it will look at whether the decline in the use of CW after WW1 was attributable to strong international or domestic pressure (3).

**Difficulties and limits in the exploration of these three hypotheses**

Testing whether the three hypotheses explained variations in CW utilization present two major difficulties.

First, it requires an understanding of the actors’ perceptions at the time of WWI. Yet, several studies demonstrate that because a ‘time of war’ is specific, distorted, actors develop, during wars, a *different* rationality.\(^2\) This different rationality changed their calculations, including those as to their weapons utilization. This rationality is hard to ‘read’, especially when we can only approach it through secondary sources and testimonies. If the following paragraphs thus attempt to capture this rationality, and to understand how the actors of this period thought of CW, they do not pretend to overcome the difficulties inherent in this exercise.

\(^1\) A more thorough discussion on these three hypotheses is included in the theoretical chapter.

Second, the case of CW utilization during WWI raises a specific challenge, which is to understand two types of variations: the variations in CW utilization per state, and the variations in CW utilization during the entire conflict. Yet, WWI presents an extremely rich, complex field of research, and includes a multitude of actors. Therefore, reducing the variations in the CW utilization to three ideal-types of hypothesis appears to be artificial and simplistic. The following analysis acknowledges these shortcomings and does not pretend to exhaustively trace and explain all the variations.

Thirdly, very briefly, the analysis is confronted by the lack of available data on the topic. This difficulty might be overcome by thorough archival work (even though some crucial archives were destroyed). The following analysis offers intuitive, provisory observations rather than definitive conclusions.

**Examining the cost efficiency theory**

As explained in the theoretical chapter, the notion of ‘a costly weapon’ is problematic and needs to be clarified. We decided to divide this category into three sub-categories: costs of development, costs of the infrastructures necessary to operationalize CW, and cost of education and recruitment.

**Cost of development: the chemical industry factor**

It is difficult to evaluate the costs of development of CW for three reasons. The first reason explaining the difficulty in gauging the price of CW development is that this price does not only concern gas but also the medium used to spread it: cylinders (or canisters), shells, launchers. We will again base our reasoning on the following assumptions: because all these weapons but the launchers were already produced in high quantities for the artillery during the whole conflict, their costs did not represent a major increase in the budget. This might be slightly different for the launchers. Yet, the overall number of launchers produced in WWI (probably a thousand) is very low compared to the other weapons, such as shells. Moreover, they were only used at the very end of the war, and thus have a marginal importance compared to cylinders or shells.
Secondly, it is very hard to measure the price of the ‘human investment’ in the development of CW. Indeed, each state created a special service supporting the waging of chemical warfare. This service gathered militaries and scientists who collaborated together in order to find ways to increase the efficiency of CW. But their inventions could also benefit other types of activities. Therefore, if their inventions also contributed to other domains (Haber was awarded a Nobel Prize for his inventions during WWI), is it relevant not to take into consideration this aspect, in evaluating the overall cost of the weapon?¹

Finally, it is hard to measure how much states had already invested and how much they had lost in order to manufacture the extant chemical agents, and to develop their national chemical industry. This part will not evaluate these costs by providing numbers, but will instead try to highlight how each state interacted with its own national chemical industry. It will assume that the more the preexisting chemical industry was artisanal, the higher the costs were to develop the massive quantity of CW used in the battlefields. The following paragraphs will describe each of these national industries (respectively the German, the French and the British) and their interaction with the armies.

The Germans

The first factor explaining why the Germans were the promptest to use CW is the very advanced state of their chemical industry. The German chemical market was at the time experiencing a rapid growth dependent on three major producers. In 1914, all of them were able to supply rapidly and in massive quantities the requests coming from the front line. None of them had to overproduce chlorine, that is increase their productivity or launch new programs to meet the needs of their army at the front. Therefore, war did not push these companies to reach their limits. Nor did it force them to spend a year or two adjusting to demand. German major producers of gas were almost immediately able and ready to supply and fuel the war efforts without having to undergo major transformations.²

The role of Fritz Haber is also decisive in understanding the specifics of German industry. Fritz Haber, who was a member of the German Army (Captain Haber), strongly

¹ Indeed, while he was developing explosive and chemical shells, Haber discovered the Haber-Bosch process. This invention was awarded with a Nobel Prize in 1918.

² Another aspect that might be interesting to explore is the key role of Fritz Haber in Germany.
advocated for the development of ‘chemical warfare’. He had very close connections with the German chemical industry, collaborated with them in the design of the weapons and of the masks. He was a leading figure of the Kaiser Wilhelm Institute for Physical Chemistry and had a direct role in the development of chlorine and in the decision to deploy CW during the Battle of Ypres in 1916. It seems that there was no such leading scientific figure and no such proponent of the gas in the British and French armies.  

*The Allies*

In contrast, the British and French chemical industries were not flourishing prior to and during WWI. In the United-Kingdom, only two factories were producing chlorine, and in very low quantities. The market was neither growing, nor really developed. The French chemical market was in these respects very similar to the British one. There was no clearly identified chemical producer able to take the lead and supply the demand. The market was very fragmented, composed of a dozen small producers unable to coordinate their efforts easily. This lack of concentration and their lower productivity prevented the UK and France from deploying CW as easily and rapidly as they would have wished. Significant extra efforts were required if the Allies wanted to have the capacity to use gas massively and repetitively (in a very short period of time). Moreover, neither French nor British industries were primarily producing chlorine. Therefore, both had to adapt and undergo major transformations to supply their states’ demand, once the latter decided to join the chemical warfare.

Because the other members of the Allies only marginally used CW, we decided not to trace the variations in their utilization, and will thus not discuss their national chemical industry.  

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1 Captain Haber, based in the Kaiser Wilhelm Institute for Physical Chemistry, assisted in the formation of special forces (Pioneer Regiments 35 and 36) to undertake gas operations in the field, collaborated with industry in the design of protective devices. See SPIERS, Edward M. *Chemical Warfare*. Urbana: University of Illinois Press, 1986.

2 If the US did join the chemical warfare, they only started to produce phosgene, chlorine and mustard gas in August 1918. Unlike the French and the British, they built huge shell-filling plants which employed over 7,000 workers, in SPIERS, Edward M. *Chemical Warfare*. Urbana: University of Illinois Press, 1986.
The costs of production

The costs of production refer to the human and logistic costs entailed in producing the CW. As said in the introductory paragraph, assessing this cost is very complex. We assume that the most relevant way to measure whether CW were too costly is to compare their costs with those of other weapons. It seems that CW stand out from the weapons massively used on the battlefields (such as shells) for two reasons. First, the production of chemical gas was perilous and many serious accidents happened in the various factories producing gas (1). These accidents became more important when the quantity of CW produced by factories increased after 1916 and with the deployment of more lethal gas (from chlorine to yperite). Several dramatic accidents caused important casualties and death among workers of chemical factories. The examples of a factory located in Calais which produced phosgene, and of a factory of Avonmouth which produced mustard gas, are the most dramatic ones. More generally, the deployment of chemical weapon was extremely risky. Filling the canisters and the shells with gas was a dangerous procedure which often caused severe injuries. Therefore, the risks attached to the production of CW make the production of the weapon peculiar (if compared to the production of other weapons), and ‘abnormally’ costly.

Second, because of these incidents, but also because of the fact that the great majority of chemical factories were artisanal, France and Britain did import huge quantities of gas. This importation ‘avoided’ the cost of producing the weapon but also presented other types of costs, which were also heavy. In fine, we can confidently conclude that the CW were a costly weapon, if compared to shells or many of the weapons used by artillery.

The costs of deployment

The deployment of gas entails two sorts of costs: the costs attached to recruiting and educating the militaries who were to use them, and the transportation of gas in the trenches. We have very few data on these two points, but we can confidently assume that the weapon was not perceived by the militaries as being as easier and more practical to deploy than many other weapons. First, the British and the Germans had to launch massive recruitment policies for the special companies formed to deploy gas in the battlefields. Second, because of their toxicity and the difficulties attached to their utilizations, many members of these special chemical services were severely injured and even killed by their own gas. Therefore, the ‘education’ of
these forces to manipulate the gas without being hurt was long, complex (these services had to adapt to different types of delivery methods) and probably more difficult than the majority of the education required to use more conventional weapons.

The insights of the cost-based theory

Were the CW regarded as a particularly costly weapon? Three provisory conclusions can be drawn to answer this question.

First, the production of CW was probably less costly for the Germans than it was for the British and French at the beginning of the conflict. The significant gap between the respective chemical market landscapes, and therefore between the amount of gas at the disposal of each country at the time of war, might explain why the Germans were the first to hit with gas, and why they were generally the first to innovate in the chemical warfare. Germans probably found the development of CW less costly than the two other states because they already had at their disposal a large quantity of gas. The British and the French, who had a fragmented and underdeveloped gas market were certainly at a heavy disadvantage in the gas deployment race. Yet, interestingly, both British and French did not really cooperate in trying to compensate their lack of capabilities by a cohesive and common development program. They rather dealt with chemicals independently and waited until 1916 before appointing a Liaison Officer. His role was to coordinate intelligence between the two states and participate in conceiving a coherent policy regarding the use of CW. Nevertheless, the agent’s efforts to organize meetings and develop a network on the topic of CW led to very few concrete results on the front. Both sides carried on using different types of shells, mortars, gas – making a mutual development of resources highly unlikely. This lack of coordination might have resulted from the organizational culture at the macro-level, as the Allies never developed a unified command of their troops during the whole World War I. In this regard, the deployment of gas did not differ from the deployment of their other resources (men, bullets, etc.). Chemical warfare remained driven by each state’s organizational culture. The incapacity of the Allies to develop a common gas mask that both could have used is a blatant example of this surprising lack of coordination on the
chemical front. In fine, the British and French had to deploy more effort, and invest more in their chemical industry, to ‘catch up’ with the Germans.

Second, the components of CW were not particularly expensive to produce. Yet, it can be argued that the risks attached to the production of the different gases, especially at the end of the conflict when each side developed mustard gas, made the production of CW costly. Manipulating the chemical agents entails specific and high risks, increasing the likelihood of suffering from severe and painful injuries. In this sense, the production of CW is riskier, and therefore more costly, than many other weapons deployed on the battlefields.

Thirdly, the deployment of CW is also a complicated process. The method of the canister (or the cylinder) required a weighty logistics, a long period of preparation, and the presence of a specific brigade who prepared and waged the attack. The development of ‘chemical artillery’ and the utilization of chemical shells (with or without projectors) did not contribute to reducing the costs of the CW utilization. This method also entailed specific costs, including the production of a launcher, the production of shells, the development of a ‘savoir-faire. It seems that many other weapons (machine guns) did not require this type of preparation and production. Therefore, it seems logical to conclude that the CW utilization did entail costs that the other weapons did not.

A weapon increasingly used because it became increasingly cheap?

CW was a costly weapon, more costly than the other weapons then massively used on the battlefields, such as shells with explosives, machine guns, etc. Therefore, the hypothesis that a weapon is used because it is not expensive does not apply to the case of CW in WWI. CW were costly, and the British and the French did not hesitate to massively invest in and import gas, in order to rapidly join the Germans in the chemical warfare. All the belligerents invested in special services, to produce different types of delivery method and to sacrifice some of their men to wage chemical attacks. All sides paid a high cost to produce CW. Why then did they decide to develop this costly weapon?

One hypothesis that answers this question is the ‘efficiency theory’. Militaries and politicians always evaluate the cost with regards to the efficiency of the weapon. An efficient weapon has to be used, even though it might be a costly weapon. The following paragraphs will examine this ‘efficiency based hypothesis’: were the CW perceived as efficient weapons by the belligerents? If yes, which types of CW? Why? Were they efficient during the whole conflict, which oscillated between a war of movement and a war of position?

**Examining the strategic efficiency theory**

The ‘efficiency hypothesis’ proposes the following explanation to highlight variations in CW utilization: actors massively used CW in 1915 because they thought the weapon was an efficient means of warfare. Starting from 1916, when they realized that the weapon was no longer as efficient as before, they started to experiment with new means of delivery (shells instead of canisters) and new toxic agents (phosgene and then mustard gas). This ‘race for toxicity’ was in fact a ‘race for efficiency”. However, the notion of ‘efficiency’ (and of an efficient weapon) needs to be clarified. The next paragraphs discuss the following defining criteria: an efficient weapon is a weapon that is convenient to use (1), it achieves specific tactical (2) and strategic goals (3). The following paragraphs will evaluate whether the CW utilization fits these criteria, and whether the ‘efficiency hypothesis’ explains all the aspects of CW utilization during WWI.

**Were CW convenient to deploy?**

In order to determine whether the actors believed that CW were convenient to deploy, which would explain why they were developed and used in such massive quantities, we will discuss three issues. First, we have to understand how CW were deployed in order to examine whether the very process of gas utilization was simple, rapid, and straightforward. Second, we will discuss the reliability of the weapon: were CW a predictable and ‘trustworthy’ means of warfare? Finally, we will examine whether those who used CW were comfortable with using the weapon: were they reluctant, or not, to manipulate the CW and deploy them on the battlefields?
Understanding the utilization process of CW

The utilization process of CW can be qualified as extremely constraining for two reasons: it relies heavily on weather conditions and requires a weighty logistics.

The weather conditions

First, very specific weather conditions are required, in order to optimally use the CW. This aspect is especially true in the case of cylinders, as the diffusion of gas entirely relied upon wind streams. The example of the Battle of Ypres, during which the weather played a decisive part, perfectly illustrates this point. German soldiers had been fighting for a year before they deployed CW at Ypres. As mentioned earlier, they had CW in stock, in important quantities, ready to be used at least six months before the battle. Yet, the Germans had been looking for a chance to use the weapon for several months. They had had the cylinders full of gas in their trenches for some time, waiting to be opened, and were waiting for the right moment to deliver the gas. Indeed, the day of the Langemarck attack, the weather was windy and the wind direction headed toward the Allies. In contrast to the previous several days, the current was not circular and the risk of seeing the gas changing its direction and hitting the Germans was low. The weather was the decisive factor in the German decision to deploy the weapon during the battle of Ypres, rather than a few weeks earlier. The Battle of Loos, described earlier (the first British chemical attack with canisters killed and injured many British soldiers), is also a revealing example of the importance of the weather conditions in the utilization process of CW.

However, the weather conditions became less decisive for the last year of the conflict, when all sides developed ‘chemical artillery’. The shells filled with gas could be directly launched into the opponent lines. The risks of seeing their own gas clouds coming back to them were considerably decreased. Yet, the temperature (cold weather neutralizes the effects of the gas) and the wind (the trenches were not so far away from each other) still remained important aspects of CW deployment.

A difficult logistics

Second, the preparation of CW attacks necessitated a distinct logistics that could only
be deployed in a war of ‘trenches’ (in contrast with a war of movement). Cylinders had to be transported to the front, and buried in the trenches. At the beginning of the war, this ‘installation’ was done during the night, which increased the risks of damaging the cylinders and injuring the soldiers taking care of the installation. When states started to use chemical artillery on a massive scale, they had to transport heavy launchers, and needed soldiers capable of using them rapidly. Finally, during all the chemical attacks, soldiers had to wear a gas mask in order to protect themselves from their own gas. As explained earlier, wearing a gas mask was extremely constraining for soldiers: they could not move easily, run easily, and many of their actions required significant physical effort, which they were unable to make because they could not breathe easily. The coordination of the infantry attacks with the chemical attacks was extremely hard to realize, and tended to considerably slow the reaction of the front lines. Slowly, the infantry at the front, who had systematically attacked right after and sometimes during the chemical attack, were no longer coordinated with the chemical attacks. In the last year of the conflict, the shells of gas were launched during the night, and it was only several hours after that the troops attacked.

*An inconvenient weapon*

*In fine*, deploying CW was a very complex process, which not only was costly, but required the presence of many different conditions and created a certain form of uncertainty. This combination made CW utilization ‘inconvenient’, and should have prevented or restrained each side from massively and increasingly using CW throughout the conflict. We can hypothesize therefore that, if the actors acknowledged the inconvenient aspect of the CW utilization, they still insisted on deploying it because the CW presented crucial tactical or strategic advantages. The following paragraphs will examine these possibilities.

**Did CW offer tactical advantages?**

The tactical or operational advantages sought by different actors while using CW changed throughout the conflict. A closer examination of them shows that the initial tactical motives for using the weapon shifted. They moved from an emphasis on the surprise effect of the CW, breaching the trenches by provoking panic, to an emphasis on the development of its lethal capacity (neutralizing a high number of soldiers).
The weapon of initiative

When the Germans opened the cylinders of chlorine for the first time, all the belligerents were stuck in a war that was at a stalemate, where every movement led to the massacre of soldiers, without providing a decisive advantage. The trenches were thus an obstacle for soldiers who wanted to deploy the offensive strategies promoted within military academies. Generals felt deprived of clear and efficient solutions, with which to introduce offensive elements into the war. Soldiers were unable to move forward or to reach the enemy hidden in their trenches, without being massacred. Moving toward the enemy exposed them to certain death. Moreover, life within the trenches was miserable, forcing soldiers to live in terrible conditions. Both sides were hidden in their trenches, and any attempt to attack the other side was doomed to fail. Both sides lost many soldiers (1915 was indeed the most deadly year of the entire conflict), and the feeling that the war would never end was prevalent among all the actors.

Because of this stalemate, German military officers concluded that they had to innovate, choose new solutions to re-introduce movement in the war. They thus reconsidered the use of chemical weapons from this perspective, as an innovative solution by which to solve their problem. They were looking for a weapon to disperse trenches and disable artilleries. Chemical weapons appeared as the solution to their problem: they could reach and disable enemies without having to be exposed to them. They would allow the artillery to move forward without being shot, and to break the front. Therefore, after one year of war, during which soldiers had to experience more than six months hidden in terrible trenches, CW utilization appeared to German Generals as the ideal solution.

Fear of missing the benefits of hitting first

Another aspect that made the Germans perceive the Battle of Ypres as the perfect timing was the growing concern that the Allies were going to use CW. The Germans were

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1 Lepick perfectly summarizes the dilemma faced by German military officers when he explains that they had to innovate in order to reintroduce movement in the war. (…) with a “technical revolution, a providential and unprecedented weapon” (in French: “Pour reconquérir le movement, il était nécessaire d’innover. La guerre de sape et de mine était loin d’apporter une réponse satisfaisante, il fallait une revolution technique, une arme inédite et providentielle.”) in LEPICK, Olivier. La Grande Guerre Chimique, 1914-1918. 1re éd. Histoires. Paris: Presses universitaires de France, 1998.
deeply attached to the ‘surprise effect’ advantage. Indeed, they knew that the UK had been testing the use of shells containing chemical agents in their factories in Glasgow in January 1915. In the meanwhile, the French had already used several asphyxiating grenades on the battlefields – even though these CW were only spreading tear gas (and not irritant or vesicant agents), the French were developing more and more of them. Therefore, the Germans thought it would be only a matter of time before they saw massive deployment of CW on the battlefields. German soldiers were thus beginning to be afraid of losing the advantage of what they perceived as a decisive surprise attack effect, coupled with that of a powerful psychological effect. Indeed, because the Allies had never really faced a massive gas attack, using CW against them, barely knowing how to wear their masks, would necessarily disorganize their troops, create panic and a breach that would allow the Germans to win the Battle of Ypres – and perhaps in the end, the entire war. This argument was omnipresent in German leaders’ minds and made them more inclined to use the weapon at that moment. They thought that the Allies were unable to really mitigate and block the effects of CW. They also knew that this incapacity was only temporary, and that, thanks to their masks, they could in the future become immune to CW. CW had thus a very high tactical efficiency in the minds of German soldiers. But this efficiency was directly commensurate with the surprise effect, and therefore diminished hugely with time and use.

The operational or tactical advantages of the first massive utilization of CW on the battlefields

The Battle of Ypres opened a significant breach of the Allies’ trenches. As detailed earlier, soldiers were not equipped to face and counter the weapon. Even though the majority of them had gas masks, they did not know how to wear them. They were most of all utterly shocked to see the irruption of gas on the battlefields Disorganized, badly hurt by the gas clouds coming from the German trenches, petrified by the sight of the panic and stupefaction among their trenches, the French could not counter German soldiers who were breaking their lines and targeting the survivors with their traditional artillery.

Langemarck (or the first Battle of Ypres) was one of their most successful attacks, as German soldiers could finally move forward and enter the enemies’ trenches without being shot by the Allies. The battle was a tactical success in many regards, and CW proved to being a very useful weapon. As the German generals who finally decided to use it expected, CW achieved
several goals: it scared soldiers and neutralized them. They were not expecting this attack; they were unable to protect themselves from gas, and could not prevent the Germans from breaching their trenches. CW finally introduced movement in a war that was at a stalemate. It provoked the first significant breakthrough in the region since the front line was established.

Another interesting analysis is that the Germans could have probably made a more important breakthrough if they had used more gas. Several historians think that the surprise effect was so decisive that more gas would have probably decimated even the French and the Canadian lines behind the first positions occupied by the British at Ypres.

The tactical utility of the weapon at the beginning of the conflict: creating a surprise effect and inducing movement in a trenches war

In a nutshell, the first massive use of gas at Ypres was a tactical success mainly because it relied on a strong surprise effect. Several attacks just after Ypres were also successful because of this effect. Combatants however started to become used to facing gas, to detecting when the enemies meant to deploy it, and thus annulling the surprise effect. The Allies started to allocate more time and resources to the training of their soldiers (i.e. wearing masks or substitutes, knowing when they could take their masks off, but also manipulating CW). They also started to massively produce and use CW. The chemical warfare was now everywhere. This generalization of the use of CW mechanically suppressed the benefits of the surprise effect. Both the Allies and the Germans, nonetheless, continued to use CW, though with different tactical purposes.

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1 Major Victor Lefebure explained “The history of chemical warfare becomes one of continual attempts, on both sides, to achieve surprise, and to counter it by some accurate forecast in protective methods. It is a struggle for the initiative” See SPIERS, Edward M. Chemical Warfare. Urbana: University of Illinois Press, 1986., p27.

2 As a gas officer of the Sixth German Army recorded in November 1916, “The casualties were mainly due to the men being surprised in dug-outs, to the neglect of gas discipline, masks not being at hand, to faulty masks, and to the use of old pattern drums which could not afford protection against the type of gas employed by the enemy”. See SPIERS, Edward M. Chemical Warfare. Urbana: University of Illinois Press, 1986.
An offensive or a defensive weapon?

Even once the surprise effect was mitigated, both sides kept on using CW. Testimonies show that actors were looking for two types of effects. First, they used CW as an offensive weapon, to hurt soldiers and exclude them from the front. Secondly, they used CW as a defensive strategy. Once deployed on the field, gas stagnates and makes the field difficult to function on. It forces soldiers to retreat and wait several days before retaking their position. Those two different uses allow soldiers to use CW in two different contexts: in a configuration of war of position (1) and of war of movement (2).

An offensive weapon which neutralizes

CW were indeed mostly used to disable the highest number of combatants possible. The gas disabled them in two ways. It first killed enemies without exposing their own men to fire. Because soldiers grew to expect exposure to gas, the number of soldiers killed per attack considerably diminished. For instance, 17 % of the soldiers of the UK expeditionary exposed to gas died in 1915. Only 2.4% died in 1918. In 1918 a soldier’s chances of being killed by gas were reduced by seven times. Yet, it should not be concluded that CW killed fewer soldiers in 1918. The quantities and lethality of gas deployed per attack had considerably varied throughout the war. The closer soldiers were to 1918, the more likely they were to be targeted by a massive quantity of mustard gas, at moments where soldiers were less likely to wear gas masks (i.e. night, lunch). If at this moment of the war men were used to wearing their gas masks, they were, on the other hand, more likely to be exposed to a gas that was more lethal than chlorine.

The second offensive effect of CW is to severely disable soldiers. If soldiers were more steadily wearing masks and thus could protect their respiratory system during the larger part of the attack, they could still be hurt by gas at several moments. First, the chlorine was mostly odorless. Apart from a faint scent of garlic emanating from the gas, it was barely noticeable. Therefore, most of the time, the first moment soldiers realized they were facing a chemical attack was on their first suffocation. This small amount of gas they breathed did not kill them but could severely disable them in the long term. The impact of CW – and more precisely their

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capacity to inflict long-term side effects on their victims – is very hard to quantify because of the lack of data. But CW certainly contributed to ousting a significant number of soldiers from the trenches, to the military hospitals or to leaving the front, and forcing armies to draw new soldiers from their civilians reserves.

*A defensive weapon*

CW were also massively used as a defensive strategy. Once deployed on the field, gas remains in the air for a few hours. It could even remain up to six days in a windless and cold week. The stagnation of gas makes the conquest of a new position more problematic. Therefore, both sides often deployed heavy quantities of gas in order to keep their position until their men rested, reorganized and could fight again. They also deployed gas in a position they wanted to defend from the enemy. Because the conquest of a field full of gas was harder and slower, spreading gas helped troops to protect positions from the enemy.

**Cylinders or artillery?**

Depending on the method used to deploy them CW could have different tactical uses. At the beginning of war, both sides used cylinders to deploy gas. These cylinders were hidden within their own trenches. Usually the cylinders were moved and put in the trenches at night, so the opposite side did not notice the presence. Once the weather conditions were regarded as sufficient (i.e. once the wind was heading toward the enemy and the ambient temperature was not too hot), the gas attack could be launched. Soldiers wearing gas masks or wet cloths could open the tap of the cylinders and let the gas spread away into the air. At a certain point, the large clouds of gas began to follow the wind and head toward the trenches.

At the beginning of the war, only cylinders were used to deploy CW.¹ Massively used in 1915 and 1916, the cylinders started to cause three logistical problems. First, installing the cylinders inside the trenches was a tricky process. Often the installation damaged the protection built for soldiers. Yet, as we previously discussed, cylinders introduced a great deal of uncertainty in the deployment of gas. Soldiers had to be absolutely sure that the wind was

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¹ With the exception of the tear gases deployed by French in artillery shells.
heading toward their target before opening them. This degree of certainty was impossible to reach at this period. Only on the very day of the attack could soldiers have a clear picture of the weather conditions, and this picture could dramatically change throughout the day. This uncertainty led to a very small window of opportunity to use CW. It forced them to attack rapidly instead of carefully scheduling plans. This constraint was very frustrating for soldiers in the trenches, in addition to systematically bringing a certain degree of anxiety about their gas cylinder attacks. All these concerns are captured by the message sent by General Barrow to the Chemical Adviser on 18 August 1916, when he explained that CW presented huge disadvantages, including difficult logistics, danger for one’s own troops, only ‘deployable’ in a short window of time that could only be determined immediately beforehand, all of which, in fine, created important tactical problems. He concludes by explaining that the advantages offered by the weapon were extremely variable and uncertain.¹

The rise of the artillery

Rapidly, actors reached the limits of the deployment of gas via cylinders. Once the surprise effect was mitigated, CW dramatically lost their tactical efficiency because of the many constraints attached to the use of cylinders. Therefore, rapidly, many thought of finding a new delivery method that would not be as constraining as cylinders. The Germans were the first to experiment with projectors shooting gas shells directly into the middle of enemy lines. They thus slowly started to integrate within their artillery forces some shells containing gas. The first German shells containing gas were used in 1916. These were identifiable by a green/blue or a yellow cross marked on the shell. The color code aimed at differentiating the various uses of shells, from attrition (gas with a high degree of lethality in high quantities) to neutralization (less lethal gas in lesser quantity).²


² Actors could recognize the different shells thanks to a color code. A green cross was marked on the shell when it contained diphosgene, a blue cross when it contained: diphenylchloroarsine (DA) and a yellow cross when it was filled with mustard gas.
Projectors of gas shells offered three main advantages to cylinders. First, they offered the possibility to rapidly project chemical gas into the enemy front lines. This capacity to project gas considerably reduced the number of soldiers injured by their own gas. Soldiers could project the gas, and, in case of windy weather, could have enough time to see the gas coming back to them and start wearing their protection. The projection also offered a second tactical advantage. It allowed its owner to benefit from a relative surprise effect once again. The cylinders were easy to identify and, in 1916, all the soldiers knew they should wear their gas masks if facing cylinders. Gas used within artillery was more problematic to identify. Soldiers could not know whether shells contained explosive liquid or gas. Moreover, they could be hit any time by these shells. Armies could use gas in shells without having to wait for windy and cold weather. This considerably increased the surprise effect, but also the capacity of CW to harass the enemy. Finally, projectors of gas considerably increased the precision of CW. If the first launches by projector were hesitant and lacking in precision, the Germans rapidly improved their method of calculating the targets. They started to use a methodology of triangulation, and were able to reach their target with an increasing precision.

The ‘enigma’ of the British resistance to artillery

If the Germans deployed chemical artillery at the very beginning of 1916, and if French rapidly joined them in this process and progressively abandoned the cylinders, the British did not. They never stopped using cylinders, despite much negative feedback from the front lines. As explained earlier, they even multiplied the number of attacks, opening their cylinders more and more frequently throughout the conflict. Why did they decide to continue to use cylinders instead of exploring chemical artillery? Two factors are generally advanced to explain this ‘anomaly’. The first one is the important influence of Major General Foulkes, who was extremely reluctant to use a method that did not include cylinders. Foulkes supervised the entire chemical service, and his decisions generally prevailed. The second reason is the significant difficulties experienced by the British chemical industries in rapidly producing shells that could be filled with chemical weapons. These two explanations might explain the reluctance of the British to develop their artillery.
**A decisive weapon?**

As demonstrated earlier, CW rapidly lost their capacity to surprise enemies and disable them before they had the time to wear their protection. Yet, after 1916, soldiers improved their knowledge of how to wear gas masks. At the same time, the masks became more and more solid and resistant to gas. These two developments dramatically decreased the disabling capacity of CW. Moreover, during certain chemical attacks, soldiers demonstrated an unexpected resistance to the gas. Despite the terrible effects of the gas, soldiers kept on fighting and pushing the enemy away. Therefore, the decisiveness of the weapon started to be questioned. If soldiers developed new tactical goals (see previous developments), they also kept on looking for opportunities to develop the lethality of the weapon. Two solutions were tried. The first one was to recreate the surprise effect and hit the enemy when he could not wear his mask. The second solution was to mitigate the protection of gas masks.

To recreate the surprise effect, the Germans, French and British started to deploy CW when the other side was likely not to have or wear protection. They started to attack at night, during lunchtime, and even all day long. Soldiers could not wear their gas masks the whole day. They were very inconvenient to wear. Breathing with them was extremely uncomfortable, and prevented soldiers from speaking to each other. Having to wear the mask was another painful constraint for soldiers stuck in trenches, and they were relieved when they could finally take them off. Those moments, even if rare, were the window of opportunity for the night and lunchtime gas attacks.

*From chlorine to mustard gas, the ‘race for toxicity’*

Another solution developed by all sides of the conflict was to increase the lethality of the gas. Each side started to develop new types of gas that could continue to affect soldiers, even those who were wearing gas masks. This research for more lethality drove the belligerents to develop a new type of gas called mustard gas. Mustard gas presented some different characteristics from the chlorine which had been used since the beginning of the war. As explained earlier, mustard gas inflicted deep and painful burns, and seriously neutralized for

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1 Notably right after Ypres, Canadian forces were hit by gas but vigorously fought against Germans who were trying to take their position. See SPIERS, Edward M. Chemical Warfare. Urbana: University of Illinois Press, 1986.
more than 3 months the great majority of soldiers who were in contact with it. During the final year of the conflict, both gases were used at the same time, and doctors at the front had to cure soldiers who were hit both by chlorine (which made them suffocate) and mustard gas (which burnt them). For these reasons, we can confidently conclude that the notion of ‘race for toxicity’ (coined by Lepick) is a very accurate description of the variations in the use of chemical agents. This race for toxicity is also the result of the fact that, very quickly after having been deployed on the battlefields for the first time, the chlorine, and even phosgene, were neutralized by protection. In other words, the ‘tactical utility’ of each chemical agent rapidly eroded, hence the constant desire of actors to find a new chemical agent to replicate the same ‘surprise effect’, the same ‘panic” and the same breach as chlorine had done at Ypres on 22 April 1915.

The contrasts between the tactics and the collective representations of CW

The tactical utility of CW varied considerably throughout World War I. If CW were initially used to break through the enemy’s trenches, create movement and take new position, belligerents gradually started to research different tactical uses. The Germans were trying to perpetuate the surprise effect by developing their chemical artillery instead of using cylinders. The French and British continued to use cylinders, but increased the frequency of their attacks. All sides were becoming more and more used to gas, as they developed efficient protections against it. When mustard gas was developed and used, the numbers of soldiers disabled after a gas attack increased again. Because mustard gas could hurt despite the gas masks, it could reach the same level of lethality as the first attack with chlorine.

These fluctuations in the tactical utility of CW sharply contrast with the collective perception attached to CW. Collective history pictures a weapon that terrifies and exterminates soldiers. It conveys the idea that the weapon was merciless, and that exposure to it led to a certain death. Historical facts offer a contradictory perspective. CW has in fact very few tactical advantages. Soldiers had to repeatedly rethink the use of CW, to make it tactically efficient.

They had to recreate the surprise attack, integrate it in their artillery, and develop a more lethal gas to make its use within the battlefields relevant and practical.

The variations in the tactical efficiency of the weapon might explain the variations in the use of CW during WWI. The first use of the weapon at Ypres was a blatant success. Its capacity to kill and rapidly disable soldiers amazed and terrified all the belligerents. When they understood however they would not be able to replicate this effect, they redoubled their efforts, used more and more gas, and tried to increase its lethality. Yet, even though this theory offers some compelling points, it raises some important questions. Why did the British and the French keep cylinders while artillery was by far more efficient? Foulkes’ stubbornness cannot be the sole reason. Moreover, how can we explain that all the forces kept on using massive quantities of gas while it was obvious that its utilization could not help them to breach the front line? Why did they keep using a weapon that was hard to handle, that a majority of soldiers despised and that was very likely to hurt them? Why did they continue using CW while their other weapons had a much higher lethality rate?1

Other decisive factors might explain variations in the use of CW. One of them is the perception of actors with regards to the strategic utility of the weapon. If tactical and strategic considerations are hard to disentangle, they are very different. Tactical considerations focus on the small picture (winning the battle). Strategic decisions endorse a more general perspective and aim at winning the whole war.

**The strategic utility of CW**

As demonstrated previously within the tactical development, slowly, belligerents became used to protecting themselves against CW. The protection cancelled the initial desired effects of CW. This slowly led to escalation. This search for higher lethality meant that the weapon was increasingly regarded as a weapon of attrition, and no longer solely as a weapon to create movement. The search for an attrition effect coincides with one of the strategic goals shared by all sides of the conflict: making war total, annihilating the maximum numbers of victims.

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1 As Lepick mentions, only 3% of the overall number of victims was killed by the CW. When soldiers were aware that chemical gas attacks might occur, their ‘chances’ to die from these attacks were twelve times lower than the risks for them to be killed by other weapons (such as shell), in VOIVENEL, Paul. *La Guerre Des Gaz, 1915-1918*. 1. ed. Paris: Giovanangeli, 2004.
soldiers, so the victory would be complete. This quest for total annihilation led to two different strategic utilizations of CW. CW had a tremendous power of attrition (1) and of erosion (2).

**After 1916: the weapon of attrition …**

Developments concerning the variation of the tactical utility of CW demonstrated that the search for higher lethality was at the core of all sides’ preoccupations. CW was regarded as the weapon of Ypres, that is a weapon of attrition whose goal was to destroy to the highest levels of men, infrastructures, and trenches. Pétain’s testimony demonstrates how actors were looking for this annihilating effect of CW, notably when he explains that the more the soldiers in the chosen sector, the higher the number of gas victims, the higher the payback of the operation.¹

This search for annihilation seems to make sense on a strategic level. CW was used to signal that the fight was total, and that combatants would not hesitate to destroy their adversary, should they need to do so. In other words, CW had a very strong signaling and strategic effect. Even though CW no longer killed and destroyed as successfully as it had at Ypres, both sides wanted to use it in order to demonstrate their strong commitment to winning.

The significant increase in the quantity and in the lethality of the deployed gas supports this interpretation. All the actors – especially the British – dramatically increased the deployment of CW during the last year of the war. Even though actors realized that CW were killing fewer combatants than other weapons (regular artillery, bombing), they remained a strategic asset on the front line. Gas was still disabling many soldiers, creating anxiety among them, paralyzing and even reversing the conquest of some positions, and signaling a strong commitment to annihilating the other side’s resistance.

… or the weapon of erosion?

CW had another important strategic value in the eyes of Germans, French and British. The weapon was used to wear down the enemy’s resistance not only by killing and hurting combatants, but also by harassing them. CW was perceived as a very useful weapon of erosion. With CW, soldiers could constantly harass the other side, day and night, and force them to live in a constant, restless anxiety.

Three factors explain this anxiety. First, soldiers were very anxious about the effects of CW on their own bodies. They were afraid of experiencing terrible pain. As depicted earlier, the effects of CW on the human body were visually very shocking. The testimonies of their friends hit by gas fueled this very high anxiety. The mere idea of being hurt by CW was thus met by high levels of anxiety among all the soldiers, especially those on the front line who were more likely to be exposed. Secondly, CW also aroused a fear of inhaling without realizing it. The gas deployed via CW was odorless and imperceptible. Therefore, soldiers could breathe a significant quantity of gas without realizing it and before protecting themselves with masks. The effects of gas were also sometimes considerably delayed. Some soldiers left their position with minor discomfort in the chest, and died several hours after in terrible pain. The effects of gas in the long term were also relatively unknown, and they might have been the decisive factors in the deaths of many soldiers several years after the conflict. Therefore, this gap between the first effects of CW and its actual impact on the human body caused a terror of dying without having the time to realize what was happening. Finally, the last type of anxiety created by CW was the fear of dying without fighting. Indeed, CW could kill a soldier at any moment of the day. It could kill while soldiers were fighting, but also while they were eating, sleeping, resting. This threat was very disturbing for soldiers, who could die without having even the possibility to engage in the combat and disarm their opponents.

For these three types of reasons, CW raised a huge anxiety among soldiers. This anxiety – coupled with other factors (coldness, lack of food, hygiene, promiscuity) – contributed to making living within the trenches unbearable. It literally eroded the willingness and the capacity of soldiers to fight and resist. It made their duty even more painful and tiring than it had been before the use of CW. If CW did not kill them as frequently as bombs and bullets did, it considerably broke their resistance.
The limits of the efficiency theory

If the efficient utility theory highlights many crucial aspects of variations in CW utilization, it is also not entirely satisfactory. The theory is based on a rational assumption: actors were cost-utility driven. They used weapons because of their tactical and strategic utility. They stopped when the weapon ceased to be tactically and strategically useful. Yet, all sides rapidly perceived CW as not tactically efficient. They tried to diversify its use, increase its lethality, but CW fundamentally remained less harmful than other weapons such as machine guns, explosive devices, etc. Why then use a weapon that obviously lacks efficiency, that is costly to produce and that is despised by a majority of the soldiers? Even if CW were not tactically useful, they might have been regarded as a strategic asset: their use was aimed at breaking resistance, annihilating the enemy and eroding its moral. Yet, again, this strategic goal did not work. The CW utilization did not break the morale of belligerents. Their resistance and their capacity to withstand chemical attacks never faded. Why then did each side continue to deploy CW?

Examining the international pressure theory

The following section attempts to determine whether the third ‘classical’ explanation of ‘international pressure’ can be used for the variations in CW utilization during WWI. It first details what this theory holds, and then details whether the three types of international pressure identified during the conflict (public opinion, International Committee of the Red Cross and the opinion of other states) explain variations in CW utilization.

Explaining variations in CW utilization with international pressures

The ‘theory of international pressure’ assumes that states’ weapons utilization varies when international pressure is constraining. This theory is based upon two ‘mechanical effects’. First, it is explained by what I called the ‘scrutiny effect’: states behave differently because they do not want to provoke skepticism and criticism of their actions. Skepticism and criticism
prevent the states from convincing their own population, but also other states, that their actions are legitimate. Deprived of legitimacy, states lose a support that is crucial for them if they want to win the war. *In fine*, the state prefers to change its weapons utilization if it allows it to keep this support and, ultimately, to win war. The second mechanical effect is called the ‘external constraint’. The state changes its weapons utilization because it fears losing the support of an ally, or, more broadly, of losing its rights or prerogatives in international institutions. Because it fears that it has too much to lose by using the weapon, the state prefers to diminish or cease use of the weapon.¹

The following part examines whether the explanation of ‘international pressure’ accounts for the variations in weapons utilization. A careful examination of the different reactions at the time reveals that three types of pressure were exerted on the different users of CW: the pressure of public opinion (of their own states or other states) (1), of international institutions or organizations (even though international organizations only really emerged after WWI) (2) and of the other powerful states at the time (especially the United States) (3). This section finally concludes that this theory explains certain aspects of CW utilization, especially the escalation in the ‘race for toxicity’, but does not explain many other variations.

*The brief criticism of public opinions*

Analyzing the varying reactions of public opinion during WWI obviously raises many problems, and this short explanation does not pretend to be exhaustive and to capture the multiplicity and the complexity of different public opinions. In order to simplify it, we will base our analysis only upon a selection of articles then published in the newspapers. We consider these articles as ‘revealing media’, which highlight the majority of public opinion of a state. Based on these documents and on the previous serious studies on CW, four crucial points highlight the very weak pressure put by public opinion on the CW utilization of the British, the Germans and the French.

First, if public opinion of the Allies was sincerely shocked by the first massive utilization at Ypres, it rapidly ‘accepted’ its utilization and ‘normalized it’. The first articles mentioning the Battle of Ypres largely condemned the CW utilization with very vibrant and

¹ A more thorough explanation of this theory is provided in the theoretical chapter.
powerful words.¹ Yet, rapidly, and despite the continuous and increasing CW utilization, the European newspapers ceased to relate and describe the chemical attacks. This observation does not apply to the US case. The US newspapers continued to relate the chemical attacks but even these articles did not create any deep form of reluctance, and ultimately any form of powerful pressure to stop using the weapons, among American civil opinion.

The silence of European newspapers on the CW utilization is due to our second crucial point, which is the generalization of the censorship. This point is discussed in more detail in part 4 of this chapter. Roughly, the newspapers quickly stopped mentioning the CW utilization for two reasons: first, militaries and politicians did not want to suscitate a fear that could have broken the morale of their people, and second, the militaries were reluctant to admit that they also used CW, for tactical reasons, but also because they feared losing the support of their own public. This censorship contributed to the exclusion of CW from the conflict. As public opinion was not informed of the different chemical attacks, it could not really pressure its governments to cease to use CW.

Third, the propaganda exerted by each actor of WWI not only contributed in masking the reality of CW utilization, but also used the CW utilization to mobilize people. When the newspapers did depict CW utilization, they attempted to convince public opinion to support the war (and join the war, in the case of the US newspapers), and CW were presented as an example of the many awful aspects of the other side’s militaries, rather than trying to pressure the different states to cease using the weapon.²

Finally, the very low number of civilians killed by the gas (if compared to the other weapons) also explains the lack of visibility of CW, which might explain why civilians were not particularly concerned by the weapon.³ CW remained an appalling means of warfare, but was limited to the battlefields, during a war that seemed to constantly escalate in violence.

² Annette Becker perfectly summarizes this point, when she says that the articles on gas are only a pretext to represent the other side as the barbarian, hypocrite and inhumane. Gas is thus always instrumentalized rather than being analyzed as a new weapon with terrifying characteristics, in BECKER, Annette. “La Guerre Des Gaz, Entre Tragédie, Rumeur, Mémoire et Oubli.” In Vrai et Faux Dans La Grande Guerre, edited by PROCHASSON, Christophe, RASMUSSEN, Anne. Collection “L’espace de L’histoire.” Paris: Découverte, 2004.
³ It seems that 5,000 French civilians were gassed, and only 100 died. These victims were gassed at the end of the conflict. In total, 300,000 French civilians were killed during WWI. Therefore, CW
The other state pressure: the US position toward gas

This point is only very briefly discussed in this paragraph, for two reasons. First, determining the pressure exerted by the different states, including the United-states, on the British, French and German practices of war is extremely complicated. It requires an in-depth knowledge of the diplomatic relations between these countries, and a thorough analysis of how these diplomatic relations evolved with the conflict, and with the CW utilization. If this aspect is worth investigating, it can be not explored in this paragraph, as it could constitute in itself a whole new dissertation. The second difficulty is methodological: how does a state exert pressure over another one? How do states transform other states’ practices of war? This methodological aspect is also worth investigating, but, similarly, it is too vast to be treated in our perspective.

Therefore, we propose only to briefly analyze the US position which, we believe, constitutes an interesting example of how states tried to influence CW utilization during the conflict. After the first CW utilization, in May 1915, President Wilson asked the Germans to stop deploying CW on the battlefields. He proposed to stop the US blockade against the neutral ports in exchange for the end of CW deployment on the battlefields (and for the Germans ceasing to attack US ships). This first ‘offer’ was the first attempt made by a state to decrease or suppress CW utilization on the European battlefields. The Germans, but also the UK, refused to accept this offer from Wilson. Moreover, if Wilson did ask to suppress CW from the battlefields, he rapidly accepted the development of a vast US chemical program, which included the fabrication of CW (in shells) with chlorine, but also mustard gas. This paradoxical position (first attempting to influence a state to stop using a weapon, and then producing the weapon) reveals the dilemma which was faced by many actors. Because they were caught between the desire to suppress the weapon, and the idea that the production of this weapon was necessary, the United-States, but also the Russian Empire (the Russian Tsar Nicholas II’s role during the Hague Conference of 1899 was decisive, yet the Russian Empire used a small quantity of CW during WWI) were ultimately unable to influence the CW utilization of the other states.

The term “international community”, even if operational and convenient, is not adequate in the case of CW, mainly because it is an anachronism. The first institution commonly regarded as international, in that it united an important number of states, namely the League of Nations, was created in the aftermath of WWI (1919). Therefore, at the time of WWI, the term ‘international community’ did not represent the same meaning and the same criteria as it did after the creation of the League of Nations. This does not mean that international pressure was inexistent before this, but rather that actors felt pressured by other states in different ways than we envision today (by an institution which gathers regularly, which has several organs, etc). In this following part we will analyze the pressure of the international ‘community’ through the legal treaties established by the different states which took part in WWI, and by the only extant institution which could be called international: the ICRC.

In our analysis of whether the international legal treaties could have pressured actors in their CW utilization, we show that the Lieder Code and the Hague Conventions did mention CW, but in very ambiguous terms. This ambiguity was the grey area used by states to bypass potential international condemnation of their CW utilization. Then, we also examine a second possible source of international pressure: the ICRC, which could be regarded, even at this time, as a powerful organization, in many respects international. Yet, this part will reveal that the ICRC did not really focus on the ‘CW issue’, and its capacity to denounce (or shame if we want to use a more recent framework) was not really used to constrain, or influence, CW utilization.

The Lieber Code and the first codification of chemical agents

The first official ‘legal text to mention the CW utilization is the Lieber Code. Created in 1863, this ‘ancestor for the laws of war’ (or code of conduct on the battlefields) for the Union Forces during the American Civil War bans the ‘use of poison’. The Lieber Code’s General Order Number 100 stipulates that the use of poison is not condoned by military necessity. It also explains that:
“the use of poison in any manner, be it poison wells, or food, or arms, is wholly excluded from modern warfare. He that uses it puts himself out of the pale of the laws and usages of war.”

An interesting analysis would be to see whether this code actually constrained the soldiers of the Union Forces in their utilization of the small quantity of gas disposable at the time. If we will not tackle this question here, we can still underline the important role of the Lieber Code in the further codification of the European laws of war. In the 1868 Declaration of Saint-Petersburg, the Russian Czar Alexander II does refer to the Lieber Code. Two years later, in 1870, Germany declared that it adopted the Lieber code to rule its conduct of warfare. Finally the Declaration of the Conference of Brussels was largely drafted by Professor Blunstchli, a friend of Lieber, and also greatly inspired by the Lieber Code.

If the influence of the Lieber Code was influential in the European laws of war of the end of the 20th century, it does not mean that all states agreed to abide it. Consequently, it does not mean that they shared the same belief on poison. Great Britain did not ratify the Declaration of Brussels. Moreover, when Czar Nicholas II first sent a circular, in August 1898, to gather the major European states to discuss the fact that, inter alia, “hundreds of millions are devoted to acquiring terrible engines of destruction”, none of the major states accepted his invitation. It was only after his second circular that states finally participated in the Hague Conference of 1899.

The First Hague Convention (1899): the Declaration (IV,2) concerning asphyxiating gases and articles 22 and 23

Organized on the behalf of the Russian Czar, the First Hague Convention reunited all the major states of the time: Germany, the United Kingdom of Great Britain and Northern Ireland, the United States of America, France, Italy, etc. (in total 50 states). On 29 July 1899, the convention explicitly referred to gas in the Declaration (IV, 2):

“The Contracting Powers agree to abstain from the use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases”

With this declaration, the Convention clearly bans a specific method of CW utilization. Asphyxiating and deleterious gases are forbidden only when they are used in projectiles and when these projectiles are launched with the intention of spreading them. The First Hague Convention also declares in Article 22 that: “The right of belligerents to adopt means of injuring the enemy is not unlimited”. Article 23 also stipulates that:

“Besides the prohibitions provided by special Conventions, it is especially prohibited:

(a) To employ poison or poisoned arms;
(b) To kill or wound treacherously individuals belonging to the hostile nation or army;
(c) To kill or wound an enemy who, having laid down arms, or having no longer means of defence, has surrendered at discretion;
(d) To declare that no quarter will be given;
(e) To employ arms, projectiles, or material of a nature to cause superfluous injury;
(f) To make improper use of a flag of truce, the national flag or military ensigns and uniform of the enemy, as well as the distinctive badges of the Geneva Convention;
(g) To destroy or seize the enemy's property, unless such destruction or seizure be imperatively demanded by the necessities of war.”

Article 23 and its provisions (a) and (e) explicitly frame CW utilization. The deliberations that took place in the days before the Declaration clarified the ‘spirit’ of this article 23. The actors agreed that the declaration’s adoption also involved “the fact that all high explosive shells generate ‘asphyxiating or deleterious gases’ which could, in a confined area, cause death. The Conference therefore adopted the interpretive ruling that splinter and gaseous
effects were to be compared, and the ban would apply if the gaseous outweighed the splinter effect”.  

In sum, the First Hague Conference declaration indirectly but firmly banned the utilization of projectiles filled with deleterious gases. Indeed, as Edward Spiers explains:

"Asphyxiating or poisonous gases are without any doubt one of the poisons forbidden under the Convention. Medical personnel who have recovered troops affected by these gases from the battlefield, not to mention the nurses who have treated them in the hospitals, are all unanimous in testifying to the terrible suffering caused by these gases, which is more harrowing to see than that resulting from the worst of wounds"

The constraining power of the First Hague Convention?

The First Hague Convention was signed by all the states which took part in WWI, except the United States. The Second Hague Convention of June 1907 reaffirmed this First Conference by republishing the Laws and Customs of War on Land. It then includes the very same paragraph 23, with the following commentary on the provision (e):

“The foregoing prohibition is not intended to apply to the use of explosives contained in artillery projectiles (...) but it does apply to the use of (...) substances on bullets that would tend unnecessarily to inflame a wound inflicted by them. “

This time, all the future actors of WWI signed the Convention. They are thus not allowed to use projectiles with gas in times of warfare. Yet, the extant analyses on the Second Convention of Hague see two limits to the constraining power of this Convention on CW utilization. First, the Convention clearly stipulates that it “shall cease to be binding from the time when, in a war between the contracting powers, one of the belligerents shall be joined by a non contracting power”. This reservation somehow limits the constraining power of the Hague Convention. The second reserve concerns the advance of the chemical industry at the time of this Declaration. Certain analysts suggest that this Convention was a form of ‘cheap talk’ because none of the parties actually had the capacity to produce projectiles with gas. The

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proposition to ban only the use of poisonous gas through shells (instead of the use of deleterious gases per se, which would have been a much wider ban) could support this analysis. It thus corroborates the idea that, in fine, the Hague Conventions were not a source of constraining pressure for states. Indeed,

“The Conference steadily defeated proposals to eliminate weapons that had reached the stage of military utility. But in the discussion of chemical shells it became apparent that no power had developed a serviceable gas projectile; since no delegation had anything to sacrifice on this score, all seized the opportunity of taking at least one spectacular step toward the humanizing of war. That is, all except the United States delegation, which stood by its initial instructions.”

The calls of the ICRC

The ICRC (International Committee of the Red Cross) launched its first public statement to denounce the CW utilization very late in the conflict, on 8 February 1918. This call coincided with the sudden increase in CW utilization on the battlefields, but also with the development of mustard gas (the 9th most aggressive of the gas deployed in WWI). In its call, the ICRC notably explains:

“Today we wish to raise our voices against a barbarous innovation which science is in the course of perfecting, that is, making it more murderous and more refined in its cruelty. We are speaking of asphyxiating and poisonous gases, the use of which, it seems, is growing to a scale hitherto unsuspected”

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3 The entire call might be found in https://www.icrc.org/eng/resources/documents/statement/57inql.htm.
Further analysis on the impact of this call to states needs to be carried out, to determine exactly whether states felt pressured by the ICRC denunciation of their CW utilization. Two aspects can yet be underlined. First, this call was made in the last year of the conflict, when the CW utilization was at its peak, and when the more deleterious gas (gas that could hurt even when soldiers wore gas masks) were deployed on the battlefields. The call was not followed by a decrease or a pause in the CW utilization. This can be analyzed as the failure of this kind of pressure, by the ICRC, to efficiently constrain actors in their CW utilization.

Second, the ICRC was also spending the majority of its resources on issues concerning prisoners of war (POW). This issue polarized a lot of their resources, and might explain why they only called for ending the CW utilization when the latter was at its peak. This ‘delayed interest’ and its ‘secondary position’ in the hierarchy of the interests of the ICRC during World War I can also be interpreted in the following way: the ICRC did not actively (at least as actively as it had done for previous issues) seek to pressure states concerning their CW utilization.

**Provisory conclusion: the failure of international pressure?**

The previous developments demonstrate that the variations in CW utilization are poorly explained by the theory of ‘international pressure’. If at the time powerful states (such as the United States) first timidly advocated banning CW, they rapidly started to develop their own chemical capacity and joined the chemical warfare. The extant conventions (especially the Hague Conventions of 1899 and 1907) did not clearly ban the CW utilization *per se* because it mainly referred to projectiles filled with deleterious gas. Both sides used this ‘ambiguity’ or ‘reserve’ as a ‘breach’ which enabled them to justify their own CW utilization. The ICRC call which advocated for the end of the CW utilization did not result in any kind of restraint in or diminution of CW utilization. All these observations allow us to confidently hypothesize that the belligerents of WWI (especially the British, the France and the Germans) did not feel constrained by the ‘international pressure’. Therefore, the variations in CW utilization have to be explained by other theories. The following part will examine two other theories which might shed light on CW utilization: the meta-norm of fighting justly and the symbolic power of the weapons.

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1 This finding is yet not very surprising. WWI is often and commonly regarded as a huge ‘diplomatic failure’, and the very existence of international organizations existed at this time is challenged by several theories.
Part III- The Arguing Process on Chemical Weapon on the Meta-norm of Fighting Justly

The moral perceptions on the CW utilization during WWI: an aspect overlooked by the rational theories

Though the previous theories do propose compelling explanations of the variations in the CW utilization, all of them overlook two aspects which, we argue, are decisive: the impact on CW utilization of the laws of war and of the moral opprobrium attached to the weapon.

Indeed, the ‘cost-based’ and the ‘efficiency-based’ theories do not consider these two aspects as crucial. First, they consider that analyzing the impact of the laws of war is if no importance. The Hague Convention of 1899 banned CW utilization by projectiles. Because the Germans, French and British used chemical shells, they violated the Hague Convention. This violation is regarded as the proof that the laws of war completely failed to constrain actors in their utilization of CW. Secondly, these two theories do acknowledge that a form of moral opprobrium was attached to the weapon. But, similarly to the case of the laws of war, they do not think that this moral opprobrium actually impacted the CW utilization. They consider that this repulsion did not last, and was rapidly overcome by the ‘pragmatic considerations’ and the necessity to win the war. In fine, they consider the influence of the moral repulsion attached to CW as not decisive in explaining variations in its utilization.

The ‘international pressure’ theory, does actually take into account these two aspects, but also concludes that their influence on CW utilization was minimal. The mobilization of international actors (be they institutions such as the ICRC or the other states) was rare and weak, and did not provoke significant variations in CW utilization. On the contrary, the statement made by the ICRC was released in the last year of the conflict, during which the CW utilization was at its climax. Therefore, this theory also generally concludes that these two aspects (the meta-norm of fighting justly and moral opprobrium) failed to impact the CW utilization.

Finally, certain studies, especially those which focus on the taboo, mention the impact of moral opprobrium on CW utilization. Yet, they also fail to really clarify the fact that the main
roots of the opprobrium come from the meta-norm of fighting justly. Because they miss this point, they miss the opportunity to clarify how the laws of war influence weapons utilization.

**Roadmap**

In contrast with the common assumption shared by a large part of the extant literature, the following analysis suggests and demonstrates that the meta-norm of fighting justly did have an impact on the CW utilization during World War I. This part aims at clarifying this impact and demonstrates that the laws of war played a significant part in four aspects of the CW utilization.

The first section investigates more closely how actors perceived CW before it first massive utilization on the battlefields. It demonstrates that their perceptions of CW ran sharply counter to their preexisting beliefs and perceptions of the meta-norm of fighting justly (largely inherited from the former chivalric codes). This contradiction is, we argue, decisive because it explained why actors first resisted the use of CW, and only deployed them in the second and most deadly year of the conflict.

The second section analyses another impact of the laws of war on CW utilization: the choice to discharge CW from cylinders instead of from shells. Indeed, this choice is not only the result of ‘materialistic factors’ (i.e. industrial production, tactical consideration, military training), but is also the consequence of pre-existing beliefs attached to the meta-norm of fighting justly.

The third section studies the escalation in the CW utilization. As we demonstrated earlier, CW reached their peak of utilization and of lethality in the last year of the conflict. If the majority of the studies conclude that this peak confirms the failure of the laws of war, we argue the opposite. Each side continued to justify their CW utilization by using the meta-norm of fighting justly. It is because they thought they were outside the realm of law that they increased their CW utilization. Put differently, the actors did not consider that they were violating the laws of war because they did not think the laws of war were still framing their actions.

In the conclusion of this chapter, we will more deeply analyze the ‘legacy’ of the CW utilization in WWI, that is how the discussions on CW, which occurred in the aftermath of
WWI, transformed the meta-norm of fighting justly, and left its imprint for CW utilization in the rest of the century.

The resistance to using CW explained by the meta-norm of fighting justly

The moral repulsion of actors in the face of CW

The studies analyzing the CW utilization during WWI generally acknowledge that a large number of the actors ‘resisted’ CW utilization. The word ‘resisted’ refers here to a form of reluctance, a disgust, which forced the actors to think of, and favor, other solutions before finally opting for using CW. The following paragraphs provide several declarations which reveal this ‘resistance’. Many other examples could have been provided. All these declarations suggest that the actors felt a strong sentiment of repulsion towards using CW. This repulsion stems directly from the gap between the effects of the weapon and their conception of the meta-norm of fighting justly. The following paragraphs provide several examples of this repulsion, omnipresent on each side of the conflict.

The British: the repulsion against using an ‘inhumane’ weapon

The British feared CW utilization and appeared to have been profoundly hostile to this means of warfare, before, and during the first year of WWI. In September 1914, several requests which advocated for the development of a program aimed at producing projectiles with tear gas were discarded. The reason invoked by the War Office and the British chief of Staff was the 1899 Hague Convention, and their willingness not to violate this law.¹ This moral repulsion seems to have been profoundly shared by British military officers and politicians. The epistolary exchange between Lord Kitchener (then War Minister) and Sir John French (then British Prime

Minister) the day right after the Battle of Ypres is a starting example. Several authors, including Richard Price, mention this exchange:

“Sir John French’s request for means to retaliate in kind was met the following day with Lord Kitchener’s response that “the use of asphyxiating gases is, as you are aware, contrary to the rules and usages of war. Before we fall to the level of the degraded Germans I must submit the matter to our Government. These methods show to what depths of infamy our enemies will go in order to supplement their want of courage in facing our troops”.

Therefore, the reluctance of the British to use CW was extremely important, and, in contrast to the French, was still strong a few weeks after the Battle of Ypres. Even though their capacity to produce CW was limited (as the previous chapter demonstrated), the vehemence of their discourse and of their denunciation of CW is striking and seems to have entertained a form of resistance. Even though this resistance did not last, its strength even in the aftermath of the Battle of Ypres demonstrates that the moral opprobrium against CW (because their utilization contravened the meta-norm of fighting justly) was strong among the majority of British officers and politicians:

“In the eyes of British political and military leaders, the obloquy for using gas weapons resulted not simply from the unsurpassed cruelty they supposedly entailed compared to other contrivances of industrial warfare, but from the fact that their first use constituted an unpardonable breach of the spirit of international law.”

The French: projectiles filled with gas but not poison

The ‘French case’ is interesting because it is paradoxical. The French were in fact the first to develop projectiles with gas. Yet, they always insisted that these projectiles could not be compared to the “projectiles with poison” banned by the 1899 Hague Convention. The gas

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contained in these shells was a diffuse tear gas that could not, under any circumstance, kill those who inhaled it. The French also justified these projectiles in that they conformed to the Hague Convention, and thus were not illegal. Three examples illustrate the influence of the meta-norm of fighting justly on the development of CW before 1915:

First, when the chemist Gabriel Bertrand proposed the use of shells with tear gas, the French army discussed whether or not this proposition violated the Hague Convention. The head of the program, General Curmer, sent a letter to Bertrand, in December 1914, saying that the proposition to develop shells was accepted only because the gases they contained were neither vesicant nor asphyxiating, therefore the weapon did not violate the 1899 Hague Convention”. The French also referred to the Hague Convention in order to both legitimize their use of projectiles with tear gas and explain why they did not fill these projectiles with a more lethal gas (such as chlorine). They acknowledged that they were using asphyxiants on the battlefields, but these agents were not noxious and thus respected the Hague convention.

Finally, the French army was at that time largely dominated by two important figures, Joffre and Pétain, who both strongly valued the offensive doctrine (i.e. use all the means at one’s disposal to attack). Yet, as Olivier Lepick explains, despite the repeated injunctions of these two figures to develop chemical warfare, many military officers refused to ‘follow’ them on the issue of CW. They argued that CW were not honorable.

The Germans: the morally despicable but necessary weapon

The German Army is often recalled as the one who ‘hit first’ and deployed massive quantities of chlorine on the battlefields. The cynical declarations of Fritz Haber, advocating for chemical warfare, are often considered as being representative of the majority of the German

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1 See DEPERCHIN, Anne. “le Gaz et le Droit International.” In Gaz! gaz! gaz!: la guerre chimique, 1914-1918, edited by Historial de la Grande Guerre (Museum), LEPICK, Olivier, and AUDOIN-ROUZEAU. Stéphane, Péronne; Milan: Historial de la grande guerre ; 5 continents, 2010. The exact words of Curmer are, in French, “La substance n’était ni délétère ni asphyxiante et en accord avec la Convention Internationale du 29 juillet 1899 de la Haye, elle est acceptée”.


officers on CW utilization. Moreover, because they were the first to hit, they are often pictured as having no particular reluctance to use CW. A closer examination shows that this picture is not entirely right. The Germans did use CW, but the reluctance to choose this means of warfare was real. German officers were concerned that CW were morally problematic, and their deployment on the battlefield not solely reducible to the debate over the tactical benefits. Thus the famous words of General Berthold Von Deimling, the very General who would wage the Battle of Ypres: “The mission of poisoning the enemy as one would rats affected me as it would any straightforward soldier. I was disgusted.”

Von Deimling was not the only German officer to be disgusted by CW. Crown Prince Ruprecht of Bavaria, who was “one of Germany’s most thoughtful and successful soldiers” also explained, in his diary, that he found “the new weapon personally distasteful”.

The choice of cylinders: abiding by the Hague Convention

Cylinders or shells?

The Germans were the first to deploy a massive quantity of chlorine on the battlefield. The “medium” or “method” the Germans chose to do so was the cylinder. This solution was not the only one at their disposal: they did have an alternative. They could use the ‘cylinder technique’ (also called nuées dérivantes”) which is a method based on deploying gas from cylinders based within their own trenches, and waiting for the gas to reach the other side. The Germans also had a second choice: integrating CW in their artillery, and encapsulating the gas within shells. CW would thus be used as projectiles launched again the enemy trenches.

As the previous part explained, it was the first solution (the cylinders) that the Germans chose and favored. This choice was controversial on a tactical level: the logistics to wage gas attacks with cylinder was highly constraining, the risks of being hit by one’s own gas higher than with chemical artillery, and the results were highly uncertain (and tied to uncertain factors

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such as the weather). Therefore, the choice of favoring cylinders of shells is intriguing. In order to fully understand it, we have to examine closely the decision process. One possible explanation is that the production of shells with chlorine would have considerably delayed the attack. This delay was problematic because the Germans could have lost the surprise effect that they thought was crucial to breach the lines. Another explanation is the role of the German jurists. German jurists were indeed directly involved in the final decision. German military executives knew that the Hague Convention had forbidden the use of chemical projectiles. As a reminder, the Hague Convention stipulates that: “The Contracting Powers agree to abstain from the use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases”

The German jurists clearly favored the solution of the cylinders because they considered that they did not project the deleterious gases. They argued that the gas escaping from the cylinder was not projected toward the enemy, even though it reached him. This interpretation of the technique is obviously very controversial. Even though the gas was not projected per se, it was diffused onto the front lines and killed soldiers. If the method was different, CW still asphyxiated and killed soldiers. Yet, interpretation remained based on a rational interpretation of the Hague Convention.

The real impact of the German jurists is difficult to assess: did it outweigh the materialistic considerations, or just reinforce them? Answering this question requires a better understanding of the decision-process and of the material capabilities of the Germans. Yet, it is very interesting to note that the Germans consulted and considered their jurists before taking the final decision. They wanted to be sure that they could prove that they were not violating the letter (if not the spirit) of the Hague Convention. Their choice of using cylinders was framed to comply with their interpretation of the convention. They identified an ambiguity in the letter of the law and took advantage of it. This ambiguity allowed them to justify and legitimize their CW utilization immediately after Ypres.

The French and British reaction: The Germans used deleterious gases

The French and British neither dismissed nor ignored the justifications of the German jurists. They tried to counter-argue, to reason against the German jurists, to demonstrate the
wrongness of their interpretation of Jus in Bello. If on the one hand, however, they harshly criticized the German CW utilization, on the other hand, they could see that the Germans’ justifications were not easy to criticize or attack. The French General Maxime Weygand deplored in his diary that the Germans took the initiative to use an “inhumane means of warfare which is condemned by the international accords”.¹ Lord Kitchener denounced the CW utilization by the Germans in the House of Lords, explaining that the enemy had employed vast quantities of poisonous gas, in defiance of the recognized rules of war and of their own pledges:

“The Germans have, in the last week, introduced a method of placing their opponents – hors de combat- by the use of asphyxiating and deleterious gases, and they employ these poisonous methods to prevail when their attack, according to the rules of war, might have otherwise failed. On this subject I would remind your Lordships that Germany was a signatory to the following article in the Hague Convention: “ The Contracting Powers agree to abstain from the use of projectiles the object of which is the diffusion of asphyxiating or deleterious gases”.”²

… but in cylinders

Yet, all actors did not share these moral condemnations of CW. Indeed, Prime Minister Asquith wrote to King George V that, because the gas was apparently stocked in cylinders and not in projectiles, its utilization did not literally constitute a violation of the Hague Convention.³ The British, but also the French, indirectly acknowledged that the Germans had not blatantly violated the Hague Conventions by using cylinders of chemical gas. They indirectly acknowledged the grey area existing in the proscription of CW, which were banned only when used in projectiles. This acknowledgment was the first step of the “battle of legitimacy” that each side would wage in order to refine, and enshrine this refinement of the meta-norm of fighting justly, as the most legitimate one.

Refining the meta-norm of fighting justly after the Battle of Ypres

The discussions between militaries and politicians in the aftermaths of Ypres played a crucial role in refining the meta-norm of fighting justly, for three reasons.

First, they revealed the ‘ambiguity’ in the wording of the Hague Convention: deleterious gases may be legally used if they are not projected. If, retrospectively, this interpretation seems obvious, this was not necessarily the case before Ypres. Indeed, the preliminary debates at the Hague Conference revealed that actors were hesitant on what exactly was banned in CW: did the ban concern the projection of asphyxiating and deleterious gases (as Declaration 2, VI stipulates) or the strict utilization of poison (article 23, a). Therefore, an ambiguity existed as to which principle should come first: the ban on poison (which could have been argued as similar to gas) or the ban on deleterious and asphyxiating gases when they were contained in projectiles? Somehow, the Battle of Ypres, and the legal disputes to qualify whether the ban applied to the utilization of gas per se or to the gas utilization through projectiles, had a part in clarifying the ambiguity: it indirectly enshrined the Declaration as the ‘right’ interpretation of the spirit of the Hague Convention.

Second, they also revealed what constitutes “a deleterious or asphyxiating gas”. Indeed, the previous section revealed that the French were already using shells with tear gas in 1914. Yet, they were not condemned for this utilization, because the gas, they argued, was not deleterious. In contrast, when the Germans used chlorine, all actors seemed to concur that it was a deleterious gas. Therefore, by arguing over CW after the Battle of Ypres, actors also enshrined both the definition of deleterious gases and the status of tear gas (i.e. legal) at the international level.

Third, these discussions on whether the Germans had or had not violated the Hague Conventions are crucial. They demonstrate that laws of war – and more specifically the Hague norm of 1899- were already consistently embedded within the discourses and mindsets of actors. The laws of war were already solid yardstick upon which actors evaluated the use of chemical agents, framed their discourses and their practices. Their constant references to the Hague Convention were perceived as a means to gain legitimacy. We can even hypothesize that, if the French and the British deployed gas cylinders instead of gas shells after Ypres, this was not only because their material constraints forced them to do so. One possibility is that they
chose this method (instead of shells) because it respected the laws of war, as clarified by the post Ypres discussions.

Who hit first? The legitimization of the CW escalation because the other side was “outside of the realm of legality”

WWI is commonly perceived as a unique moment of European history, during which the states and former empires experienced a brutal escalation in violence. The debate on the ‘brutalization’ of war (detailed in the literature review of this chapter) illustrates this point: WWI plunged the European people into an ocean of brutality, inhumanity, beyond the rational. CW are paradigmatic of this new form of irrational, excessive, terrible violence.

This paragraph does not aim to contradict this view or to pretend that WWI did not represent a form of brutalization. Rather, it aims to demonstrate that, even though WWI represented a form of inexorable escalation of violence, actors remained guided by their perceptions of fighting justly. If the laws of war were violated in many respects, they still conditioned, drove, many of each side’s practices of war, including their CW utilization. Actors always attempted to justify their actions with regards to the laws of war, and this necessity to justify themselves restricted their ranges of action.

The Germans: the debate over who used the weapon the first

As we explained earlier, the Germans justified their massive CW utilization with two arguments. First, they claimed that their CW utilization did not violate the Hague Conference per se because they used cylinders instead of projectiles. Secondly, they argued that they were not the first to use CW on the battlefields. The French already used projectiles containing some gas, the year before. They did not accept the French argument that, because their shells only contained tear gas, they could be qualified neither as deleterious nor as asphyxiating. In contrast, the Germans saw these French shells as, chronologically, the first breach of the codification of CW as stated by the Hague Convention. This unprecedented, original breach “transported” the French and the Germans outside of the realm of law: because the French were the first to break the laws of war framing CW utilization, they finally broke the accord signed at the Hague Conference and freed the Germans from any kind of legal binding and legal
obligation. Therefore, no side had to abide by the Hague Conference. The Germans finally argued that they were not violating the laws of war because they were no longer bound by them: it was in this context of ‘legality’ that they started to deploy CW.

This constant effort to justify the first CW utilization is intriguing. The notion of pragmatism and ‘military necessity’ was very strong among German officers just before and during WWI. Their constant willingness to refer to the laws of war to legitimate their actions seems, therefore, puzzling: One possible explanation for this puzzle is that their conceptions of fighting justly were deeply embedded in their military culture (the notion of military necessity being also codified by the laws of war). Their argument indirectly reinforced the cohesion of the laws of war: their CW utilization was not a violation of the laws of war because the Germans had been constrained to quit the realm of the laws. In fine, the laws of war remained the yardstick by which they justified and legitimized their CW utilization.1

The Allies: the Germans initiated the war

The Allies also constantly tried to legitimate their actions by proving that they were complying with their own conception of fighting justly. This effort to demonstrate the legality of their practices of war (and conversely the illegality of German practices of war) was salient during the elaboration of the Versailles Treaty. There was a systematic attempt by the Allies to prove that the Germans deliberately violated the laws of war. To do so they generally proposed a threefold argument. The Germans were the first to attack the Allies, which proves that they never really wanted to abide by the laws of war. If the Germans were outside of the realm of legality, the Allies were only legitimately defending themselves by engaging in the war. CW utilization was thus not illegal per se, because it was a proportionate action, carried out in a context where states were fighting for their survival.

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1 See DEPERCHIN, Anne. “le Gaz et le Droit International.” In Gaz! gaz! gaz!: la guerre chimique, 1914-1918, edited by Historial de la Grande Guerre (Museum), LEPICK, Olivier, and AUDOIN-ROUZEAU. Stéphane, Péronne; Milan: Historial de la grande guerre ; 5 continents, 2010.
When the meta-norm of Waging Just War justifies the end of the constraining power of Fighting Justly

First, the Allies argued that the Germans originally broke the laws of war by being the first aggressor, invading Belgium. This ‘original aggression’ is pictured as a violation of the Jus ad Bellum (i.e. the right to go to war): the Germans had no ‘just reasons’ to invade and attack France. We will not discuss here this argument, which yet predominated and was constantly reiterated during the discussions of the Versailles Treaty. The Allies wanted to prove that the Germans were the aggressors. By invading Belgium, the Germans blatantly violated the laws of war and also manifested their willingness not to respect any kind of laws, from the laws of war to the laws of people. The Allies even argued that the Germans had premeditated this attack, from the time of their very signature of the Hague Conventions (assuming the ‘double-cross theory’: that is, the Germans pretended to respect the laws of war, knowing they would violate them several years after). This alleged premeditation is interesting because it seems to indirectly refer to the notion of perfidy, also banned by the laws of war. It also seems to imply that the Germans represented a major threat, to the survival of the states aggressed by them.

Self-defense allows chemical weapons utilization

The Allies also explained that a second conclusion could be drawn from the argument about German aggression: namely, the entire participation of the Allies in WWI was only a form of reply to this unjust aggression. The French even mention the term of “legitimate defense”. Because the Allies were doing nothing but protect their own survival, they had the right to use whatever means they could (including CW) to retaliate. CW utilization was legitimized and legalized because of this first original aggression waged by the Germans.

This argument is extremely interesting because it reveals the strong interdependence between the arguments over the meta-norm of Fighting Justly and of Waging Just War. Though this relationship is further studied in other chapter of this dissertation, we wanted to show here that the process of arguing over CW can also leads actors to argue over what constitutes waging a just war, and vice versa.

In fine, the argument of the Allies is the following: by using CW, they were carrying out nothing other than a just and proportionate reaction, in a context where their survival was threatened. Therefore, they complied with the meta-norm of fighting justly.
Gas and the respect of the norm of distinction

Finally, actors also seem to have debated and argued over another facet of the metanorm of fighting justly: the principle of distinction (i.e. not deliberately targeting civilians in war). Indeed, if CW were increasingly used throughout the conflict, it seems that they were mostly directed against combatants. There is no strong evidence of civilians having been the clear and intended targets of chemical attacks. This does not mean that civilians were spared by CW. Several studies mention a number of 5,000 civilian victims.¹ Yet, as Oliver Lepick explains, a great majority of these victims were gassed because they ignored the German warnings (asking them to leave their village due to the imminence of a chemical attack) or because they did not stay away from the gas for a long enough time to be protected against its delayed effects (this was especially true when the gas was phosgene or mustard gas). Therefore, at first glance, it seems that CW utilization did respect the norm of distinction (i.e. sparing civilians and only targeting combatants).

Yet, it is interesting to note that the possibility of bombing civilians with CW was discussed among the highest military spheres. It is even more interesting to see that, again, neither the Germans, French nor British ever crossed this line and violated the norm of distinction.² The Allies and Axis seriously considered using CW to destroy cities and civilians. Both sides discussed and weighed this possibility. They saw in this option a potential tactical value: breaking the morale of the enemy and hastening its surrender. Prominent figures (such as Colonel Jackson) advocated for gas bombing. Yet, none of the sides actually chose it. The discussions evaluating this option reveal two points. First, all sides refused to be the first to gas bomb civilians. When they were seriously considering the option, each side stepped back when it realized it would be the first to make such an attack. This refusal shows how the use of CW, especially against civilians, remained attached with opprobrium. It could also be the result of the strong implementation of the customary norm of distinction. Because the latter was very solid, actors did not want to be the first to violate it. Secondly, some actors did not even try to

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develop the option of gas bombing. It is true that the effectiveness of gas bombing was also arousing suspicion among militaries. The high volatility of the gas made its effects uncertain and hard to predict. Many militaries thought that the bombing of cities would not have been efficient, because the gas would have evaporated before actually harming civilians. This interpretation remains debatable. Combatants could have bombed cities with mustard gas, once they started to use it. Mustard gas is less volatile and more lethal than chlorine. Yet, they did not. This behavior reveals that actors were reluctant to choose this option not only because of its logistical problems, but because of the opprobrium attached to the very idea of gassing civilians.

**Provisory conclusion: The legacy of the arguing process of WWI**

The arguing process over the meta-norm of fighting justly on the CW utilization during WWI reveals three concluding points.

First, our previous section on the ‘international pressure’ theory reveals that the extant legal rules, which framed CW utilization before WWI, were ambiguous. The argument over CW utilization during, but also after WWI, both revealed and refined this ‘grey area’ contained in the legal treaties. This refinement took the form of a “battle of legitimacy” in which each side wanted to demonstrate that its own understanding of the laws of war was the most legitimate one.

Second, it also reveals that in this battle of legitimacy, the winners of WWI (the Allies) were a ‘step ahead’. It was they who could impose their perceptions of what happened during WWI as the most legitimate, through the Versailles Treaty and the subsequent bodies of laws aimed at regulating European relations. These bodies of laws not only imposed sanctions and duties on Germany, but also formed the basis of what states should do, and should not do, in order to comply with the laws of war. For instance, article 171 of the Versailles Treaty bans, in Germany, “the use, the manufacture and importation of asphyxiating, poisonous or other gases and all analogous liquids, materials or devices”. This interdiction paved the way for a ban on CW utilization *per se*, formalized through the 1925 Convention, also called Protocol for the Prohibition of the Use of Asphyxiating, Poisonous or Other Gases, and of Bacteriological
Methods of Warfare. Therefore, the example of CW also demonstrates two points. First, the arguing process on CW and the meta-norm of fighting justly, which take place after a war, remains decisive to understanding the subsequent practices of war. Second, the outcomes of the arguing process are also determined by the relationships of power which exist during and, even more importantly, after a war. This aspect reintroduces the realist idea that power remains decisive in the ‘logic of arguing’, and that not taking into account this aspect is as misleading as denying the crucial impact of justifications on practices of war.

Finally, the CW example also shows that the arguing process over CW not only refined the meta-norm of fighting justly, but also reshaped the meta-norm of waging a just war (jus ad bellum). More specifically, refining the meta-norm of fighting justly also contributed in refining the pillar principle of the last resort: CW utilization might constitute a specific condition which authorizes the deployment of more ‘extreme’ forms of ‘war engagement’. After WWI, it might be argued that states can now intervene when CW is used: because CW inflict an unnecessary suffering, their utilization constitutes a particularly extreme situation that legitimates an outside intervention, to end it. If none of the ‘soft measures’ (such as economic blockades) work, then states might have legitimacy to use the ‘last recourse’ and go to war.

A century after WWI, this argument still seems to be enshrined as an acceptable and legitimate one: the CW utilization of sarin gas by the Syrian government against its own civilians reactivated the same reasoning. This is because attacking civilians with CW is so particularly awful (in contrast to the attacks with conventional weapons) that the United Nations increased their pressure on the Syrian government, even invoking the possibility to use the Responsibility to Protect, to legitimate their right to intervene and engage in conflict with the Syrian government.

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1 This point is further analyzed in the conclusion of this chapter.

2 In this respect, an interesting research agenda could be to analyze how the arguing process on fighting justly also impacts a third body of the laws of war, commonly named jus post bellum, which provides rules for the post-war process.

3 The subsequent request to monitor and constrain the Syrians in their CW utilization was framed by the majority of the states in the Security Council (except Russia) as the condition sine qua non which guarantees a non-intervention in Syria. This ‘framing’ (the next CW utilization will entail an intervention) also reveals the idea that using CW is a practice of war of a specific nature, which is not only framed by jus in bello (or fighting justly) but which also ‘forces’ states to argue over jus ad bellum (waging the just war).
Now that we have examined the impact of the arguing process on the meta-norm of fighting justly on CW utilization, we will analyze why the arguments denouncing its utilization were so “persuasive”. Indeed, CW are remarkable because they are one of the rare weapons banned per se, through the 1925 Convention, so early in the twentieth century.¹ The following part reveals that the CW was constructed, and perceived, as a powerful symbol by actors, and this symbolic power directly contributed in increasing the persuasiveness of the arguments denouncing its utilization.

**Part IV – The powerful symbol of chemical weapons and its imprint on the collective memory of WWI**

Many prominent historians of the Great War share the intuition, and the belief, that actors perceived CW as a powerful symbol of WWI. For Jean-Jacques Becker, if CW injured and killed fewer soldiers than shells, it nevertheless “became so infamous that it is even perceived, sometimes, as the symbol of the Great War”.² Georges-Henri Sotou agrees that despite its lack of strategic benefits, chemical warfare remained in the collective imagery as the “strongest symbol” of the horrors of WWI.³ Many references to CW and their utilization during WWI can be found within popular literature. Several prominent authors refer to the gas and the profound and dramatic impact it had on soldiers, but also on their entire society. In France,

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¹ The only notable exception being the ‘dum dum bullet’ or ‘expanding bullets’, banned by the Declaration IV, 3 of the 1899 Hague Convention. This is a projectile and not a weapon per se.

² In the preface of HISTORIAL DE LA GRANDE GUERRE (MUSEUM), LEPICK, Olivier, AUĐOIN-ROUZEAU. Stéphane. Gaz! gaz! gaz!: la guerre chimique, 1914-1918. Péronne; Milan: Historial de la grande guerre ; 5 continents, 2010. Jean-Jacques Becker explains “Même le nombre de morts et de blesses qu’il a provoqué est faible par rapport à celui qui fut le fait des autres armes, en particulier de l’artillerie. Alors pourquoi a-t-il acquis une telle célébrité, au point d’apparaître parfois comme un symbole de la grande guerre?”

André Malraux, Roger Martin du Gard, Guillaume Apollinaire, *inter alia*, mention in their writings the destructive power of the gas which killed their hero (Adrien Thibault), and their friends in the trenches.¹ Wilfred Owen describes in his poem “Dulce et Decorum est” the “ecstasy of fumbling’ which, through the “thick green light”, exposed the soldiers to terrible pain, “choking, drowning, “the blood come gargling from the froth-corrupted lungs”.² Sir Arthur Conan Doyle also mentioned the gas in his memoirs, recalling the “agonies of asphyxiation” inflicted by a “mechanical and inhumane” weapon during the British campaign in France and Flandres.³ Other examples abound and some will be mentioned in the following paragraphs.

**Weapons and WWI: the specific status of CW**

As explained in the introduction, the representation (or more precisely the overrepresentation) of CW is *paradoxical*. Not only did shells kill most of the soldiers in the trenches, but they also had an impact on the collective imaginary of WWI. The ‘*gueules cassées*’ (soldiers with disfigured faces), the amputated limbs of soldiers were powerful visual testimonies to how WWI disrupted, and haunted for a long time, European societies. These injuries were not caused by CW but by shells and shrapnel. Therefore, the ‘predominance’ of CW as *the* symbol of the horrors of WWI cannot be solely explained by the striking images of gassed victims or of gas clouds, or by the numbers of persons it killed. The predominance of CW as *the* symbol of WWI has to be explained by *something else*, and this *something else* is at the core of our analysis.

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**Roadmap**

This part demonstrates that the symbolic power of CW as representing the *horrors* and the *horrible* nature of WWI is explained by the multiplicity of the values encompassed by the weapon. CW creates an intense ‘fear’ which is perceived as more awful than any impact of shell or bullets (1). Moreover, CW, and more specifically the designation of *who was the first to use CW in WWI*, were the object of an intense dispute between the Germans and the Allies during and after WWI. The stake in the dispute was to determine who was the barbarian (the CW becoming the instrument of the barbarian), and, indirectly, who was the civilized. Finally, CW are also regarded as the weapon of the ‘weak’, the ‘anti-chivalric weapon’ which disrupts the symbolic order inherited from the chivalric code (3).

These three facets of the symbolic power of CW explain why CW, as the symbol of the horrors of WWI, were deeply embedded in European collective memory. This embeddedness explains why any contemporary allusion to CW reactivates strong images, and strong feelings of repulsion and fear. This reactivation ultimately impacts any discourse justifying CW utilization, or non-utilization, in two ways: it strengthens the persuasiveness of those who advocate against its use, and conversely, considerably increases the burden of proof on democratic states when they are tempted to recourse to CW utilization (4).

**Methodology**

In order to demonstrate that CW have three different facets that increase their symbolic power, we decided to analyze representations that are easily available in the public space (either because they are quoted in very famous studies of WWI, or because we can easily find them on the internet or in manuals).¹ Even though this choice necessarily limits the scope of our analysis of the symbolic power (CW has more facets than we discuss in this part), it is based upon our understanding of what is the ‘collective imaginary’. The ‘collective imaginary’ is (roughly) defined as the ‘group of representations which, in the official history of a group, is commonly associated, with an event or an actor’. In this regards, it appears to us as important and relevant to only focus on those representations which are still associated with WWI, which have had a

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¹ All the references mentioned in this part appeared in the studies detailed in the bibliography, and could be viewed in manuals or Internet.
wide audience at a certain moment and/or which are mentioned by those who have studied CW (especially those mentioned by proponents of the ‘war culture’, who emphasize the necessity to understand the perceptions in order to understand the reality of war). This following part thus relies on sources already mentioned in research colloquiums and important studies on WWI. It endorses an interpretative lens which attempts to reveal the gap between the representations of CW in WWI (and also of WWI through CW) and the reality of the battlefield.

The weapon of fear

One striking facet of CW is their capacity to create fear, both on the battlefield, but also outside of it, to those not even at risk of exposure. Three aspects seem to ‘trigger’ and ‘fuel’ this specific fear: the visual terror of CW, the pain it inflicts and the fact that it kills without piercing the flesh. All these aspects concur in creating what we describe here as an ‘anthropological fear’ which largely explains why CW have this specific symbolic power.

The visual terror

Two ‘visual features’ (two characteristics commonly used to represent CW in paintings, drawings, or in descriptions) stand out when it comes to representing CW: the yellow color of gas (1) and the horrified faces of soldiers facing CW (2). These features are extremely interesting because they do not faithfully represent the reality of war, and more specifically, the reality behind the CW utilization.

The color of putrefaction

When represented in paintings or drawings, CW are generally associated with several features that reveal and increase the fear that the weapon generates among soldiers, but also among observers. The weapon is generally associated with the specific color of a pale and greenish yellow. This association emphasizes the perception that the gas is linked to the notion of putrefaction and miasma, which, in fine, are linked to the idea of death.\footnote{Annette Becker even links the color of yellow with the disease of tuberculosis in BECKER, Annette. “La Guerre Des Gaz, Entre Tragédie, Rumeur, Mémoire et Oubli.” In Vrai et Faux Dans La}

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The gas clouds are generally represented with a yellow color, probably for two reasons. First, at the beginning of the conflict, each side used chlorine (one of the several CW used in WWI). This chlorine was indeed mixed with a powerful greenish yellow smoke, hence the possibility to easily recognize it when deployed.¹ Testimonies of soldiers who were gassed with chlorine generally mention the big yellow clouds, visible from the other side of the trenches, that soldiers could see floating in their direction.

The fact that chlorine was the first massive attack with CW on the battlefields, and that this first massive utilization was a real shock for the French soldiers, probably explains why, in the collective imagery, CW utilization during the whole of WWI took the form of yellow clouds. Yet, several researches demonstrate that chlorine was only the first gas used during WWI. Rapidly, chlorine was mixed with 10% of phosgene, before being replaced with ‘mustard gas’ (yperite). And despite what its name suggests, ‘mustard gas’ was transparent, colorless. Representing mustard gas as yellow is a distortion of the reality. Yet, several paintings and drawings did use this color, synonymous with putrefaction and death, perpetuating the image.

The second factor that might explain why the emanations of CW were painted in yellow is the fact that the Allies’ shells containing mustard gas were marked with a yellow cross. This yellow cross possibly caused many soldiers to continue associating this color with the CW. Annette Becker notably points out that even Hitler recalled this yellow cross in his book Mein Kampf.² This ‘yellow cross’ somehow reinforces the perception that CW necessarily bring putrefaction and death.

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gas masks that dehumanize them. Examples of these representations abound and are mentioned by most of the important analyses of CW utilization during WWI. The following section more specifically demonstrates that these representations only partially represent what actually happened on the battlefields. The gap between the collective perceptions of gas and its ‘reality’ in the trenches reveals the strength of the symbolic power of CW, and the absorption into the collective memory of the idea that CW are a particularly awful weapon.

**Inhaling gas: the wide range of the impact of gas on soldiers**

The first type of representations of the effects of gas is that of the horrified faces of soldiers, and even civilians, who inhaled it. There is no doubt that the CW inflicts terrible suffering on its victims, and the following analyses do not seek to euphemize, or normalize, this suffering. Yet, they aim to reveal the specificity of the representation of this suffering, which vividly contrasted with the representations of other suffering experienced in the conflicts, such as that inflicted by shells.

The following paragraphs illustrate the specificity of the representations surrounding gas, and the gap mentioned earlier between the representations and the reality, through the analysis of a specific memorial: the Steenstraete Monument. Built in 1929 in Belgium near the region of Ypres, to honor the first ‘gassed victims’ of the first Battle of Ypres, this statue represents three soldiers hit by the gas. Each soldier reveals the wide range of the effects of gas on combatants.

**The ‘survivor’ figure of the gas attacks**

Only one of the figures is still standing, but he hides his face with his hands which probably hold a wet handkerchief. This first soldier obviously suffers from the gas but he

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1 The colloquium ‘Gas! Gas! Gas!’ offers a very comprehensive overview of the most popular paintings, sculptures and drawings on gas. See HISTORIAL DE LA GRANDE GUERRE (MUSEUM), LEPICK, Olivier, AUDOIN-ROUZEAU, Stéphane. Gaz! gaz! gaz!: la guerre chimique, 1914-1918. Péronne; Milan: Historial de la grande guerre ; 5 continents, 2010.

2 A picture of the monument, destroyed by the Germans during WWII, can be found on several websites collecting images of former WWI memorials. See [http://www.zilvercruys.be/monument.html](http://www.zilvercruys.be/monument.html).
remains still. Two explanations seem feasible as to why the soldier, despite the fog of the gas that surrounds him, does not stumble and fall. First, the French built this monument and might have wanted to express the idea that, even when attacked with gas, French soldiers did not withdraw, but bravely faced the threat. In reality, very few gas utilizations created ‘massive panic movements’ among the opponent lines, leading soldiers to run away and leave their position in the trenches. Olivier Lepick mentions only five moments during which the gas really created a panic that ‘pushed’ combatants to withdraw and hide.\textsuperscript{1} In addition, the surprise effect of the gas attacks did not ‘work’ more than a few months after May 1915. After the Battle of Ypres, each side started to take the chemical threat seriously and anticipated being gassed. Soldiers were told to wear ‘protective wet handkerchiefs’, (sometimes using their own urine) that could diminish and mitigate the terrible effects of chlorine.\textsuperscript{2}

Therefore, this representation of soldiers facing the chemical threat is pretty accurate with regards to what happened \textit{in reality}, in the aftermath of Ypres. Moreover, the first gas attacks on the battlefields (especially the gas attacks in Ypres in 1915) were waged with chlorine, which was far less lethal than mustard gases deployed later in 1918.

The monument does not picture what happens after the Langemarck attack, and the terrible side effects of the gas on soldiers who survived the gas attacks. This absence is obviously explained by the ‘limits’ of the medium (a statue) which necessarily fixes a representation in time. But the rest of the collective history also barely mentions or pictures the survivors of gas attacks, who could develop terrible side effects, including difficulties in breathing (which sometimes persisted until the death of the combatant) caused by profound injuries to the lungs (some soldiers even underwent lung ablations), a persistent blindness and

\textsuperscript{1} Olivier Lepick explains that five attacks provoked massive panic movements: the German attack of Langemarck on 22 April 1915 (the attack represented in the monument of Steenstrate), the German attack against the Russian forces near Uxkill on September 1917, the German attack in Carporetto on 24 October 1917, the German attack against the British and Portuguese forces in Neuve-Chapelle on 9 April 1918 and the German attack against French and British in the ‘Chemin des Dames’ on 27 Mai 1918. See LEPICK, Olivier. “Des gaz et des Hommes: Populations Civile, Militaire et Opinions Publiques face à l’Arme Chimique pendant et dans l’immédiat après Grande Guerre.” In Gaz! gaz! gaz!: la guerre chimique, 1914-1918, by HISTORIAL DE LA GRANDE GUERRE (MUSEUM), LEPICK, Olivier, AUDOIN-ROUZEAU. Stéphane. Gaz! gaz! gaz!: la guerre chimique, 1914-1918. Péronne; Milan: Historial de la grande guerre ; 5 continents, 2010.

also very profound lesions and burns on the rest of their members, including genitals. These side effects are rarely evoked or pictured, not only because of the silence that reigned in democratic societies surrounding the traumatic effects of WWI, but also because many soldiers themselves attributed these side effects to a persistent tuberculosis. Again, CW and the idea of miasma are very closely associated in collective history.

*The terrible suffering inflicted by the inhalation of gas*

The second soldier is curled up on his knees, also hiding his face with his hands. Yet, in contrast with the first soldier, he does not hold any handkerchief or protection, and his position suggests that he is experiencing terrible pain. The soldier is not dead but he seems incapable of opening his eyes, standing up and escaping the gas. This representation reveals two important effects of gas on soldiers who had no protection against it: the rapid physical sensation of drowning and the extreme pain inflicted on the eyes.

First, the position of the soldier is important as it reveals one of the ‘stunning’ effects of gas: the sensation of losing one’s legs, of being paralyzed and incapable of walking and moving. Rapidly the soldiers hit by the gas had tremendous difficulties in breathing, *as if* they were drowning. This feeling is caused by the physical effects of gas, which causes edema in the lungs and, *in fine*, congests the lungs so that they are unable to function correctly (then covered with a grey substance that causes asphyxia ‘from the inside’). Some testimonies describe how soldiers hit by the gas ran *as if* they were looking for air. The feeling of drowning is commonly perceived as one of the most painful feelings, a form of agony that slowly ‘extirpates the life’ from the body. Hit by the gas, the soldier is ‘condemned’ to slowly see his life fading away.

If the nature of the gas deployed during the totality of the conflict differed, all the different varieties (yperite and mustard gas) caused severe lesions in the lungs, which might ultimately kill the combatants, who had the sensation of drowning. Yet, this representation of immediate pain at the contact with CW is only partially true. The introduction of phosgene and mustard gas delayed the terrible effects previously described. After 1916, many soldiers hit by

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gas left the front, standing and smiling, in order to reach the hospitals located near the front. They did not realize how much the gas had actually affected them, because the effects were delayed. Olivier Lepick mentions several striking examples of soldiers ‘unaware’ that gas already killed them, such as the soldier who firmly explained to the camp doctor that he felt very well a few hours before literally falling down, dead.¹

The gas (especially the yperite) also attacks the combatants’ eyes. Once in contact with gas, soldiers felt their eyes burning, and streaming. Their vision started to blur, and sometimes they even became blind for several days (cases of irreversible blindness were extremely rare). The popular painting of John Singer Sargent, ‘Gassed’, represents a dozen soldiers standing in the midst of the dead bodies of gassed combatants. These soldiers have their eyes bandaged with wet handkerchiefs and are guided by a young man who has not taken part in the hostilities (and who is probably a medical orderly). They hold each other’s shoulders, to help them slowly advance in the midst of the dead bodies. This representation is very close to what happened in reality: if these gas attacks were massive, they did not kill every soldier, and many of those who did suffer from side effects, survived the attack. Deprived of vision, they sometimes had to wait for a long time on the battlefield before being taken for medical help.

Another interesting feature of the memorial is the absence of gas masks on the faces, or around the necks of the soldiers. This absence was real at Ypres, during the first massive attack of chlorine. Even though soldiers did possess some protection (the production of the first rudimentary gas masks started at the beginning of 1915), they did not believe that a gas attack could actually happen, and therefore did not really take seriously the instructions on wearing it correctly. When the attack actually started at Ypres, they did not realize this was a gas attack, and when they did, they did not really know how to wear the masks. Some soldiers were not even aware that the mask had to be put on the face to protect them against the gas.² Yet, once the ‘surprise effect’ of the gas attack faded, and each side started to expect to be gassed, the French soldiers became be extremely familiar with wearing gas masks in the trenches. The gas

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mask was always around their neck, ready to be worn at any moment, and especially once any suspicious odor started to invade the trenches (the soldiers were very sensitive to odors, especially as the more lethal form of gas was transparent. The gases had a very strong odor similar to garlic). Many soldiers however still refused to wear the gas mask because it created a feeling of suffocation that prevented them from achieving their task. Since front line soldiers were generally maneuvering heavy weapons that required very rapid moves and strength, they needed to take deep breaths to sustain their efforts. Nevertheless, the wide majority of soldiers knew how and when to use it, even though they were still haunted by a constant anxiety that they were not wearing it correctly, and therefore, that they could become suddenly affected by the terrible side effects of the gas.

Therefore, this figure of the soldier on his knees is, in fact, not the most common representation of the victims of gas during WWI. Very rapidly, soldiers did wear a gas mask, and were thus able to escape the deadly effects of CW. Yet, the toxicity and the lethality of the gas changed during the conflict. Sargent represents gassed soldiers at the end of the conflict (at the second battle of Ypres in 1918), when soldiers were hurt by yperite, a much more aggressive gas than chlorine. If the masks could sometimes neutralize the most lethal effects, many other terrible side effects still affected those hit by the gas. This reveals another reality of the front: gas, especially at the end of the conflict, was also used by each side not necessarily in the prospect of killing soldiers, but with the goal to temporarily disable a large part of them in the trenches. Soldiers hit with gas were sometimes kept away from the front for a long time, gathered in temporary camps (compared to ‘La Cour des Miracles’) or sent back home. Eric Henri Kennington represented these camps (and more specifically the camp that was formed near Péronne after the German chemical attack of 1918) in his famous painting Gassed and Wounded, displayed at the Imperial War Museum.

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1 In the book VOIVENEL, Paul. La Guerre Des Gaz, 1915-1918. 1. ed. Paris: Giovanangeli, 2004. Paul Voivenel quotes Roger Maurice who explained that wearing the mask is acceptable only for soldiers who do not need high quantity of oxygen. He then explains that the soldiers of the artillery were deploying vast efforts to shoot with heavy weapons, in MAURICE, Roger, L'évolution Des Méthodes D'offensive de 1915 À 1918, Mercure de France, 1918.

The face of the gassed soldier in death

The face of the soldier killed by gas is recurrent in the representations of WWI. In the memorial of Streenstaete, the third soldier is lying down, his face and arm turned to the sky. His face looks livid, torn by the pain. This dramatic representation seems to be very close to the reality of the front. One specific feature of the gassed victims was their petrified and white, almost blue, face. Testimonies of doctors, or soldiers, at the front underline the extreme rigidity of the faces of the gassed soldiers, and also their livid, white, almost blue color. The blood vessels in the neck were ‘filled’ as if they were going to explode. Another very specific feature of the gassed soldier was the white liquid coming from the mouth. All these anomalies are recurrent in the representations of gassed victims, and these representations contributed to the maintaining of the separation of gassed victims from the other victims. All the other victims are included in the same category (that of soldiers killed in WWI) even though these victims died for a wide range of different reasons. Ultimately, this separation helps to build the symbol of CW as a weapon of a specific nature.

As the third part of this chapter explained, only 3% of the soldiers on the Western Front died because of CW. In total, this represents 17,000 soldiers, and 8,500 of them died in the last eleven months of the war, when all sides started to use the most lethal gas, yperite. If the ‘death face’ of the gassed soldier is a reality, it certainly does not represent the main reality of the conflict.

The face with the gas mask

Even though none of the three soldiers of the Steenstraete memorial wears a gas mask (this absence is of course perfectly relevant because this memorial represents the first soldiers killed at Ypres, who were not wearing gas masks), the figure of the soldier wearing a gas mask is one of the most recurrent representations of WWI. This recurrence this omnipresence can be explained by two observations: gas masks are a direct creation of WWI (1) and, because they hide the faces of soldiers, they emphasize what has been perceived as a characteristic feature of WWI: the beginning of the ‘total war’ and of the escalation of the violence. (2)

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In 1915, the French were already producing the ‘ancestor of the gas mask’, which took the form of a ‘protective handkerchief’ (also called Tampon T) and which were sent to the trenches in May 1915. If the soldiers did not wear them during the first massive gas attack of Langemarck (May 1915), which killed so many of them, it is because of the surprise effect and not because these masks were ineffective. Rapidly, because the French realized that the gas was also very harmful for the eyes, they developed glasses that soldiers had to wear in addition to the mask. This was perceived as extremely inconvenient, and is the reason those in command asked for the development of a more efficient and practical gas mask, to resist the more aggressive gas attacks with chlorine and phosgene. It was only in November 1915 that all the French possessed the gas mask that is so widely represented in the collective memory: the gas mask M2B. If masks had existed before WWI, this new mask was created because of WWI. This ‘intrusion’ into the battlefield could, moreover, be qualified as extremely persistent: testimonies stress that, during the last year of the conflict, soldiers were constantly wearing the gas mask, mostly because they were afraid of missing a gas attack while resting or sleeping, or in a moment of inattention. This ‘persistent intrusion’ is somehow ‘transmitted’ in the collective memory through the omnipresence of these faces with gas masks.\(^1\) The British and Germans did not wear the same type of gas masks. The German gas mask is remarkable for its additional front ‘filter’. This filter has often been mocked in caricatures, which depicted it as a snout, negating the humanity of the Germans who were already traditionally perceived, in French culture, as being particularly coarse.\(^2\)

Beside its ‘persistent intrusion’, the gas mask is interesting because it hides the soldiers’ faces. More precisely, when soldiers wear a gas mask, they become similar, replaceable, and replicable soldiers. This interchangeable face somehow represents the ‘massification’ of the violence, described by Ernst Jünger as being the “democratization of war”.\(^3\) WWI remains for

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many observers and contemporaries (as in the debate on the brutalization of war mentioned in the introduction of this chapter) the ‘war of the masses’, that hurt each European family, killed 9 million and ‘crushed’ the destiny of at least 8 million young people.\(^1\) WWI transformed the practice of war into a “undisguisedly mechanical and inhuman” action.\(^2\) In this regard, the gas mask, which indirectly anonymizes the soldier, echoes another important figure that is associated with WWI in the collective imagery: the Unknown Soldier.

**Only barbarian introduce CW onto the battlefield**

If the CW has such an imprint on the European collective imaginary, this is to some extent because actors considerably manipulated the significance of its utilization. CW were at the core of the propaganda war between the Allies and the Germans, and more specifically, at the core of the battle to determine who was the most barbarian.

In this propaganda war, if none of the sides denied having used CW (even though they considerably downplayed this aspect in their respective denunciations of each others ’CW utilization), each side persisted in trying to prove that it was not the first to use them. This insistence of actors on demonstrating that they were not the initiators of the CW utilization is remarkable. It is as if the decision to be the first to use CW (and not mere CW utilization itself) was regarded as the conscious decision to cross the line between civilization and barbarism. It is therefore less the possession of CW that is constructed as barbarian than the decision to be the first to actually use them.

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\(^1\) And probably more if we take into account the families of those who came back and could never really continue their life. The ‘PST syndromes’ were not really ‘recognized’, which makes the counting of those who came back from the trenches suffering with stress symptoms impossible. Yet, Stéphane Audoin-Rouzeau attempts to explain and illustrate how WWI constituted a trauma for those who waged the war, but also deeply impacted the life of their sons and grandsons in his remarkable and original book AUDOIN-ROUZEAU, Stéphane, *Quelle Histoire: Un Récit de Filiation (1914-2014)*, Hautes Études, Paris: EHESS : Gallimard : Seuil, 2013.

Propaganda war

If CW were the object of much controversy within the battlefields, they were also at the core of another war outside of the battlefields: the propaganda war. The propaganda war is defined as the ‘discursive war’ led by each side in the prospect of delegitimizing the enemy. The process of delegitimization might take different forms. Mostly it consists in framing the conflict in such a way that the opponent is strongly negatively depicted – and even ostracized. Propaganda is, in fine, a voluntary distortion of the facts and a tool for belligerents to communicate with their populations in order to gain their support, via the legitimization of their action. This legitimization might be positive (valuing one’s own actions, or not mentioning certain actions) and/or negative (stigmatizing the enemy). During WWI, newspapers were torn between a powerful censorship coming from their government, and the necessity to reinforce the political support of public opinion through propaganda.

Tell me ‘who hit first?’ … and I will tell you who is barbarian

The French and British newspapers violently denigrated the Germans’ violence and ‘barbarism’ (this justified the violence of their actions against them). One of their principal angles from which to attack and criticize the Germans was German CW utilization on the battlefields. French newspapers heavily denounced the massive deployment of CW during the Battle of Ypres. They depicted it as a terrible breach of international law, an awful means of warfare: the ultimate proof that the Germans lacked humanity. The Times qualified the use of CW as “an atrocious method of warfare” that would “fill all races with a new horror of the German name”.¹

The severity of these condemnations is interesting and reveals the partiality of these newspapers caught in a dual tension, between informing and mobilizing. Indeed, these articles forgot to mention that France was already using CW on the battlefields, even though in less quantity, when the Germans undertook their massive chemical attack in Ypres. They also

considerably minimized their reporting of French research into the use of gas, and the probable imminence of a chemical attack to be waged by the French.

During the months following Ypres, French and British newspapers adopted a contrasted approach as to Ypres, and more broadly on German gas utilization. For the first time, they widely spread the news to their readers and vibrantly denounced what they perceived as a cruel, horrible means of warfare that could only be deployed by shameful and barbarian Germans. They mainly framed the CW utilization within an anti-German discourse, this discourse being perceived then as very popular and having a strong ‘rally round the flag’ effect. Newspapers for instance published caricatures of German soldiers, pictured as pigs, wearing gas masks that looked like snouts. CW utilizations were mentioned only to reveal and underline the lack of humanity of the German soldiers.

Yet, very rapidly, at the end of 1915, the newspapers on each side stopped mentioning CW utilization (be it German or Allies’ utilization) for two reasons. They first feared criticism from public opinion which, they thought, might be very hostile to the knowledge that a massive quantity of gas was being deployed on the battlefields. Even though French newspapers repeated the claim that CW utilization by the Allies was merely a form of just retaliation, of self- defense against the barbarian actions of the German, who were guilty of having initiated this terrible form of warfare (as they were guilty of having initiated the entire WWI), they feared that public opinion finally would reproach the government for its gas utilization. Secondly, the political leaders started to worry that public opinion actually feared the generalization of chemical warfare. If at the beginning of the conflict, French civilians could have pretty easily protected themselves from the noxious effects of chlorine (with had no delayed effect and which was visible), this started to change with the development of gases with higher levels of lethality and delayed effects (chlorine and phosgene, and mustard gas). Several hundreds of civilians were killed by the mustard gas still in the air, because, in the absence of visible yellow clouds, they decided to return to their villages. Therefore, in order to avoid a form of collective terror, the French and British governments decided to cover up all the events linked to chemical warfare (even their own CW utilization) until a few months before the end of war.

Finally, the British newspaper approach as to gas attacks greatly differed from the French censure. The propaganda bureau of the Foreign Office, Wellington House, did report the chemical warfare between the Allies and the Germans. “In the hope of influencing opinion in the neutral United States”, the British press did not censure the chemical warfare, because
they wanted to “ensure that gas remained a central issue in allied propaganda”.¹ It was thus frequent to read in the British newspapers stories in which the Germans were represented as cruel soldiers (gas being the cruel means of warfare), and in which the sufferings of the gas wounded were described. This ‘propaganda’ did not really ‘convince’ the US press to endorse the same perspective on chemical warfare. As Olivier Lepick mentions, the majority of US articles had a very distanced and factual approach, “devoid of moral judgments”, on the gas attacks.² It would be interesting, with this regard, to examine more thoroughly the impact of CW on the US collective imagery. This image probably differs for several reasons, the most important one being that some gases had already been used during the Civil War, and, in that sense, the CW utilization during WWI did not constitute an unprecedented reality.

**The Haber affair**

Very briefly, it could be interesting to mention the controversies aroused by the figure of Fritz Haber, the official German inventor of the CW, and especially to describe two situations he had to face, which reveal the strong symbolic power associated with gas.

The first one is the huge outcry after he received the Nobel Prize in 1918. Many French and British scientists, but also public opinion in these states, violently criticized the idea that this award was being given to the inventor of the CW. They see in this award the direct consecration of the invention of CW, dismissing the fact that the prize was in fact given for Haber’s invention of the synthesis of ammonia, thought of as being a means to decrease starvation in the world. This example reveals the strong association, not to say the confusion, between Haber and the CW: because the CW was barbarian, its inventor could not be awarded a Nobel Prize, even one which was supposed to reward inventions in physics, a domain

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generally perceived as morally neutral by the public. The controversy over this honorific title is extremely interesting, and reveals the strong symbolic power attached to CW.

The second very interesting ‘event’ which includes Haber and reveals the strength of the symbolic power attached to CW is the personal trajectory of his son, Hermann Haber. Fearing the possibility of being persecuted by the Nazi government because of his religion (Herman Haber, as his father Fritz, was Jewish), Herman Haber left Germany for France, and asked in 1935 to be naturalized. Surprisingly, even though Herman was not his father, and even though he radically and publicly criticized his father’s ‘discoveries’ of CW, Herman was refused this naturalization. The debates which enshrined this decision reveal how the negative opprobrium attached to CW was attached not only to the figure of Fritz Haber, but also to his relatives: Herman Haber has a ‘hereditary guilt’ because of his father ‘who was condemned by the ‘laws of people’, because of his involvement in the German CW development during WWI.¹

The anti-chivalric weapon

CW also deeply marked European societies of the beginning of the XXth century for two reasons: they profoundly disrupted the ancient symbolic order built on the chivalric codes (1) and challenged the anthropologic division separating men and women, upon which the entire social structure was built (2).

The destruction of the symbolic order

The CW utilization disrupted the ancient symbolic order, inherited from the old chivalric codes which still prevailed within the European armies. This disruption might explain why each side was reluctant to be the first to use CW, and even more reluctant to admit that they were the first to use it. CW profoundly damaged the ancient symbolic order for two reasons: they abolished the more fundamental distinctions established by the chivalric codes (combatants and civilians, but also times of war and times of truce) (1), and they contradicted, and even quashed the notion of bravery (2).

¹ A more thorough analysis on this point is proposed in BECKER, Annette. “La Guerre Des Gaz, Entre Tragédie, Rumeur, Mémoire et Oubli.” In Vrai et Faux Dans La Grande Guerre, edited by Christophe PROCHASSON and Anne RASMUSSEN. Collection “L’espace de L’histoire.” Paris: Découverte, 2004. It is also interesting to note that the Versailles Treaty did aim to condemn the scientists involved in the development of CW. Yet, the latter were never indicted or pursued.
The weapon of the masses that kills the masses

Because they are inherently indiscriminate, CW abolish *de facto* the distinction between combatants and civilians. They kill everyone who is exposed to them without protection. If, as we saw previously in part 3, this indiscriminate nature challenges the principle of distinction, it also challenges the social status of combatants. Why have combatants if they are fundamentally incapable of protecting civilians? Why have combatants who cannot do more than civilians themselves? The CW raise fundamental questions on the *raison d’être* of the armies, and of the war. If war is no longer a matter of armies, but rather of “concerns”, and if it “alienates” an entire society, then should it still be tolerated? These questions were at the core of an important wave of pacifist movements that emerged in the ashes of WWI. CW were one of the most recurrent objects discussed by these movements, in their denunciation of the absurdity of this ‘total war’. The surrealist movement mocked the gas masks, and with them the absurdity of ‘modern warfare’ as waged ‘hand-in-hand with scientists’. The official number of civilians killed by CW is, as we discussed earlier, not high compared to the overall number of civilian deaths. CW did not, in reality, completely abolish the distinction between civilians and combatants because it mostly killed combatants. Yet, CW represent the possibility of annihilating this barrier *for good*, and this mere possibility was extremely disturbing for many members of post WWI societies.

Moreover, testimonies of gassed victims and their doctors reveal that soldiers in the trenches were constantly afraid of being attacked with gas. And this concern was justified, especially at the end of the conflict during which the CW utilization considerably increased on both sides. CW were increasingly used, in higher quantities, with a higher lethality, and with higher frequency. Many gas attacks occurred at night, while soldiers were sleeping or resting. Therefore, not only did CW abolish the distinction between civilians and combatants, but also the distinction between the time of war and the time of truce. We know, thanks to well known studies on WWI, that soldiers in the trenches suffered from having been in a constant position of ‘expectation’, which led them to oscillate between anxiety and a profound feeling of ennui.

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1 The most serious studies count approximately 5,000 civilians killed by CW. Yet, as mentioned by these studies, this number is probably underestimated for several reasons, including the difficulty to evaluate the long-term effects of the CW.
Most of the actors had thought they were leaving for a short war, and seeing the conflict extending was perceived as extremely painful. In this regards, the CW utilization increased this pain, and the feeling that war was everywhere, at any time, and that combatants had to be combatants all the time. In fine, CW distorted all the boundaries, between combatants and civilians, between fighting and rest. If on the one hand, CW deprived the combatant of his raison d’être, of the prestige of social status, it also, on the other hand, plunged him into a new temporality where former landmarks were no longer relevant.

*The weapon that negates bravery*

Not only did CW kill without differentiating combatants from civilians, but they also killed without differentiating skilled from unskilled and ordinary soldiers. CW indeed killed officers and men, with no distinction. Some studies even underline that the most gifted men were more likely to be gassed, because they needed to remove their masks to achieve the most complicated and yet indispensable actions (for instance soldiers on the front lines who were charging heavy weapons often got rid of their masks during the attacks). *In fine*, because only a gas mask was necessary to protect oneself against CW, ‘overcoming’ this weapon did not require the qualities valued in the chivalric code (agility, courage, strength). In this regard, CW disrupted the symbolic order and rendered the extant hierarchies obsolete. If, despite their personal qualities, all the combatants were equally vulnerable to CW, why then maintain the extant symbolic order? In this sense, CW made it to retain this symbolic order, because it forced soldiers to rethink their social order, reinvent a new hierarchy and adapt to a new reality. Some testimonies insist on how CW killed all the horses, and made impossible the development of cavalry near the front. This concern, we believe, illustrates how CW profoundly challenged the status of the cavalry, still regarded as one of the most prestigious bodies of European armies. The pictures of horses hurt by the gas symbolize the end of a certain way of fighting, that ceased to be glorified and perceived as the most legitimate one, after WWI.

This profound disruption of the symbolic order might explain why CW were constantly depicted as the weapon of the weak, the coward. As explained earlier, at the end of the conflict, CW were transparent, odorless, and deployed at any time of the day or night. Soldiers were constantly extremely afraid that gas attacks might kill them when they were not able to fight, that is when they were sleeping, washing, resting, etc. Yet, these soldiers could easily have been
just as anxious about shells. Shells, which killed many more soldiers than CW did, were also deployed at any time of the day, falling upon people without them realizing it, etc. In this regard, shell utilization could reveal the same degree of cowardice that CW utilization did. Why then were only CW regarded as the weapon of the weak? Our hypothesis is precisely because, in contrast to shells, CW profoundly disrupted the symbolic order. Launching shells was perceived as requiring certain skills (agility, strength). Its ‘capacity to kill’ was not regarded as systematic.¹ Unlike CW, the shells maintained the idea that keeping the extant symbolic order was possible.

The anthropological fear and the poison

The profound and specific fear surrounding CW must be driven by another unique characteristic than that of the pain they inflict. If not the intensity, the decisive element might be the way the pain is inflicted. Both CW and poison indeed kill from the inside. They inflict pain without penetrating or “crossing the barrier of the flesh”.² They kill without causing bleeding. All the other traditional weapons (bullets, bombs, swords, crossbows) wound and kill with visible marks. Victims bleed. With poison and CW, victims do not bleed, and when they do, this is from the inside, in a very low and invisible degree.

The capacity to kill without shedding blood reactivates the parallel often made between CW and poison. This reactivation, also called grafting in the constructivist literature, is interesting for two reasons: first it strengthens the arguments banning the CW utilization, provided that the parallel between CW and poison is solid (1), and it transfers the irrational feelings, especially opprobrium, attached to death caused by poison to that caused by CW (2).

Yet, does the variation in the manner of death– dying with bleeding versus dying without blood and external wounds– explain the variation in opprobrium attached to a weapon? For many anthropologists and historians, the answer is yes. Death without bleeding would have a

¹ We insist on the fact that these are perceptions. Shells were very often launched in such high quantities that this could be defined as systematic, destroying entire battlefields, leaving very little possibility for soldiers to remain uninjured.

fundamentally different nature. CW – like poison – kill from the inside because they make their victim bleed from the inside. This bleeding from the inside is the reason of the ‘anthropological transgression’ or ‘anthropological fear because it destroys the symbolic division between the sexes. Men ought not to bleed from the inside but from the outside – they must fight and risk their lives to protect their community. On the contrary, women were excluded from war because by nature they bleed from the inside. This fundamental difference legitimizes the task division in war between men (included in war) and women (excluded and forbidden to fight). Therefore, if men also bleed from the inside, why should they be the only ones to fight? Why should they even be the most legitimate to fight? Therefore, because CW destroy the fundamental barrier between men and women, they destroy the raison d’être of this barrier, at the core of every social group. This destruction of the fundamental social structures explains why CW profoundly unnerve not only their victims, but also their users.¹

Conclusion - The legacy of the arguing process in the CW utilization

This chapter shows that both the meta-norm of fighting justly, and the symbolic power, significantly impacted on the CW utilization. This impact can be measured during WWI, but also in its aftermath. Indeed, it is fair to say that the arguing process which engaged the Allies and Germany in WWI on CW utilization had a significant impact, left a decisive ‘legacy’, both in the perceptions shared by actors on what constitutes fighting justly, but also on the symbolic order which prevails among the democratic militaries, even today.

Legacy of the meta-norm of fighting justly

How did the arguing process, which took place during and in the aftermath of WWI, actually influence subsequent CW utilizations?

Indeed, the argument between the different actors of WWI, which, as we previously described, contributed in clarifying the meta-norm of fighting justly, did not prevent actors from using the weapon again. As detailed within the trajectory of the weapon, a wide range of

¹ Audoin-Rouzeau notably quotes Françoise Héritier who agrees with the fact that the fundamental distinction between men and women, which justifies the exclusion of women from the field of war, is the fact that they already bleed from the inside.
different actors, on multiple occasions, deployed CW after 1918. Yet, we argue that if certain actors continued to use it, their justifications for their CW utilization have changed in three respects.

First, the state that uses CW, regardless of how it uses it, is directly ‘projected’ outside of the laws of war and of the realm of civilization. The CW utilization during WWI, and the subsequent argument over the legality of its utilization, helped considerably to enshrine the idea that the one who deploys CW, whatever the conditions, is uncivilized and violates the laws of war. The First Hague Convention, which constituted the referential framework for actors when they had to judge the legality of CW, and which only banned the utilization of projectiles filled with deleterious gas, has been refined in several legal texts. Article 171 of the Treaty of Versailles (signed in 1919) proscribed not only German use of projectiles filled with deleterious gases, but also “the utilization”, the “manufacture and importation” of “asphyxiating, poisonous or other gases and all analogous liquids, materials or devices”. This article considerably extends the extant ban on CW, and, as several authors argue, transfers the opprobrium attached to the conditions of CW utilization to the very nature of CW.¹ It is the weapon per se, and not the conditions of its utilization, which is illegal. This “extension” of the ban might be analyzed as the direct consequence of the specific conditions of the post WWI arguing process: the willingness to increase the charges against the Germans and to ‘demonstrate’ their direct and omnipresent responsibility in the conflict. If Article 171 bounded only Germany, and only for a limited time, it was one of the funding texts of the Hague Convention of 1925. This Convention prohibits “the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices” and extends this prohibition “to the use of bacteriological methods of warfare”. This Convention then remained the main referential body of laws upon which actors judged and justified their CW utilization, until the 1993 Convention.² After this Convention, actors had to cease to justify their CW utilization by arguing over the conditions of their utilization. They rather had to justify the choice to use them. Because the weapon became illegal per se, its users had no other solution but to preemptively claim that they were outside the realm


² The 1993 Convention, which prohibits the “development, production, stockpiling and use of CW and requires the destruction of both CW production facilities and the weapons themselves” is generally depicted, by the extant literature but also by actors, to be even more restrictive and constraining than the 1925 Convention.
of the laws of war and of the realm of civilization. By doing so, they perpetuated the ‘trick’ used by the belligerents in WWI, which consisted in declaring oneself outside of the laws of war, and that thus the laws of war are not violated. And states declared that they were outside the realm of civilization because they were fighting against barbarians, or because they were themselves barbarians. The declaration of Winston Churchill on the British utilization of CW in Mesopotamia in 1920, against the Iraqis, speaks for itself:

“I am strongly in favour of using poisoned gas against uncivilised tribes. The moral effect should be so good that the loss of life should be reduced to a minimum.”

Churchill then clarifies why, he believes, the tribes are “uncivilized”. For him, they do not fight as the British do, and so they are thought of as being outside of the realm of the laws of war. Indeed,

“If it is fair war for an Afghan to shoot down a British soldier behind a rock and cut him in pieces as he lies wounded on the ground, why is it not fair for a British artilleryman to fire a shell which makes the said native sneeze?"

In sum, after WWI, CW users have to justify why they are using CW, and not any longer when and how they are using it. This “constraint” does not prevent them from using CW. Actors have found rhetorical solutions to justify their utilization, one of them being qualifying the target of the CW utilization as barbarian. This qualification reveals the dual disciplining power of the weapon. It is a disciplining power because it qualifies, defines, categorizes its users. It is a dual disciplining power because it also qualifies its targets. CW users are uncivilized, except when the weapons are used against the “uncivilized”. Justifying CW utilization is also a way of delegitimizing the enemy and dragging him outside the realm of civilization.

Second, the arguing process also enshrined the definition of which type of gas could be deemed as deleterious and therefore banned by the Hague, and then the 1925, Conventions. The

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post WWI discussions mainly focused on banning the gases which had been massively used by the Germans, that is chlorine and yperite. In several comments and declarations during the debates formalizing the 1925 Convention, both French and British insisted that these two types of gas belonged to the category of ‘deleterious gas’. They also tried to include in this category tear gas. Yet, this inclusion was not accepted in the final version of the text, partly because tear gas was not perceived as one of the most dangerous gases used during WWI, and consequently did not appear as a priority. This concept of priority acknowledged that the term ‘deleterious gases’ applied only to the gases mainly used by the Germans – chlorine and yperite. Other gases, except toxic agents which had immediate and devastating effects (such as sarin gas, invented in the 1930s) were not clearly included within this category. This lack of clarity created a grey area in the laws of war that had tremendous consequences for the rest of the twentieth century. The whole debate on the utilization of orange agents and defoliants by the United States during the Vietnam War is revealing. The hesitation to formally condemn the US utilization of these orange agents was partly due to the difficulties in proving that this agent could be unequivocally regarded as a deleterious gas. The ‘imprint’ of WWI discussions and justifications on the definition of CW, the focus it created on chlorine and yperite, to the detriment of other gases which have very similar effects, might explain these difficulties.

Third, the arguing process enshrined a specific understanding of what constitutes an “unnecessary suffering”. The Hague Conventions were the first to pave the way by proposing a list of the weapons which provoked “unnecessary suffering”. Because it prohibits CWC utilization under any circumstances, the 1925 Convention confirmed this approach, of focusing on the means instead of on the characteristics of the suffering, and does give rise to several questions. The first one is that it creates an implicit hierarchy, promoting the weapon which always inflicts the same effects, to the detriment of the weapon which, depending on the conditions of utilization, can inflict a wide spectrum of suffering. As we will see in the next chapter on incendiary weapons, this implicit hierarchy, enshrined by the post WWI arguing process, will have an important impact upon the rest of the twentieth century. It might explain why actors are more inclined to ban a weapon which is perceived as having a unique effect (such as napalm, which only burns) than a weapon which has several effects (such as the white phosphorus weapon, which not only burns, but also has screening effects against infra-red), even though one of these effects is deemed as illegal when caused by another weapon.
The second question, which was present in the discussions over the meta-norm of fighting justly during the entire twentieth century, concerns the hierarchy of the pain experienced by soldiers. What is the most unbearable pain for them: being burned, poisoned, suffocated, blinded, amputated, or traumatized? Unraveling an order within this terrible inventory of effects is extremely problematic, as it seems to require an evaluating and measuring of intangible, incomparable feelings. Another extremely problematic aspect is to measure the types of pain by their duration. Indeed, several testimonies, including those of gassed soldiers, advocated for the non-banning of CW, on the grounds that their effects were more humane than those of the majority of the weapons used in WWI. They notably underlined the fact that the high explosives, the shells, the bullets could be far more painful than having to face gas. This was for several reasons, the first one being that CW caused immediate death while shells and explosives ‘forced’ soldiers to suffer from a long, terrible agony. Several books detail the fear, and the traumatic secondary effects of amputation, without any form of anesthesia. Finally, several believe that CW were so terrible that they forced the opponent to surrender; and finally shorten the entire war.\footnote{See the memo of the head of chemical warfare production, Sir Keith Price, on using CW in India: “the objections of the India Office to the use of gas against natives are unreasonable. Gas is a more merciful weapon than the high explosive shells, and compels an enemy to accept decision with less loss of life than any other agency of war” in MILTON, Giles. “Winston Churchill’s Shocking Use of Chemical Weapons.” *The Guardian*, September 1, 2013. http://www.theguardian.com/world/shortcuts/2013/sep/01/winston-churchill-shocking-use-chemical-weapons.} The task of this last section is not to prove that CW are not inhumane or that their effects are more merciful. Rather, it aims to show that an evaluation of the effects of all these weapons, and more precisely whether they are unnecessary or not, requires the construction of a hierarchy underpinned by normative considerations. The post WWI arguing process over CW is the second significant step (after the Hague Conventions) in enshrining the idea that killing without ‘breaching’ the body is the less human way of dying on the battlefields. As we will see in the following chapter, this belief was also enshrined within the arguing process on incendiary weapons, which also have the characteristic of killing without shedding blood.
Legacy of the symbolic power attached to CW: the “revaluation of all values”? Reversed heroism and unnecessary suffering

WWI is often perceived as a turning point, a war of a new nature, which would have entirely re-shaped the “rules of the game”. Several commentators underline the industrialization of war, or the active involvement of actors located in other continents than Europe, as the key factors which explain why WWI was a different and new kind of war. Others argue that WWI also profoundly reshaped the mentality of actors, for whom war could never be the same again. We tend to agree with the latter and argue that WWI also reshaped, and more precisely reversed, the symbolic order attached to the military: the honorable and the brave were no longer those who fought mercilessly and with ease. The brave became those who suffered and endured excruciating pain. And the CW utilizations, and the representations associated with them, played a direct part in this re-evaluation of values.

The representations of soldiers, and especially of soldiers hit by gas, indeed differ from previous icons and paintings representing soldiers on the battlefields. The brave becomes not those who inflict the pain, but those who suffer from it. This new belief sharply contrasts with that as to soldiers of the Napoleonic campaigns, who are pictured as standing, fighting, but without any obvious sign of discomfort or agony. After WWI, being honorable on the battlefield requires engagement, courage, but also a form of extraordinary suffering. As we previously explained, CW are thought of as inflicting extraordinary pain, which would be more terrible than other forms of wounds and injuries on the battlefields, such as shells, bullets or knives. Yet, this belief is problematic, as many medical records show that the consequences of these wounds inflicted by shells could be excruciating, and left the soldier with psychological disorders regarded as equally traumatic as those caused by gas. The rest of the whole twentieth century would perpetuate this new belief or association that unnecessary suffering is that caused by a particular pain. And it would constantly try to define, specify this pain, by clarifying which weapon inflicted it. Ultimately, the bravest soldiers become those who had to endure the effects of these specific weapons, and CW were one of them.

The recent debates over the Purple Medal and the US soldiers gassed during the first Iraqi war are a revealing example of this “reversed heroism”. The New York Times recently published several articles which revealed that approximately 600 US soldiers were exposed to
chlorine and mustard gas during the First Iraqi war. The majority of them were gassed while they tried to dismantle the weapons stockpiled in Baghdad. This fact was kept secret for a long time and was only revealed very recently. The revelation was immediately followed by a request from US Veterans to award these soldiers the Purple Heart. This medal, which honor US soldiers killed or wounded in combat, was, before this event, denied to those soldiers gassed in the First Gulf War. The standard was then that “a service member who had been exposed to a CW agent qualified for a Purple Heart only if the chemical had been released by the enemy”. The refinement of this standard (the Purple Heart can now be awarded to those who were hit by their own gas and to those who were hit in a situation of non combat) is extremely interesting, as it reinforces two assumptions: it perpetuates the idea that CW provoke a specific type of wound, and it enshrines the belief that the soldiers who suffer from their effects, even if these effects were not caused in a regular situation of combat, have to be honored.

In a nutshell, the CW utilization during WWI participated in disrupting the extant symbolic order by reversing the values of heroism. The logic of distinction ceased to promote the soldier who inflicted pain and fought fearlessly and without suffering pain. Heroism became the capacity to endure suffering which was not only unnecessary, but also excruciating. The CW contributed to the enshrining of this belief for the rest of the twentieth century. It became then the paradoxical weapon which, on the one hand, is a dishonorable means of warfare for the brave, but which, on the other hand, transforms its victims into war heroes.

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“What makes this question of unfair weapons so fascinating, and at the same time constitutes its real value, is the fact that different periods and cultures were by no means always in agreement as to which weapons were fair and which were not. For example, present-day sensibilities are offended by napalm as a particularly horrible weapon. However, Anna Comnena in the eleventh century considered Greek fire a perfectly respectable instrument of war which, to the extent that it was judged by any criteria apart from effectiveness, did honor to its inventor”.

Martin Van Creveld, Technology and War

**Introduction**

**Napalm: a trajectory shed with opprobrium**

When Harvard scientist Louis Fieser created a new type of incendiary weapon which he called napalm on 4 July 1942, he probably did not expect that he would become the ‘father of’ a weapon erected at the very core of American military strategy ten years after. He probably did not expect either that, after having been widely lauded and awarded for this invention for more than 25 years, he would have to rewrite his official biography so that the word “napalm” ceased to appear in it.

Interestingly, the personal trajectory of Fieser echoes the trajectory of napalm utilization by the US Army. Like Louis Fieser, napalm experienced during the first twenty years of its utilization a relative ‘popularity’ in the eyes of prominent militaries (Curtis LeMay being the most famous figure of them), but also a relative indifference from the US domestic population.

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During this period, the US Army increasingly deployed napalm, and, to use the words of Harry Truman’s secretary of war Robert Patterson while referring to incendiary weapons, “this ‘dud’ of World War I became one of the most potent weapons in the Pacific Operations”. Yet, this ‘popularity’ faded away after Vietnam War, as the weapon started to be widely criticized by both international actors (notably by United Nations members during the discussions on Protocol III, which lasted from 1970 to 1980) and domestic movements (especially students). This ‘decrease in popularity’ coincided with a significant decrease in napalm utilization, as the weapon almost disappeared from the battlefields after the Vietnam War. While it is true that some incendiary weapons were used during the Iraqi and Afghanistan wars, their low quantities could not be compared to those deployed in Vietnam, or even in the Korean War. In 2001, the US Army organized a ‘last canister ceremony’ at the Fallbrook Naval Weapons Station to publicly destroy its last remaining stockpiles of napalm. Like Fieser, the US Army ultimately ‘cleared’ from its weaponry the name of napalm.

What about the other weapons with incendiary characteristics?

At first sight, both the decreasing utilization of napalm and the willingness of the United States to “clear out” napalm from its weaponry might be analyzed as follows: US militaries and leaders started to perceive napalm differently after the Vietnam War, and the weapon lost, in their eyes, the capacity to be strategically efficient, cost-efficient or legitimate. This shift in perception found its roots in events that occurred during the Vietnam War and in its aftermath: hence the necessity to investigate these two specific moments. This investigation could ultimately reveal interesting insights into why, at a certain moment, a weapon ceases to be used on the battlefield.

Yet, after a closer examination of the napalm trajectory, a second puzzle stands out. Napalm is not the unique incendiary weapon widely used in the period from World War II to the Vietnam War. White phosphorus weapons (WPW) were massively deployed, often associated with napalm. White phosphorus, like napalm, ignites rapidly and creates dramatic and long lasting fire. Yet, in contrast with napalm, WPW do not seem to be attached with the

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same degree of opprobrium, or to have been removed from democracies’ armaments. The recent Operation Cast Lead (2009), during which the Israeli Defense Forces used WPW, revealed the ambiguous attitudes and perceptions attached to the weapon. Interviews with actors and analyses of the debates during Cast Lead show that the white phosphorus weapon was, and is, not always regarded as an incendiary weapon. This intriguing aspect leads us to reframe and perhaps complement the research question at the core of this research, in order not only to study why, at a certain time, a weapon ceases to be used on the battlefields, but also why a weapon ceases to be used while another weapon, with similar technical characteristics, does not.

**Extant literature review on the (understudied) incendiary weapons and blind spots**

**An unexplored object**

Very few studies examine the utilizations of incendiary weapons, their strategic or tactical utility, their history or even the legal treaties which frame their utilization. While carrying out this research, I discovered that incendiary weapons were largely untreated by the extant literature, and constituted, then, a topic about which there is still ‘a lot to say’.

Because it is very scarce, the corpus of studies on incendiary weapons sharply contrasts with the plethoric literature on chemical weapons. If understanding the trajectory of chemical weapons was challenging because of the abundance of information, references and analyses on the topic, a retracing of the incendiary weapon trajectory offers different but equally difficult challenges. Incendiary weapons are, mostly, only briefly evoked and with a transversal perspective (studies generally retrace the entire war during which the weapon was used). If several excellent monographs exist, they do not encompass the wide variety of incendiary weapons which were actually used on the battlefields.\(^1\) Therefore grey areas remain, and only

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archives, interviews and primary sources could provide a comprehensive understanding of how and when incendiary weapons have been used over time.

The methodology

I, for example, complemented my reading with archival research at the United Nations, in order to retrace the different discussions which led the United Nations to create the Protocol III of Certain Conventional Weapons, which restricts the conditions for the utilization of napalm. I also heavily relied on official documents released by the United Nations (especially studies and expert reports ordered by the United Nations) but also by NGOs. I draw most of my sources from historical monographs, based on substantial archival work, analyses of newspaper articles and reports from the Chemical Warfare Service. Interviews were also extremely useful as they provided me with a clear idea of how incendiary weapons were tactically and strategically perceived, and how and when they were deployed. This methodology allowed me to investigate my research questions which were only sketchily tackled by the extant literature: How can one explain the variations in incendiary weapons utilization? Why did actors cease (or pretend to cease) to use napalm while they continued to use white phosphorus weapons, and why such a difference in the degree of opprobrium attached to them?

The four arguments of the chapter

This chapter argues that the retracing of the trajectory of napalm and white phosphorus utilization, and the analysis of the international arguing process over them which occurred at two distinct times (in the aftermaths of the Vietnam War and Operation Cast Lead respectively) highlight four crucial points.

First, the Vietnam War revealed in the eyes of US militaries and politicians the strategic limits of massive air bombing with incendiary weapons. US militaries largely concluded that the doctrine of ‘massive incendiary bombings’ did not successfully erode the morale of the opponents and so failed to achieve its main strategic goal. Moreover, this doctrine was in conflict with the conception of fighting justly, shared by many militaries, but also by the domestic audience. Slowly, the contrast, between the effects of the massive incendiary bombings (especially on civilians) and the dominant conception of fighting justly, reinforced
both the resistance against the incendiary bombing doctrine, and the belief that this strategy was not efficient.

Second, and this is one of the most interesting aspects of this case-study, if the relevance of the military doctrine used during the Vietnam War was significantly questioned by militaries, public opinion and several international actors concentrated their critiques against only one of the various means used to achieve this military doctrine: napalm. This chapter aims to understand the reasons for this focus, and suggests that the ‘logic of symbolic power’ might highlight why napalm was ‘singled out’ from other weapons and doctrines of utilization, by those who criticized the Vietnam War.

Thirdly, the chapter reveals that the arguing process over the incendiary weapons utilization which took place after the Vietnam War was largely polarized around napalm utilization. This polarization explains why napalm’s characteristics are those used to build the definition of incendiary weapon, refined and detailed in the Protocol III of the Convention on Certain Weapons Utilizations (CCWC). This refinement of the meta-norm of fighting justly, reinforced by the strong symbolic power attached to napalm, directly explains the subsequent behavior of the US Army towards its remaining stockpiles of napalm. Because napalm ‘captures’ the negative opprobrium, the US army reduced and concealed its napalm utilization on the battlefield. At the same time, the US Army, and other democratic armies, continued to deploy other weapons with similar incendiary characteristics (such as the WPW). Because the latter are not attached to the same negative charge as napalm, and because they do not entirely fit with the legal definition of incendiary weapon, based on napalm, armies are less reluctant to use them. The retracing of the arguing process over WPW particularly highlights this ‘disciplining mechanism’, and the ‘paradox of categorization’ it entails.

Finally, the chapter contributes to illuminating the mechanisms of the “battle of legitimacy”: that is this moment when all actors argue, and attempt to develop the more persuasive argument, so that their meta-norm of fighting justly is finally enshrined at the international level. A comparison of the two different arguing processes (over napalm and over WPW) enables us to consider some factors, such as the strength of the symbolic power attached to the weapon, and the support of actors with a high social status inside the institution, as potentially decisive in explaining when actors succeed in refining the meta-norm of fighting justly at the international level.
Definitions of incendiary weapons

What is an incendiary weapon?

The term ‘incendiary weapon’ (IW) refers to a wide range of different devices, sometimes called ‘antipersonnel weapons’, from fire arrows to bombs filled with napalm. Incendiary weapons are constituted by two components: an incendiary agent (1) and a delivery method to launch or ignite the incendiary agent (2).

What is an incendiary agent?

The ‘incendiary agent’ is defined as a “substance which oxidizes with a powerful exothermic (heat-producing) reaction”.¹

The incendiary agent differs from explosives:

“in that combustion is sustained for a relatively long period of time (minutes instead of micro-seconds) during which the gradients of heat dissipation can be overcome, thus increasing the likelihood of igniting secondary fires in inflammable substances such as wood, plastics or asphalt.”²

Therefore, it is very frequent that incendiary agents (of the napalm type) are mixed with a substance that slows down the rate of burning. The incendiary agent produces heat and transfers it in three ways: radiation, convection or conduction.

SIPRI numbered in 1975 at least seven types of different incendiary agents: metal incendiaries, pyrotechnic incendiary agents, oil based incendiary agents (such as napalm), oil-and-metal incendiaries, pyrophoric incendiary agents (such as WP), inorganic substances which ignite in water and what they call “new incendiary agents” (incendiary agents that ignite spontaneously). These agents differ in three ways: their capacity to ignite and self-ignite (1), to have spreading effects (2), to sustain or to extinguish (3), and the temperature they reach (4).


We will not elaborate upon these points, but many military manuals and studies initiated by the United Nations detail them, and review this wide variety of incendiary agents.  

What is a delivery method?

Because incendiary substances ignite rapidly and burn severely, actors generally deploy them through a ‘delivery method.’ These methods are commonly divided into two categories: delivery methods from the ground (1) and from the air (2).

Until WWI, it seems that incendiary agents were merely delivered by methods from the grounds. These methods were of four great types: improvised, grenades and mines, flamethrowers, and both small and large incendiary projectiles. During and after WWI, incendiary agents were increasingly used ‘from the air’: rockets, mechanical projections (such as catapults) and bombs (especially filled with napalm and WP).

These different delivery methods greatly differed in terms of risks undertaken by the launcher, effects of the incendiary agents, precision of the delivery, etc. We will not elaborate upon these points, but solely focus on the dominant delivery method of the two IW we are interested in: incendiary bombs with napalm, and with WP. These bombs generally varied in size (depending on the tactical goal), and they were commonly filled with 9 to 1,550 kg of napalm and/or WP.

The elasticity and the historicity of the definition

The most salient challenge in defining this ‘category’ of IW is the continuous development of incendiary agents but also the multiplication in delivery systems of these incendiary agents throughout the 20th century. Because they suddenly had to face a multiplicity of new weapons that were ‘potentially incendiary’, the different actors (militaries and international organizations) understood that what they defined as an incendiary device was extremely ambiguous.. If the belief that incendiary weapons were almost comparable to

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1 The study written by the SIPRI constituted the basis of the report ordered by Secretary General U-Thant after the Teheran Conference in 1969. This report was widely discussed at the United Nations during the formalization of Protocol III of the Convention on Certain Conventional Weapons (CCWC), which ultimately provided a definition of incendiary weapons.
chemical weapons was prominent in the post WWI discussions, this was no longer the case after the widespread bombings with napalm during the Vietnam War. In the aftermath of this war, actors started to argue over the definition of incendiary weapons. The Protocol III on Prohibitions or Restrictions on the Use of Incendiary Weapons, signed at Geneva on 10 October 1980, ended this argument by enshrining the following definition:

Incendiary weapon means any weapon or munition which is primarily designed to set fire to objects or to cause burn injury to persons through the action of flame, heat or combination thereof, produced by a chemical reaction of a substance delivered on the target.

The puzzle of the definition

In sum, the definition of incendiary weapon provided by Protocol III of 1980 is extremely specific if compared to that shared by actors at the beginning of the century, when WPW and napalm were both included in the category of chemical weapons. It is then extremely interesting to see how the refining process of the meta-norm of fighting justly transforms napalm into an undisputable incendiary weapon (no other categorization would be admissible), while WPW has a more ambiguous nature (as a weapon which has both incendiary and chemical capacities).

This history of the categorization of IW raises interesting questions: why have actors decided to define IW in one way rather than another? Why have they finally decided to dissociate chemical from incendiary weapons? What are the political mechanisms behind the categorization of a weapon and its enshrinement in legal treaties?

In order to highlight these questions, the following paragraphs will detail two weapons which share similar incendiary characteristics, and which belong to the same category at the beginning of the century. It will then more specifically try to understand how actors argued over the meta-norm of fighting justly, and how this argument finally impacted upon how weapons are categorized by the laws of war. As several authors of International Relations explained, categories of the laws of war are not secure, and understanding their construction is fundamental
to understanding why they are the way they are.¹ A retracing of the arguing process might be an interesting method to reveal and unveil these mechanisms of construction.

What is napalm?

Napalm is a generic word that refers to a multitude of weapons called “thickened oil incendiary agents”. It was officially created by Louis Fieser during the “America First Independence Day of World War II” on 4 July 1942 on the campus of Harvard. Experiments that led to its creation were sponsored by the military-academic and the military-industrial complexes created after 1940 by the National Defense Research Committee. Napalm is thus the product of a long process initiated and funded by the American government.

Napalm proved to be a very efficient incendiary agent for several reasons. First, it greatly increased the probability of igniting other inflammable materials in the target area. Secondly, napalm has great visco-elasticity, which greatly extends the range of the jet of flaming fuel projected by flamethrowers.² Thirdly, napalm is not self-igniting and therefore can be more easily handled than other incendiary agents. Different types of napalm have existed throughout time: napalm, napalm B and today MK77. The very existence of these different types proves that the US Army is constantly trying to improve napalm – and thus keep it in its weaponry.

US Tactical Air Command promoted napalm B³ as its main incendiary agent in 1966: napalm-B achieves a higher maximum temperature (850 °C compared with 760° for the previous form of napalm), it has a longer burning time and is thus more effective in igniting fuels and lubricating oils in mechanical equipment, melting alloy components, detempering steels, fusing glass and burning rubber, than napalm. It causes more severe burning of human skin and is more stable in storage. It also creates a more dense smoke that is said to increase the


³ Napalm B is the most popular form of napalm.
psychological effect and hinder efforts to fight the flames. Some forms of napalm B are even resistant to water. In a nutshell, napalm B is more destructive, easier and safer to handle, and its effects more destructive than those of the previous napalm.

Finally, the US Army acknowledged that many MK77 bombs had been used during the wars of the 2000s, especially in Afghanistan and Iraq. Even though these bombs are not called napalm, militaries and experts consider them as such, as their incendiary properties are very similar. If MK-77 and napalm (obviously) have a different name, only a slightly different distribution of constituents makes napalm B different from the liquid contained in MK77. Effects and military advantage are considered as identical.\(^1\) Even militaries acknowledge this comparison: when a prominent American general was questioned on the presence of MK77 on the battlefields of Afghanistan, he replied that the US Army was not using the “old napalm” but “a new form of napalm”.\(^2\) This story vividly illustrates that, despite its new label (i.e. MK77), certain actors do consider that MK77 is nothing but the most recent form of napalm.

### What is WPW?

The so-called “white phosphorus weapon” (WPW), also colloquially named Willy Pete, can take the form of a bomb, a grenade or a mortar containing a given quantity of white phosphorus. White phosphorus is a chemical agent commonly used for four different functions: smokescreen, marking, light and fire. It can indeed create smokescreens in order to mask movements from the enemy, notably by interfering with infrared signals. It is a powerful marker, rendering a target visible for a long time, even for airplanes which fly at high speed and at a long distance from the target. It also allows soldiers to light even in the darkest places. ‘Tactically’ speaking, this weapon is traditionally very much used by soldiers during urban combats, because it allows them to attack very dark places without being seen by other belligerents. Finally, WPW can also burn very rapidly in the air and provoke massive and destructive fires similar to those created by napalm: it is thus also a very useful incendiary

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\(^1\) Many chemists agree that the new distribution of elements constituting napalm is roughly identical to the distribution of the previous generation of napalm. They consider that the effects, such as the capacity to ignite, are identical and even superior to the previous type of napalm. As a weapon is qualified depending on its effects, I thus consider MK77 as comparable to napalm. I will elaborate more upon this point and upon the use of the label « napalm » in upcoming sections.

\(^2\) In response to a report by Al-Jazeera on December, 14, 2001 that was blaming the US for using napalm during the battle of Tora Bora, General Tommy Franks replied “We’re not using the old napalm in Tora Bora”.

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weapon. Both napalm and WPW were used together during the ‘massive incendiary bombings’ waged by the United States, from World War II to the Vietnam War. In a nutshell, the capacities of WP are myriad, which makes the specific rationale behind its use difficult to determine.

**Roadmap**

The following chapter is divided into four parts.

The first part of the chapter retraces the trajectory of incendiary weapons, that is when and how incendiary weapons were deployed on the battlefield over time. It more specifically focuses on two incendiary weapons: napalm and WPW. The trajectory reveals that incendiary weapons, especially napalm, were less and less used on the battlefields after the Vietnam War.

The second part focuses on incendiary weapon utilization during the Vietnam War, and more specifically investigates which reasons, or which particular aspects or events of the conflict, might explain the subsequent shifts in napalm utilization. It analyzes the three common theories (efficiency, cost-effectiveness and international pressure). If demonstrates that the Vietnam War did reveal the limits of the then used military doctrine (massive incendiary bombings). Because this doctrine largely relied upon napalm, the discussion over its limits ‘spilled over’ onto the status of napalm as a strategic weapon. Moreover, strong domestic movements mobilized against the napalm utilization, eroding civilian support for the Vietnam War, and this in turn contributed in reinforcing the belief that the weapon was non-strategic.

The third part demonstrates that napalm utilization also contributed to the refining of the meta-norm of fighting justly at the international level. The strong symbolic dimension attached to the weapon, and the leading role of Secretary General U-Thant both contributed to enshrining, at the international level, the perception that napalm was a disproportionate and cruel means of warfare. This new belief directly explains the creation of the Protocol III, which clarified both the definition of incendiary weapons and the conditions under which they can be legally used.

The fourth part retraces the arguing process which took place after Operation Cast Lead (2009) over the WPW utilization by Israeli Defense Forces. It carefully retraces the different arguments which were developed during the process, notably those concerning the status of WPW (whether as incendiary, chemical or conventional weapons,). It then more specifically details how each actor waged the “battle for legitimacy”, which ‘tools’ they used, and lays out
some possible explanations why none of them really enshrined their perceptions of fighting justly as the most ‘persuasive’ one at the international level.

**Part I – The trajectory of incendiary weapons**

The following part proposes to briefly retrace the trajectory of IW utilization. It first sketches the limits of this retracing (1), and then details the three major phases of IW utilization (2).

**Limits of the retracing of the trajectory of incendiary weapons**

A retracing of the trajectory of IW utilization, without doubt, gives rise to a great number of challenges. The most obvious reason is that weapons with incendiary characteristics are plethoric, ranging from the small Molotov cocktail to the massive bombs filled with napalm. This wide variety is a challenge for whoever wants to measure the total quantity of IW deployed on the battlefield. The following trajectory is therefore based upon many assumptions and projections, and does not pretend to be exhaustive.

The second difficulty relates to the multiplicity of the delivery methods used to deploy IW. The range covers the hand grenades, and the mobile flamethrowers, including bombs launched from airplanes. This wide variety of methods is another challenge to overcome in order to obtain an accurate account of the number of IW deployed in the battlefields.

The third difficulty concerns the supposedly ‘unproblematic’ nature of the weapon. More precisely, before Vietnam War, IW did not really catch the attention of actors and combatants, who did not consider it as particularly remarkable, in contrast, for instance, to CW. Its utilization therefore was not well documented. This observation has yet to be reconsidered for two cases of IW: both the flamethrower and napalm are regularly and explicitly mentioned in historical studies. The fact that these two weapons stand out from the entire trajectory of IW, and also from the testimonies of actors, is a puzzle which is interesting to consider and investigate.
The three phases of the utilization of incendiary weapons

The trajectory of the IW utilization on the battlefields can be roughly divided into three ‘ideal-type’ phases. First, from antiquity to the period just before WWI, IW were mostly used for similar purposes (encircling and besieging) and with similar methods (projectiles from the grounds). The second period, from WWI to the Vietnam War, is remarkable for two reasons. There is a constant and signification integration of IW within the armaments of democracies: IW were never used as systematically and as widely as during the Vietnam War, which really constitutes the peak of the IW utilization. Second, we can observe a significant diversification of the delivery methods of IW. Not only was the flamethrower developed and increasingly used, but the expansion of aerial bombing (both as a practice and as a doctrine) also largely contributed to dramatically increasing the quantity of incendiary bombs deployed on the battlefields. The third phase is called the ‘post-Vietnam’ area, and covers the period ranging from 1970 to today. The utilization of IW during this period is hard to read and evaluate. The most obvious reason is the deliberate refusal by many states to recognize that they had IW, and used them on the battlefields. There are indeed several examples of wars (Afghanistan, Iraq, Cast Lead) in which actors were reluctant to acknowledge that they did use IW. This ‘denial’ is another interesting puzzle in the trajectory of IW, and will be further investigated in the next part of this chapter.

Phase 1 – The Greek fire, the fire arrows and the incendiary grenades, from antiquity to pre WWI

The “Greek fire”, also called “Wild fire”, is commonly evoked as the first incendiary weapon largely deployed on the battlefields. It is not the first incendiary weapon per se, because fire was already perceived as a crucial means of warfare, before the development of Greek fire. The “Art of War”, written by Sun Tzi, indeed already mentioned the “five ways of attacking with fire” as a useful technique to win a war.¹

Thucydides mentioned some earthenware pots lighted in the hands or ignited by incendiary arrows, incendiary balls projected into the enemy camps by catapults, and also the launching of firework hoops directly into the enemy troops. “Greek fire” was either developed

by projectiles set in fire (such as incendiary arrows) or by directly “lighting the torch”. If there is no detailed description of the exact quantity, or of the frequency of “Greek fire” utilization in antiquity, it seems that “Greek fire” was mostly deployed in the specific situation of siege. Belligerents used “Greek fire” either to besiege or to defend a siege. A notable exception is the Thirty Years Wars, during which “hundreds of villages were put to the torch”.\footnote{1}{See STOCKHOLM INTERNATIONAL PEACE RESEARCH INSTITUTE. Incendiary Weapons. A SIPRI Monograph. Cambridge, Mass: MIT Press, 1975.}

If IW were repeatedly deployed during this time sequence, which ranges from antiquity to WWI, it seems that its users were constantly facing important technical difficulties when maneuvering the “Greek fire,” as many parameters (rapidity of igniting, intensity of the fire, precision) had to be considered before launching the weapon. More specifically, it seems that the IW users were always confronted by a trade-off between accuracy and destructiveness. Indeed, fire arrows and earthenware pots ignited in the hand or by arrows could be pretty accurate, but their destructiveness was pretty weak, mainly depending on weather conditions. In contrast, igniting the fire by the torch was a very reliable way to be assured of the destructiveness of the Greek fire, but it exposed its users to great danger, and forced them to ignite the fire within their own position, considerably decreasing the precision of the attack.\footnote{2}{For a more detailed account, see PARTINGTON, J. R. A History of Greek Fire and Gunpowder. Johns Hopkins paperbacks ed. Baltimore: Johns Hopkins University Press, 1999., MAYOR, Adrienne. Greek Fire, Poison Arrows, and Scorpion Bombs: Biological and Chemical Warfare in the Ancient World. Woodstock, NY; London: Overlook Press ; Duckworth, 2009, and VAN CREVELD, Martin. Technology and War: From 2000 B.C. to the Present. A rev. and expanded ed., 1st Free Press ed.; 1st Free Press paperback ed. New York : Toronto : New York: Free Press ; Maxwell Macmillan Canada ; Maxwell Macmillan International, 1991.}

The subsequent development of flamethrowers, hand grenades that could rapidly ignite and aerial bombings with incendiary weapons were all conceived in order to diminish this trade-off (destructiveness versus accuracy) and to offer the possibility to strike precisely and massively.

**Phase 2 – Development of aerial bombings and the increasing use of incendiary bombs from the air (WWII until the Vietnam War)**

The following part reveals that two trends characterize the IW utilization during the period ranging from WWI to the Vietnam War.
First, two types of IW were increasingly included in democracies’ weaponry: flamethrowers and incendiary bombs. These two IW were massively deployed on the battlefields during this period, before reaching their peak of utilization in the last years of the Vietnam War. Secondly, it seems that these weapons were massively deployed in the Pacific, especially during WWI and subsequently in the Korean and Vietnam Wars. This “geographical tropism” has two classical explanations. First, combatants in the Pacific area were generally hiding themselves in the jungles: the IW were thus perceived as an extremely practical means to destroy their hideouts.1 Second, most of the wars that took place in the Pacific were led by the US, which might explain why, ‘mechanically’, more IW were used in this geographical area.

The flamethrower

We will only briefly discuss the utilization of flamethrowers, as the main focus of our chapter is on napalm and white phosphorus, which were massively deployed aerial bombings. The flamethrower was created in 1878 by the French, and was used for the first time during WWI. Both French and Germany used it to project white phosphorus, and also sometimes chlorine, against the opposing troops. It seems though that its utilization was not massive, especially when compared with the other weapons used in the conflict. Though several testimonies mention the utilization of flamethrowers in the trenches (the flamethrower was able to reach a range of 30 yards), the weapon was less deployed than the CW (which was itself far less used than shells and other ‘conventional weapons’). Official reports mention that only 0.5% of the total hospital admissions in WWI were caused by the flamethrower.

After WWI, the flamethrower was notably used in Ethiopia by Italy (during the Abyssinian War) and during the Sino-Japanese war (1937-1945). Even though flamethrowers were deployed in WWII, the Korean War and the Vietnam War, the frequency and the magnitude of their utilization never reached that of the aerial bombings with incendiary weapons.

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1 To the question of “why do you think incendiary weapons were so massively used in the Pacific?” many interviewed militaries underlined the fact that the abundance of forests and jungles in Pacific made the utilization of incendiaries particularly efficient. Incendiaries could ignite rapidly and easily achieve their tactical task.
Aerial bombing with incendiary weapons, from WWI to WWII: from an underdeveloped and unreliable device to a major weapon of tactical and strategic warfare

The first incendiary bombs launched from airplanes occurred during WWI, at the very end of the conflict. In 1918, the US Air Force dropped approximately 2,600 bombs filled with incendiary agents on German troops and cities. Because the airplanes were not very heavy, the bombs dropped were small and did not contain a huge quantity of incendiary agents. The British dropped incendiary bombs in their war in Mesopotamia (against the Iraqis in 1920s), and the Italians also launched more than 3,000 bombs filled with incendiary agents in Ethiopia (1935-1936). Some historical studies claim however that these Italian alleged incendiary bombs were in fact filled with chemical and not incendiary agents.¹

WWII undeniably constitutes both the first dramatic increase of IW utilization on the battlefields, and the first massive aerial bombing with incendiary agents. The reasons for this dramatic increase will be detailed later, but mostly concern strategic doctrine (bombing civilians in order to break their morale and their capacity to supply the front lines, and also backing up or clearing the way for one’s own troops) and technological evolutions (airplanes produced after 1942 were able to carry more significant quantities of incendiary weapons). The following numbers highlight this sudden and dramatic increase in the incendiary bombing: the British Royal Air Force dropped 190,335 tons of incendiary agents, while the US Air Force dropped 80,000 tons of incendiary agents over German cities. Several historians report that the city of Dresden, which was entirely destroyed by aerial raids, was massively bombed with incendiary agents. Throughout the conflict, the raids on German cities were increasingly waged with incendiary weapons (incendiary bombs represented 25% of the entire number of bombs, before reaching 70% in the last year of the conflict to the detriment of explosive devices).²

Germany also dropped significant quantities of incendiary weapons on the Allies' cities. The Lutwaffe, which had the time to train and improve their techniques of aerial bombings during the Spanish Civil War, regularly carried out raids over British cities, especially Coventry (the Coventry Blitz on 14 November 1940) and London (the London Blitz of 29 December

1940). I could not find any clear record on the quantity of incendiaries deployed by the Germans during World War II, but it was arguably a quantity very close to that deployed by the British.

**Napalm in WWII**

Created in 1942 in the United States, napalm was deployed for the first time with US flamethrowers on 15 December 1943 in Papua New Guinea. Rapidly after this, napalm was almost exclusively delivered through air bombings. The first US air attacks with napalm were led by the US Seventh Air Force Attack on 15 February 1944 near the Pacific island of Ponhpei. Six months later, napalm was deployed for the first time in Europe, in the immediate aftermath of D-Day. The US Air Force was the first to use it, in the Ardennes, in order to destroy the armored concentrations of the Germans, and at Falaise, when German soldiers tried to escape encirclement. Very rapidly, napalm was included in the majority of the incendiary bombings which took place in Europe, but also in the Pacific.

Yet, napalm is rarely evoked in the descriptions of the incendiary bombings of WWII. This is for three reasons. First, the United States Air Force was the only actor which used napalm during the war. And the United States was not the heaviest incendiary bombers (the RAF dropped an overall quantity of IW twice as important during the conflict than the USAF). Second, the US only started to drop napalm bombs in February 1944. Therefore, this incendiary weapon was only used during the last year of the conflict. As a result, the overall quantity of napalm deployed during WWII (14,000 tons) only represents 17% of the overall quantity of incendiary weapons deployed by the US during WWII, and drops to 5% of the entire quantity of incendiary weapons deployed by the Allies during the conflict. Thirdly, more than 2/3 of the entire quantity of napalm deployed by the US during WWII (which represents 14,000 tons) was dropped in the Pacific. A great majority of it was used during the attack considered by Curtis LeMay as “the most devastating raid in the history of aerial warfare” of Tokyo, on 9 March 1945, which killed 84,00 civilians, hurt 90,000 of them and destroyed more than a quarter of the entire city.1 The bombing of Tokyo is generally perceived as exceeding the “greater conflagration of the western world” which occurred during WWII, and, by certain historians,

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as more terrible than the nuclear bombing of Hiroshima and Nagasaki.\textsuperscript{1} Because the studies on WWII generally focus on the European theater, to the detriment of the Pacific, napalm is rarely depicted as a décisive weapon of WWII.

\textbf{After WWII: the Pacific and the massive aerial bombings with napalm and white phosphorus}

After WWII, incendiary weapons are used in almost all the conflicts. The US transferred napalm to the Greek Democratic Army, which massively used it during the Greek civil war, waged against the communists (1944-1949), notably during Operation Torch, which consisted in dropping hundreds of tons of napalm. The British also used incendiary weapons, but refused to use napalm, during the civil war in Malaya (1948-1960). At the same time, the French started to massively deploy napalm (they called it ‘special antipersonnel bombs’) in the war they waged in Indochina from 1946 to 1954.\textsuperscript{2} These utilizations did not, however, equal the massive quantity of incendiary weapons used by the US during the short but devastating Korean War (1950-1953).

\textit{The Korean War}

In this conflict, “American napalm hit the ground within twenty-four hours of the UN vote”, that is on 26 June 1950 in North Korea. The overall utilization of incendiary weapons, especially napalm, was massive, to the extent that the New York Herald Tribune headlined on October 1950: “\textit{Napalm the No. 1 Weapon in Korea}”.\textsuperscript{3} The following numbers provide a pretty accurate picture of napalm utilization during the Korean War, which was massive and much more important than the utilization of incendiary weapons during the whole of WWII. Indeed,

\begin{quote}
\textit{\textquoteleft\textquoteleft a total of 32,357 tons of napalm fell on Korea, about double that dropped on Japan in 1945. Not only did the allies drop more bombs on Korea than in the Pacific theater during
}\end{quote}

\begin{thebibliography}{9}
\bibitem{1} \textsc{Stockholm International Peace Research Institute. Incendiary Weapons. A SIPRI Monograph. Cambridge, Mass: MIT Press, 1975.}
\bibitem{2} \textsc{See Chassin, Lionel Max. \textit{Aviation Indochine}. Amiot-Dumont, 1954.}
\bibitem{3} \textsc{See Neer, Robert M. \textit{Napalm An American Biography}. Cambridge; MA and London; England: Harvard University Press, 2013.}
\end{thebibliography}
WWII – 635,000 tons versus 503,000 tons – more of what fell was napalm, in both absolute and relative terms.”

Moreover, “on an average good day”, according to Eighth Army chemical officer Donald Bode, UN pilots dropped 70,000 gallons of napalm: 45,000 by the U.S. Air Force, 10,000-12,000 by its navy, and 4,000-5,000 by marines.”

Between the Korean and Vietnam Wars

Two major IW utilizations occurred in the period separating the War in Korea and the Vietnam War, from 1953 to 1961. First, the French used significant quantities of napalm in Algeria. There is no official record on this, but several testimonies of journalists, and even militaries on the ground, acknowledge that napalm was used and even produced in the French bases during the war. The French were trained by the US pilots and learned how to use and deploy napalm from the air. It is hard to quantify the exact quantity of napalm and incendiaries deployed during this war, even though some argue that napalm probably destroyed 2/3 of the entire Algerian forest. The second ‘remarkable’ utilization occurred in Cuba, from 1956 to 1959 and also in 1961: the Batista regime allegedly used significant quantities of napalm against Castro’s troops.

The Vietnam War (1961-1973)

The first deployment of napalm during the Vietnam War occurred on 27 February 1962. Two South Vietnamese pilots, formerly trained by the US, dropped napalm on North


2 “Practically every U.S. fighter plane that has flown into Korean air carried at least two napalm bombs” chemical officer Townsend wrote in January 1951. in NEER, Robert M. Napalm An American Biography. Cambridge; MA and London; England: Harvard University Press, 2013.

3 Interview with General Robineau, 19/05/2014. Available archives on the French Air Force weaponry also reveal the utilization of ‘anti-personnel’ bomb during the Algeria War.

Vietnamese positions. Napalm was progressively introduced into both US and South Vietnamese arsenals, and by 1966, “napalm was an integral part of the U.S. effort in Vietnam.”¹

The quantity of incendiary weapons, and of napalm, reached levels which are almost non comparable to what happened before: “about 388,000 tons of US napalm fell on Indochina in the decade from 1963 to 1973, compared to 32, 357 tons used on Korea in just over three years and 16,500 tons dropped on Japan in 1945.”² In general, “all the munitions, including incendiary, were used in quantities two or three times the total used by US forces in WWI.”³ As from 1964, it was napalm-B, conceived to ignite more easily and over a longer range of time, that was massively deployed in both North and South Vietnam. The peak in napalm utilization was reached in the later years of the conflict in April 1972. The last US troop withdrawal happened in 1973, after almost ten years of bombings with napalm: “South Vietnam, despite the assistance of perhaps 400,000 tons of napalm dropped on its behalf, surrendered on April 30, 1975. Napalm, and with it America, had lost its first war.”⁴

It is also important to note though napalm bombs have been the predominant incendiary munitions during the Indochina War, the US and allied forces also made limited use of magnesium thermite incendiary cluster bombs.⁵ Yet, there is no official record on the exact quantity of this incendiary weapon used. Several records indicate that flamethrowers were also deployed in significant quantities on the ground.⁶

Phase 3 - Post-Vietnam War: a decreasing use of the weapon “that dares not speak its name”

The Vietnam War, undeniably, constitutes the peak in the trajectory of IW utilization. Because the magnitude, the quantity and the frequency of IW utilization has never again equaled what happened in Vietnam in 1972, the following paragraph will only briefly recall the most important subsequent incendiary weapons utilizations, including WP and napalm. The following paragraph proposes a brief overview summarizing this third phase:

“Napalm bombs fell in west, central, and east Asia in the 1970s and 1980s. US sources reported frequent use of napalm by Soviet troops in Afghanistan during the 1979-1989 invasion and occupation. (...) Iraqi forces used napalm extensively against Kurdish citizens in the 1986-1989 Anfal extermination campaign. Latin America saw at least two post-Vietnam deployments”.

After these utilizations, several newspapers and reporters pinpointed the utilization of incendiary agents, especially napalm and white phosphorus, in the Yugoslavia wars, the First and Second Iraqi Wars and in Afghanistan. Yet, the quantities never reached a level similar to those deployed in Vietnam, or even in World War II.

Two unprecedented features of IW utilization stand out in this third phase.

First, and this makes a retracing of the napalm trajectory in this phase very difficult, states started to constantly accuse other states of using incendiaries (especially napalm), and, at the same time, systematically denied that they were themselves using incendiary weapons. This profusion of justifications ‘blurred’ the reports evaluating the exact quantity and nature of

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weapons deployed. It became a more complicated task to understand exactly which weapons were used, and when.

Second, and in continuity with the previous point, several states started to emphasize, in their declarations, that they were using firebombs, and not incendiary weapons. They started to develop, or said they were developing, new types of weapons which were less clearly linked to the category of IW. This development was often used by actors as a “trump card” showing that they were no longer using incendiary weapons. The most remarkable example is the case of the US army in Afghanistan. While the acting secretary of the navy declared on April 2001 that the US had destroyed all its extant stockpiles of napalm, the US were accused of using napalm in the Battle of Tora Bora, eleven months after. The ’defense’ used by the US General is revealing: he declared that the US was not using ‘old napalm’. The fact that the US maintained its claim not to have used napalm, despite evidence to the contrary found by journalists and NGOs, underlined the potency of the charge and echoed the vituperative reactions of governments elsewhere when accused of napalm deployment”. It also revealed that states were now developing new types of incendiary agents, different from the ‘old ones’, without clearly identifying them as such. In that sense, a retracing of the trajectory of IW becomes more complex.

**Part II – The shift and the arguing process over napalm**

**How did the Vietnam War explain the shift in incendiary weapons utilization?**

The following part analyzes the different reasons that might explain why it was precisely after the Vietnam War that the United States considerably decreased their incendiary weapons utilization. It argues that two theories in particular highlight this shift.

First, many contemporaries, especially members of the US Army, analyzed the Vietnam War as a blatant strategic failure. The massive incendiary bombings and the ‘strategy of attrition’ neither broke the morale and the resistance of North Vietnamese combatants, nor did

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1 An Al-Jazeera journalist asked General Thommy Franks whether the United States were using napalm in Afghanistan on December, 14, 2001. The General replied “We’re not using the old napalm in Tora Bora”.

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it enable the US to maintain a stable control over Vietnam. Napalm which was the weapon at
the core of this strategy, was then re-evaluated in the light of the following question: if massive
incendiary bombings are strategically inefficient, should the US army keep using, in
significantly high quantities, incendiary weapons like napalm?

Second, the perception of Vietnam as a strategic failure was also reinforced, in the eyes
of militaries, by the fact that a significant part of their domestic opinion criticized their actions
and ceased to support the war. US military culture at the time of the Vietnam War promoted a
‘Clausewitzian perspective’ of war, which holds as a sine qua non the support of public opinion.¹ This lack of support, especially after 1966, slowly reinforced the idea that Vietnam
was a strategic failure. One of the most striking features of the domestic protest against the
Vietnam War was this emphasis on napalm, and more particularly the perception of napalm as
a particularly cruel weapon which killed children (it even “sticks to them”), and destroyed
everything in the vicinity. This ‘negative focus’ on napalm directed contributed in tarnishing
the reputation of the weapon, to a point that it trumped its military utility. A few years later, a
vast majority of members of the United Nations reunited in Lugano and Lucerne and, for the
first time in the ‘history of the laws of war’, asked for a legal treaty which clearly prohibited
the utilization of incendiary weapons. A few years later, in 1980, and with the support of the
United Nations Secretary General, the Third Protocol of Certain Conventional Weapons,
explicitly restricting incendiary weapons utilization under certain conditions, came into being.

Roadmap

The following paragraphs will briefly discuss the cost theory, before examining in more
detail how the two theories of efficiency and international pressure contribute to explaining the
slow decrease in the use of napalm on the battlefield. I then discuss the logic of symbol as, I
argue, it played a significant role in international and domestic pressure denouncing napalm. It
will then more specifically focus on demonstrating why the proposed theory of “arguing over

¹ See notably BALZACQ, Thierry, DE NEVE, Alain, eds. La Révolution Dans Les Affaires
the meta-norm of fighting justly” explains both the decision of militaries to reconsider the strategic utility of napalm, and the strong resistance of US domestic and international opinion.

**Examining the Cost-Utility Theory**

I will only briefly examine the cost utility theory, for it is very clear that it does not explain the decrease in napalm utilization. It was not because napalm suddenly appeared more expensive than the ‘benefits’ it could achieve that the US Army decreased its utilization.

First, incendiary weapons, and especially napalm, are extremely ‘cheap’ weapons. Their production does not require costly logistics. Several testimonies of actors even mention that napalm was sometimes ‘produced’ by the militaries themselves, actually on the battlefields, with large canisters. Transportation, from the chemical industries of the US to the battlefields, also through canister, did not cost any more than the transportation of other weapons. Finally, when Curtis LeMay decided to increase the incendiary bombing strategy in Japan (1944-1955), he did not ask for new airplanes, but just filled the bombs with higher quantities of napalm, and asked the airplanes to fly lower. This increase in napalm utilization did not require extra airplanes. In sum, the costs associated with napalm utilization were minimal.

Second, because this work focuses on the trajectory of a weapon once the costs associated with its development are ‘absorbed’, I will not particularly detail the different steps and costs entailed by the creation of napalm. Yet, two interesting aspects support the idea that even the creation of napalm did not cost much. First, the inventor of napalm, Louis Fieser, was hired by the Chemical Warfare Service to develop a new vesicant gas for the US Army. His discovery of napalm was sponsored by the chemical warfare service. In that sense, the discovery did not require any extra-expenses. Second, a revealing comparison made by Robert Neer highlights the low cost of napalm when contextualized with other weapons: while the budget of the Manhattan Project for developing the nuclear bomb reached the total sum of 27 billion

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1 Interview with General Robineau, 14/06/2014. See also ROBINEAU, Lucien, Chasseurs des Djébels.
dollars, the development of napalm cost approximately 5.2 million: that is more than 5,000 times less costly.\(^1\)

**Examining the efficiency theory**

As explained in the opening paragraph of this part, I believe that the efficiency theory (i.e. a weapon ceases to be used because it lacks strategic utility in the eyes of militaries) highlights why the US Army decreased its napalm utilization after the Vietnam War.

Before World War II, and therefore before the creation of napalm, incendiary weapons were largely considered as not able to reach important tactical goals, notably because of the trade-off, detailed in the trajectory, between precision and destruction. Incendiary weapons did not impress militaries during World War I: it was hard for them to predict whether they would ignite, and whether the fire would sustain. Napalm, with its capacity to ignite rapidly and burn for a long time, changed the perceptions actors had of the weapon. Yet, and as explained in the introduction, its tactical utility can only be measured in the light of its strategic utility.

Second, incendiary weapons got caught in the debate over the strategic utility of aerial bombings. Consequently, their reputation as ‘strategic weapon’ suffered heavily from the critiques of the ‘annihilation strategy’ (or Armageddon), and the doubts that this strategy could in fact bring victory. The failure of the “Vietnam quagmire” ‘forced’ the militaries to reevaluate their air doctrine, and more specifically to reconsider the ‘precision air strike’ doctrine, and, correlatively, the status of napalm in their military strategy.

Finally, the section briefly evokes the ‘reputation’ of napalm, and demonstrates that the weapon generally antagonized militaries, as the latter either felt repulsed by the effects of the weapon, or do not consider the weapon as a particularly different means of warfare.

**The tactical utility of incendiary weapons**

Incendiary weapons were not always at the core of the US strategy. The history of US military doctrine and of the different research programs undertaken by its services shows that

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incendiary weapons were, before World War II, at the ‘periphery’ of the US military doctrine. This ‘relegation’ can be explained by two facts. First, for a long time, incendiary weapons represented a major technical challenge for their users, mostly because of the ineluctable trade-off between destruction and precision (detailed in the trajectory part) its users had to face while using it. Second, the development and research on incendiary weapons were neglected, to the advantage of chemical weapons, which were perceived as far more efficient and promising than incendiary weapons, such as flamethrowers. On the eve of World War II, the Chemical Warfare Service was largely funding research aimed at developing new types of gas, and largely overlooked the possibilities to develop incendiary weapons. This tendency to value gas over incendiary weapons reflects the belief that incendiary weapons did not represent a particularly useful means of warfare.

Things changed with the development of napalm. Because, in contrast with the extant incendiary weapons, napalm could ignite rapidly and for a long time, it somehow offered a solution to the trade-off then so constraining for soldiers. Once napalm had been created, many research projects were funded, in order to maximize the potential tactical benefits of the weapon. A project involving bats which would have lifted small quantities of napalm and dropped them on specific targets (also called “Bat Bombs) was, for example, funded by the White House.

If napalm changed the perceptions militaries had of their incendiary weapons, by transforming them into potential tactical assets, it does not mean that the weapon was largely regarded as strategically efficient. In order to investigate this aspect, we need to study how incendiary weapons, and napalm in particular, were perceived at the strategic level.

The debate over aerial bombings: precise strikes or war of attrition?

In order to understand why napalm fell into disgrace in the eyes of militaries, and why they questioned its strategic utility, it is first crucial to understand the debates over the theory of aerial bombings. If the practices of aerial bombings were marginal before the massive German incendiary bombings of the Spanish Civil War (the notorious city of Guernica being one of the cities destroyed by fire), they had yet very much preoccupied militaries since the

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1 A member of the Chemical Warfare Department for example says, after World War I, that “taken all in all, the flame thrower was one of the greatest failures among the many promising devices tried out on a large scale”
1910s, and many of them tried to theorize the best aerial strategic doctrine. The constitution of each aerial doctrine, their normative assumptions and their impact on practices of war are a fascinating topic.¹ Yet, because of the constraint of the exercise, I will offer only a brief and therefore necessarily simplistic account of their dissensions, to more specifically highlight how this debate contributed in refining the perceptions militaries had on napalm.

Indeed, the debates on the best strategic doctrine for aerial bombings generally are underpinned by four fundamental questions:

Which are the targets to strike?

Which firepower/weapon should be used to strike them?

How long should the strikes last?

What are the ultimate goals of these strikes?

Following the precepts of Giulio Douhet, proponents of “massive incendiary bombings” (such as the United States during Vietnam, the British and Germans during World War II) contend that the air strikes have to strike two targets. First, they have to strike civilians, preferably with very destructive firepower so they can create a maximum of destruction.² They also have to target ‘resources’, that is plants which provide crucial resources for waging the war, roads and railroads, and everything which could allow the opponent to sustain the fight. In order to realize these strikes, states need a weapon with a highly destructive power. If the majority of European states used thermite and explosive bombs to realize these strikes, the United States rapidly designated napalm as the core weapon of its massive incendiary bombings.


² Certain military strategists even advocated targeting incendiary weapons specifically upon the poor neighborhoods of the big cities: because the buildings were close to each other and because they housed a high density of population (especially a population which directly contributed to the war effort by working in factories), they were ‘ideal targets’ for the annihilation strategy.
The massive incendiary bombing doctrine largely prevailed in the US military doctrine from World War II to the Vietnam War.¹ The US deployed indeed massive quantities of napalm, waging in Tokyo (1944), “the most devastating raid in the history of aerial warfare”.² A member of Douglas Mac Arthur’s staff contended that “with the exception of the atomic bomb, flame was the most effective weapon employed in Pacific warfare”.³ The belief that the massive incendiary bombing, and with it napalm, explained the success of the US in Japan was reinforced by the declaration of the Japanese Prince, who admitted that he had in fact already been willing to make peace after the massive incendiary raids over Tokyo (and therefore before the deployment of the nuclear bomb).

Proponents of the massive incendiary bombings fundamentally hold the idea that bombing civilians will break their morale and eventually lead them to stop supporting their government and their militaries. They also believe that destroying their ‘strategic resources’ will eventually constrain states, unable to sustain the war efforts, to capitulate. Proponents of the “precise bombings” largely criticize these two fundamental assumptions. They rather believe that precise strikes, which do not aim at hurting civilians, are more likely to bring victory. First, they are less likely to ‘waste’ resources and men in the bombings because the bombings are fewer. Second, they believe that massive bombings do not break the morale of civilians: rather, they reinforce their willingness to fight. Targeting them is thus not ‘strategically wise’. Third, precise bombings allow the user to be more flexible, to more easily modify tactics and more easily adapt to the ‘uncertain events’ of war.⁴ For all these reasons, precise bombing is perceived as more efficient.

The Vietnam War, and the massive bombing of civilians with incendiary weapons, revealed in the eyes of US militaries the limited character of this kind of warfare. The consequent organizational shifts experienced by the US Army in the aftermath of the Vietnam War, the threefold development of more precise weapons, of new doctrines of air power, and

¹ Indeed, certain Commanders were in fact in favor of a ‘precision strategy’ doctrine, and the Joint Chief of Staff was often ordering the commanders not to massively bomb civilian areas.


of courses of ethics (also called the “ethical turn”) are strong indicators that the US Army acknowledged that its strategy was not adequate and needed to be reconsidered.¹

Napalm and its high destructiveness was the “ideal” weapon for the massive incendiary bombings. The disgrace of this military doctrine might then explain why, ultimately, napalm became less regarded as an efficient means of warfare after the Vietnam War.

The reputation of the weapon

How was napalm perceived by its users? It seems that the weapon mainly provoked two types of attitudes.

Many militaries regarded napalm as a normal means of warfare, or at least as not more cruel than the other weapons used in war. Curtis LeMay is probably the most famous figure representing this attitude. At the head of military strategy in the Pacific during World War II and the Korean War, LeMay repeatedly advocated for massive incendiary bombings, and justified it with the idea that “the whole purpose of strategic warfare is to destroy the enemy’s potential to wage war”.² Finally, many soldiers expressed their preference for napalm, as the destructive firepower of the weapon enabled them to keep to a high altitude, and therefore protected against the opponents’ defenses.

In contrast, many soldiers felt a strong repulsion against napalm. First, several testimonies of soldiers evoke the particular odor of napalm, and more specifically the odor of skin burnt by it. This odor haunted many of them after the Vietnam War.³ Moreover, because they flew very close to the grounds, most of the pilots could see the terrible effects the weapon inflicted upon their targets. The effects of the weapon, which will be more thoroughly investigated in the symbolic part, were terrible for the person burnt, and many testimonies of soldiers express their reluctance to inflict harm that they regarded as inhumane. Curtis LeMay describes how repulsion also affected some of his men:


³ The specific odor of the napalm is also mentioned in Apocalypse Now, a movie directed by Francis Ford Coppola (1979), through the very famous monologue “I love the spell of napalm in the norming (...) it sounds like victory, like the war is going to end”.

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“We killed civilians, friendly civilians, and bombed their homes, fired whole villages with the occupants, women and children, and ten times as many hidden communist soldiers, under showers of napalm, and the pilots come back to their ships, stinking of the vomit twisted from their vitals by the shock of what they had to do”.

Finally, the last cause of soldiers’ repulsion against napalm is that some US soldiers were accidently hit by the weapon. Although these testimonies were rare and did not circulate widely within the Army, they contributed to reinforce the idea that napalm inflicted terrible pain and therefore might not be similar to other conventional weapons.

Examining the External Pressure Theory

The theory of ‘external pressure’ (both international and domestic pressure) highlights decisive aspects of why the incendiary weapons almost disappeared from the battlefield after the Vietnam War. More precisely, it largely explains why, among all the incendiary weapons used in the Vietnam War, it was napalm that was directly targeted by the Third Protocol, and why the US Army sought, after the Vietnam War, to clear napalm (and not white phosphorus or other incendiary devices) from its weaponry.

The Vietnam War ‘shed light’ on incendiary weapons at the international level

Before the Vietnam War

Before detailing the arguing process which led to the creation of the Third Protocol of 1980, it is important to note that the topic of incendiary weapons was rarely raised within the United Nations, and, more broadly, at the international level. This ‘absence of mentions’ is intriguing because, as the trajectory of the weapon reveals, incendiary weapons were widely used in the 20th century. The first mention of incendiary weapon was made in the aftermath of World War I, and referred more precisely to the status and utilization of flamethrowers. Yet, rapidly, the discussions shifted to another topic, which then attracted much more attention: that

of chemical weapons. Similarly to the militaries who were more interested in developing chemical than incendiary weapons, the League of Nations considered that framing chemical weapon was its priority, and must supersede the topic of incendiary weapon.

Yet, several states raised their voice against incendiary weapons utilization. In 1952, Britain was one of the only states which, through the voice of its Parliament, condemned napalm for inflicting terrible and indiscriminate loss and suffering. Churchill even states in his memorandum of 22 August 1952 that Britain “should make a great mistake to commit ourselves to approval of a very cruel form of warfare affecting the civilian population (...) It is one thing to use napalm in close battle, or from the air in immediate aid of ground. It is quite another to torture great masses of people with it”.¹

**During the Vietnam War**

**The “barbarous weapon of annihilation”**

Several times during the Vietnam War, napalm is mentioned at the international level. Both the USSR and the Democratic Republic of Vietnam issued a joint communiqué denouncing ‘the use of barbarous weapons of annihilation including napalm bombs, against the peaceful population” in April 1965. More than one year after, the Warsaw Pact described napalm as the ‘munition that clung to flesh and burned to the bone”. The mention of napalm in this Pact is very interesting, and demonstrates the propensity of states to criticize the utilization of a specific weapon in order to delegitimize its user.

**The decisive role of Secretary General U-Thant**

It was mainly the Secretary General U-Thant, attached to the disarmament issue and open to the recommendations of the ICRC, who launched the process of discussion within the UN. Kurt Waldheim only finished this work in 1980. The ICRC was the second main instigator

of this ban and organized the crucial preliminary conferences of Lucerne (September 1974) and Lugarno (January 1976), which produced the documentary basis for the further discussions of the CCWC in 1980.

When these conferences opened, the compilation of statistics on incendiary weapon was extremely thin (only one UN report was ordered on this issue), especially when compared with the contemporary production of statistics for chemical, biological or nuclear weapons. ¹ This relative absence of interest in incendiary weapons is generally explained by the fact that international conferences were more concerned with limiting chemical weapons (widely used in WWI as the previous chapter shows), and then nuclear weapons (after WWII). This is interesting as it shows that the denunciation of weapons at the international level is also driven by political considerations, by the perceptions actors have of wars and their legitimacy, and is thus not exclusively based on pure ideal moral concerns. The intrusion of the incendiary weapon on the international scene is also the result of the specific conflict of the Vietnam War. Indeed, U-Thant was primarily concerned by the legitimacy of the Vietnam War, when he first launched preliminary investigations into napalm. He was also alerted during the Teheran Conference (1969), which invited him, through resolution XXIII, to investigate the need for additional humanitarian international conventions to prohibit certain means of warfare that threatened civilians and the environment. It is hard not to see a correlation between the massive use of napalm during the year 1969, the loss of legitimacy surrounding the Vietnam War and the sudden interest of U-Thant in banning napalm. Finally, Kurt Waldheim reiterated the words of U-Thant when he stated in the press release of 19 May 1972:²

“\textit{You are aware that during the last two weeks I have publicly expressed my deep concern about the Vietnam conflict. For reasons which are no doubt clear to all of you, the UN has still not been able to play the role that I feel it should in contributing towards a solution of this problem. In the past the UN repeatedly was criticized for not dealing actively with the war in Vietnam. As you are aware, I have recently taken the step of presenting a memorandum to the President of the Security Council.}”

¹ UNITED NATIONS GROUP OF CONSULTANT EXPERTS ON NAPALM AND OTHER INCENDIARY WEAPONS, ROLF BJÖRNERSTEDT, United Nations Secretary General. 1973. \textit{Napalm and other incendiary weapons and all aspects of their possible use: report of the Secretary General, Number 16}. United Nations.

² UN archive SG/SM/1964/ORG/714.
This press release preceded the launching of the Conference of the Committee of Disarmament which hosted the preliminary discussions of Protocols I, II and III of the CCWC. These discussions will be detailed in the development on the arguing process over incendiary weapons and the Third Protocol.

The (key) role of domestic pressure?

If several members of the United Nations started to seriously consider the issue of napalm in 1970, at the very end of the Vietnam conflict, US domestic opinion had already begun to denounce and protest against the weapon’s utilization in 1966.

This domestic pressure against the utilization of napalm took a variety of forms, from large demonstrations in the universities to spectacular actions led against the Dow Corporation: that is, the chemical company which produced, *inter alia*, the napalm then used in Vietnam. The following paragraphs will not retrace all of them, but will rather underline three important points I consider as crucial to understanding the impact of domestic pressure on napalm’s utilization.

The first one is that many of the domestic movements opposed to the Vietnam War decided to denounce napalm, among all the possible weapons and practices of war deployed by the US militaries. This focus on napalm is puzzling because it raises the question of why this weapon *in particular* is *more* denounced than the others. To this question, I propose the following answer. Napalm had been rapidly associated in the collective imagery with the idea that it first and foremost burned and killed children. The first images of babies and children hit by napalm started to circulate in 1964. Slowly, they multiplied. If they did not trigger a particular reaction in 1964, this started to change after 1967, as protesters were often seen brandishing them. These images contributed in creating a strong link between, on the one hand, napalm as a terrible weapon, and, on the other hand, children who were suffering excruciating wounds. This representation of napalm as deeply harming children was later reinforced in 1972, with the circulation of the famous picture by Nick Ut. The sentence “napalm stick to kids” was rapidly coined and used by activists.
Second, domestic opposition only started to denounce napalm utilization in 1966. The timing of this denunciation is at first sight surprising because this was certainly not the first year of napalm utilization. Yet, a closer investigation of the media coverage of the weapon reveals an interesting point. The first explicit mentions of napalm utilization in the media were made precisely in 1966:

“If Bankson succeeded in reorganizing MACV’s handling of the press, he made little progress in removing the command’s restrictions on acknowledging the use of napalm, defoliation, and sophisticated armaments such as cluster bombs and flechette ammunition. In the past, he observed, official spokesmen had declined to acknowledge the presence of those weapons in order to deny the Communists a chance to claim that the US was waging a terror campaign. Yet by 1966, everyone in South Vietnam knew they were present and in use. “1

Finally, a very interesting facet of the pressure from domestic opinion is the degree of repugnance not only against napalm, but also against those who were, to a greater or lesser degree, attached to it. The example of the trajectory of Louis Fieser, who invented napalm, is revealing. While Fieser was awarded several medals for having contributed to the creation of napalm in the 1950s, the situation radically changed for him after 1966. He indeed deplored being regularly criticized, and attacked for his responsibility in the development of napalm. The case of the Dow Corporation is also very interesting. While the company had enjoyed a good reputation among students and the American population in general before the Vietnam War, everything changed in 1968. Students refused to apply for jobs there; religious movements protested against it, important universities refused it access to student job fairs. All this ultimately led the company to cease its napalm production in 1969. Yet, even now, the company is still reproached for having participated in the war by napalm production

The previous analyses confirm that napalm was heavily denounced both by an important part of the US public opinion, and also by important member states of the United Nations. Analyses of the discourses they used to denounce napalm reveal that strong social perceptions started to be attached to the weapon. Put differently, napalm was no longer just a weapon, but

rather became a weapon targeting children (for US public opinion) or a weapon exemplifying the violence exerted by the US in Vietnam (for certain members of the United Nations). In sum, the Vietnam War transformed napalm into an object “vested with a strong social power which goes beyond its material capacity”. In sum, napalm became a symbol.

The symbol of the ”unjust Vietnam War”

Why, among all the possible weapons used in the Vietnam War, did US domestic opinion specifically blame napalm? Why had this same public opinion not found its utilization particularly problematic before? The following paragraphs explore these questions, and more specifically investigate the symbolic dimension of napalm. After the Vietnam War, napalm was no longer perceived as a normal or conventional means of warfare, but came to represent something else. The following paragraph aim to provide possible explanations of this “symbolic shift”, which “tarnished” napalm “to a point that it trumped its military utility”.¹

The picture

When I asked “why did the US public opinion denounce napalm in particular?” of my interviewees, one answer always came back: the power of images, the role of the media and the picture of a little girl burnt by napalm, screaming, running to find a way to escape the attack.

Napalm is probably one of the only weapons which is so tightly attached to one specific representation. This representation is the picture taken by Nick Ut on June 8, 1972, in a South Vietnamese village hit by an aerial attack of napalm. The photo was rapidly published in the New York Times and won the Pulitzer Price in the same year. It circulated everywhere, including during the preliminary discussions on napalm utilization at Lucerne. It was brandished near the huge demonstrations against the Vietnam War, usually next to the placards

¹ These words are those of a British General who explained why he was reluctant to use napalm, in NEER, Robert M. Napalm An American Biography. Cambridge; MA and London; England: Harvard University Press, 2013.
“napalm sticks to kids”. This picture is generally defined as a “public icon”, which not only represents the Vietnam War, but war in general.\footnote{See HARIMAN, Robert, LUCAITES. John Louis, 2007. \textit{No caption needed: iconic photographs, public culture, and liberal democracy}. Chicago: University of Chicago Press.}

**A South-Vietnamese attack**

Yet, as was the case for chemical weapons, this image remains a distortion of what really happened. Retracing the real history of the picture reveals how the collective imagery creates and shapes symbolic pictures. The picture taken by Nick Ut is commonly thought of as representing a US strike waged with napalm over a village of civilians. This common idea is partially true: it was in fact a South Vietnamese, and not a US pilot who dropped the bombs of napalm on the village. This distinction might be regarded as minor. Indeed, the US pilots trained the South Vietnamese to fly airplanes and to launch bombs. The US Army also transferred to the South Vietnamese a significant quantity of napalm. In this light, it might be argued that the US Army was as responsible as the South Vietnamese for this napalm attack. It might also be argued that Americans were not directly involved in the attack, and that the reality on the battlefield was more complex than what the media suggested. Yet, I want to stress that the photo represents in fact a ‘reality’, more complex than many analyses made at that time.\footnote{HARIMAN, Robert, LUCAITES. John Louis, 2007. \textit{No caption needed: iconic photographs, public culture, and liberal democracy}. Chicago: University of Chicago Press.}

**Accidental napalm**

The fact that public opinion interpreted this picture as the symbol of the ‘unjust character’ of Vietnam also surprised Nick Ut. The latter never wanted to imply that the US dropped the bomb. Nothing in his photograph suggests that the US waged the attack, or that this attack was intentional. Quite the opposite. He even chose to name the picture “accidental napalm”, as he wanted to stress the inherent complexity of the war. The napalm that fell from the sky that day, was not specifically intended to hurt civilians. This was a result of a wrong estimation, an “accident”. Ut, as he explained later, was trying to stress that a wrong estimation could lead to terrible effects. This argument is different from suggesting that the attack was intentional, deliberate and aimed at hurting the civilians living in the village.
The anthropological fear

Several aspects are specifically striking in this picture, and echo characteristics of the representations of chemical weapons. More precisely, the weapons share three similar characteristics.

First, the little girl seems to suffer from excruciating pain. Her face is torn, she screams and looks completely lost. She is wandering in the midst of other bodies, also torn by pain. This representation reminds us of the soldiers hit by gas during World War I: their faces were also torn by pain, and they wandered in an ocean of bodies, as if they were alone on the battlefield, without being able to find a way to escape it.

Second, both chemical and incendiary weapons create an “anthropological fear”. This concept, detailed in the chapter on chemical weapons, suggests that certain fears are more terrible than others because they profoundly disturb fundamental anthropological barriers. Because they kill without penetrating the flesh, chemical weapons abolish the distinction between the one who fights and the one who does not. Based on the testimonies of soldiers, but also of military historians, napalm also seems to raise a profound, deep fear among soldiers. Curtis LeMay notably mentions in his memoir that the weapon seems to raise particular concerns among these men. Testimonies of soldiers express their disgust in front of the vision of men hit by napalm. Robert Neer mentions the Soldier James Ransone who saw his own men accidently hit by napalm: “Where the napalm had burned the skin to a crisp, it would be peeled back from the face, arms, legs... like fried potato chips. Men begged to be shot. I couldn’t”. Napalm burns to the bone but does not cause bleeding. Like the chemical weapon, it kills without causing bleeding, and therefore blurs the fundamental anthropological separation between the fighter and the others.

Third, like chemical weapons, napalm kills without offering the possibility for the soldier to demonstrate his heroic qualities. For the very same reasons as with chemical weapons, napalm is an anti-chivalric weapon: bravery, engagement and heroism cannot prevent

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2 See the development of chemical weapons as an anti-heroic weapon in chapter III on chemical weapons.
the combatant from being killed. Napalm also blurs the limits of war, as it can fall from the sky at any moment.

For all these reasons, napalm attracts the same level of opprobrium as chemical weapons do. The main difference between the two weapons is that napalm is represented as particularly hurting civilians, and not the combatants. Representations of chemical weapons in World War II always included soldiers. The representations of napalm do not: they always include a civilian. This ‘shift’ in the identity of the target is interesting. One interpretation of this shift is that the Vietnam War also revealed, at least in the eyes of public opinion, that wars were not always ‘conventional’, with a clear and firm separation between civilians and militaries. The combatant is no longer on the battlefield, but hidden among civilians, and this explains why the latter are the principal victims of the conflict.

**A counter-symbol?**

If the photograph taken by Nick Ut undeniably marked domestic opinion, it is interesting to see that the US Army was also affected by the impact of this image. More precisely, it understood the considerable symbolic damage the picture created, and engaged several actions to stop the tarnishing of its reputation. Indeed, several years after the picture, the army ordered another photo, of the very same child (became then an adult called by her name Kim Phuc), together with a US pilot allegedly responsible for the napalm attack on her village: John Plummer.¹ In this photograph, called “Meeting at the Wall” we can see both Plummer and the child, now adult, sitting at the same table, smiling.²

The willingness of the United States to take this picture, and to represent this ‘reconciliation’ can be easily perceived as an attempt to mitigate the symbolic damage created by the Pulitzer Prize image. It shows that the American army did consider “Accidental Napalm” as an icon with a strong symbolic power. “Accidental napalm” thus became a dual symbol:

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¹ In fact, Plummer was not the responsible for the attack, and the US Army knew it. The napalm attack that day was waged by South Koreans. See HAGOPIAN, Patrick. *The Vietnam War in American Memory: Veterans, Memorials, and the Politics of Healing*. 1. paperback printing. Amherst, Mass: Univ. of Massachusetts Press, 2011.

While a large part of public opinion perceived the picture as an illustration of the cruelty of war, the US Army justified via this picture the “necessary” collateral damage of a just war.

**A value symbol**

Indeed, napalm can be accordingly described as a value symbol that reinforces the identity of the cruel aggressor. The idea was often reiterated, in the preparatory debates of the 1980 UN Convention, that napalm is an inhumane weapon that can easily inflict terrible suffering on civilians and innocents. Its presence in the popular culture and collective memory is strongly associated with the idea that the US occupation in Vietnam was cruel and unjustified.

This highly negative symbolic charge attached to napalm may have created a specific moral climate, inclined to exclude it from the battlefields. It could have done that in two ways: by giving a moral authority to the persons advocating for its ban (and thus facilitating the creation of the Protocol CCWC) or by increasing the scrutiny by these same persons, whenever napalm might be used (and thus drawing attention to the war and making it more likely to be questionable). In both cases, the transformation of napalm into a symbol considerably increased the burden of proof the US Army had to deploy, to justify use of the weapon.

**Why study the arguing process over incendiary weapons?**

The previous developments argued that both the strategic utility and the external pressure theory highlighted the question of why napalm disappeared from the battlefield after the Vietnam War. They also revealed that both domestic and international actors who denounced napalm perceived the weapon as a symbol, either of cruelty (a weapon which ‘burns” and “sticks to kids), or of violence (a violent means of warfare).

The following paragraphs aim to demonstrate that the theories of both strategic utility and domestic pressure can be complemented by an approach which focuses on the meta-norm of fighting justly, shared by militaries and by domestic opinion. Indeed, both these actors also evaluate napalm’s utilization in the light of their own conceptions of the meta-norm of fighting justly. The justifications they use to denounce or promote the weapon always refer to the customary norms of the laws of war, that is military necessity, proportionality and distinction.
These customary norms shape the meta-norm of fighting justly. Contrary to common wisdom, which suggests that actors refer to the meta-norm of fighting justly only within international institutions (such as the United Nations), the following paragraphs demonstrate that they in fact always remain at the core of the choices and decisions of actors: hence the necessity to retrace their evolving understandings.

Complementing the theory of domestic and international pressure

The meta-norm of fighting justly also underpinned the conceptions of those who denounced napalm utilization but were not part of the military. This observation is at first sight intriguing, because university students, diplomats, and all the actors who constituted the “domestic and international” contestation against napalm were a priori not as socialized to laws of war as militaries can be. Yet, their discourses mainly denounced napalm on the basis that it was an indiscriminate means of warfare, ultimately referring to the conception of ‘fighting justly’.

The most revealing example of this ‘constant reference to fighting justly’ is the slogan used in the major protests against the Vietnam War, that napalm was “the weapon that sticks to kids”. This way of “framing” and describing napalm is particularly interesting. It implies that napalm has inherent characteristics which make the weapon particularly dangerous and lethal for children. My first observation is that this qualification is largely underpinned by the notion of distinction, at the core of the laws of war: it indirectly acknowledges that the distinction between civilian and combatant is legitimate, because it uses this distinction to condemn napalm. Because napalm kills a specific section of the civilian population, the weakest, the children, it is an atrocious means of warfare. In sum, the discourse denouncing the weapon largely relies upon a specific understanding of the meta-norm of fighting justly (i.e. one which promotes a strict understanding of the notion of distinction). My second observation is that this qualification is also problematic, or at least intriguing, because it is also the result of a distinction that singles out napalm from the others means of warfare. Napalm is not the only weapon that killed children in war. As explained within the introduction, napalm was often combined with white phosphorus. And napalm killed children before the Vietnam War. Why

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1 See the theoretical chapter which defines the meta-norm of fighting justly in more detail.
then such a focus on this weapon, among all the other possible weapons used during this war? Why such a focus on this very specific moment of the Vietnam War? The same question could be asked of the international actors, who did nothing to frame napalm utilization after World War II or after the Korean War. Why this timing for the denunciation?

**Complementing the strategic utility theory**

Many US official discourses, but also some records of discussions between the US Strategic Air Command and the President, reveal that both actors widely discussed the effects of the bombings on civilians. While evaluating the aerial bombings, they often mentioned the notions of restraint, distinction, humanity, but also of military necessity. These principles are based upon their own perceptions of the meta-norm of fighting justly, and are used to justify and articulate actors’ strategic recommendations.

Several examples illustrate how almost all the US Presidents, from World War II to the Vietnam War, regularly ordered their militaries to wage “not indiscriminate” attacks. President Roosevelt was the first to publicly express his apparent disdain against “ruthless bombing from the air of civilians in unfortified centers of population during the course of the hostilities which have raged in various quarters of the earth”, “which have resulted in the mourning and death of thousands of defenseless women and children”. Because they were indiscriminate, Roosevelt described these bombings as an “inhumane barbarism”. More interestingly, he also mentioned that he was determined not to use this method of warfare, provided that “the same rules of warfare will be scrupulously observed by all their opponents”. Not only did Roosevelt mention the meta-norm of fighting justly, but he also referred to the principle of reciprocity, at the core of the laws of war. Roosevelt was not alone in advocating for restraint in strategic bombings. President Truman repeatedly asked his Pacific Commanders to wage bombings which were “not indiscriminate”.

During the Korean, but also the Vietnam War, the Joint Chiefs of Staff rejected several of these attacks on the basis that they could “be interpreted as “an attack against the civilian

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population” of a state. Of course, a legitimate question to ask, in the light of these calls for restraint and the high number of indiscriminate attacks led by the US, is “does the discourse advocating for restraint mean that this restraint was implemented by the militaries ‘on the ground’?

In his memoirs, Curtis LeMay interestingly explains that he often dissimulated or euphemized the level of destruction of the attacks he waged, when reporting to his superiors, because he did not want to be stopped by them. Several examples prove that he was certainly not the only one to do this. Thus we see the distortion between, on the one hand, the official discourse, and, on the other hand, the actual practices. If the discourses over the strategic utility of massive incendiary bombings included the meta-norm of fighting justly, does it mean that the practices were also shaped by this meta-norm? The interesting point to note, in the examples where Curtis LeMay or other militaries did not follow the rules asking for restraint, is that they always invoked the principle of military necessity as driving their actions. Military necessity, also defined as the ‘possibility for militaries to use whatever means is necessary to achieve their goal’, is a core principle of the laws of war. Therefore, even if they did not respect the position of the Joint Chiefs of Staff, who advocated restraint, they still referred to a principle included in the meta-norm of fighting justly, and considered that it superseded the two other principles of proportionality and distinction. In that sense, it might be argued that militaries were still driven by the meta-norm of fighting justly, though their understanding of it differed from that of the President and the Joint Chiefs of Staff.

The variations in the meta-norm of fighting justly: the discussion for the Third Protocol of the Convention of Certain Weapon (CCWC) 1980

The following development analyzes the arguing process which took place at the United Nations, from the decision in 1962 by Secretary General U Thant to lead further research into napalm, to the 1980 Protocol which bans, under certain circumstances, incendiary weapons utilization. Three points stand out from this retracing.


Banning napalm, incendiary weapon or both?

States largely argued over napalm, more than over incendiary weapons in general. If the term napalm is repeatedly mentioned during the whole argument, it does not appear in the final Third Protocol. This ‘semantic shift’ is intriguing: why, if the napalm was at the core of the denunciation against incendiary weapons, was it removed from the final legal treaty? I argue that even though the word does not explicitly appear, the definition of ‘incendiary weapon’ entirely fits with the technical characteristic of napalm. Even though the Protocol III of the CCWC does not mention the word, it clearly frames the napalm utilization.

On 22 September 1972, the United Nations delegations received the report commanded by Secretary General U-Thant called “Napalm and Other Incendiary Warfare and All Aspects of Their Possible Use: Report of the Secretary General”. The very framing of the title implies that napalm was regarded as a particular incendiary weapon, but also as a weapon which was particularly incendiary. The report largely pictured the napalm as a weapon which is largely indiscriminate, and which has tremendous incendiary characteristics. The report does mention the “other incendiary weapons”, such as the white phosphorus, but only very briefly. Most of its analyses are based upon the napalm utilization during World War II, Korea and Vietnam War.

When the General Assembly meet in 1972, one hundred states gathered in order to discuss the report, and propose a draft resolution to frame the utilization of the weapon. They proposed a draft resolution which specifically deplores the utilization of napalm in combat. The draft, “suggesting that the use of napalm – for it was to this weapon that attention was principally given- ought to be forbidden but was not yet prohibited by general international law”.¹ The napalm then continued to drive the debates on the prohibition of the incendiary category.

Yet, rapidly, the different experts started to disagree on whether napalm should be explicitly mentioned in the legal treaty, or whether the legal treaty should remain general and

include no name of weapon. If a weapon is explicitly mentioned, the legal treaty might be regarded as too restrictive, and therefore not very constraining (the state can find a weapon with a different name but with very similar effects). On the other hand, there was so far no consensus on the definition of incendiary weapon. The question of the definition of incendiary weapon raises various problems: should the weapon be defined as incendiary in the light of its effects, of its composition or of its conditions of utilization?

The Protocol III and its definition of incendiary weapon reveal that, if the name ‘napalm’ disappeared from the final legal treaty, the definition of incendiary weapon (that I will discuss in the following part of the chapter) was a clear and unambiguous reference to napalm. In sum, the word incendiary weapon as defined by the Protocol, could only refer to napalm.

From a discriminate to a non-discriminate nature provoking unnecessary suffering: when the napalm tightens up the notion of distinction and expands that of unnecessary suffering

The arguing process over napalm utilization also ‘forced’ actors to reveal their own understanding of the meta-norm of fighting justly, especially of the principles of unnecessary suffering and distinction. Following the different steps of the model of the logic of arguing (defined in the theoretical chapter), the argument led to the refinement, at the international level, of these two conceptions. The conception of unnecessary suffering, which was until this moment only explicitly referring to chemical and biological weapons, then started to also include the incendiary weapons. Moreover, if a certain ambiguity remained on the discriminate nature of incendiary effects before the Vietnam War (several experts mentioned that napalm was more discriminate than explosive devices), the Protocol III clarified and enshrined the fact that napalm was a non-discriminate weapon. This redefinition ultimately contributed in tightening up the principles of distinction.

Indeed, the archives retracing the debates during the work of the CCWC (1980) show very contrasting understandings of distinction and proportionality. Some states do not perceive why napalm should be inherently unlawful (Oman, United States) while others consider that the weapon is per se non proportional and indiscriminate (Sweden, Guatemala, New Zealand, Iran). I found in the archives declarations by states in 1973 explaining that the use of napalm is per se in contradiction with the notion of proportionality and distinction. For instance,
Guatemala explains that because of its characteristics napalm is “inherently problematic with regards to the norms of proportionality and distinction”\(^1\). For Guatemala, napalm does violate the spirit of the two customary principles for three reasons: napalm is impossible to control, it destroys the environment and it presents too many risks for civilians. Not every state agreed with Guatemala when the issue of incendiary weapons was addressed to U-Thant. The United States refused to take part in the discussion and the Oman Republic reaffirmed its will to use the weapon as the situation might demand.\(^2\)

A large part of the debates particularly focuses on the ‘indiscriminate nature’ of napalm. In 1950, napalm was considered as one of the most discriminate and proportional weapon, especially compared to high explosives. This vision was deeply criticized, first through the report of the Secretary General. In this report, the napalm is considered as “causing severe damage in the civilian sector even when, ostensibly, the targets of attack are military.” Say differently, the firepower of napalm is presented as being so high that using the weapon with restraint is impossible. In sum, the napalm is presented as being inherently non discriminate.

Another interesting aspect discussed in the conferences of Lucerne and Lugarno is the idea that napalm creates unnecessary suffering. The reports underline the extreme pain that the napalm inflicts to its ‘victim’, the ‘exceptional resource for the medical treatment’ of its victims, and the fact that the injuries caused by napalm were very different from the other type of injuries. This view, again, sharply contrasts with how napalm was perceived before the Vietnam War. When, during the Korean War, the British denounced the terrible pain napalm inflicted on both civilians and militaries, several United Nations experts replied: “almost all weapons create terrible suffering but napalm was, at least, more discriminating than high explosives”\(^3\).

This contrast between the two visions reveals that the dominant perception of napalm shifted:

\(^1\) Letter of Guatemala addressed to U Thant on the 16 May 1975 – S-0442-0101-06, UN Archives.

\(^2\) See the Letter UN 3546/132 addressed by John Scali to U-Thant, where he says “As you will recall, the US did not participate in the preparation of the report, and my Government prefers not to offer any comment upon it”. For Oman, see letter MO/291/75, UN Archives.

\(^3\) See Parliamentary Debates (Commons) 5th Ser Vol 500 (1951-52) Cols 848-50, 1425-26 in UN Secretariat. Respect for Human Rights in Armed Conflict: Existing rules of international law concerning the prohibition or restriction of use of specific weapons, Survey prepared by the Secretariat, 7 November 1973, UN General Assembly A/9215 (Vol I) 146 :86.
from a conventional means of warfare, to an indiscriminate means which inflicted unnecessary suffering.

**Banning napalm, allowing white phosphorus weapon?**

A retracing of the process of arguing over the meta-norm of fighting justly reveals that certain weapons ‘catch’ the attention of states, and therefore are more likely to be at the core of the legal ban, than other. The process of arguing, in the case of napalm, led to the enshrinement of both the category and the definition of incendiary weapons. This process largely depended upon a political context which was very specific: many actors wanted to denounce the war, and needed to find a sticking point or a window of opportunity to do it. For them, the napalm was a mean to denounce a policy, and a war. Regardless of the initial motive of the states to ban napalm, the arguing process contributed in defining the incendiary weapon in conformity with the characteristics of napalm. Conversely, it excluded from the category, weapons such as white phosphorus weapon. The following part will explain how the imprint of napalm on the category of incendiary weapon transformed the white phosphorus into a weapon with an ambiguous status. This ambiguous status was revealed and discussed within the United Nations during the Operation Cast Lead, almost 30 years after the formalization of the Third Protocol of III.

**Part III - The arguing process over WPW during, and after, Operation Cast Lead**

The White Phosphorus Weapon (WPW) hit the headlines for the very first time with Operation Cast Lead, which took place in December 2008- January 2009. Contrary to what many newspapers articles seem to suggest, this weapon had been used many times prior this operation: it indeed has been deployed on the battlefields since World War I by different states, be they labeled democratic (French, American and Israeli) or autocratic (Libya, Lebanon, Iraq). Whilst its use has been recurrent since World War I, the weapon never really caught the attention of the United Nations, militaries or domestic groups before 2009. Nor was it at the core of transnational campaigns before this operation. Given the very low frequency of WPW utilization and the low number of deaths it caused in 2009, this sudden attention appears as surprising, or at least at odds with records of previous transnational mobilizations aimed at
banning weapons, such as chemical weapons or anti-personal landmines. It is even more surprising when this utilization is compared with the massive deployment of WPW during the Vietnam War. Operation Cast Lead also benefited from a wide media coverage; there was a high number of newspapers articles on the topic, a profusion of videos of WPW explosions on social media, and even the production of documentaries denouncing the weapon (and being the sole object of a documentary is not so common for weapons). This is not to say that chemical weapons or napalm are more condemnable than WPW because of the high number of victims they killed. But the case of WPW is clearly counter-intuitive because the ‘common explanations’, such as the high number of victims, the strong visual images, the lack of scrutiny by the international community, clearly do not explain the timing of the arguing process over WPW.

The following part studies, specifically, WPW utilization during Operation Cast Lead, for two reasons.

First, Operation Cast Lead coincides with the first transnational mobilization led by ‘important’ NGOs (Human Rights and Amnesty International) aimed at denouncing the use of WPW by any state during a conflict. This is indeed the first time that members of the United Nations substantially question the legitimacy of the weapon, and the legitimate conditions of its utilization. If these mobilizations are of a different nature and intensity than those which ultimately led to the ban on chemical weapons (NGOs did not gather in a joint umbrella organization and did not produce any legal text to specifically ban WPW), they remain remarkable because they engage the arguing process, at the international level, over WPW.

Secondly, Operation Cast Lead also coincided with some ‘organizational’ shifts in Israeli military organization. It was indeed right after Operation Cast Lead that Israeli defense forces considerably decreased the production and presence of WPW within soldiers’ arsenal.

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1 The previous parts I and II detail the significant quantities of incendiary weapons, especially of napalm and WPW, deployed from World War II to the Vietnam War.

2 As demonstrated in the previous part, in contrast with napalm, the status WPW was only very briefly discussed during the discussions leading to the Third Protocol of the Convention on Certain Conventional Weapons.
Israel even claimed, in April 2013, that they would definitely cease to produce and use the weapon ‘within about a year’.

For these two reasons, Operation Cast Lead represents a turning point in the WPW trajectory, and the following section studies how the arguing process over the WPW and the meta-norm of fighting justly highlights this ‘turn’.

The process of arguing at the international level: understanding the battle of legitimacy and the role of non-state actors in changing WPW utilization

Consistent with the hypothesis proposed in this dissertation, this part investigates how states and non-state actors ‘take advantage’ of Operation Cast Lead to argue over WPW, and, by doing so, change what is regarded as an ‘acceptable’ means of warfare. This part focuses on how these shifts in normative framework occur, and the impact of non-state actors’ discourse on them. By denouncing what they perceive as a violation of the laws of war, these actors reveal how they interpret the ambiguous meta-norm of fighting justly. They also oblige ‘the other side’, the international institutions, to argue and persuade them, of the legitimacy of their perception. If this process ultimately clears the ambiguity of one aspect of the meta-norm, it also, at the same time, creates other grey areas and contradictions in the meta-norm of fighting justly.

Roadmap

In order to describe this threefold arguing process (denunciation – battle of legitimacy – refining meta-norm of fighting justly), this chapter proceeds in three steps.

First, it will focus on how each side describes the IDF utilization of WPW during Operation Cast Lead (2008-2009). Interestingly, IDF and NGOs indeed argue even on the description of the utilization (frequency, quantity, location, and of the numbers of casualties) What is often presented as an ‘objectifiable step’ (‘facts cannot lie’) is, in fact, the very first part of the ‘battle of legitimacy’.

Second, the following part confronts the rationale of each side’s arguments justifying or denouncing the use of WPW with regards to the laws of war. This comparison shows that each

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side shares conflicting perceptions of the legality of WPW utilization, because they value different conceptions of the meta-norm of fighting justly. The arguing process is the occasion for each to clarify its own conception of fighting justly, detail it, and ultimately cast away the ambiguity of the meta-norm of fighting justly, by imposing its own conception as to the most legitimate one.

The third part focuses on the context in which the arguing process took place. It studies the battle of legitimacy wherein actors deployed different tools and means to persuade and win over the other sides, including symbols. This battle of legitimacy between Human Rights Watch (HRW), Amnesty International (AI) and Israel has been mostly waged within the United Nations, hence a special focus of attention on this institution.

The conflicting factual descriptions of the WPW utilization by IDF during Operation Cast Lead

The NGOs’ version of the use of WPW during Cast Lead

This part focuses first on NGOs’ factual description of Cast Lead, because they were the first to engage in the arguing process. In that sense, they framed the debate, as they indirectly constrained Israel to answer the points they underlined. Human Rights Watch and Amnesty International were the two NGOs that denounced WPW utilization during Cast Lead. These two NGOs share multiple common points, the most obvious ones being their size (these are major transnational NGOs), their research methodology (sending experts on the field to collect testimony and proofs) and their ‘influence’ within the United Nations (they both have powerful sway inside the institutions). The two NGOs differ mostly in the ‘angle’ they choose to tackle issues: HRW is mostly composed of former international lawyers, which probably explains why the NGO developed a legal argument to denounce the WPW utilization (WPW as an illegal weapon). Amnesty International focused more on the illegitimacy of WPW utilization, by using a moralizing discourse that referred less systematically to the laws of war.¹

¹ I explore this aspect in my Mphil dissertation called “Fighting Justly: when NGOs and states fight to impose their perceptions of the laws of war”.

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Human Rights Watch (HRW) report and argument

According to the Human Rights Watch report, “Rain of Fire: Israel’s Unlawful Use of White Phosphorus in Gaza”, Israeli defense forces had used WPW eight times in the twenty-three days of Operation Cast Lead.\(^1\) The first time HRW experts recognized the use of WPW was on 3 January 2009, when they saw vast quantities of white smoke floating over the 232 road to Israel.\(^2\) HRW recognized this smoke as being generated by WPW, mainly because it is easily identifiable as such. Indeed, WPW smoke does not look like ordinary fire but is rather white and dense. HRW experts pointed out another use of WPW the day after, that is 4\(^{th}\) January 2009, when some fire between IDF and Hamas combatants had been exchanged near to Sifaya village, in a middle of an agricultural zone in the north east of Beith Lahiya. The same day, some WPW bombshells ready to be used were recognized within the IDF arsenal. Five days later, on 9\(^{th}\) January, WPW had allegedly been used near Khuza’a. This little village had seemingly been bombed with WPW several times, not only the 9\(^{th}\) but also the 10\(^{th}\) and the 13\(^{th}\) January. On the 15\(^{th}\) January, an attack with WPW that lasted more than three hours took place near Tel Al-Hawa and Rimal. It was perceived as the main element causing the destruction of the upper floor of Al-Quds hospital and of four buildings belonging to UNRWA (a UN agency helping Palestinian refugees). WPW was used yet again on 16th January in the same zone, but without causing such destruction. Finally, WPW was used for the last time on 17\(^{th}\) January, which is a day before combat ceased. It was deployed on Breit Lahiya and hit the primary school hosted within UNRWA. Cumulatively, WPW had been used eight times, causing the death of 12 civilians and injuring more than one hundred of them.

Amnesty International (AI) report and argument

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\(^1\) See Rain of Fire: Israel’s Unlawful Use of White Phosphorus in Gaza, HUMAN RIGHTS WATCH, 25 March 2009, p. 77

\(^2\) Pictures of this smoke were taken and published in many different newspapers. The New York Times was the first to publish them on 4 January 2009. They can be seen in http://www.commondreams.org/news/2009/01/05/israel-rains-fire-gaza-phosphorus-shells.
In one of the first Cast Lead related articles, Amnesty International condemned two uses of WPW. Both occurred on 15 January; one hit the UNRWA compound (with three shells), causing a large fire, while the other one landed in the Al-Quds hospital. ¹

Amnesty International also released a report evaluating the violations of the laws of war during Cast Lad. Issued in 2 July 2009, the report is called “Israel/Gaza, Operation ‘Cast Lead’: 22 days of death and destruction”². The first and more striking reference to WPW in this report is the back cover photograph illustrating “Palestinians run for safety at a UN school for refugees in Beith Lahiya” while they experienced an “Israel Strike using white phosphorus shells”. The white phosphorus issue is then mostly elaborated in a sub-section of the section on “Indiscriminate attacks”, and via testimonies describing the operation. Ten pages are then dedicated to describing its use and justifying why the use of WPW violates the norm of distinction.

The report first confirms the WPW utilization during the attack on the UNRWA compound on 15 January. It explains that Amnesty International delegates found fragments of several WPW artillery shells.³ The report also denounces the attack against Al-Quds hospital in the center of Gaza city with WPW artillery shells.

In another section of the report are gathered several testimonies of civilian victims. One of these testimonies is that of Saba Abu Halima, who reported that she lost her husband, four of her children and her daughter-in-law in a WPW artillery attack on 4 January 2009. The report explains then that Amnesty International staff found the remains of the 155mm artillery WPW carrier shells which allegedly hit the house. According to another testimony given by another injured civilian named Hanan Al-Najjar, the strikes by WPW shells in civilian area son 10 January 2009 killed his wife instantly. Experts from Amnesty International also found in this area several used artillery shells. The multiple shells they found led them to believe that many attacks occurred between 10th and 13th January. Finally the report describes the attacks of 17th

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³ See the picture in Israel/Gaza, Operation ‘Cast Lead’: 22 Days of Death and Destruction AMNESTY INTERNATIONAL, July 2009, p32.
January, during which WPW artillery shells struck an UNRWA primary school in Beit Lahi killing two children and injuring several others.¹

**The IDF version of the use of W**

*The denial*

While NGOs were the first to bring the topic on the table, helped by powerful media such as New York Times, IDF initially demonstrated a form of reluctance or refusal to answer their accusation, and, *in fine*, to join the arguing process. They remain silent for three days, before finally answering the accusations by explaining that “*with certainty* (...) *white phosphorus is absolutely not being used*.”² The army Chief of Staff reaffirmed this declaration on 13th January that “the IDF operates weapons in accordance with international law” and therefore “*do not use phosphorus*”, but rather “*smoke curtains*”.³ After a few days, the denial was less ‘absolute’. Israel admitted to using shells usually containing white phosphorus. Yet, it also explained that these shells were in fact “*quiet shell*, “*empty*” with “*no explosives and no white phosphorus*”.⁴ These first days of denial did not last, and rapidly, the IDF engaged in the arguing process with a provisional report recognizing and justifying their WPW utilization.

*The IDF provisional report*

In an attempt to answer accusations detailed in NGO reports, the IDF released, several months after the end of Operation Cast Lead, a first “provisional” report stating that the use of

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² See *The Operation in Gaza, Factual and Legal Aspects*, THE STATE OF ISRAEL, July 2009, p52.

³ See *The Operation in Gaza, Factual and Legal Aspects*, THE STATE OF ISRAEL, July 2009, p51.

⁴ See *The Operation in Gaza, Factual and Legal Aspects*, THE STATE OF ISRAEL, July 2009, p53.
WPW during Operation Cast Lead was entirely legal. This report is remarkable for three reasons:

First, it was published in July 2009, that is no more than six months after the end of the operation (which officially ended on 18th January 2009). This shows that the ‘timing’ of states (several months once the conflict is over) is often very different from that of NGOs, who rapidly denounce and document a violation of the laws of war.

Secondly, the report addresses three of the eight WPW strikes denounced by HRW and AI. The report does not quote, nor does it mention as being under investigation, the five other strikes with WPW that had been cited by the NGOs. It is not clear whether Israel considered these five strikes as legal, or as not having actually taken place. The report is therefore only a ‘partial’ answer to the NGOs accusations, and shows that the arguing process is often made on selective grounds.

Thirdly the report describes itself as providing temporary conclusions, and as waiting for further details and investigations to be completed. If IDF published an “unachieved” report while investigations were not over, it is mostly because they intended to argue and address rapidly the growing public critiques of NGOs and the UN Human Rights Council. They published a final report in August 2009, but did not introduce substantial changes in it.

WPW as a precise and less destructive weapon, in a conflict that legitimates a high level of retaliation

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1 See in paragraph 20 of the report, p6: “Because of the rush to judgment and the myriad accusations of legal violations, generally without pause to consider what International Humanitarian Law actually requires, it is important to release this Paper now, to place the Gaza Operation into its proper legal and factual context and to answer propaganda and prejudice with facts and law” in The Operation in Gaza, Factual and Legal Aspects, THE STATE OF ISRAEL, July 2009, p. 164.
The report proposes a two-step argument to legitimate WPW utilization. I will detail, in this paragraph the rationale of each arguments, and more precisely the discourse used by each actor to justify their position.¹

Because operation Cast Lead was carried out to defend Israeli civilians from an imminent and increasing threat coming from the terrorist group Hamas (the threat was high), they had the right to use weapons with destructive firepower (proportional response) (1). Yet, they used all feasible precautions to spare civilians from casualties, and the WPW was used precisely because it is less destructive than many other weapons achieving the same operational tasks (2).

The report first explains that Israeli weapons utilization has to be understood in a context of imminent and increasing threat coming from Hamas. By insisting on the fact that they were replying to a threat rather than initiating an attack, IDF legal advisors framed their discourse to comply with the spirit of the two main principles of jus ad bellum: that is “just cause” and “proportionality”. IDF explores here a very interesting facet of the meta-norm of fighting justly, which is its dependence on the meta-norm of Waging Just War.²

The imminence and the danger of the threat, which might justify a ‘strong’ recourse to violence, does not mean that IDF violated the laws of war (jus in bello). Indeed, the report contends “where incidental damage to civilians or civilian property could not be avoided, the IDF made extraordinary efforts to ensure that it would not be excessive in relation to the anticipated military advantage in each instance and as a whole.” The WPW utilization is presented as part of these “extraordinary efforts” to use “the most precise weapons available, applying no more force than necessary to achieve its legitimate military objective”. Indeed, as the report explains:

“Israel’s use of shells containing WP as a smoke obscurant, for example, was consistent with – and not prohibited by – applicable rules of international

¹ I am therefore not proposing to develop my point of view, but rather to expose the different arguments, as if I was the actor, as to how I justify the WPW utilization.

² This aspect is more thoroughly investigated in the chapter on drones. I will thus not discuss it here.
law and permitted the IDF to avoid the use of high explosives and munitions that would have otherwise been necessary to protect Israeli forces”.

A distorted view of international law, an unfair “public criticism”

The report heavily criticizes the “public criticism”, based upon “incomplete and often inaccurate information” which ‘plagued’ the entire Operation Cast Lead. It is noteworthy that the report describes the allegedly false legal understanding of WPW utilization as a perfect example of this “unfair criticism”.¹ The WPW is indirectly presented as a crucial stake, as exemplifying the tendency of many actors (including NGOs and important newspapers) to develop a false understanding of Israeli practices of war. Indirectly, the WPW, whose utilization during Cast Lead is arguably marginal, slowly became a fundamental point over which the two sides would argue, not only to impose their conception of the meta-norm of fighting justly, but also to impose their vision of the entire Operation Cast Lead (this aspect will be further studied in the last part of this chapter, on symbolic power of WPW).

Chart summarizing the different descriptions of the use of WPW during Operation Cast Lead

Below is a chart that summarizes how the different actors diverge on the descriptions of WPW utilization, considered as problematic with regards to the laws of war. Three conclusions can be drawn.

First, HRW is the actor that signals the highest number of WPW utilizations violating the laws of war.

Second, both NGOs have very similar factual descriptions of the use of WPP, and only clearly diverge upon two utilizations (number 1 and 7).

Third, IDF only acknowledge three WPW utilizations (# 2, 6 and 7). These utilizations refer to the destruction of a house near Sifaya that killed many members of Al-Haima family (#2), the destruction of the Al-Quds hospitals where many injured civilians were treated (#3) and the destruction of the United Nations facilities that hosted a school (#8). IDF did not deny

¹ Hamas’ alleged utilization of human shields is the other case presented in the report as having been incorrectly presented by newspapers and NGO.
that these destructions happened, but, in contrast with AI and HRW, did not consider them as violating the laws of war. These destructions were presented as collateral damage.

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Does HRW acknowledge this use?</th>
<th>Does AI acknowledge this use?</th>
<th>Does IDF acknowledge this use?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/3/09</td>
<td>Yes -</td>
<td>No mention</td>
<td>No mention</td>
<td></td>
</tr>
<tr>
<td>1/4/09</td>
<td>Near Sifava village, North East of Beith Lahiya</td>
<td>Yes - WP killed and injured the Al-Haima family</td>
<td>Yes - WP killed and injured the Al-Haima family</td>
<td>Yes – Collateral damage on the Al-Haima family near Sifaya</td>
</tr>
<tr>
<td>1/9/09</td>
<td>Near Khuza’a</td>
<td>Yes</td>
<td>Not explicitly mentioned but may be encompassed in the several days before 13 January</td>
<td>No mention</td>
</tr>
<tr>
<td>1/10/09</td>
<td>Near Khuza’a</td>
<td>Yes</td>
<td>Yes</td>
<td>No mention</td>
</tr>
<tr>
<td>1/13/09</td>
<td>Near Khuza’a</td>
<td>Yes</td>
<td>Yes</td>
<td>No mention</td>
</tr>
<tr>
<td>1/15/09</td>
<td>Tel-Hawa and Rimal</td>
<td>Yes - Destruction of UNRWA and Al-Quds Hospital</td>
<td>Yes - destruction of UNRWA and Al-quds hospital</td>
<td>Yes – collateral damage on the Al-Quds Hospital</td>
</tr>
<tr>
<td>1/16/09</td>
<td>Tel-Hawa and Rimal</td>
<td>Yes -</td>
<td>Not mentioned</td>
<td>No mention</td>
</tr>
<tr>
<td>1/17/09</td>
<td>Breit Lahiya</td>
<td>Yes - Primary school of UNRWA</td>
<td>Yes - Primary school of UNRWA</td>
<td>Yes – Collateral damage with the destruction of UNRWA school</td>
</tr>
</tbody>
</table>

The factual description upon which actors based their argument constituted the grounds of the arguing process. A confrontation of the two different factual descriptions of WPW utilization during Cast Lead reveals that, despite the divergences in the ‘factual observations’,
some common points still can be found, and these constitute the “stumbling blocks” over which actors were to argue in order to assess the legitimacy of WPW.

The next section studies how actors took advantage of the ambiguity of three principles of the laws of war (proportionality, distinction, feasible precautions). Each side interpreted ambiguous norms differently on the basis of their own understanding of the meta-norm of fighting justly, and by doing so, engaged in a ‘battle of legitimacy’ in order to impose their own interpretation, and the meta-norm of fighting justly underpinning this interpretation, as the most legitimate one.

The conflicting arguments on WPW utilization: assessing the legality or the illegality of the WPW utilization by IDF during Cast Lead

The indeterminacy of laws of war: manipulation versus ambiguities

The different ‘official factual versions’ of WPW utilization provide a very mixed image of the use of WP during Operation Cast Lead. These disagreements do not merely result from a pure attempt by states to manipulate the laws of war to their own benefits. Manipulating the laws of war is defined herein as an ‘unfair’ and ‘inconsistent’ utilization of them, by distorting the letter and the spirit of the laws in an ‘unjustifiable’ way. The manipulation of the laws of war by actors in order to justify or criticize other states’ actions is a recurrent object of study in International Affairs. Yet, two actors who clearly disagree on the legal interpretation of the very same event, even though they use a similar ‘referent body of laws’ (i.e. laws of war) do not necessarily manipulate this referent body of laws.

Actors might have a different understanding of the notion of “fighting justly”, and, consequently, differ on the appreciation of what exactly constitutes a violation of laws of war, and lawful behavior. Eventually, these divergences lead them to perceive the use of WPW differently. Even though they use the same reference body to argue upon the use of WPW (i.e. laws of war) they clearly disagree on how this body frames and qualifies the use. In fine, having two actors conflicting over interpretations of the same meta-norm of “fighting justly” may be the result of manipulation, but also, equally, of ambiguity.

The three ethical dilemmas of WPW utilization during Cast Lead

The following paragraphs will explain to what extent the three points upon which actors have evaluated the use of WPW are ambiguous. It will then describe how each side understood and used these ambiguous points to justify or denounce the use of the weapon during Cast Lead. The three points can be summarized in three questions. The first point is related to the notion of intentionality: why was the WPW used? Secondly, was the WPW utilization proportional with regards to the threat and the military gain? Thirdly, did the WPW utilization respect the principle of distinction? Can the victims of WPW be qualified as collateral damage or as intentional casualties?

The paradox of weapons categorization

The case of WPW is remarkable because it reveals the ‘paradox of categorization’. If weapons categorization is supposed to clarify the conditions under which weapons can be legally used, it also introduces an ambiguity in the framing of those weapons that ‘resist’ these categories.

On the one hand, the laws of war (jus in bello) divide weapons into six different categories: conventional, incendiary, chemical, radiological, biological and nuclear.1 This categorization, which is nothing more than a classification of weapons based on their technical capacities, is supposed to give actors a better understanding of how and when each weapon, with its specific technical capacities, can be used legally. For instance, those states party to the Chemical Weapons Convention (1993) are forbidden to use chemical weapons under any circumstances.2 The categorization finally clarifies the specific conditions under which a weapon’s utilization is legal.

On the other hand, weapons sometimes have multiple technical capacities at the same time. For instance, a projection of WPW can simultaneously screen, burn, and smoke. This variety of tasks defies the categorization proposed in the laws of war, because it makes the

1 In fact, weapons are classified into two main categories: conventional weapons and weapons of mass of destruction. Nuclear, radiological, chemical and biological weapons belong to the category of weapons of mass destruction. Incendiary weapons are part of the category of conventional weapons.

WPW potentially belong to three different categories at the same time. This ‘simultaneous triple categorization’ prevents actors from knowing exactly which category the weapon belongs to, and therefore, under which conditions the weapon’s utilization is legal or illegal. It somehow ‘annihilates’ the benefits of the categorization.

How the laws of war respond to the paradox of categorization

The laws of war do not ‘ignore’ this paradox, which ultimately introduces ambiguity in the framing of a weapon. They ‘confront’ it in two ways. First, instead of referring to the weapon by its technical capacities, the laws of war sometimes precisely name the weapon. For instance, the Ottawa Treaty precisely forbids the use, the development and the acquisition of antipersonnel mines. This ‘specific designation’ of the weapon ‘bypasses’ paradoxes similar to the ‘triple categorization’. Second, the laws of war propose to rank the categories that possibly designate a weapon by means of the principle of intentionality. Put simply, the intent makes the weapon. Therefore, if belligerents use WPW primarily in order to create a fire, the weapon is categorized as incendiary. The WPW is not inherently incendiary, but contextually categorized as incendiary. This categorization is a form of ranking: if the WPW is used to create a fire and thus classified as incendiary, its other technical capacities (creating smoke, screening and burning human skin) become secondary (they were not the first intended effect). This ranking is based upon normative judgments as to the intentionality behind the utilization. Two difficulties emerge from this ranking.

First, how to define the intent behind the weapon utilization? Indeed, are there any criteria that help actors to clearly distinguish what purpose a weapon is used for? Does, for instance, the actors’ discourse constitute a relevant ‘basis’ to qualify the intention? Should we look more closely at the doctrines of utilization, the orders given on the battlefields or the context of utilization of the weapon, to reveal the real intentionality behind it?

Second, is it even relevant to rank and single out the intentions behind the weapon utilization? What if actors use a weapon precisely because it simultaneously has three different types of effects? The categorization of the weapon becomes then a tool for actors to pretend that they are deploying the weapon for a specific technical capacity (that they rank as primary) while they actually desire to achieve at the same time three types of different effects (that they artificially rank as secondary)?
The invisible ranking of the weapon categorization

This ranking through the rationale of the intention often remains unspoken or unjustified, hence the concept of ‘invisible ranking’. The arguing process over WPW utilization during Cast Lead helped to unveil this ranking, and to confront its coherence and its legitimacy. WPW have indeed three types of technical capacities: they can burn in the air (and have incendiary capacity), create toxic chemicals (chemical capacity) and create a smokescreen (conventional capacity). The following paragraphs will detail how actors argued over the categorization of the WPW, and how this categorization was decisive in finally determining whether the WPW utilization was legal or not. They reveal that, on the one hand, the IDF maintain that the WPW was used either as a conventional weapon (smokescreen) or as an incendiary weapon, and in both cases in accordance with the laws of war. On the other hand, the NGO maintains that WPW was used only as an incendiary weapon, and under conditions that violate the specific body of law that frames this type of weapon. Amnesty International agreed with this ‘incendiary qualification’, before it was even contended that WP were used as chemical weapons.

The paradox of incendiary weapons categorization

Incendiary weapons are defined, since Protocol III of the Convention on the Use of Certain Conventional Weapons (CCWC) of December 1983, as follows:

“any weapon or munition which is primarily designed to set fire to objects or to cause burn injury to persons through the action of flame, heat, or combination thereof, produced by a chemical reaction of a substance delivered on the target”.

Yet, incendiary weapons do not include “munitions which may have incidental effects, such as illuminants, tracers, smoke or signaling systems”, and weapons with an “additional incendiary effect” that is with an ‘incendiary effect is not specifically designed to cause burn injury to persons, but to be used against military objectives, such as armored vehicles and installations of facilities”.

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In sum, the definition of incendiary weapons is twofold. Incendiary weapons not only have incendiary effects (incendiary effects are only a sufficient condition), but they are *primarily* designed to have such incendiary effects. This nuance is crucial, and constitutes the grey area within which actors argue over the categorization of WPW.

WPW has incendiary effects: it can set fire to objects, facilities, and cause burn injury to persons. White phosphorus has important pyrophoric properties, which explains why it ignites extremely rapidly. Only lack of oxygen can extinguish the combustion of white phosphorus. Yet, it is not clear whether WPW is *primarily* designed to have incendiary effects, notably because it also has screening and illuminating effects. Put differently, did the IDF charge their shells with white phosphorus in order to illuminate, screen or burn? Each side is going to argue over this ambiguous point (ambiguous because several justifications can coexist without one being less legitimate than the other).

Both NGOs will argue that WPW were intentionally used as primarily incendiary weapons, while the IDF will refuse this categorization. IDF answers NGOs accusations by explaining that WPW were first used as screening agent, and that their incendiary effects were only secondary.

*WPW was used as a primary incendiary device and not as a conventional weapon during Operation Cast Lead*

According to HRW and AI, WPW was used as a primary incendiary device, and not as a conventional smokescreen and illuminating agent, during the whole of Operation Cast Lead. Their argument is twofold: the conditions of WPW utilization considerably undermine its screening capacities (1) and other agents with similar screening capacities and without incendiary effect were at the disposal of the IDF (2).

First, IDF could not have claimed to have used the WPW for its infrared optics and weapon-tracking systems, mostly because they consistently used the weapon during the day. The tactical benefits of infrared are much less important when used during the day than during the night. Why then use a WPW for its screening properties if the conditions under which the
weapon is used will neutralize these very same properties? Does this mean that the WPW was in fact used primarily for its other properties, including incendiary effects? Moreover, WPW was mainly used in air bursting. This delivery method is extremely counter-productive because it disperses the smoke in the air, and prevents soldiers from creating dense smoke, to protect their troops on the ground. Therefore, if the WPW was used as a screening agent, it had little success in the tactical goals it was supposed to achieve.

Second, NGOs also pinpoint the fact that IDF also carried in their arsenal another screening agent called the 155mm smoke projectile. This agent is presented as being as an efficient screening agent with no incendiary effects. NGOs therefore ask the following question: Why did IDF use (in poor conditions) a weapon to smokescreen a civilian area and take the risk of harming civilians with the incendiary effects of this very same weapon, while another weapon, at their disposal, could have achieved the same screening properties without taking this risk? For NGOs, the answer can only be that the WPW was primarily used for its incendiary properties and therefore could accordingly be qualified as a “highly incendiary” weapon, framed by the Protocol III of the CCWC.  

Interestingly, HRW notes that Israel did not sign Protocol III, and thus is not legally bounded by its restriction on the use of incendiary weapons. Yet, this non-signature does not mean that Israel can use incendiary weapons under any conditions it wishes to. IDF remain bounded by the customary norms of proportionality and distinction. This aspect will be detailed more specifically in the following paragraphs, as they concern other aspects of the meta-norm of fighting justly and waging just war (more specifically, the definition of civilian and collateral damage).

The IDF answer: WPW was mainly used as a conventional weapon

IDF strongly disagreed with the arguments advanced by HRW and AI regarding the “highly incendiary nature” of WPW. They maintained that the WPW was not used primarily for its incendiary properties, but for its two other qualities: smoke-screening and illuminating.

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1 See The Operation in Gaza, Factual and Legal Aspects, THE STATE OF ISRAEL, July 2009

2 To support this last statement, HRW provides an excerpt from an Israeli military manual stating that it is forbidden to attack a military objective situated within a population center employing incendiary weapons.
Indeed, IDF justified the use of WPW near the UNRWA headquarters on 15 and 17 January with the following rationale: they used it only to produce a smokescreen so they could protect themselves from the Hamas anti-tank crews that were operating nearby. Indeed, WP can block the enemy’s vision of the troops, and, at the same time, protect their own troops by preventing the Hamas combatants from using visual observation tools such as infrared. WP was thus primarily used as a “standard smoke projectile” in order to prevent Hamas’ attempts to hit IDF tanks deployed in the area. If incendiary effects did ‘emanate’ from the weapon, they were not those that were primarily wanted and expected by the IDF.

The fact that WPW was used during the day, or that they could have used more efficient methods to create smokescreen, is not directly tackled by any of the IDF legal reports on Operation Cast Lead.

**Conclusion on the incendiary nature of WPW**

The two sides of the arguing process disagreed over the categorization of the weapon, and whether WPW were primarily used as incendiary agents, or not. Each side operates a ranking in the technical capacities of the weapons, and deploys different arguments justifying this ranking. If both of them acknowledge the incendiary properties of WPW (and only disagree on the rank of these incendiary properties), they substantially differ on another technical properties of WPW: the chemical properties. This aspect will be explored in the following paragraphs.

**The paradoxes of the categorization of chemical weapons**

The Geneva Protocol of 1925 prohibits “the use of asphyxiating, poisonous or other gases and all analogous liquids, materials or devices being prohibited, their manufacture and importation are strictly forbidden”. This 1925 Protocol provides the first clear legal definition of chemical weapons (CW).¹ This definition was refined 68 years later in the Convention on the Prohibition of the development, production, stockpiling and use of chemical weapons and

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¹ See the previous chapter for more details on this point. Chemical weapons were first designated by the 1899 Convention under the name of “deleterious gas”. This definition was largely refined and clarified in the aftermath of WWI through the 1925 Convention.
on their destruction (also called CCWC). In this convention, CW are defined in article 2 as “toxic chemicals and their precursors, except where intended for purposes not prohibited under this Convention, as long as the types and quantities are consistent with such purposes”. They are “munitions and devices, specifically designed to cause death or other harm through the toxic properties of those chemical specified below”. The notion of “toxic chemical” means any chemical that through its chemical action on life processes can cause death, temporary incapacitation or permanent harm to humans or animals.

The ambiguity of the definition of “chemical weapon” lies in the expression “specifically designed”, which (as the expression primarily designed for the case of incendiary weapon) refers to the hierarchy of the weapon’s effects. Indeed, a weapon that has some chemical attributes (i.e. the capacity to cause death or other harm through the toxic properties of its toxic chemicals) but has other properties, may not be eligible for the category of chemical weapon. It is only if the primary use of the weapon is to cause harm or injury with the chemical agent contained in it that the weapon may be qualified as chemical. In that sense, WPW can be qualified as chemical weapon if, and only if, belligerents use it in order to harm or cause death with the chemical substance of white phosphorus.

The CWC also includes the idea of consistency, which introduces a form of measure of the intentionality behind the weapon utilization. A massive presence of toxic chemical is more likely to be illegal because it more likely reflects a desire to harm the other side, and vice versa. The idea of consistency finally means that a weapon might contain toxic chemicals and be legally used only if these chemicals do not exceed the military goal. And this military goal cannot be the will to inflict chemical injury on opponent soldiers or civilians.

**Amnesty International: the WPW was used as a chemical weapon**

Amnesty International is the sole NGO that publicly argued that the WPW was used as a chemical weapon during Cast Lead. If their official report does not explicitly refer to this point, other official media of AI, including released videos, show their field agents evoking WPW as a chemical\(^1\). The rationale of their categorization of WPW as chemical weapon is

\(^1\) See the video of Amnesty International on: [http://www.youtube.com/watch?v=2xvBMOUpDE](http://www.youtube.com/watch?v=2xvBMOUpDE) (the word chemical is used in minute 4).
twofold: WPW provokes deep chemical burns (1), and its utilization in dense civilian areas was necessarily aimed at harming civilians (2).

First, the confusion surrounding the nature of WPW is fueled by the nature of the injuries the weapon inflicts when it comes into contact with human skin. WP causes deep chemical burns as the phosphorus peroxide (a chemical agent) reacts with the water in the skin and produces corrosive phosphoric acids. The report written by Amnesty International details this aspect when it quotes the Israeli army Chief Medical Officer declaring:

“When the phosphorus comes in contact with living tissue it causes its damage by eating away at it. Characteristics of a phosphorus wound are: chemical burns accompanied by extreme pain, damage to tissue, the phosphorus may seep into the body and damage internal organs (…) Burns covering a small area of the body (…) less than 10 percent in humans may be lethal as a result of its effects, mostly on the liver, heart and kidneys”.

Amnesty International and Human Rights Watch provide several testimonies emphasizing how civilians injured by chemical weapons were suffering, and that this suffering was not comparable to injuries caused by fire.

Moreover, AI argues that not only did WPW inflict chemical injuries, but that it was also intentionally deployed to harm civilians through the toxic properties of white phosphorus. The quantity of white phosphorus inside the shells was too high, and thus not consistent with the military goal of IDF (i.e. fighting against combatants from Hamas). The risks of exposing civilians to harm by white phosphorus were too high not to consider WPW as chemical weapon. For all these reasons, the AI considered that the chemical effects prevailed over the other properties of the weapon (incendiary and smokescreen), hence their argument that WPW was used as a chemical weapon during Cast Lead.

**HRW and IDF: the WPW was not used as a chemical weapon**

In their official reports, however, neither Human Rights Watch nor IDF express the possibility that WPW was used as a chemical weapon during Cast Lead. Within their reports, they only refer to the incendiary category when they refer to WPW. This focus on the incendiary nature of WPW might be explained with the three following reasons: practical difficulties in
assessing the quantity of chemicals used in Cast Lead (1), the ambiguous nature of WPW, in contrast with other CW that have no other tactical benefits than creating chemical clouds (2) and the necessity for NGOs to deliver a credible and simple argument at the international level (3).

First, AI field agents mostly base their argument that WPW was used as chemical weapons on the number of civilians hurt by the weapon. Yet, this argument is flawed for several reasons: Gaza is a very dense civilian area (what is the proportion of civilians harmed by the white phosphorus?); counting civilians killed by white phosphorus is very complicated (the area was also widely bombed), etc. The difficulty in gauging the consistency of the presence of the white phosphorus (WPW spread in the air and thus its quantity cannot be really estimated) finally undermines the categorization of WPW as a chemical weapon.

Second, WPW is commonly perceived as a weapon with only two types of effects: incendiary and conventional. Generally, chemical effects of the WPW are either dismissed, or not perceived as prevailing over incendiary or screensmoking effects. This ‘common perception’ is probably explained by the fact that, in contrast with other CW widely used on the battlefields (such as yperite, sarin gas, orange agent), WPW have other properties than merely the capacity to inflict chemical burns. These ‘extra-properties’ are presented as the proof that WPW cannot be used primarily as CW because they necessarily cause different types of effects, and it is therefore necessarily for these other effects that they are primarily used. If this proof is debatable, it is sufficient to introduce an ambiguity in the WPW categorization. Actors exploit this ambiguity to ‘conventionalize’ the weapon (i.e. chemical weapons are not conventional and belong to the broad category of weapons of mass destruction).

Third, interviews with members of HRW and AI show that these actors aim to convince not only states but also public opinion. Because of this dual audience, it might have appeared as simpler and clearer for NGOs to limit their argument to the denunciation of the WPW incendiary effects. Arguing over the chemical effects might have been perceived as a risk of

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1 Interviews with militaries also support this idea that WP are generally perceived by militaries as a conventional weapon with incendiary effect. During the war in Iraq, the US General Peter Pace declares that “WP” is a “legitimate tool of the military” and that it “is not a chemical weapon. It is an incendiary. And it is well within the law of war to use those weapons as they’re being used for marking and for screening” in ‘US General Defends Phosphorus Use’, BBC NEWS, 30 November 2005 <http://news.bbc.co.uk/2/hi/4483690.stm>
complicating a discourse that yet needs to be audible and simple, to gain the support of public opinion.

**The argument over WPW and the meta-norms of waging just war**

The previous paragraphs demonstrated that Israel and the NGOs argued over the meta-norm of fighting justly in order to justify their WPW utilization. The following paragraphs are dedicated to demonstrating that, while these actors argued over WPW, states also discussed and refined another meta-norm, called the meta-norm of Waging Just War (i.e. collective perceptions of how jus ad bellum frames the right to go to war).

**The ambiguity of the category of proportionality and of feasible precautions**

The use of WPW is framed by the customary principle of proportionality. As discussed in the theoretical chapter, this principle is ambiguous. Asserting whether an action is proportional requires making a calculus between the outcome and the costs of the action. If the outcome represents a significant military advantage, the action to achieve this outcome is legal, even if it entails significant costs.

In the case that the outcome does not constitute a significant achievement in terms of military necessity, then the action must not be too costly, otherwise it ceases to be legal. Therefore, evaluating the “costs” and the “military necessity” is crucial to determine whether an attack is proportional. The evaluation of these two points, and the calculation of the legality, are very different depending on who formulates them.

**A disproportional and illegal use of WPW**

For Operation Cast Lead, NGOs tend to consider the costs as being extremely high, that is excessive with regards to the military objective WPW was supposed to achieve. For them, the use of WPW inflicted more casualties and damage than necessary for its military goal. Therefore the use of WPW could be regarded as proportional.
Their argument is threefold: only a threat of an unprecedented nature (1), a crucial operational goal (2) and the respect that all the feasible precautions were taken (3) might justify the WPW utilization during Cast Lead. These reports demonstrate that the three conditions were not met, hence their denunciation that WPW utilization was illegal.

* A threat of a new nature? Justifying an unprecedented use of WPW

First, while IDF had possessed the WPW for many years, Operation Cast Lead is the first time they deployed WPW within the Gaza Strip. These unprecedented conditions of utilization must be justified with regards to the principle of proportionality. Having in mind this principle, HRW considered that only an increase in military necessity could justify an increase in the possible costs inflicted on civilians. Indeed, IDF were aware of the dubious nature of the weapon (i.e. infliction of incendiary effects and causing chemical injuries). In this respect, they necessarily know that the use of WPW in such a densely populated area was likely to be costly for civilians. Therefore, according to HRW, only a higher threat, that is a threat of an unprecedented nature, might explain this shift in the use of WPW by IDF. Only a newly dangerous situation, threatening their survival, could justify increasing the risks due to the use of the WPW in Gaza.

Measuring what constitutes a “newly peril” necessarily requires an evaluation of the nature of the threat faced by belligerents. As demonstrated in the introduction, this evaluation sets a bridge between the two bodies of the laws of war that are jus ad bellum (rules justifying the intervention) and jus in bello (rules framing the conduct of war). It is indeed normatively justifiable to use means that inflict severe casualties to retaliate against an adversary, provided the threat is extreme. Michael Walzer underlined this “bridge” between jus ad bellum and jus in bello when he theorized the idea of “supreme emergency” to justify the conditions under which it is possible to use extreme means of war. According to him, the supreme emergency is characterized by a threat of defeat that is imminent (1), the defeat has to come with tremendous consequences such as the survival of the country or to pose a threat to the whole of humanity (2) and the actions undertaken must have a positive effect (3). By posing these conditions, defining what a “supreme emergency” is, Walzer legitimates and frames the possibility to commit actions costly toward civilians’ lives. The definition of what constitutes a “supreme emergency” might differ – and we’ll see how - but it creates a possibility to increase the
permission to harm civilians provided the situation is extreme. According to HRW, nothing in
the situation faced by Israel and IDF can justify the high costs of the use of WPW: the attacks
of Hamas did not constitute a significant danger threatening the whole survival of the region,
of Israel or of IDF. Rather HRW underlines the asymmetric aspect of the war and the necessity
for the stronger side to comply with the laws of war, despite the propensity of the weaker to
launch illegal actions. Amnesty International also refutes the idea that IDF was facing a
supreme emergency situation. For AI, “the scale and intensity of the attacks were
unprecedented, even in the context of the increasingly lethal Israeli military campaigns in Gaza
in previous years. More Palestinians were killed and more properties were destroyed in the 22-
day military campaign than in any previous Israeli offensive”.\footnote{See Rain of Fire: Israel’s Unlawful Use of White Phosphorus in Gaza. HUMAN RIGHTS
WATCH, March 25, 2009, p9.} In other words, for AI, Operation Cast Lead was utterly disproportional, and nothing could justify it.

An excessive destruction with regards to the expected military gain

The second argument is similar in many respects to the previous one. It still addresses the
issue of the calculus between military necessity and damages inflicted, but the reasoning is
slightly different. HRW explains that even though the argument as to the unprecedented threat
is acceptable, the principle of proportionality has been violated. Indeed, even if an
unprecedented threat may justify the use of WPW, this use must comply with the proportional
principle. In this respect, it must achieve a specific and significant military advantage, with the
provision that the costs of using it do not exceed this advantage. Yet, HRW deplores the use of
WPW against some that did not constitute significant military gains. It is indeed regarded as
disproportionate to use WPW against facilities whose destruction does not represent a clear
plus-value in terms of achieving a tactical or strategic advantage. The damage caused by the
WPW, especially when the military facilities WPW targets are in the middle of civilian areas,
will necessarily be high, and only a high military advantage can justify these damages. The
example HRW provides is the use of WPW on the 1948 armistice line. IDF apparently used
WPW to destroy shrubs and trees all along the line because they might serve as cover for
Palestinian armed groups. Yet, by doing this, they set fire to a large part of the area and
destroyed many civilian habitations and facilities. Therefore, for HRW, “it is not clear whether
this has not provoked the destruction of civilian objects in excess of the expected military gain”. Unless IDF successfully proved that the military gain they were looking to achieve when they destroyed these civilian facilities was significant, their use of WPW was disproportionate and thus illegal.

Amnesty International agrees with HRW’s argument. It states that “much of the destruction was wanton and deliberate” and “could not be justified on grounds of military necessity.” For them, the IDF operation “was often the result of reckless and indiscriminate attacks, which were seemingly tolerated or even directly sanctioned up the chain of command.”

Not every feasible precaution has been taken when WPW has been used

The notion of “feasible precaution” derives directly from the principle of proportionality and is considered as being part of the customary norms of the laws of war. This notion stipulates, “In the conduct of military operations, constant care must be taken to spare the civilian population, civilians and civilian objects. All feasible precautions must be taken to avoid, and in any event to minimize, incidental loss of civilian life, injury to civilians and damage to civilian objects.” These precautions are commonly understood as “being limited to those precautions which are practicable or practically possible, taking into account all circumstances ruling at the time, including humanitarian considerations.” In order to take into account all circumstances ruling at the time, military commanders must necessarily plan their operation on the basis of their assessment of the information from all sources which is available to them at a relevant time. This therefore requires the best possible intelligence, including information on concentrations of civilian persons, important civilian objects, specifically protected objects, the natural environment and the civilian environment.

According to HRW, IDF did not take all feasible precautions while using white phosphorus weapon during Cast Lead. Their main argument is the following: IDF could not have been ignorant that they were using WPW in densely populated neighborhoods, including Gaza city. They used the weapon repeatedly over time and in different locations, which shows that the use was part of a pattern of policy (and not incidental or accidental usage). This

1 See Rain of Fire: Israel’s Unlawful Use of White Phosphorus in Gaza. HUMAN RIGHTS WATCH, March 25, 2009, p2.
voluntary use in highly populated area is problematic because some precautions could have been taken to make the use of WPW less costly for civilians. First, if IDF had used WPW as an anti-personal weapon, they should have used the weapon in less populated areas or in places where civilians were more separated from combatants. Secondly, IDF have another weapon that has the very same smokescreen effects without the incendiary properties (the 150 mm smoke projectiles). This weapon, present in the IDF arsenal, could have achieved the very same function as WPW (providing the intent to use WPW was to smokescreen) without igniting fire and hurting civilians. Therefore, IDF – recklessly or willingly – did not use the less costly means they had in their possession to achieve their strategic goal. In that sense, they did not take all feasible precautions to achieve their tactical or strategic goals. HRW also specifically points out one event. When IDF used WPW near the UNRWA headquarters on January 15, UN personnel launched several warnings on the danger the attack represented for civilians. Yet, IDF did not take into account these warnings and continued to use WPW despite the information provided by the UN. For HRW, not taking into account this information is extremely problematic, as other armies – such as the US Army – commonly tend to stop their action as soon as they receive calls and warnings of this nature. This attack despite the warning is thus a clear violation of the feasible precautions principle., as IDF did not take into account some of the information they had, and by doing so, failed to minimize civilian casualties.

Amnesty International also supports this view. For them, “Israeli forces could not conceivably have been unaware of the presence of civilians in locations which were repeatedly attacked, including white phosphorus and other imprecise weapons, given that these areas were under close surveillance by Israeli drones.” Being in possession of this information, IDF should have taken more precautions while launching attacks on this area.

The IDF response: WPW utilization is part of a proportionate answer to an imminent threat

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1 Scott Anderson, a retired US Army officer working inside the UNRWA, proved that he called the IDF several times around 8 am. IDF told him they were trying to stop the shelling, but according to Anderson, “I know that in the US Army it would not take that long to get the artillery fire to stop”, in Rain of Fire: Israel’s Unlawful Use of White Phosphorus in Gaza, HUMAN RIGHTS WATCH, 25 March 2009, p 45.
The IDF response is based upon three arguments: this is a legitimate defense, the victims were used as human shields, and therefore can be qualified as collateral damage.

Neutralizing Hamas fighters who were attacking Israeli civilians – Israelis in Gaza are in a “besieged citadel”

In their final report released in August 2009¹, IDF underline the extreme dangerousness of numerous actions launched by Hamas prior to Operation Cast Lead. They deplore the proliferation of what they call ‘terrorist attacks’ since the Al Aqsa Intifadah (October 2000), including some “suicide bombings in the heart of Israeli cities, shooting attacks on vehicles, murders of families in their homes, and unrelenting rocket and mortar fire on Israeli towns and villages”². All these attacks would have caused the death of 1,100 Israelis, and, moreover, would have terrorized millions of Israeli throughout the whole country. This justification is underpinned by two arguments. First, the survival of Israel is endangered by the very existence of Hamas. Hamas is indeed regarded as a “terrorist group” whose aim is to “disrupt negotiations between Israel and the Palestinian Authority”, and “to prevent a peaceful resolution of the conflict in the Middle East”. Hamas does not desire peace with Israel. Rather, it only wants to perpetuate the conflict between Palestine and Israel, and thus severely undermines the chances of Israel to have a peaceful future. Therefore, Hamas constitutes in itself a significant threat to the survival of Israel. Furthermore, this threat would have significantly increased in later years. The report thus explains:

“Over time, Hamas extending the range of the rocket fire, by late 2007 reaching as far as some of Israel’s largest cities, including Ashkelon (with a population of over 110,000), Ashdod (with a population of 210,000) and Be’er Sheva (with a population of over 185,000) and threatening one million Israeli civilians – almost 15 percent of the Israeli Population – as well as Israeli strategic installations, such as major electricity and gas-storage facilities.”

¹ See The Operation in Gaza, Factual and Legal Aspects. THE STATE OF ISRAEL, July 2009.
² The report says:” Al Aqsa Intifadah (October 2000), the terrorist attacks against Israelis have included suicide bombings in the heart of Israeli cities, shooting attacks on vehicles, murders of families in their homes, and unrelenting rocket and mortar fire on Israeli towns and villages – all told resulting in the deaths of more than 1,100 Israelis, the wounding of thousands more, and the terrorization of millions.” in The Operation in Gaza, Factual and Legal Aspects. THE STATE OF ISRAEL, July 2009.
In other words, the threat represented by Hamas would only have increased in the years before Operation Cast Lead, making the Hamas “menace” more salient and dangerous. This menace could not have been mitigated by other means than war: indeed, the report explains that Hamas refused to engage diplomatically with Israel, despite the numerous efforts of Israel to find an agreement and “de-escalate” the conflict.\(^1\) Because the people of Israel would have became “de facto hostage of a terrorist organization”, and because Hamas significantly increased the magnitude of their attacks (from a dozen rockets on 19 December 2008 to thirty rockets on 24 December 2008), IDF decided to retaliate.\(^2\) By framing Operation Cast Lead as an operation of self-defense that was only responding to a significant higher-level threat, IDF underlined their right to use more costly weapons such as WPW. By doing so, they claimed that they still respected the notion of proportionality and legitimated their action as a right to defend themselves against obvious breaches of laws of war committed by the other side. They thus framed the use of costly weapon such as WPW during Operation Cast Lead as legal with regards to the laws of war.

The second argument is close to the first one but slightly differs as it underlines the risk of a threat rather than the actual consequences of the threat. The final report insists on the fear experienced by the whole of Israel because of the diffuse threat exerted by Hamas. It dwells on the fact that even though the rockets were not actually killing many Israeli civilians, knowing they exist and could be launched at any time was causing constant feelings of insecurity for Israeli people. This feeling was intolerable as every Israeli citizen feared for her or his survival. The very existence of this fear represented a significant breach of the laws of war and legitimated the attack of IDF against Hamas. This argument – which framed the Operation Cast Lead as a legitimate operation even though the actual attacks of Hamas were regarded as having caused very few casualties and damage – is close to the notion of “just fear”. Theorized by

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\(^1\) See Rain of Fire: Israel’s Unlawful Use of White Phosphorus in Gaza. HUMAN RIGHTS WATCH, March 25, 2009, p 52 and 55.

\(^2\) Their decision to retaliate is based upon the following rationale: “Escalation of rocket and mortar shell attacks launched from the Gaza strip and targeting the civilian population in Southern Israel. Letters referenced Israel’s inherent right to defend itself and its citizens from such armed attacks, and stated that Israel would not indefinitely tolerate a situation where Israeli citizens became de facto hostages of a terrorist organization”. See The Operation in Gaza, Factual and Legal Aspects. THE STATE OF ISRAEL, July 2009. p53.
Michael Walzer, the notion of “just fear” legitimates “preemptive strikes” in two conditions: when there is a “manifest to injure, a degree of active preparation that makes that intent a positive danger (1) and a “general situation in which waiting or doing anything other than fighting greatly magnifies the risks” (2). IDF’s argument was precisely to underline that the rockets in possession of Hamas represented a significant threat for a large part of Israel (“a total of 248,692 students within rocket range”, “daily attacks on Israeli civilians’ homes, schools, kindergartens, shops, clinics, factories and other civilian infrastructures), and that a failure to retaliate would increase the number of missiles launched by Hamas. Their report thus frames the anxiety of Israeli citizens about being hit by a Hamas rocket as a “just fear”. Provided this argument is accepted, the IDF report did frame the use of costly weapons such as WPW as a legal retaliation against an unbearable, “just fear”.

It must be noted that NGOs do acknowledge the unlawful character of rockets launched by Hamas. For instance, B’Tselem does acknowledge that “Armed Palestinian organizations breached international law by firing Qassam rockets at civilian population centers in Israel, by firing at Israeli soldiers from inside residential areas, thereby endangering the lives of the residents, and by storing weapons in civilian buildings.” Yet, they do not consider the nature of the reply made by Israel (firing with WPW) as proportional. For them, the costs remain too high despite the unlawful actions of Hamas.

*WPW killed only when Hamas used human shields*

The dozen “direct” victims of WPW were killed in densely populated areas. This aspect is denounced by NGOs as a non-respect of the principles of – among others – feasible precautions every belligerent should take toward civilians and proportionality. Indeed, the costs inflicted on civilians must never be higher than the actual military advantage of an operation and the means that will kill or hurt the lowest number of civilians must be employed. According to the IDF report, the use of WPW complied with these two principles. The WPW was always used against military objectives: that is Hamas leaders who were hiding in civilian areas. These Hamas leaders were often using civilians – and particularly entire families with children- as a “human shield” in order to deter Israel from launching attacks against them. Israel argued that this utilization of human shields is a form of manipulation of the principle of distinction by
Hamas. Israel argues that the practice of human shields is a ‘trap’ and a deliberate intent to force the other side to hit civilians, and therefore violate the principle of distinction.

One striking example is the attack with WPW against the UNRWA school. This strike seemed to be a deliberate breach of “feasible precautions”. Yet, Prime Minister Ehud Olmert allegedly explained to Ban Ki Moon that “Hamas was firing from the UNRWA site”. Therefore, their attack against UNRWA was against these Hamas leaders. In an article released a few days after, the two authors seem to link this attack on the UNRWA site with the death of a prominent figure of Hamas, the head of security Said Siam. Therefore, we can imagine that the argument of IDF would be the following: the costs endured by civilians and civilian facilities were not higher than the military advantage of the operation (killing a Hamas leader). This helped the IDF to frame the operation as legal. The feasible precautions had been taken but were undermined by the deliberate intent of Hamas leaders to hide among civilians.

This – controversial – argument was strongly criticized by HRW and Amnesty International. They both explained that UNRWA vigorously denied the allegations that a Hamas leader was using human shields in the vicinity at the time of the attacks. And even though some Hamas leaders were present, they still did not regard the use of WPW as proportional in such a populated area.

**WPW victims are collateral damage**

IDF do not deny that they inflicted many injuries and deaths among civilians by using WPW. They underline however the fact that all of them must be qualified as collateral damage. They did not intend to kill civilians but rather intended to protect themselves from attacks by

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1 See in *Israel/Gaza, Operation “Cast Lead”: 22 Days of Death and Destruction. AMNESTY INTERNATIONAL, July 2009, p4. Yet, “Contrary to repeated allegations by Israeli officials of the use of “human shields”, AI found no evidence that Hamas or other Palestinian fighters directed the movement of civilians to shield military objectives from attacks. HRW declared that “In the cases documented in this report, HRW found no evidence of Hamas using human shields in the vicinity at the time of the attacks. In some areas Palestinian fighters appear to have been present, such as in Khuza’a and the Tel al-Hawa neighborhood of Gaza City, but this does not justify the indiscriminate use of white phosphorus in populated area”.*
Hamas. The death of civilians was a collateral consequence, an unintended effect of their use of WP as a smokescreen.¹

By stating their incapacity to predict the negative and harmful effects of their strikes with WPW, the IDF reiterated their intention not to injure civilians. They also dwelt on their will to calculate and evaluate the consequences of such an attack. They made very clear the fact that they were not intending to target the civilians, nor that they expected such outcomes. By stating this, they tried to demonstrate their compliance with the principle of distinction. They also “transformed” their attacks against civilians into collateral damage. As the latter does not constitute a “war crime” or an infraction against the laws of war, IDF proved they did endorse a legal conduct during their attack on the UNRWA. They then explained that this incident helped them to re-evaluate the negative effects of WPW, and thus to cease its use in civilian areas for their future attacks.²

*WPW and the ambiguity of the principle of distinction*

The principle of distinction forbids the direct targeting of civilians by belligerents. To be effective, this principle requires a strong conceptualization of what constitutes a civilian and what is a belligerent. As discussed in chapter 2, this principle is ambiguous as it becomes more and more complex to define who participates in the war, and who does not. Both IDF and the NGOs take advantage of this ambiguity and frame their discourse so as to demonstrate that the use of WPW complies or does not comply with the principle of distinction.

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¹ The IDF report states “Despite the maintenance of a safety distance, some felt wedges and other components of the projectiles apparently landed in the compound after the release of the felt wedges in the air. The IDF neither intended nor anticipated this outcome.” in *The Operation in Gaza, Factual and Legal Aspects*. The State of Israel, July 2009.

² More precisely, “Following a U.N. report on a fire in the compound, and in response to a request by the UN, the IDF ceased the use of smoke projectiles in the area.” And “After reviewing the conclusions of the investigation, the Chief of the General Saff emphasized the importance of a clear doctrine and orders on the issue of various munitions which contains phosphorous. In particular, Lt Gen. Ashkenazi ordered that any use of phosphorous for purposes other than smoke obscuration be treated as exceptional, in order to minimize the risk to civilians. These instructions are currently being implemented in IDF orders and operational plans” in *The Operation in Gaza, Factual and Legal Aspects*. The State of Israel, July 2009.
As for IDF, the use of WPW complies with the principle of distinction, as they have no intention to hurt civilians.

The argument that Israel complied with the principle of distinction slightly reiterates the previous principle of “feasible precaution”, used by IDF to demonstrate that the use of WPW was proportional. Yet it differs, as it pushes the logic of the argument consistently to its end. Indeed, not only did the use of WPW respect the principle of “feasible precaution”, but it was the safest feasible precaution possible, to reduce and avoid civilian harm. As a smokescreen, the WPP enabled IDF tanks to advance and take position without being fired on by Hamas, and, conversely, without having to engage fire with Hamas in very densely populated areas.1

Therefore, the preliminary report of IDF underlines the fact that it is actually very hard to qualify the damages of WPW, and that these damages are certainly less significant than if other weapons had been used, and had sustained violent battles in very densely populated areas. Insisting on the difficulty in evaluating the use of WPW absolutely (that is, not relatively to other means of war), the IDF report frames Operation Cast Lead as complying with the principle of distinction.2

In a nutshell, WPW were never used to directly target civilians. When the weapon was launched near them or in their direction, it was to achieve a significant military objective. The killing of civilians was mostly the result of Hamas violating the principle of distinction by hiding among the population and using civilians as human shields.

For the NGOS, the use of WPW blatantly violated the principle of distinction.

The argument of NGOs underlining the non-respect of the principle of distinction by IDF when they used WPW is threefold. First, IDF clearly had the intent to hurt civilians. Secondly, they made assistance to civilians and the wounded difficult to access. Thirdly, they

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1 IDF explain that “In the absence of the smoke-screen, the fight would have continued in this area, and the IDF would have had to use reactive fire to engage anti-tank units, with the likelihood of greater civilian” in The Operation in Gaza, Factual and Legal Aspects. The State of Israel, July 2009.

2 The IDF argument is “There appears to be insufficient evidence to conclude that WP caused extensive injuries to civilians in the course of the Gaza Operation. While this may, in fact, have occurred in some cases, it is not clear to what extent this may have happened. However, concrete complaints on damages and harm caused by the use of smoke munitions containing WP are still being investigated by the IDF and any definite conclusion in this regard would be premature” in The Operation in Gaza, Factual and Legal Aspects. The State of Israel, July 2009.
took advantage of the argument of the human shield to justify the death of civilians they called “belligerents”.

According to the NGOs, the modalities of the use of WPW clearly validate the idea that IDF used WPW to hurt civilians. They used WPW in air-burst mode, with mortars, that is a mode which aggravates the spread of phosphorus by lowering its capacity to strike a precise target. This mode makes phosphorus more likely to explode and spread, less likely to pinpoint targeting, and thus increases its indiscriminate properties. Moreover, they scheduled the burst at a very high altitude, which also makes the phosphorus be more likely to spread.

“WP was repeatedly fired indiscriminately over densely populated residential areas, killing and wounding civilians and destroying civilian property. It was often launched from artillery shells in air-burst mode, which aggravated the already devastating consequences of the attacks.”

Moreover, after using WPW, IDF did not do its utmost to assist the wounded and civilians. According to NGOs, the denial of the use of WPW in the first days of Operation Cast Lead prevented many doctors from applying the more appropriate treatments to wounded civilians. The hitting of a part of Al-Quds hospital also presented a breach of the principle of civilian assistance by diminishing the possibility to assist and treat the wounded.

Finally, NGOs and IDF strongly differ on the number of WPW victims. IDF recognized a very low number of civilian victims of WPW. HRW deplores the death of a dozen civilians, while Amnesty International considers that almost thirty persons were killed because of WPW. This confusion in assessing the exact number of civilians dead because of WPW lies in the fact that IDF did not consider 18 victims of WPW as civilians, but rather counted them as combatants, assuming that these 18 persons were participating in the hostilities. In contrast, NGOs refused to regard these 18 persons as belligerents, mostly because they considered the evidence proving their direct affiliation with Hamas was very flimsy, or because they

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1 See Israel/Gaza, Operation ‘Cast Lead’: 22 Days of Death and Destruction, AMNESTY INTERNATIONAL, July 2009, p. 127

2 AI repeated denials of the use of WP by Israeli officials during the conflict delayed or prevented appropriate treatment for people suffering agonizing burn.
considered their actual proximity to Hamas too weak to legitimately regard them as belligerents. Depending on the conception of a combatant (more precisely depending on which conditions could render a civilian regarded as a combatant fighting with Hamas against IDF) the calculation of the number of victims differs. And so does the perceptions of actors on the legality of WPW utilization during Cast Lead.

This section so far has shown that two different conceptions of the use of WP during Operation Cast Lead coexist. On the one hand, IDF argue that WPW can be legitimately regarded as a proportional and conventional device, the use of which respected all feasible precautions. In this perspective, the victims of WPW are collateral damages and the use of WPW remains legal. On the other hand, NGOs describe WPW as an excessively damaging device, used primarily for its incendiary properties, and not respecting all feasible precautions. They describe the weapon as having been utterly illegal. It is clear that, while the IDF’ version is based upon a broad conception of fighting justly (a very broad conception of proportionality and distinction), The NGOs’ perception relies on a narrow conception of the meta-norm (narrow conception of proportionality and distinction). Each side thus argues at the international level and deploys means to impose their perception of the meta-norm as the most legitimate one.

The following section creates a bridge between ethical/normative and sociological perspectives. It does not make the claim that it is only ideas that move actors. Rather, it assumes that the perception that an ambiguity exists and must be exploited is at the core of the mobilization (regardless of the nature of the interests that drive actors to mobilize). The following section will study how these actors mobilize in order to impose their argument as the most legitimate one. It will demonstrate that they both use the UN for its legitimization properties, and that they develop different types of tools and arguments (including symbols) to clarify the ambiguity of the meta-norm to their own advantage.

**Part IV: The Battle Of Legitimacy within the United Nations**

The following part examines in detail the “battle of legitimacy” that took place within the United Nations, during which both sides fought to demonstrate that their argument was the more persuasive one, and to finally enshrine it at the international level. It reveals that, despite the efforts of the Secretary General and of the Human Rights Council to recognize the “dubious nature” of WPW, the status of WPW was not clearly identified after Operation Cast Lead.
Unlike the arguing process on napalm which took place after the Vietnam War, and which ultimately clarified the indiscriminate nature of the weapon, the arguing process over WPW did not refine the meta-norm of fighting justly at the international level. Several explanations for this failure will be examined, among them that of the symbolic power.

Conflicting perceptions and international cacophony

As demonstrated below, IDF and NGOs strongly diverge on the framing of the use of WPW: while IDF assume that WPW utilization respects the three principles of proportionality, distinction and military necessity, NGOs emphasize the illegal character of the use of WPW. According to the latter, WPW would have clearly violated the principles of proportionality and distinction, notably by deliberately killing and hurting civilians (and – correlatively- by causing deaths that could have been avoided).

These two arguments were opposed during a relatively short time scope, from the beginning of the Operation Cast Lead (4th January 2009) to the release of the final report by IDF (July 2009). Reports by HRW and AI that were released during this short period supported and reinforced the previous and numerous public declarations made by these two NGOs. The fact that the many different analyses were publicized in such a short time, and that these analyses were technically sophisticated albeit strongly diverging, fueled the confusion and made the debate barely audible for other actors of international society.

Each NGO report concludes with a list of recommendations, and many of them directly ask for the UN to act by pursuing, condemning or investigating the IDF use of WPW (among other recommendations). NGOs recommend such actions as they assume that the specific use of WPW by IDF is a crime of war, and, as every crime of war, should be strongly condemned and sanctioned. This direct interpellation of the UN launched a heated debate among its members, asking the following questions: how should international society qualify the use of WPW? Bearing in mind the spirit and the letter of the laws of war, should the UN have condemned the use of WPW by IDF and pursued them for crimes of war? On the contrary, were NGOs misleading concerning the legal aspects of the use of WPW? Both NGOs carried out strong lobbying within their own organizations (members), in civil society and at the UN to publicize these questions. To do so, they made several declarations in the media, but also concentrated their pressure at the UN level. They used the UN as a powerful tool of “collective
legitimization” in order to make their voice more audible, and, eventually, to impose their perception of Operation Cast Lead, including the use of WPW by IDF, as the legitimate one.

The United Nations and the “collective legitimacy”

As discussed in the theoretical chapter, the United Nations is currently perceived by states as one of the most legitimate institutions when it comes to judging the legality of weapon utilization. As such, the United Nations is more likely than many other institutions to achieve “collective legitimization”, that is to “to be regarded, and used, as a dispenser of politically significant approval and disapproval of the claims, policies and actions of States”.¹ This unique power allows the United Nations to “legitimate” certain claims and to outcast others. Moreover, the United Nations has a strong tradition in denouncing war crimes, launching inquiries to estimate violations and advocating for the creation of legal treaties framing the use of weapons. In that sense, it seems to be the most relevant institution to legitimize the perceptions of actors with regards to the use of certain weapons. Finally, the chapter is very much interested in the propensity of the UN to make one claim – be it enunciated by IDF or NGOs – more legitimate than the other one.

The role of Secretary-General and the constitution of a Board of Inquiry that denounces the ‘dubious’ nature of WP

Secretary-General (SG) Ban was very active during Operation Cast Lead. He met several times with Israeli leaders and made public declarations in favor of the necessity to protect civilians during the conflict. In the aftermaths of Operation Cast Lead, he appointed a board whose aim was to investigate nine incidents that occurred during Cast Lead, that were susceptible to being interpreted as breaches of the laws of war. This board – formally called “United Nations Headquarters Boards of Inquiry to review and investigate nine of these incidents” – was convened on 11 February 2009 and submitted a report to the Secretary-General on 21 April 2009.

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The 148 pages report they published did not really catch the attention of the media, especially when compared with the impact of the Goldstone report five months later. SG Ban released a letter dated 4 May 2009 addressed to the President of the Security Council. In this letter, SG Ban summarizes the report while emphasizing the aspects he considers as prevalent and preoccupying.\(^1\) He includes at the end of his summary the complete board report.

The board report analyzes – among the nine incidents - two attacks launched with WPW: the UNRWA Field Office attack of 15 January 2009, and the UNRWA Beit Lahia Elementary School attack of 17 January 2009. In both cases, the report deplores the disproportionate effects of WP. It criticizes the terrible incendiary effects of the weapon, which destroyed much of the infrastructure of the UNRWA Field Office, including \textit{“buildings containing food, medicines and other goods essential for the delivery of humanitarian assistance to the people of Gaza”}. It implies that the destruction could have been even worse, but for the heroic reaction of two members who stopped white phosphorus from blowing up a reservoir of fuel. The report also deplores the death of two children killed during the attack on the Beit Lahia Elementary School. They clearly locate the cause of these two deaths in the incendiary and chemical properties of WP.

In a nutshell, the report delivers a very critical analysis of the use of WP during Cast Lead. For the two cases previously quoted, the report considers the use of WP as disproportionate and as violating the customary norm of \textit{“feasible precautions”}. The report indeed quotes ICRC, stating \textit{“if used against military targets in or near populated areas, weapons containing WP must be used with extreme caution to prevent civilian casualties”}. Yet, the report underlines that very few measures had been taken to preserve civilians and civilian facilities. Finally, one of the most interesting aspects of this report is the explicit criticism it makes of what is regarded as being the dubious nature of WP. The report finger-points the impossibility for the weapon to merely be a screening agent, as the fragments or projectiles delivered by the weapon \textit{always} have incendiary effects. It thus calls into question the traditional double categorization of the weapon (as incendiary and as conventional) and invites us to consider it as being purely an incendiary weapon.\(^2\)


\(^2\) Indeed, “The Board noted that death or serious injuries could also be caused by the falling shell casing, weighing up to 15kg, and other metal components or fragments of the projectile; and that,
The Security Council’s blockade

Operation Cast Lead in general – and the use of white phosphorus in particular – did not provoke any significant reaction from the Security Council. A possible explanation for this lack of reaction is the fact that both the US and Russia possess WP in their weaponry, and both have used the weapon very recently. The US used WP during the Iraq War and in Afghanistan, while Russia used WP in Chechnya in 1994, during the battle of Grozny. It is thus plausible that these two countries did not want to condemn the use of WP per se, because they shared an interest in not shredding opprobrium on the weapon.

Another explanation can be found in some diplomatic cables released by Wikileaks. One of them details how Ambassador Susan E. Rice asked Secretary General Ban to add to his letter the explicit recommendation that no further action needed to be undertaken by the UN. She expressed concerns with regards to the recommendations 10 and 11 of the report, in that they could be a bad precedent “if the report of a Board of Inquiry expands beyond its terms of reference”.\(^1\) Recommendation 10 asks the SG to ensure the timely investigation of the other incidents involving the death or injury of UNRWA personnel, in consultation with the Commissioner-General of UNRWA. Even though this recommendation does not explicitly quote the white phosphorus weapon, it remains related to the weapon, as UNRWA was attacked with WP on 15 January 2009. The recommendation 11 explicitly asks for further investigations concerning the use of WP “into populated urban areas of Gaza, including in the incidents at the UNRWA Field Office and the UNRWA Beit Lahia School”. This request is based upon the principle that “where civilians had been killed and there were allegations of violations of international humanitarian law, there should be thorough investigations, full explanations and, where required, accountability”.

Therefore, Susan Rice’s request embodies the Security Council’s reluctance to evaluate Operation Cast Lead and – more particularly – the use of white phosphorus weapon with regards to the compliance with the laws of war. By asking Secretary General Ban to cover up the necessity to lead further investigations and by asking him to evade recommendations 10 and

Susan Rice makes clear that some members of the Security Council refuse to discuss these topics at the international level. In other words, the first process of arguing about the norm of fighting justly stops at the level of the Security Council, as the latter does not make Israel accountable for its use of WP.

**The Goldstone Report and the Human Rights Council**

The “Goldstone report” is the designation journalists and UN members gave to the 574 pages report ordered by the Human Rights Council in order to evaluate the legality of Operation Cast Lead. This report was issued to evaluate the propensity of the two sides – IDF versus Hamas – to act in compliance with the laws of war. The South African Judge Richard Goldstone was appointed to head the report, and was helped by Christine Chinkin, Hina Jinali and Colonel Desmond Travers. All of these persons had previously worked for other fact-finding UN missions. Richard Goldstone is the former Prosecutor of the International Criminal Tribunals for the former Yugoslavia and Rwanda. He was also a member of the Human Rights Watch board. The report was officially released on 15 September 2009, almost one year after the beginning of Cast Lead.

The report required three months of investigation, during which these four members collected testimonies, examined findings and analyzed the alleged violations of laws of war. Among the most serious accusations of the report is that of IDF’s deliberate intent both to hurt civilians and to destroy their infrastructures. This accusation is severe, as the deliberate intent to target civilians is a crime of war. The IDF use of WPW constitutes thus one aspect of this deliberate intent to kill civilians, but not the only one. To support this argument, the Goldstone report underlines three decisive points: the use of WP is a breach of the principle of “feasible precautions”; as a non-proportionate attack; and as a violation of article 18 of the Fourth Geneva Convention. The report discusses five cases in which WP was used by IDF: the 4 January attack against the Habula family’s house, the 12 January attack against a family’s house in Kuzaa, the

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1 Christine Chinkin is a Professor of International Law at the London School of Economics and who participated to the fact-finding mission to Beit Hanoun in 2009, Hina Jinali is an advocate of the Supreme Court of Pakistan and member of the International Commission of Inquiry on Darfur in 2004. Finally, Desmond Travers is a former colonel in the Irish Defense Forces and member of the Board of Directors of the Institute for International Criminal Investigations.
15 January attacks against the UNRWA compound and Al-Quds Hospital and the attack against Al Wafa hospital.

*A disproportionate use of WP*

The use of WPW against the Al Quds Hospital on the 15 January 2009 was qualified as a direct and intentional attack. The fires it created took a whole day to extinguish, and created panic among the patients who had to be evacuated.\(^1\) This panic and the other damage inflicted on civilians are evaluated as being excessive with regards to the military gain of the attack. Moreover, the Mission assumed that “*it was unlikely that there was any armed presence in any of the hospital buildings at that time*”.\(^2\) This assumption strongly undermined the IDF defense which argued that this attack was a proportionate reply to Hamas attacks and strategies of using human shields. The report thus concludes that “the advantage gained from using WP to screen Israeli armed force tanks” “*could not be deemed proportionate*”. The use of WP is “not justifiable in relation to any military advantage sought in the particular circumstances”.\(^3\)

This argument is also supported by the idea that WP can do long term damage to civilian facilities, and be a potential danger a long time after its use. The report underlined that wedges of WP have remained active in Gaza for up to 24 days after discharge. This had injured some children in the aftermath of the operation, and many civilians (including doctors working in the areas hit by WPW) complained about the disastrous secondary effect of phosphorus. They quote doctors who were shocked by the “*severity and sometimes untreatable nature of the burns*

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\(^1\) See HUMAN RIGHTS COUNCIL. Human Rights in Palestine and Other Occupied Arab Territories, Report of the United Nations Fact-Finding Mission on the Gaza Conflict. A/HRC/12/48. United Nations, September 25, 2009 p14. It is explained that ”The Mission also finds that, on the same day, the Israeli forces directly and intentionally attacked the Al Quds Hospital in Gaza City and the adjacent ambulance depot with white phosphorous shells.”


caused by the substance”.\footnote{1} Finally, the spread of WP badly damaged agriculture in the area, and had disastrous ecological impact.

Moreover, the report contests the allegation that WP was only used for marking and signaling purposes. They note the existence of “other screening and illuminating means which are free from toxicities, volatilities and hazards that are inherent in the chemical white phosphorus”\footnote{2}. They thus underline the excessive harm caused to civilians (notably the Abu Halima family, where five members died instantly because of WP and five others were badly injured) and the impossibility for the use of the weapon to be proportionate in civilian areas.\footnote{3}

**The violation of principle 18 of the Fourth Geneva Convention**

The attacks against the Al Quds hospital echoes another attack directed against the Al Wafa Hospital. Both constitute a violation of the customary prohibition of attacks on civilian hospitals embodied in principle 18 of the Fourth Geneva Convention. Indeed, the attacks were a “grave breach of the Fourth Geneva Convention in respect of willful killings and willfully causing great suffering to protected persons, and as such give rise to individual criminal responsibility”.

**No feasible precautions**

For both attacks against the two hospitals, the Goldstone report deplores the fact that the warnings used by IDF were insufficient and limited. Moreover, the attack against the UNRWA field office is regarded as “extremely dangerous, as the compound offered shelter to between 600 and 700 civilians and contained a huge fuel depot”. Consequently, the Mission concludes


that this attack “violated the customary international law requirement to take all feasible precautions in the choice of means and method of attack with a view to avoiding in any event minimizing incidental loss of civilian life, injury to civilians and damage to civilian object.”¹ This is all the more true as the UNRWA compound contained thousands of liters of fuel stored in tankers. The explosion of WP near this area could have created significant destruction and considerably increased the risks to civilians.

The Goldstone report also criticizes the IDF argument, that they took feasible precautions, notably by respecting a “safety distance” within civilian areas. For the UNRWA attacks, the report found that this safety distance was not respected. Moreover, they criticize the incapacity of IDF to forecast the dramatic destructions they caused, especially as they knew that hazardous material was stocked in the UNRWA facilities.² Finally, they regret that IDF did not immediately stop using WP after the many phone calls and warnings made by UNRWA staff to Israeli senior officers. The report concludes that IDF were “systematically reckless in determining the use of WP in built-up areas”.

The ambiguous nature of WPW

The Goldstone report ends with recommendation. One of them invites states, and Israel in particular, to reconsider the weapon and its ambiguous nature. The report first emphasizes that even though IDF claim to have used the weapon in two different ways in order to achieve two different goals – exploding munitions used as mortar shells for screening, and smoke projectiles with felt wedges for anti-personal effects- the effects on civilians were equally dramatic. Therefore, the report advocates a total ban on WP. WP should not be deployed as a screening device because of the number and variety of hazards attached to the use of such a pyrophoric chemical. Moreover, the weapon is regarded as too destructive to be used in built-up areas. For these reasons, while the report concedes that WP was not at that stage proscribed


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under international law, it affirms that serious consideration should be given by Israel to undertake a moratorium on the use of such weapons, “in the light of human suffering and damage they have created in Gaza”.

Yet, as is explained in the introduction of this part, the recommendations of the ‘Goldstone report’ did not entail the creation of a legal treaty explicitly banning the weapon. The weapon was not attached with the same degree of opprobrium as was napalm in the aftermath of the Vietnam War. The hypothesis that I propose to investigate in the following developments is that the WPW was rapidly attached with a strong symbolic power. Yet, in contrast with napalm which, once the arguing process started, was almost immediately and unanimously regarded as a univocal symbol, the WPW became a polarizing symbol. The status of polarizing symbol considerably blurs the arguing process, because it neutralizes the logic of the ‘most persuasive argument’ (detailed in the theoretical chapter). Actors cannot find a common platform (and therefore cannot really argue and accept being convinced by the most persuasive argument) because the polarizing symbol prevents them from deliberating on the same bases of discussion. Without the logic of arguing, the actors cannot reframe the meta-norm of fighting justly.

Symbols within the United Nations

This dissertation argues as to the necessity to study symbols at the international level. Symbols may be another type of argument helping actors to frame their discourse and refine norms of world politics. As a reminder, the symbol is defined as an “object vested with social power beyond exercised at a distance from its material source”\(^1\). Because the United Nations is regarded as one of the most legitimate institution, it is more likely to create powerful international symbols than other organizations. The reason is that the power of symbols derives from the legitimacy surrounding an institution. Therefore, the more the institution is regarded as legitimate, the more powerful the produced symbol will be.\(^2\) A powerful symbol is a symbol


\(^{2}\) Ian Hurd notably explains when he says that “since in IR the power of institutions comes from the belief in their legitimacy, we must therefore look for the origins of international symbols in the legitimacy of their originating institutions. The symbols that are unique to the international system (as opposed to those that are borrowed from domestic society) all come from legitimized international
internalized by actors, able to constrain actors’ actions by being extremely meaningful for them. Its effects on actors are very close to those of taboo, but differ in the sense that symbols may attach very different types of ideas and social meanings to their object, and not merely opprobrium, as the taboo does. A symbol may experiment with and reinforce identity (value-symbol), contain and invite to share common references and identities (focal-symbol) or/and contain a message commonly understood among actors (message-symbol).

As analyzed previously, the opposing arguments made by NGOs and ID, regarding the legality of the use of WP, were first exchanged via official declarations, press coverage and reports. The battle of legitimacy took on a new dimension when the UN started to discuss the legal status of WP with regards to its use during Cast Lead, but also to its use in general. Different UN organs – General Assembly, Secretary-General and Human Rights Council – have discussed the issue of the use of WP during Cast Lead. This chapter argues that, by framing the discussion and engaging a dialogue with the other actors (NGOs and IDF), these three UN organs have participated in erecting WP as a value symbol.

WPW as a value and ambivalent symbol: a symbol of the “assaulted fortress” versus a symbol of injustice and oppression

WPW symbolizes the unjust character of Operation Cast Lead

The report “Rain of fire” largely denounced the use of WPW, and even ‘placed’ this denunciation at the core of its argument that IDF had violated the laws of war during Operation Cast Lead. HRW erected WP as the key point of the whole denunciation of the Operation Cast Lead. WPW is thus framed as embodying, capturing the spirit of the whole Operation Cast Lead. The underlying rationale of their denunciation is the following: Operation Cast Lead was illegal mainly because the Israelis used WPW in an illegal manner. WPW is erected as the “perfect example”, the paradigm capturing the illegality of the entire Operation Cast Lead. This two-step argument operates a “transfer” of properties: the illegal character of the weapon is
transferred to the character of the whole operation. Blaming one (the use of white phosphorus weapon) is sufficient to blame the other (the whole Operation Cast Lad). This way of framing one’s discourse to denounce the Operation Cast Lead transforms WP into a metonymy. It attaches a specific meaning to the WPW: WPW is not merely an ambiguous weapon with regards to the laws of war. Rather, it is the symbol of the illegality of the whole Operation Cast Lead. Exactly as napalm had been perceived as symbolizing the illegitimate character of the Vietnam War, the white phosphorus weapon captures the illegality of the Israeli Operation in Gaza in 2008-2009.

This specific framing – that erects WP as a metonymy of Operation Cast Lead – is also perceptible in the discourse employed by HRW activists. During interviews with them, they reiterated their deep condemnation of the whole Operation Cast Lead, and stressed their view of WP as being symptomatic of the illegal character of the operation. For them, this operation was condemnable with regards to the principles of jus ad bellum, and in order to prove this, they underlined the illegality of the use of WPW. By doing so, they placed WPW at the very core of their argument, and attached to the weapon a very specific set of values: opprobrium, condemnation, and injustice. They participated in making the weapon a symbol of the unjust character of Operation Cast Lead. This social meaning prevails over the strict evaluation of the weapon with regards to the laws of war. In other words, WP is no longer just a weapon amongst others: it has become the weapon used by Israel during the illegal Operation Cast Lead.

The erection of WPW as a symbol of the “unjust Operation Cast Lead” was fueled by several other factors. First, the use of WPW is quoted in all the reports ordered by the UN, and is the central argument establishing that Israel committed crimes of war in Israel. Secondly, images of WP have been used to depict Operation Cast Lead: these striking images have contributed to the creation of a strong relationship between WP and Operation Cast Lead. Thirdly, NGOs and UN missions had never denounced the use of WP before Operation Cast Lead: this former silence over WPW sharply contrasts with the “over-treatment” of the use of the weapon during Operation Cast Lead. It tends to brand the WPW as being “the weapon of the Operation Cast Lead”, rather than a weapon used long before this, and long considered as problematic with regards to the laws of war. Finally, the very character of the NGOs’ advocacy campaign denouncing the use of WP explains why WP has been constructed as a symbol of the

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1 Interview JM Fardeau, Head of Human Rights Watch France, 15/01/2010.
illegal Operation Cast Lead. Traditional transnational advocacy campaigns, whose aim is to ban a weapon (rather than denouncing a conflict) have some identifiable characteristics that this campaign did not have: it did not create any “umbrella organization” to centralize their action; did not propose any legal draft (or any legal proposition) banning the use of WP did not produce any statistics or reports demonstrating the dangerous and limited aspects of WP; did not share an official and common stance promoted by all the NGOs of the campaign on WP; and did not propose meetings to discuss the dangerous aspects of the weapon. In other words, whilst HRW and AI denounce the very same weapon, their mobilization to denounce this weapon was not transnational. The denunciation of the weapon suffered from the fact that it was actually Operation Cast Lead that these NGOs wanted to denounce, rather than the WPW itself. The WPW suffered from the symbolic dimension attached to it, in the sense that this symbol prevails over the perception of WPW as a conventional/incendiary weapon.

**WPW symbolizes the unjust international opprobrium shed on Israeli operations**

Israeli statesmen and IDF have attached another symbol to the WPW. For them, the WPW was legally used during the whole Operation Cast Lead. They acknowledged that the use of the weapon caused some deeply regrettable collateral damages. Yet IDF demonstrated that they used all feasible precautions to avoid it, and stopped using the weapon as soon as they could. In other words, they demonstrated that the use of WP complied with the laws of war, and did not constitute a crime of war. They thus resolutely denounced the criticism of NGOs and of UN fact-finding missions, as they believed these critiques were unfair and fallacious.

A large part of the Israeli argument defending and justifying the use of WP is captivated by its denunciation of what it saw as lawfare, launched by international society. Israel felt that it was unfairly criticized for its use of WP, as the weapon was not an illegal weapon per se, and as they had demonstrated that the use of the weapon complied with the laws of war. WP became then a perfect example of the propensity of NGOs and the UN to outcast and shame Israel at the international level, without having any valid reasons to do so. It became a value symbol of the unjust international opprobrium against Operation Cast Lead in particular, and of Israel’s actions in general.
This erection of WP as a symbol of unjust international opprobrium was strengthened by the polemic discussions over the “Goldstone report”. Originally called “Human Rights in Palestine and Other Arab Territories, Report of the UN fact finding Mission on the Gaza Conflict”, it was rapidly “nicknamed” the “Goldstone Report” by many actors, including IDF and Israeli Statesmen. This propensity to reduce a report to the sole name of its head plays a part in delegitimizing the objectivity and the neutrality of the report. This was not merely a report on Operation Cast Lead, but a report made by Richard Goldstone. This way of presenting the report echoes some very controversial debates that emerged after the release of the report. These debates questioned the neutrality of Goldstone’s team and – more specifically – called into question the good faith of Richard Goldstone while drawing the conclusions of the report. This led to very unfortunate and unfair critiques against Goldstone, some of which even questioning his perception, as a member of the Jewish community.

WP became then the weapon that was legally used during Cast Lead but which was unfairly denounced by NGOs and the UN as being illegal. It became a symbol of an unjust international opprobrium launched against Israel. The many controversies that followed this virulent debate only confirm that some irrational social meanings were attached to the Goldstone report and to the WPW. Several months after, Goldstone gave an interview in the Washington post and explained that he was “reconsidering” the conclusions of his report. He did not say anything explicit concerning the use of WP within the interview, but he indirectly explained that the attacks were in fact proportionate (as they were retaliating to an imminent threat coming from Hamas). The other members of the report officially broke away from Goldstone’s declarations and reaffirmed the validity of the previous conclusions. This confusion fueled even more dramatically the symbolic and controversial nature of WPW. It is not merely regarded as a weapon, but a means of warfare used in a very problematic context, that of the opposing forces Israel and Hamas. This conflict is open to many different interpretations. For IDF, Israel is an assaulted fortress, a besieged actor fights against terrorism. It is leading an asymmetric war against terrorists who use their population as a human shield, and use laws as a means to win the hearts of international society. From this perspective and for IDF, WP is no longer merely a weapon, but has become a tool legally used during Cast Lead. IDF thus argue that, despite its legality, NGOs and the UN have stigmatized the weapon because they underestimate the dangerousness of Hamas, and the necessity for Israel to protect
itself (Massada syndrome). WP is thus the value symbol of their dangerous and misleading interpretation of the conflict.

Conclusion

By retracing the trajectory of two widely used incendiary weapons, the chapter answers to what constitutes the starting puzzle of this chapter. Why, after having used such high quantities of napalm, having placed it at the core of their military air strategy, did the US Army cease to use the weapon? Why did they even publicize the destruction of their remaining stockpiles in March 2001? Why did they destroy these remaining stocks, a costly procedure, while they used, even if in lower quantities, weapons with incendiary characteristics, just a few months later in Afghanistan?

*Why did incendiary weapons disappear after the Vietnam War?*

At an early stage of my researches on napalm, I realized that this question could not be dissociated from a larger debate concerning the ‘doctrine of strategic bombing’. Napalm was mostly deployed from the air, and at the core of strategic debates on whether ‘attrition strikes’ (massive bombing in order to entirely destroy the target) eventually break the morale of civilians and destroy the resources of the enemy. Rapidly, the question of “why did napalm disappear from the battlefield” echoed another issue which was “why was the strategy of attrition abandoned by militaries”? The ‘attrition strikes’ were abandoned in favor of strikes which could hit with restraint, without destroying everything around the target: in sum, a strike which could respect the principle of distinction and enable the striker to hit only the person identified as a combatant. Matthew Evangelista perfectly summarizes the dramatic change in the way the United States (but also democracies in general) approach strategic bombing:

“The norms governing bombing – and particularly the harm it imposes on civilians – have evolved considerably over a century: from deliberate attacks against rebellious villagers by Italian and British colonial forces in the Middle East to institutionalized practices seeking to avoid civilian casualties in the U.S. counterinsurgency and antiterrorist wars of today. In between, the strategic bombing campaigns of World War II caused great civilian destruction
through fire-bombing of cities (…) What accounts for the dramatic changes in ethical and legal norms governing air warfare over time?"¹

The chapter then demonstrates that the decisive moment, both in napalm utilization and in the doctrine framing its use, was the aftermath of the Vietnam War. It is after this war that both the weapons and the strategic doctrine ceased to be used within the US Army.

It proposes then to study how the three different theories possibly highlight the timing and the reasons for this shift. It seeks to understand more thoroughly the mechanism of a ‘strategic change’ in military doctrine. It reveals that the negative image attached to napalm at the end of the Vietnam War had a decisive impact on the ‘ethical turn’ endorsed by the US military after the Vietnam War, and their subsequent emphasis on precise strikes and on less reliance on incendiary weapons. Napalm was indeed very negatively perceived by US domestic opinion, for whom it was a weapon which killed children and inflicted inhumane pain. It became rapidly attached with a strongly negative symbolic power, which made the argument for its ban more powerful.

Immediately after the Vietnam War, several states asked for sanctions against napalm utilization by the United States. These debates ‘forced’ the different states to clarify their own understanding of pillar principles of fighting justly, that is the notion of distinction and proportionality, but also of unnecessary suffering. These discussions were the starting point of the preliminary meetings for a Protocol to Ban Incendiary Weapons, also called Protocol III of the CCWC, which was proposed and signed by a majority of states (with the exception of the United States) in 1980. After the Protocol III of the CCWC, weapons which create fire, which were, at the beginning of the century, considered as chemical weapons, and which, after World War I and the refinement of chemical weapons (and their subsequent exclusion from this category) had no clear legal status, became the ‘incendiary weapon’. And the utilization of incendiary weapons was then restricted to specific conditions, such as non-utilization near civilians. The chapter also briefly discusses why, besides the symbolic power attached to

napalm, the social positions of actors within the international institution, might increase their ability to impose their argument as the most legitimate one. In the case of incendiary weapons, archival research shows that the Secretary General U-Thant played a particularly important role and personally intervened to impose a ban on the weapon.

**Why did only napalm disappear after Vietnam War? Understanding how the legal categories are constructed**

A retracing of the arguing process over incendiary weapons illuminates how the legal categories are constructed (i.e. namely why incendiary weapons were defined in one way rather than another one). The post-Vietnam period and its focus on napalm explain why the term ‘incendiary weapon’ largely designates weapons which are very similar to napalm: that is, a weapon which create huge fire. It also explains why it excludes, or at least does not explicitly encompass, from this category, weapons such as White Phosphorus Weapon which, though they might appear similar to napalm, in that they have similar incendiary characteristics, also have in addition screening effects, and therefore do not entirely correspond to the category. This ‘resistance’ to the incendiary category explains why less opprobrium was attached to the weapon, even though it provokes the same effect on humans as napalm.

**Arguing over White Phosphorus Weapons during the Operation Cast Lead (2009)**

The second part of the chapter tries to understand how actors argued over the definition of incendiary weapons after the ‘Vietnam turning point’. It reveals that it was only during Operation Cast Lead that actors reengaged in the arguing process over incendiary weapons. NGOs (Human Rights Watch and Amnesty International) and UN actors (the Goldstone Commission) denounced the way Israel used incendiary weapons, and, by doing so, promoted a broad understanding of the extant definition of incendiary weapons. In contrast, Israel justified its utilization based on an argument which promoted a restricted understanding of this very same definition. In fine, both sides waged a “war for legitimacy” in order to enshrine, at the international level, their argument as the most legitimate one. Because this discussion did not lead to a clear refinement of the definition of incendiary weapons (i.e. no legal treaty explicating the status of WPW) and because many states continued to use the weapon after the discussion (i.e. NATO in Afghanistan), I tend to conclude that the arguing process did not really contribute
to enshrining a new definition of the incendiary weapon at the international level. Moreover, the arguments could not rely on a clear and univocal symbol which could have made them more persuasive. The WPW was caught in a controversy (the Goldstone Report) which strongly divided international actors, and therefore did not allow the actors to clearly prove that their argument was the most persuasive one.

The legacy? Banning WPW from the arsenals, napalm and the semantic shift

This conclusion might be restated in the light of upcoming events. Israel recently announced that it plans to remove WPW from its arsenal. If it is the case that they do not use WPW in the future, it might be argued that they reconsidered the efficiency or the legitimacy of the weapon, and that the arguing process over Cast Lead might have triggered this reconsideration. The creation of a legal treaty or a Protocol which complements the extant definition of incendiary weapon (i.e. refining the definition so it unambiguously incorporates WPW) could also be interpreted as a successful refinement of the meta-norm of fighting justly. Should WPW be clearly encompassed within the incendiary weapon category, the weapon could be “grafted” with the strong opprobrium already attached to napalm. Indeed, in contrast with WPW, where actors still debate over its status and its legality, napalm is still strongly attached with opprobrium. While the US Army did use in Iraq and Afghanistan low quantities of incendiary weapons, that is weapons with the exact same characteristics and effects as napalm, they refused to call them napalm. Instead, they referred to these weapons by the names MK-77 or “firebombs”. This semantic shift is fundamental: it reveals how deeply actors internalized the idea that napalm was an illegitimate or a problematic means of warfare.
**V - Arguing Over Unmanned Aerial Weapons during Obama Administration: paradoxes and aporias**

**Introduction**

**An increasingly restrictive meta-norm of fighting justly…**

The former chapters demonstrate that the meta-norm of fighting justly has shifted toward a “restrictive understanding” (i.e. high standard of precision and restraint) consequent to three key moments: the use of chemical weapons in World War I, of napalm in Vietnam War, and of white phosphorus during Cast Lead.\(^1\) In the aftermaths of these three moments there came to the fore ambiguities in the meta-norm of fighting justly. More precisely, what exactly was meant and involved in the pillar principles of unnecessary suffering, proportionality, and distinction was widely discussed among actors, and refined through texts with varying legal power (1925 Geneva Protocol, 1970 Protocol, and the Goldstone Report). Actors argued over the meanings, and fought to impose their own understanding of those principles. As a result, the meta-norm of fighting justly shifted toward a specific interpretation promoting a narrow understanding which valued restraint, precision, and moderation. Consequentially, the conception of a “just weapon” has shifted, to one that values an ‘anti chemical weapon”, that is a precise, moderate weapon able to considerably mitigate collateral damages.

**… and the development of UAV**

In parallel, Unmanned Aerial Vehicles (UAV), defined more precisely later in this chapter, have been increasingly developed and used within battlefields since WWI. Recently,
some very precise UAVs, in that they are able to fire accurate and moderate shots, have been deployed in, *inter alia*, Pakistan, Israel, Libya, Yemen and Iraq. These weapons are commonly held to be very accurate, especially when compared with the destructive and imprecise firepower of napalm, chemical weapons or white phosphorus. Recent studies confirm that precise UAVs are being increasingly produced and used by states, and even by non-state actors\(^1\). On the eve of 2015, the vast majority of states is equipped with UAVs: “87 countries have some UAV capability, 23 possess more sophisticated drones, and 30 have armed UAV program”.\(^2\) And this trend will likely intensify in the coming years\(^3\). Two questions thus remain: has the development of those new weapons transformed the norms and practices of war and if yes, how? And have those developments profoundly challenged, if not undermined, the coherence of the meta-norm of fighting justly?

### How does the existing literature examine UAVs?

A rapid literature review indicates that the UAV is commonly approached and analyzed via three lenses: the ethical/legal, that of efficiency, and that of targeted killing policy. Each of these lenses ultimately explores one of the following questions: Under which condition(s) is the UAV ethical and legal with regards to the existing laws of war? Is the UAV an efficient means of war? Are UAVs transforming the practice of targeted killing, and if yes, how?

The following paragraph sketches a brief overview of how the existing literature answers these questions. This rapid analysis shows that only a rare number of studies retrace

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\(^1\) Drones even flooded civilian society, for the first time, for specific activities such as agriculture and photography, and now for private use via electronic commerce companies such as Amazon, Ebay. Worldwide, Today, “52 countries have an association with UAVs, whether as developers, manufacturers, operators, and/or exporters of them (…). Worldwide, there are some 250 models of UAVs to choose from, some with production histories approaching two decades to those that are only millions of dollars and several years from reality. Of these countries, 41 actively fly 80 of these 250 models of UAVs” in NEWCOME, Laurence R. *Unmanned Aviation: A Brief History of Unmanned Aerial Vehicles*. Reston, Va: American Institute of Aeronautics and Astronautics, Inc, 2004.

\(^2\) HOROWITZ, Michael C. and FUHRMANN, Matthew, Droning on: Explaining the Proliferation of Unmanned Aerial Vehicles, October 24, 2014.

\(^3\) NATO is expected to invest $1.7bn in the following years in new unmanned aerial vehicles [http://www.bbc.com/news/29062549](http://www.bbc.com/news/29062549)
the whole historical trajectory of UAVs, and an even a rarer number focuses on how the laws of war have impacted this trajectory through time and conflicts.

**UAVs as an ethical/legal issue**

*Ethics of war and UAVs*

The ethical/legal perspective approaches the utilization of UAVs in a normative light. It confronts the characteristics of the current utilization of UAVs with the spirit and letter of the legal and ethical norms that currently frame it.¹ Two questions generally polarize this literature: does the utilization of remote controlled weapon undermine the pillar principle of the reciprocity of risks? Does the capacity to strike precisely (which is assumed as a characteristic of current UAVs, such as Predator) represent a moral improvement for the practices of war?

*Killing by remote control and the reciprocity of risks*

A large part of the ethical/legal literature addresses the tensions – and sometimes contradictions - between “killing by remote control” and the principles of reciprocity of risks. Whichever the views on those tensions, the argument is generally structured by the following three steps of reasoning.

The first recalls that laws of war were generally created to protect both civilians and the soldiers who were risking their lives on the battlefields. One of the core principles of Jus in Bello is precisely the reciprocity of risks: soldiers are allowed to kill only because they themselves risk being killed in combat. This reciprocity of risks is mentioned in criminal law, but only in the very restricted situation of “legitimate defense”. When laws of war apply, this principle always applies; hence the rights for soldiers to kill the opponent combatants in situation of combat.² The second step questions whether a drone operator – who sits miles away

¹ For the distinction between ethical and legal norms, see the theoretical chapter.

² A few exceptions nuance this statement, though without invalidating it.. If the combatant surrenders, then they should not be killed. Moreover, if the combatant is not in a situation of fighting, then they also might be captured instead of being killed. See the very interesting contribution of Michael Walzer on this point when he discusses whether combatants can and should kill the soldier who sleeps in Walzer, Michael. *Just and Unjust Wars: A Moral Argument with Historical Illustrations*. 4th ed. New York: Basic Books, 2006, p187.
from the target, in a hangar, with no imminent risk of being killed –can be said to be in a situation of “reciprocity of risks”. The reasoning generally concludes with the following question: with an absent or undermined reciprocity of risks, are soldiers entitled to the same rights and duties (i.e. jus in bello principles), including the right to kill? Are operators of remote controlled weapons entitled to kill other combatants despite breaching the very principle of Jus in Bello that authorizes this killing?

The most recurrent dissensions rest on three points:

(1) Are remote controlled weapons breaching the reciprocity of risk? (Is not the drone operator, even if physically removed from the battlefield, still morally within the battlefield, and therefore still in a situation of risk reciprocity?)

(2) Are remote controlled weapons the sole weapons to mitigate the reciprocity of risk (is it really an unprecedented breach of this principle)? Many militaries considerably nuance the argument that UAVs are the first and the only weapon to wreck the principle of reciprocity.¹ They generally mention pilots of recent jets who fly so distantly from their target that any risk that would threaten their safety (shooting the plane, capturing the pilot) is very unlikely. Certain authors believe that the risks of being killed are as unlikely as those of a UAV operator seated in a hangar in Arkansas.² Others perceive UAVs as a new step, a new level in the breach of the reciprocity principle.

(3) Is the reciprocity of risk a concrete aspect of war, or rather an abstract principle that cannot actually be achieved? If applying the “reciprocity of risk” in combat is unrealistic, a chimera or a “horizon indépassable”, then does it mean that war is no longer (if it has ever been) a place of martial values such as bravery and honor? Therefore, this literature sometimes tackles the wider question of the substantial

¹ Several authors advanced that other weapons (machine guns, jets) have already profoundly breached the reciprocity of risk. This is notably the case in NOËL Jean-Christophe, Occuper sans envahir: drones aériens et stratégie, in Les guerres de demain. Paris: IFRI, 2013. Noël mentions machine guns that profoundly transformed the reciprocity of risks. Yet, he still considers that unmanned weapons precipitate soldiers into a new era of responsibility. Yet, not all the authors believe that unmanned weapons raise new and unique ethical questions.

² Author interview with Colonel Michel Goya (21/05/2014).
tensions (if not contradictions) between new technologies, including remote controlled 
weapons, and what is called the traditional ethos of soldiers.¹

**Remote-controlled weapons as a moral improvement of war?**

In addition to the question of whether UAV utilization abides by the laws of war, the 
existing literature also questions the impact of UAVs on the ethics of war. More precisely, it 
questions whether UAVs represent a long-term desirable practice. To do so, it analyzes the 
potential hidden side effects of UAVs, and weighs them against their potential benefits. Three 
paradoxes polarize this literature:

1. **Killing with distinction versus lowering the threshold of war.**
   
   UAVs are often praised as a very precise weapon able to shot with restraint. Therefore some authors question the moral responsibility armies might have, to acquire and use the most precise weapon at their disposal.² Other authors worry that the existence of a precise weapon necessarily lowers the threshold of going to war (i.e. when a state is entitled to go to war against another one). Precision might be an asset but it might also reduce the moral and practical barriers to an intervention.³

2. **Prudence versus the loss of responsibility**


UAVs take the pilot out of the battlefields. This ‘extraction’ should allow the pilot to act with more caution and prudence. Yet, other authors consider this distance as a source of a problematic feeling of loss of responsibility. Pilots feel more entitled to kill because shooting the opponent combatant seems unreal and easy (i.e. pushing a button). Remote controlled weapons would lower the threshold to kill.\footnote{1}

\textit{(3) Over- legality versus Collapse of legality}

A part of the literature regards the UAV as a high-technological weapon, which is very sophisticated, costly and not accessible to all states.\footnote{2} The utilization of this highly precise weapon by a minority of states might incentivize those states which cannot acquire such weapons to stop trying to abide by laws of war. The standard of precision and proportionality might appear as too high to be actually achievable. Because they are unreachable, they become irrelevant to them, leading to the collapse of the constraining power of the laws of war. This discussion is recurrent in counter-insurgency contexts, where the strong and the weak fight with very different types of weapons.

\textbf{An object widely discussed in and by secondary sources}

Finally, an important part of the extant literature comes from secondary sources, especially US and Israeli newspapers and magazines. Their approach is very interesting because they provide an empirical treatment to abstract ethical questions of legal/ethical literature. They notably analyze many recent and ongoing utilizations of UAVs (Libya, Syria, Pakistan, Yemen, Iraq), and discuss the problematic aspects of, \textit{inter alia}, identification of targets, collateral

\footnote{1} On this aspect, see the overview written by Emmanuel Goffi in MAZOYER, Sébastien, LESPINOIS, Jérôme, GOFFI, Emmanuel, BOUTHERIN, Grégory, PAJON, Christophe (coord.). \textit{Les drones aériens : passé, présent et avenir. Approche globale}. Paris: La Documentation française, coll. Stratégie aérospatiale, 2013, p. 349-368.

damage, disconnection between the pilots and the battlefields, proliferation of surveillance drones, and signature strikes.¹

*International Humanitarian Law and UAVs: the source of NGO reports*

Finally, reports published by major NGOs such as Human Rights Watch, and Amnesty International, provide valuable insights on the tensions between UAVs utilization and International Humanitarian Law. The latter regularly publishes documented analysis of specific UAV utilization considered as problematic with regards to the laws of war. Reports are generally based on a three-step demonstration structured as follows: they first provide factual elements on strike(s), then discuss its consequent legal violations and finally recommend actions users and the international community should undertake. Three reports in particular provide a very detailed inquiry on UAVs. They include analyses on US strikes in Yemen (Letta Tayler for HRW), Pakistan (Amnesty International), but also Israeli strikes on Gaza (HRW).²

*The efficiency of UAVs*

The great majority of the recent literature is focused on assessing UAVs’ efficiency. They often aim at highlighting the trade-off between expectations and actual consequences of UAVs. These studies generally hold specific assumptions on the goals UAVs are supposed to achieve. They then propose a method by which to measure whether those goals are met. They

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finally evaluate which side the trade-off between the effects and the counter-effects leans towards.

\textit{UAVs and terrorism}

The analysis of UAV efficiency has rekindled the attention of academic literature on the issue of counter-terrorism. The topic is unraveled in various studies, drone strikes being promoted as an efficient means to fight terrorism, by some politicians and analysts. This literature often starts with a specific definition of terrorism (this definition is commonly very controversial because of the lack of consensus on it), before determining whether this terrorism is, or is not, mitigated and even eradicated by drone strikes. The studies commonly tackle two types of questions.

(1) Are UAVs – and more specifically targeting drones – an efficient mean to end terrorism? Studies examine whether the single use of UAVs (i.e. without complementary or supporting use of force such as men on the ground) can eradicate terrorist groups.\footnote{See JOHNSTON, Patrick B. “Does Decapitation Work? Assessing the Effectiveness of Leadership Targeting in Counterinsurgency Campaigns.” \textit{International Security} 36, no. 4 (Spring 2012): 47–79; PRICE, Bryan C. “Targeting Top Terrorists: How Leadership Decapitation Contributes to Counterterrorism.” \textit{International Security} 36, no. 4 (Spring 2012): 9–46; JORDAN, Jenna. “Attacking the Leader, Missing the Mark Why Terrorist Groups Survive Decapitation Strikes.” \textit{International Security} 38, no. 4 (Spring 2014): 7–38; JOHNSTON, Patrick B., SARBAHI A., The impact of US drone strikes on terrorism in Pakistan, Unpublished manuscript, Rand Corporation, 2012.} A majority of the studies is skeptical as to this method’s efficiency, especially because of the side effects associated with it (support of the local population toward terrorists, rapid reconstruction and even reinforcement of the terrorist network after the strikes, necessity to support the drone strikes with ground armies).

(2) Are UAVs a discreet means for states to extend their dominance over other territories? Endorsing the critical theory approach and following the research agenda drawn by the Global War on Terrorism theory, these studies analyze how states take advantage of terrorism to extend their influence.\footnote{See BUZAN, Barry. “Will the ‘Global War on Terrorism’ Be the New Cold War?” \textit{International Affairs} 82, no. 6 (November 2006): 1101–18.} From this perspective,
UAVs are studied as a new, discreet and powerful means by which states can increase their influence and control over new territories.¹

**Drones as efficient means of Warfare**

Although the issue of terrorism strongly polarizes recent discussions on UAV efficiency, UAVs are also analyzed through the prism of ‘simple warfare’. UAVs are weapons that have been and might be used in situations of conflict. Many studies then question whether UAV utilizations have provided a tactical and/or a strategic asset in the waging of a war.² Their demonstration is commonly structured with the following four steps:

1. Tactics and Strategy are two different domains. If both of them are crucial to win a war, strategy tends to predominate because it concerns the “grand objectives” (strategy is generally thought of as encompassing tactics).
2. Do UAVs achieve tactical goals? How do they influence the definition of tactical goal?
3. Do UAVs achieve strategic goals? How do they influence the definition of strategic goal?
4. Do tactical benefits outweigh strategic limits? Do tactical limits outweigh strategic limits? Beside a few exceptions, these studies conclude with the following paradox: if drone strikes are a tactical success, they largely remain a strategic failure.³

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³ “The Obama administration’s growing reliance on drone strikes has adverse strategic effects that have not been properly weighed against the tactical gains associated with killing terrorists.” in BOYLE, Michael J. “The Costs and Consequences of Drone Warfare.” *International Affairs* 89, no. 1 January 2013, 1–29.
Are drones renewing the issue and practice of targeted killings?

Finally, an important part of the literature discusses the issue of UAVs as the means to proceed to targeted killings. In this sense, UAVs have rekindled interest in the topic of targeted killings, which faded away in the aftermaths of Cold War. This literature generally focuses on four questions:

1. Are UAVs transforming the practice of targeted killing? Put differently, do UAVs have specific characteristics that could transform the very practice of targeted killing?

2. Are targeted killings with UAVs efficient? This question generally reiterates and overlaps with the views expressed in literature on the use of UAVs to fight against terrorism.

3. Under which conditions are targeted killings with UAVs justifiable?

4. What are the lines between targeted killings, political assassination, murder and killing in combat? This question investigates the conceptual fuzziness that sometimes surrounds politicians’ self-justifications over drones strikes, especially with regards to the status of their targets (combatant or non-combatant) and the system of law that frames their actions (laws of war or criminal law/law enforcement). It aims to determine whether drone strikes are a new kind, or a hidden form, of assassination. These assassinations might be directed against foreign citizens (on which grounds is the assassination justified?), but also against political leaders of groups or parties (this case would raise new ethical issues: on which grounds could a state justify killing someone who represents a political force and a political alternative for its citizens?). Even in the case of those targets being arguably identified as combatants or alleged terrorists, this literature also raises the question of the legitimacy of the means to kill them.

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1 In this issue, see the very stimulating article THOMAS, Ward. “Norms and Security: The Case of International Assassination.” *International Security* 25, no. 1 (Summer 2000): 105–33. Written before 2000, this article is, in a sense, very innovative for bringing such clarity to a topic that has only started to be widely discussed in academic literature more than ten years after.

This literature is extremely stimulating but tends to entangle the issue of targeted killings and that of UAVs. Put differently, this literature investigates less the use of UAVs per se, than the doctrine of utilization that frames its use.

**Literature Blind spots**

The extant literature provides valuable examination of UAVs, and more specifically of the three key topics, of ethics of war, efficiency and targeted killing. Yet, this chapter identifies three limits or blind spots.

First, very few studies retrace the entire trajectory of UAVs throughout the 20th century. Most of the studies focus on recent UAVs (especially targeting drones such as Predators), and on the most recent years of utilization (especially on the climax of the employment of targeting drones at the beginning of Obama’s first mandate). This lack of historical approach is here hypothesized as prejudicial. An understanding of how UAVs have been used throughout history is necessary, to put in perspective the sudden intensification of UAVs utilization in 2010.

Secondly, none of the studies analyzes how NGOs and Institutions (such as the United Nations) have argued over UAVs. If many of their arguments are analyzed in the ethical/legal literature, there is no specific study of how those arguments are discussed between NGOs and states that are using UAVs. As this dissertation hypothesizes, that there is articulation between normative arguments and repertoires of action, the lack of interest in this discussion process explains the lack of understanding of how the meta-norm of fighting justly eventually constrains the utilization of UAVs.

Finally, there is a significant lack of attention given to the following question: why have states decided to develop these weapons at this specific moment? More specifically, it seems that a majority of the literature assumes that the driver of the proliferation and utilization of

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2 See the theoretical chapter. The articulation between the normative arguments and the repertoire of actions is clarified therein. The ongoing dissertation of Amélie Ferey on targeted killing is currently analyzing those arguments in action.
UAVs is economic.\textsuperscript{1} It therefore overlooks many other potential explanations of the variations in UAV utilization, one of them being the constraining influence of laws of war.

The four arguments of the chapter

As a reminder, the overall thesis of the dissertation is the following: while arguing over weapons utilization, each actor reveals the range of acceptable and unacceptable interpretations of the means to be deployed to wage war (i.e. meta-norm of fighting justly). Under specific conditions, clarified in previous chapters, the arguing process ends by enshrining one of the interpretations of fighting justly at the international level.

The present chapter focuses mainly on the first steps of the arguing process, when each side starts to argue over an object. The reason for this focus is mostly methodological. It would have been extremely difficult to study the “enshrining step”, as the major debates concerning UAVs are still ongoing. This has prevented us from analyzing in detail (and with a necessary distance) how the different arguments would be finally instrumentalized to enshrine one interpretation at the international level.\textsuperscript{2} Yet, this case study of UAV still reveals interesting insights on when a certain form of constraint starts to appear and modify the state’s practices (i.e. first step of the enshrining process). By analyzing the arguing process over UAVs, this chapter reveals the four following points:

First, actors started to argue over UAVs only after the third intensification in the trajectory of the weapon, which coincides with the first months of Obama’s first mandate. It is hard to know whether this timing is consequent to the intensification in the use of one specific type of UAV (precise targeting UAVs) or if it is rather correlated with other factors linked to this intensification (domestic pressure, context of utilization). In any case, it shows that the

\textsuperscript{1} With this regard, see the very stimulating article GILLI, Andrea and GILLI, Mauro, The Diffusion of Drone Warfare? Industrial, Infrastructural and Organizational Constraints (April 16, 2014). Available at SSRN: http://ssrn.com/abstract=2425750 or http://dx.doi.org/10.2139/ssrn.2425750 that contests this common view.

\textsuperscript{2} It would have been interesting to draw different scenarios for the possible future of this enshrining step. This could have helped us to think about the interpretation of fighting justly that was more likely to be enshrined in the following years.
intensification in the trajectory of a weapon (i.e. that occurred in 1982 and in 1990s) does not always entail the development of an arguing process at the international level.

Second, the beginning of the arguing process over UAVs coincides with a shift in US utilization of UAVs. If the traditional explanations (cost, efficiency, international pressure) do highlight why the Obama administration increased and then decreased its utilization of UAVs, they do not explain the timing of this shift. Why did the Obama administration start to reconsider the cost and the efficiency of UAVs precisely in the aftermath of 2012? The chapter demonstrates that understanding the different perceptions of the meta-norm of fighting justly is essential to understand when a weapon or a doctrine of utilization is held as efficient, cost-effective, and practical to use. The timing is explained as followed: the arguments deployed by the Obama administration in response to other actors’ inquiries over their use of UAVs (including those of NGOs) were based on interpretations of laws of war that were ambiguous and controversial. The arguing process made salient the flaws of their arguments. This lack of clarity and persuasiveness in their interpretations of the meta-norm of fighting justly ended in undermining the very coherence of their military strategy. It indirectly ‘constrained’ them to provide new justifications as to their strategy. It shifted their burden of proof. Eventually, this shift in the burden of justification incentivizes actors to change and decrease the intensification of their practices, so that they do not blatantly violate the meta-norm of fighting justly.

Third, this chapter also demonstrates that the arguing process produces new ambiguities. While arguing over UAVs, actors had to discuss and remold the traditional principles of distinction and proportionality. In that sense, the case of UAVs clearly highlights how certain technologies might resist the extant categories of war. As a result, actors try to overcome this resistance by refining or forcing categories, mostly in order to dissipate potential ambiguities. In the case of UAVs, by proposing interpretations to clarify ambiguities in the principle of distinction, actors have increasingly stalemated the meta-norm of fighting justly into a paradox that undermines its overall coherence. The case of UAVs reveals the paradox of precision: weapons are required to be more and more precise to be legal. Yet, this call for precision only makes more salient the complexities – and the profound limits - of the category of combatants. The clarifications gained on one principle are lost in another one.

Fourth, and this is the most significant contribution of this chapter, the arguing process over UAVs is not only remolding the meta-norm of Fighting Justly. It has also transformed the
meta-norm of Waging Just War.¹ Arguing over UAVs has contributed in challenging the pillar principles of this other meta-norm (constitutive with Fighting Justly and Jus Post Bellum of the Just War meta-norm). These are just cause, proportionality and self-defense. It has notably considerably stretched the grey area between war and intervention, and, consequently, war and peace. In fine, this extension of the grey area has blurred the conditions under which the laws of war might be applied – and therefore undermines the overall coherence of laws of war. If the arguing process has undoubtedly dissipated ambiguities on the level of the distinction soldiers should reach while targeting combatants, it has clearly created new ambiguities as to when the person they are targeting can be arguably qualified as combatant (and in sum on when soldiers are required to target with a high level of precision). So, if the arguing process has clarified the principle of distinction, it has undermined its very raison d’être.

Definitions: what is an Unmanned Aerial Vehicle?

As the first lines of the chapter suggest, UAVs compose a wide variety of models. What are the common criteria shared by all of the weapons classified as UAVs? What is the unifying factor between all of them?

To answer these questions, the chapter will use the DOD definition which portrays UAV as a:

“powered, aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry a lethal or nonlethal payload”².

This definition draws four sufficient conditions a vehicle has to meet in order to be accordingly qualified as a UAV: absence of human operator on board (1), vehicle that is able

¹ See the theoretical chapter for more clarifications on the meta-norm of “waging just war”. This meta-norm refers to Jus Ad Bellum, that is the conditions under which a waged war can be qualified as just. With the meta-norms of Fighting justly (Jus in Bello) and Jus Post Bellum, it constitutes the meta-norms of Just War.

to fly autonomously or driven by forces (2), that can be used at least several times (3) and that is potentially lethal (4).

**First sufficient condition: Absence of human operator on board**

The first condition sufficient for a vehicle to be qualified as UAV is the absence of a human operator inside the vehicle. This condition does not mean that the vehicle is driven and maneuvered without human assistance. Rather, it means that the control of the vehicle does not take place inside, but outside of it, generally during two different time-periods. UAVs can either be controlled before their deployment via the utilization of a time-clock mechanism. This was notably the case with hot-balloons full of explosives that were “programmed” by men to launch explosives at specific moments, and that were oriented in a specific direction. During the flight of these balloons, there is no control exerted by humans, and no human is onboard. Another possibility is that human control can be exerted while the vehicle is flying. During World War II, some planes were entirely maneuvered (even if with a limited precision) via gyroscopes manipulated by men on the ground. The same principle applies now with recent UAVs such as Predators or surveillance drones. Pilots, gathered in hangars, control them during their whole flight via remote controls. The difference between the two lies in the fact that pilots have a better visibility, as they can drive with the aid of a screen that broadcasts what the camera fixed on the UAV releases.

In either situation, human pilots or operators drive the vehicle. Humans remain included within the loops of decisions. This point will be further developed in the following sufficient condition.

**Second sufficient condition: Autonomous fly or driven by forces**

This sufficient condition clarifies two points.

First, the category of UAV does not include as worthy of study those autonomous weapons that are not specifically designed to fly. The analysis excludes all the remote control weapons that are used within water (such as torpedoes, which were launched for the first time during WWI) or on the ground (such as the remote weapon stations, weapons designed to carry soldiers’ weapons, to dig or clear the ground of mines).
Secondly, the vehicle has to fly autonomously. Contrary to what the word suggests, it does not mean that the weapon flies in a totally independent way, without any sort of human assistance. As explained previously, humans remain inside the loop of decisions.¹ In the end, they remain the fundamental impulse of the UAVs’ actions.

Yet, and this point will be discussed further in this part, the “on-the-loop” debate is extremely controversial. The impact of humans on hot-air-balloons is easy to measure for two reasons. It is limited in time (humans merely impact before the launching). Humans are also obviously the necessary condition for hot-air-balloons to strike. Without humans, the balloon remains on the ground and cannot strike. The idea that humans are necessary for the functioning of flying vehicles, in the other hand, is being increasingly challenged. The human impulse is now sometimes extremely limited, reduced to a very limited number of actions (sometimes confined to two decisions: should we or should we not launch the flying vehicle? Should we or should we not strike?). If the human impulse has been ever more reduced, in terms of significance and of impact, is it still accurate to pretend that these weapons are not independent but fly autonomously? Or do they fly independently? If they fly independently, do they not become very similar – if not identical - to robots, in war?

Third sufficient condition: Re-usable weapons

The sufficient condition named “re-utilization” excludes de facto weapons that cannot be re-used after having achieved their tasks. This clearly refers to a category of weapons that are not eligible to be included in the category of UAVs: they include ballistic or semi-ballistic vehicles, cruise missiles or artillery projectiles. If these weapons possess all of the three other sufficient conditions (autonomously fly, no human on board, potentially lethal weapons), and thus could be qualified as UAV, their destruction is inevitable. Their destruction generally constitutes the condition of the success of the targeting. They cannot be used – and are not programmed to be used - more than once. Hot-air balloons – which this chapter qualifies as

¹ In that sense, a weapon that autonomously flies might not be autonomous, defined as « a weapon system that, once activated, can select and engage targets without further intervention by a human operator” by the DOD in US DEPARTMENT OF DEFENSE, ‘Autonomy in weapon systems’, Directive 3000.09, 21 Nov. 2012, p. 13.
UAVs - can be re-deployed. On the contrary, missiles are designed to explode. It is impossible to use them more than once. Missiles thus cannot be qualified as UAVs.

This sufficient condition does not exclude vehicles that possess the three other conditions but that are incidentally destroyed while achieving their tasks, such as UAVs that have been shot down, or UAVs that have malfunctioned, and because of that, have been destroyed.

**Fourth sufficient condition: Potentially lethal weapons**

This sufficient condition questions the utility and goals behind the use of UAVs. Are they solely designed to target? The condition that the vehicle should be “potentially lethal” indirectly assumes that the UAV can achieve other tasks. It can target, bomb, launch explosive weapons, and in this perspective, be lethal.¹ But a UAV can achieve many different missions that do have not a lethal objective. UAVs are often depicted as achieving two sorts of goals: either targeting, or gathering intelligence via surveillance. Yet, history proves that UAVs also complete other tasks, often ignored by the literature, such as decoying or marking.

**Roadmap**

This chapter will first retrace the trajectory of the utilization of the UAV, from its first deployment on the battlefields to the recent year of 2014 (1). It will then focus more particularly on what might be measured as the most significant shift in this trajectory: the Obama administration’s intensive recourse to UAVs from July 2010 to March 2013 (2). The third part aims at understanding this significant increase in the utilization of UAVs, notably by testing the three common hypotheses of efficiency, cost and international pressure. It demonstrates that the meta-norm of fighting justly – and more specifically the arguing process over it – highlights why this variation happens precisely in the period between 2010-2011 (3). The fourth part details the arguing process, and more particularly how the arguing process over UAVs is questioning and refining not only the meta-norm of fighting justly, but also that of just war. (4) The fifth and last part analyses the symbolic power attached – or not - to UAVs (5).

¹ This category of UAVs (i.e. UAVs able to target and strike) is sometimes designated with the acronym UCAV (Unmanned Combat Air Vehicle).
Part I- The trajectory of unmanned aerial vehicles

The contribution of tracing the trajectory of UAVs

The contribution of retracing UAVs’ trajectory is threefold.

First, the deployment of UAVs within the battlefield is not a recent practice. The sudden attention from IR literature often leaves us with the false impression that the use of UAVs is a new and unprecedented phenomenon of war. In reality, belligerents were already using hot balloons full of dynamite in 1849. The first massive deployment of drones –the most commented on type of UAVs – was not in the aftermath of 9/11 by CIA, but rather during Operation Peace in Galilee in June 1982, by Israel. Many other examples could be provided to show how little known, how counter-intuitive is the trajectory and the history of the UAV. Confronting the conventional wisdom, the trajectory depicted in this chapter shows when and which types of UAVs have actually been used.

Secondly, and to complete the first point, UAVs are of different types, tasks and uses. Hot-balloons full of explosive, kites with photographs, Firebees, Predators, micro air vehicles, etc... all these can be accordingly qualified as UAVs. This variety of instruments echoes a variety of tasks that the existing literature generally dichotomizes, between surveillance (photographing, live broadcasting) and targeting (firing, bombing, exploding). Yet UAV can achieve other tasks, such as decoying, marking, etc. These contrasted examples of UAVs are difficult to encompass within a single trajectory. The existing literature often covers up the diversity of tasks and the wide range of UAVs, which considerably vary in terms of precision, and accuracy. Consequently, the fact that many UAVs have been used despite a significant lack of precision and reliability in the past is often left unquestioned.

Thirdly, it reveals that, contrary to what the common view holds, the utilization of UAVs has not started to intensify since the 2010s. This is not to say that the number and varieties of drones did not significantly increase at this time, especially after Obama’s inauguration. But two qualitative shifts in the UAVs utilization can already be observed before this date. The first deployment of UAVs that had a significant impact within the battlefield took place during Operation Peace in Galilee. Israel used a dozen of its UAVs in surveillance and decoying missions. This is the first time that UAVs were so recurrently deployed within the battlefield
and, more importantly, so integrated within the arsenals. The second qualitative shift concerns the US and their use of UAVs, mostly as surveillance tools, during the Gulf and Yugoslavia wars. Those two conflicts shed a new light on UAVs, perceived as very useful weapons, able to engage without intervening, to maintain peace without counting on ground forces. The third qualitative and quantitative shift of 2010 (Obama’s first mandate) will be described in the next part.

In a nutshell, a retracing of UAVs’ trajectory also dismisses a common view about their utilization, which holds that drones have always been well integrated within armies, that they were developed in the aftermath of 9/11, and that their task is limited to striking.

**The limits of UAVs trajectory**

Even though retracing UAVs trajectory helps us to gain a better understanding of the variations in their utilization, the exercise in itself has its pitfalls. More specifically, it has two limits: a lack of data (1) and a reluctance to publish data (2).

Indeed, UAVs have only fairly recently aroused the attention of observers. For example, their utilization during the Vietnam War and other conflicts is poorly documented. Therefore, several mentions of UAVs in this trajectory could not have been cross-checked, especially the older and rarer ones.

Moreover, there is no official record on the productions and utilization of UAVs, especially the recent models. The release of these data is the subject of a major dispute today, which roughly opposes two sides: those who believe that holding them in secrecy is necessary (and generally invoke national security reasons) and those who don’t. More generally, the choice of releasing data on UAVs seems to vary considerably, depending on states and types of utilization. Therefore, a large part of our data relies on independent investigations, which themselves rely on unverified assumptions and premises. The other part of our data comes from the very rare historical monographs on UAVs and from newspapers articles discussing specific utilizations of UAVs.

For these two reasons, the trajectory of the UAV here depicted has lacunas. It does not pretend to faithfully and exhaustively retrace all the uses of UAVs. Rather it attempts to retrace uses that have, at a certain point, been both recorded and documented.
The UAV’s prehistory

The first UAVs emerged in the 19th century in a civilian context

The deployment of pilotless aerial devices was a latent aspiration shared by many military strategists and scientists. Historiographies on drones diverge on which event constitutes the first actual flight of an unmanned aerial device. This divergence is due to the different assumptions held by authors as to what constitutes a functioning aerial device, which goal it ought to achieve, and which criteria define a successful flight.

One of the first attempts to build a functioning pilotless device came from George Cailey in 1804. He created a fixed wing glider that could successfully fly pushed by the wind stream. Forty-four years later (in 1848), in England, John Stringfellow built the first pilotless and motorized aerial vehicle, and called it the “Aerial Stream Carriage”. His vehicle could fly on its own, without the wind. A French engineer named Du Temple realized the same exploit in May 1857. These three examples are often recalled as the starting points of the history of UAVs, in several books and studies, even though none of them took place within a context of war.  

The first use of targeting UAVs within the battlefields: the First Italian War of Independence (1848) and the hot balloons

The first war during which unmanned aerial devices were used was the First Italian War of Independence (1849). On August 22, the Austrian Army deployed hot-balloons carrying baskets full of explosive, in the prospect of destroying Venice. The Austrians were controlling approximately 200 balloons that were supposed to launch explosives on Italian positions, thanks to a time-fuse mechanism. Several years after, both Union and Confederate Forces used similar types of UAVs, then called Perley’s Aerial Bomber. The impact of those balloons on the battlefield seems yet to have been very minimal, as many balloons flew in wrong directions or failed to drop their explosive charges.

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The first surveillance UAVs: the Spanish-American War and the kite

If hot-balloons were used with the prospect of targeting, other unmanned aerial devices were employed in surveillance missions. Corporal William Eddy deployed a kite that was used in 1989 during the Spanish-American War. Based on the system elaborated by Douglas Archibald, the kite could take photos via a shutter release attached to the string. William Eddy could take approximately a hundred photographs, which allegedly provided valuable information on adversaries’ positions.

All those examples fit into the “pre-history” of the UAV, in that they all identify devices that were very hard to guide, drive and manoeuvre, even if they achieved the tasks they were designed for. This weakness with regards to precision had begun to be addressed and mitigated by scientists on the eve of WWI via, *inter alia*, the development of radio and aviation.

The invention of remote controlled aerial vehicles and their absence in World War I

The history of the unmanned aerial device has been heavily influenced by the development of radio. Radio allowed scientists to conduct vehicles at distance by remote control. It thus dramatically accelerated the development of UAVs. In 1898, Tesla exhibited his remote control engine called Teleautomaton at the New York Madison Square Garden. If the scientist did not catch the attention of American militaries, in the sense that the latter did not commission any of these UAVs, Tesla created the first aerial vehicle that could be remotely controlled with a decent precision. Ten years after Tesla, a French artillery officer named René Lorin also conceived an aerial vehicle that could be controlled by radio. The vehicle did not

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1 It is not very clear whether William Eddy was a civilian (a journalist) or a Corporal. Articles and history manuals differ on this point.

prove to be reliable and precise enough (at least in the eyes of French militaries) to be used during World War I. The US Army did order large quantities of an aerial vehicle called “Kettering Bug”, able to carry a 300 pounds bomb. Yet, by the end of WWI, no unmanned aerial vehicles had been deployed on the battlefield. If the US Army did use some remote controlled vehicles called torpedoes, they were designed to move and strike solely under water.

### World War II, the (massive) return of hot balloons and the tactical failure

The inter-war years and World War II had been very productive periods for unmanned aerial weapons, such as missiles, torpedoes, etc. Yet, those weapons cannot be qualified as **UAVs stricto sensu** because they did not meet the defining criteria of re-usability.

The first significant development of targeting UAVs occurs in 1944. Approximately 9,000 Japanese hot-balloons full of explosive devices were launched from Japan in the prospect of reaching and bombing the United States’ west coast. Japanese experts were expecting that the hot-balloons could reach the west coast in between 30 and 60 hours. The first balloon was sent on November 3, 1944. If this mission now seems at best extremely optimistic, the Japanese genuinely thought those hot-balloons could inflict some damage on their American enemy before WWII ended. This event is remarkable for two reasons. First, it demonstrates a certain faith in the use of UAVs in combat. Several facts support the idea that sending those hot-balloons was not a cheap action (i.e. an action undertaken because of its low cost and with the assumption that it would likely fail without causing harm). Those thousands of balloons required an important logistic support that was expensive (even though still far less than many other weapons), as well as time and infrastructures. The program was cancelled only when hydrogen plants were destroyed, making the production of hot-balloons impossible. Secondly, and remarkably, the US national press refused to release any kind of information on this event. This silence is surprising. The US press could have favored prevention and advertised the necessity to be cautious about approaching the balloons. At the time, Americans had indeed no clue as to how many Japanese hot-balloons actually reached US territory and could constitute a serious threat. Therefore, advertising them would have helped people to stay away from them and to considerably diminish their propensity to be lethal. The second remarkable point of this silence is that US newspapers could have advertised and broadcast the fact that this attack
turned out to be a huge tactical failure. Indeed, very few Japanese hot-balloons successfully reached US territory. They killed seven persons, now recalled as the sole WWII victims killed on US territory.¹ The hot-balloon strikes could have been used as a symbol of Japanese failure or cowardice. Yet newspapers did not advertise this attack. This choice is remarkable and might be accordingly interpreted as the first manifestation of the fear aroused by UAVs.

In a nutshell, very few UAVs had been actually used during World War II. While they might have a given rise to a certain fear (as the Japanese hot-balloons episode seemed to prove) UAVs utilization remains anecdotal in terms of tactical and strategic impact. Nevertheless, it seems that in the aftermath of WWII, UAVs saw development, and a growing popularity among both US and Israeli armies.

The slow rise of the Remotely Piloted Vehicle within US and Israel’s armies

The US, the Firebee and Vietnam

The Firebee (also named BQM-34) was the most frequently deployed UAV of the decolonization area. The US military defines the Firebee as “a remotely controlled target drone powered by a turbojet engine, that achieves high subsonic speeds and is designed to be ground launched or air-launched.” Firebee is the direct product of a US Air Force bid launched in 1948, which was looking for a “ground-to-air and air-to-air gunnery and missile training” and which was won by Ryan Aeronautical Co.² Deployed for the first time in 1955, Firebees were designed for two missions.³ First, they were deployed as decoys aimed at diverting enemies’ firepower. If many of those UAVs ended up being struck by a missile, a large part of them could have been re-used, thanks to an ingenious system of a parachute that was automatically deployed before reaching the ground. Firebees were also used as flying targets, for US pilots in

¹ Those seven victims were five children that were playing with the balloon and their pregnant primary school teacher – also mentioned as the pastor’s wife – who was playing with them. See in RIZZO, Johnna. “Japan’s Secret WWII Weapon: Balloon Bombs.” National Geographic, May 27, 2013. http://news.nationalgeographic.com/news/2013/05/130527-map-video-balloon-bomb-wwii-japanese-air-current-jet-stream/. and MIKESH, Robert C. Japan’s World War II Bomb Attacks on North America. Smithsonian Institution Press. Vol. 9, 1973.

² See DICK, Smith, Aviation History, 7/1/2007, ISSN: 1076-8858, Volume 17, Issue 6, p. 12

³ Many UAVs were further modeled on the US Firebee, such as the Chinese Hai-Ying 4.
training. The second mission of the Firebee was to gather intelligence, and undertake surveillance missions. Firebees called “Lightning bug” generally undertook those missions. They were not entirely similar to the decoying Firebees, being transformed and improved versions. Lightning bug operated approximately 3452 combat sorties during the whole Vietnam War.¹

In a nutshell, the first significant utilization of UAVs on the battlefields was aimed at gathering intelligence and decoying. If finding reliable records on the exact quantity of Firebees deployed during the Vietnam War is extremely complicated, it seems that an average of one drone mission was flown each day.²

Conclusions drawn by the US Army on this first massive utilization of a specific type of UAV – the Firebee – had oscillated between skepticism and optimism. On the one hand, many doubted that UAVs could be a reliable weapon. UAVs had experienced many malfunctions. Many were shot by enemy fire, while a significant number of them were diverted by enemy radio control. On the other hand, UAVs seemed to have achieved a certain form of curiosity – if not popularity -within US Army. The Vietnam War did not lead to the exclusion of UAVs from the US arsenal. On the contrary, Firebees were kept, and they have been constantly improved and re-designed until very recently (2002).

The first integration of UAVs within an Army and the starting point of a new industry: Israel and Operation Peace in Galilee (1973)

The first significant utilization of UAVs in the post 1945 era started after the second day of Israeli Operation “Peace in Galilee” in 1973. Following the path opened by the US with the Vietnam War, and apparently impressed with the results the US obtained with Firebees, Israel secretly purchased from the US a dozen Firebees in 1970. Israel then deployed them in various missions, from surveillance, to the prospect of diverting soviet missiles and blurring radar missiles bought by Egypt and Syria.


The deployment of Firebees during the Peace in Galilee Operation is commonly regarded as a success, due partly to the fact that many observers regard Operation Peace in Galilee as a major tactical and strategic success. Firebees undoubtedly received positive attention from Israeli Army and Industry at this moment. In the aftermath of the Operation there emerged powerful national industries able to replicate Firebees, but also to create new types of UAVs. Israel Aerospace Industries (IAI), a very large Israeli Defense Company, started to develop a new type of surveillance UAV called Scout, which sent back real-time pictures of several Syrian surveillance systems in Lebanon. At the same moment, and in reaction, another large Israeli industrial group, Tadiran, developed the concurrent UAVs model Mastiff.

These two creations from Israeli big industries are crucial to an understanding of the post 70s trajectory of UAVs. One of the most popular and used UAVs, called the Pioneer, has been regarded as the natural legacy of both the Mastiff and the Scout. IAI co-jointly participated in its production with the US AAI Corporation. Israel also started to export its production, to other states.

The beginning of a new era?

After the 1970s, the trajectory of UAVs began to be closely intertwined with both US and Israeli industries, and armies. The trajectory of UAVs from 1945 to 1980 reveals four points. First, UAVs that take the form of drones had been strictly used as decoys or surveillance gatherers. In contrast, hot-balloons had always been used for their striking power. Actors could rapidly detect whether the UAV would target, or whether it would have more passive missions (decoying and surveillance do not lead to firepower). Secondly, US factories were the only ones to produce UAVs so far. It seems that the American monopoly on the production and development of UAVs slowly eroded with the Israeli concurrence in the aftermath of Peace in Galilee. Yet, before 1975, the US and Israel had been the only ones to use UAVs. Thirdly, UAVs had been merely deployed against military positions in a context of declared war. Finally, until 1970, UAV utilization within the battlefield had remained the prerogative of democracies.

These four elements are emphasized here because they would drastically change in the following era, and more particularly during the 1990s.
The 1990s, the development and integration of surveillance UAVs within the striking process

The First Gulf War and the Pioneer

1990s turned out to be years of fruitful collaboration between the US and Israel for the development of UAVs. AAI and Israeli Aircraft Industries joined forces to produce the Pioneer, a performing surveillance UAV.\(^1\) The Pioneer was first deployed for the second phase of the Gulf War, during Operation Desert Storm (17 January 1991-28 February 1991). At the end of this war, 40 UAVs had been deployed for a computed total number of 552 sorties and 1,641 flight hours.\(^2\) These missions were mostly aimed at supporting naval combats with surveillance and damage assessments missions.

The First Gulf War and beginning of the tactical impact of UAVs (1991)

One of the most crucial episodes of UAVs utilization in the Gulf War took place on 27 February 1991. A Pioneer discovered that two Iraqi patrol boats were heading toward Faylaka Island (Kuwaiti island). Iraqi patrollers rapidly realized that a Pioneer had localized and followed them. The Iraqi soldiers’ reaction was surprising. Instead of attempting their initial task (reaching Kuwait) or of retreating, they preferred to immediately surrender. These Iraqi patrols had been previously exposed to Pioneers. They knew that their surveillance missions were generally followed by an armed attack, generally a strike coming from air or sea. The Iraqi soldiers preferred to surrender “preemptively”. This surrender is often recalled as the “first known surrender of enemy troops to an unmanned vehicle”.\(^3\)

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1 As explained in the previous paragraph on Operation Peace in Galilee, the Pioneer is the improved fruit of the combination of two Israeli drones, the Mastiff and the Scout.


Far from being anecdotal, this event reveals two significant changes regarding UAVs’ utilization and perception. First, in contrast to their use in Vietnam, UAVs became with the First Gulf War highly reliable surveillance means. It is precisely because Iraqi patrols knew that UAVs would correctly achieve their tasks (i.e. releasing images of a potential target or danger to the closest base) that they immediately surrendered. Secondly, UAVs were increasingly integrated within the targeting process. Pioneers did not have the capacity to strike, but they provided live images, which were immediately exploited. In other words, their release of the images constituted the first step of a more general process of identification that aimed at targeting potential enemies or threats. In that sense, UAVs were increasingly involved in the process of decision making during the combat.

Eventually, the US Army and Marine Corps perceived the Pioneer as a very useful support for their aerial and naval attacks. The DOD final report on Operation Desert Storm, released in April 1992, states that “the Navy Pioneer UAV system’s availability exceeded expectations.” The numerous DOD reports on the Gulf War certainly show that the different operations undertaken during this conflict are commonly perceived as tactical and strategic successes. One of the reasons for this success is attributed to the “revolutionary new generation of high-technology weapons, combined with innovative and effective doctrine” that “gave our forces the edge”\(^1\). The report does not explicitly state that the “high-technology weapon” category refers to the Pioneer. Yet, it seems reasonable to think that the Pioneer falls into this category. If it is not the only one, the weapon represents a real high technology achievement when associated with air and naval equipment.

The First Gulf War seems to have substantiated the belief – at least among US Army and Marines - that UAVs were an efficient means of war for two reasons: they provided valuable intelligence, and they considerably shortened and improved the process of firing. The DOD supports this claim in one of its reports that identifies the first upcoming challenge for the

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DOD as being to “retain our technological edge out into the future”\(^1\). All these facts evidence the acceleration of the development of UAVs that followed the First Gulf War.


A wide range of UAVs, from Pioneers (previously used during the First Gulf War) to RQ-5 Hunter and RQ-1 Predator were deployed during the Yugoslavia Wars. The aftermath of the First Gulf War saw the development of Pioneers, but also of a new type of drone, namely Hunter and Predator. If these drones differed from the previous Pioneer models in their shapes and weight, they did not really offer new functionalities. Not able to strike, their uses were still limited to surveillance missions. The situation changed slightly at the end of the conflict. The US Air Force equipped some of its Predators with laser designators. This equipment enabled the drone to mark the targets with laser. Yet, because it was conceived in the last moments of the conflict, the newly equipped Predator was never used during the whole period of the combat in Yugoslavia\(^2\)

Each of the three drones was deployed at various time and in various locations during the conflict. Pioneers were massively deployed at the end of the Yugoslavia wars, in 1999, in Serbia. Some sources also state that a Marine squadron deployed seven Pioneers in support of several US operations in Bosnia from 1996 to 1997.\(^3\)

The RQ-5 Hunter was used in the same place and at the same time as the Pioneer, that is in Serbia at the end of the conflict. The first UAV to be used during the conflict was the RQ-

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1 Predator. In 1995, it was deployed in Bosnia-Herzegovina during the Provide Promise operation.¹

It seems that the US Army and Marines were in favor of using those UAVs because they could wage surveillance missions at an altitude never reached before. This option was extremely valued, especially during this conflict, as visibility in these areas was considerably lower than it was in the sunny and dry plains of Kuwait. Satellites were indeed hampered in their transmission of decent images of the locations because of the bad weather.² Drones were not, and did not endanger the lives of pilots. Even if on several occasions drones were kept grounded while they were needed, it seems that actors generally perceived drones as extremely useful in those reconnaissance missions.³

What the trajectory reveals: the 1990s as a qualitative shift in the use of UAVs

The two 1990s conflicts have three common points. First, both are mainly regarded as tactical and strategic successes. These successes are largely attributed to the capacity of the US to strike rapidly and precisely. As will be demonstrated within this development, drones clearly epitomize this new capacity (1). Secondly, both conflicts are mainly driven by the US – even if backed by a UN coalition. This US leadership is of importance to an understanding of the ensuing trajectory of drones (2)⁴. Finally, both conflicts can be analyzed as a sort of turning


⁴ The US is not the only state that has influenced UAV development. Israel, which has also been using UAVs since Operation Peace in Galilee in 1982, has also played an important part. Yet this chapter will more precisely focus on the US trajectory because the US has been more vocal of its utilization of
point in the quest for legitimacy, in the eyes of the domestic and of the international community (3). This quest will objectify the drones as a dual instrument by which to gain legitimacy. First, drones are portrayed as the possibility to intervene without engaging. They create the possibility to wage war without having soldiers killed (3a). Secondly and conversely, they are also presented as offering the possibility to wage war without killing any civilians. The strategic success is – during and after those conflicts – strongly associated with the necessity to mitigate as much as possible collateral damages and civilian casualties (3b). Yet, drones also started to arouse a certain suspicion, if not opprobrium, among certain actors (civil opinion but also military). After these two conflicts came the first substantial debates on the legal and ethical implications of the general employment of drones on the battlefield (4).

A greater number and a wider variety of surveillance UAVs within battlefields

First, two factual observations: from the Gulf War to the Yugoslavia wars, an increasing number (1) and a wider range (2) of drones have been used. Drones are more present on the battlefields, and more developed than ever. More importantly, the perception of their tactical utility has shifted, from being regarded as an object that could achieve some risky surveillance missions (Vietnam), to the image of a weapon that provides precious intelligence and considerably improves the strike capacity of planes and jets. In contrast to the 1980s, the capacity of drones to decoy seems to be underscored by actors, who prefer to envision and promote UAVs for their capacity to wage surveillance missions and accelerate the strike process. Moreover, official reports released on those conflicts unanimously praised the capacity of armies to strike rapidly and precisely, constituting the first stone of their strategic successes. All the reports also recommend the US to develop their technological advantages, understood as their capacity to rapidly localize their targets, and to strike them precisely. In that sense, drones epitomize this new technological advantage.

French militaries especially were very skeptical with regards to the introduction of UAVs in their arsenal.
In both conflicts, drones were strictly used as surveillance means that released images exploited by US armies. Because drones are the only vehicles that could provide information of such quality, they were regarded as major tactical assets.

The US leadership and the trajectory of drones

This thesis does not aim at highlighting precisely how US leadership influenced other states’ practices in the 1990s, including utilizations of UAVs. Answering this question needs much more time and space than this chapter offers. Therefore, our concern in this chapter cannot be to measure thoroughly the influence of the US on the worldwide utilization of UAVs. Yet, it seems very likely that the prominence of the US militaries in the NATO operations contributed in shedding light on UAVs, and on socializing other coalition states with the use of UAVs. Moreover, the utilization of US UAV’s abroad, in territories that are not United States, might have provided a very important visibility to the US utilization of drones. Unlike Israel, which barely publicizes its utilization of UAVs, and which rarely uses it outside of its own borders, the United States often publicly comment on their utilization of UAVs. In that sense, the US have contributed to building their image as a leader in the utilization of UAVs.


2 In the aftermaths of the First Gulf War, Germany started to acquire and even used UAVS during Yugoslavia War. See FITCHETT, Joseph. 1999. “Germans Perform Army, Navy and Air Missions in Balkans: Dealing Again With War.” The New York Times, April 22. http://www.nytimes.com/1999/04/22/news/22lht-rforeign.t.html. It would be interesting to see whether other members of the European Union, such as France, or the United Kingdom, developed the same type of behavior.
The post 1990s discourses on UAVs: a weapon that promotes and fits with the ideology of zero soldiers and of zero civilians killed

While the deployment of UAVs was not a recent practice, the 1990s military discourses largely conveyed the idea that UAVs represent a double innovation. An innovation that enables actors to intervene without engaging (1) and that capacitates democratic armies in reaching the dual objective of zero soldiers killed and zero collateral damage (2).

During war of Yugoslavia, American and European statesmen had been extremely vocal in their dual desire to preserve both their own troops and Yugoslavian civilians. The desire to preserve one’s own troops had already been publicly expressed, especially after WWII, during the Korean and Vietnam wars. Therefore, the reiteration of this concern during and in the aftermath of the 1990s wars was not surprising. Yet, the inclusion of UAVs within this discourse is unprecedented. UAVs were depicted for the first time as a useful and precious medium in the achievement of zero soldier and civilian casualties.¹

More surprising are the declarations of coalition states valuing and praising the necessity for their troops to be extremely cautious towards Yugoslavian civilians. These declarations were largely followed by actions undertaken with a rigorous attention to avoid hurting civilians. These actions include the refusal to strike without an absolutely clear visibility, and the beginning of a close collaboration with lawyers on the ground. These actions – sporadically implemented in previous conflicts – seem to raise caution to a level that has never been reached before, especially in the eyes of the military.² A myriad of testimonies recall that many new incumbent limitations were imposed upon soldiers.³


³“I suspect military commanders are somewhat frustrated over the limitations that are being put on them,” said Gen. Charles Horner, a retired Air Force officer who directed the 1991 Persian Gulf air
The 2010 shift in trajectory of UAVs

The Gulf and Yugoslavia share common characteristics. Both conflicts have led to a significant integration of UAVs in combat maneuvers. Both conflicts have also revealed shifts in the perception of UAVs. UAVs now might incentivize soldiers to surrender. Surveillance missions waged by UAVs are at the core of post war accords.¹ Statesmen value the capacity of UAVs to “intervene without engaging” (even though the limits of this ‘possibility’ have been increasingly discussed). Yet, some dissonant voices also started to rise, underlining the potential difficulties in apprehending UAVs in the future. Are they a new type of performing satellite, a new type of bombing at distance weapon, or a new weapon that offers new possibilities, but that also might suscitate new ethical problems?

The 1990s saw the utilization of UAVs in a new region (the Middle East) and within a new set of armies (NATO). UAVS had been increasingly integrated within military forces, essentially for reconnaissance missions and for accelerating the targeting process. The qualitative shift would be followed by a dramatic quantitative shift at the beginning of the 2010s. Obama’s administration was going to use UAVs intensively, repetitively, in countries it was not officially at war with, and for missions (i.e. direct targeting) it had never had to achieve before. The following part will describe this crucial moment in the UAV’s trajectory.

Part II - The Intensification of the Utilization of UAV under Obama’s First Mandate


Why focus on US utilization of UAVs?

The US deployment of UAVs on the battlefield would undergo a dramatic intensification on the eve of 2010. If many different states had used UAVs in the aftermaths of the Yugoslavia wars (United States, UK, Germany, France, Israel and also Iran), the following part focuses solely on US practices of war, for three reasons.

First, the US is the state that has deployed the highest number of UAVs since 1990s. This peak in the utilization of UAV is a salient variation that contrasts with the rest of the UAV trajectory. Therefore, understanding the drivers of this variation seems necessary in order to answer our first puzzle (i.e. does the meta-norm of fighting justly explain variations in the practices of war?)

Secondly, the US utilization of UAVs has concentrated attention, and created ambivalent feelings among the traditional actors who argue over the meta-norm of fighting justly (namely NGOs, militaries, members of UN, international lawyers specialists in laws of war). It is the UAV as it has been used by the US that constitutes the starting point of the arguing process analyzed within this chapter. US utilization of UAVS has, so to say, framed the arguing process over UAVS in the post 9/11 area.1

Thirdly, the US has been the first state to deploy sophisticated targeting UAVs, such as the Reapers and the Predators, on the battlefield.2 While it was not the only state to deploy those specific UAVs throughout the 20th century (Israel and UK did, too), international debates on UAVs have largely focused on this type of UAVs, to the detriment of the surveillance or decoying UAVs. Many non-state actors worry that targeting UAVs are becoming the unavoidable future practice of war: hence their actions to limit the current US utilization. In this perspective, it is interesting to focus on the US use of UAVs as it seems to pave the way for many other states.

1 Moreover, a wide range of the Academic Literature that analyzes UAVs also focuses on the US deployment of targeting UAVs. See the literature review of this chapter. Only very few studies extend their analysis to other states, such as Israel. FINKELSTEIN, Claire Oakes, OHLIN, Jens David, ALTMAN, Andrew, eds. Targeted Killings: Law and Morality in an Asymmetrical World. 1st ed. Oxford: Oxford University Press, 2012 stands out as an exception.

2 As opposed to non-sophisticated UAVs such as hot-balloons full of explosive that were used, inter alia, during World War II.
**Roadmap**

The literature review highlights the fact that studies on UAVs have proliferated in the aftermaths of 9/11. Whether those analyses discuss the efficiency of UAVs, their legitimacy or the ethical problems they give rise to, they all seem to converge on one implicit assumption: the proliferation of UAVs coincides with 9/11.

The first section of this part will attempt to substantiate this belief, and therefore examine whether 9/11 represents a significant shift in the utilization of UAVs. It will more precisely demonstrate that the utilization of surveillance and targeting UAVs has in truth intensified in 2010, under the authority of Obama’s administration.

The second section of this part attempts to understand why it was precisely at this moment that UAVs utilization shifted. It will discuss the three hypotheses laid out in the theoretical chapter: the cost based, the efficiency-based and the international pressure hypotheses.¹

The third part will sketch a provisory conclusion, showing that the meta-norm of fighting justly might explain the variations in the utilization of UAVs.

**Methodology**

To measure the intensification of the post 9/11 utilization of UAVs, this analysis uses the following methodology. It will first provide some factual information on the post 9/11 utilization of drones, namely the quantity of UAVs within the US arsenal, but also the number, localization and tasks (targeting, surveillance, decoying) of their strikes. This inventory will be limited for several reasons, the most obvious one being data confidentiality, which as a result invites observers to largely infer. There is no consensus on those numbers, and in that sense, all of the available statistics only partially reflect US practices. That is why we will confront the numbers with independent investigations. This confrontation will provide us with a more accurate idea of the variations in the use of UAVs. Consideration of those variations will help us to determine whether there is actually a significant shift in the deployment of UAVs. So far in our study (until the 1990s), those deployments could have been qualified with the four

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¹ See the theoretical chapter for more detail on those three hypotheses.
following characteristics: largely for reconnaissance missions (1), limited to fifteen-twenty vehicles (2), with a daily mission frequency (one mission every day of the conflict) (3) in a coalition context (4). In the case that the four characteristics intensify or shift in the post 2000 utilization of UAVs, then this chapter will assume that the implicit idea of a significant shift in the use of UAVs is empirically verified.

**Factual information on UAV deployment by the US in the aftermath of 9/11**

In order to substantiate and illustrate the intensification of UAV utilization in 2010, our analysis will rely on the following numbers: the number of UAVs within the arsenal, the number of missions operated with UAVs, and the number of strikes. These numbers are thought to provide a reliable overview of the nature of UAV utilization.

**Number of UAVs within the US arsenal**

The very number of UAVs within the US arsenal has considerably increased since 1990. If the US had between twenty and twenty-five UAVs in the aftermaths of the Yugoslavia wars, 200 UAVs were at the disposal of US Army the day before 9/11. Of those 200 UAVs, it can be realistically inferred that only a very few of them were targeting UAVs. Indeed, the first successful test of targeting UAVs occurred– to a relative disinterest, largely resulting from CIA’s efforts to keep secrecy over this event - in Nevada in 16 February 2001.

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2 Mark Mazzetti tells the following anecdote “The age of armed, remote-controlled conflict had begun with little fanfare. The Air Force issued a short press release, which led to a small story in a local Las Vegas newspaper. A congressman from Nevada called to congratulate the Predator team, but the engineers and pilots were disappointed when a CNN crew that was rumored to be coming to film did not show up. CIA officials had been trying to keep the entire operation a secret and were angry that the Air Force even put out a press release. CNN was never allowed on the base.” in MAZZETTI, Mark. *The Way of the Knife: The CIA, a Secret Army, and a War at the Ends of the Earth*. New York: The Penguin Press, 2013.
In 2011, the US arsenal of UAVs is radically different. There is a total of 1388 UAVs. The majority of those UAVs remain surveillance UAVs, while only 18% of the entire US arsenal is composed of targeting UAVs (255). In a nutshell, the overall number of UAVs has multiplied by more than 6 in 10 years (from 200 to 1388). This number does not include the 6,000 very small short-range reconnaissance systems that allow soldiers to look “around corners” or “over hills”.\footnote{The budget for UAVs is expected to increase by 30%, which allow us to hypothesize with confidence that the acquisition of UAVs will continue to increase throughout the following decade. The following charts provide a more detailed overview of the numbers and types of drones present within US arsenals in 2011 (classified by branches).}

The budget for UAVs is expected to increase by 30%, which allow us to hypothesize with confidence that the acquisition of UAVs will continue to increase throughout the following decade. The following charts provide a more detailed overview of the numbers and types of drones present within US arsenals in 2011 (classified by branches).


<table>
<thead>
<tr>
<th></th>
<th>Hunter</th>
<th>Shadow</th>
<th>Global Hawk</th>
<th>Fire Scout</th>
<th>Total # of Surveillance UAVs in 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Army</td>
<td>20</td>
<td>450</td>
<td></td>
<td></td>
<td>470</td>
</tr>
<tr>
<td>Air Force</td>
<td></td>
<td>14</td>
<td></td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Marine Corps</td>
<td></td>
<td>52</td>
<td></td>
<td></td>
<td>52</td>
</tr>
<tr>
<td>Navy</td>
<td></td>
<td></td>
<td>36</td>
<td>61</td>
<td>97</td>
</tr>
<tr>
<td>Total # of UAV</td>
<td>20</td>
<td>505</td>
<td>50</td>
<td>61</td>
<td>\textbf{1133}</td>
</tr>
</tbody>
</table>


\footnote{If those types of UAVs are included within our calculus, then the number of overall UAVs would have increased by more than 36.}
### Number of missions realized by UAVs

The total number of missions realized by each UAV is impossible to estimate precisely, for obvious reasons of feasibility and confidentiality. The increasing number of UAVs within the US arsenal is a first clue indicating that the recourse to them has probably become more systematic. This hypothesis tends to be verified by interviews with militaries, who stress the omnipresence of surveillance and targeting UAVs on the battlefields (Afghanistan, Iraq) but also within territories that are not at war against the US (Pakistan, Yemen, Somalia). It seems also reasonable to hypothesize that the budget expectations of increasing the overall number of surveillance UAVs within the US arsenal is the direct consequence of a growing demand for, and thus a growing utilization of, surveillance UAVs by the US Army.

Quantifying the utilization of targeting UAVs is easier, mostly because the number of drone strikes the targeting UAVs operate can be recorded. Below is an overview of the number of strikes achieved by UAVs since February 2001, which is when targeting UAVs started to be included within the US arsenal.
Number of strikes achieved by US UAVs

This chart is based upon data gathered by the Bureau of Investigative Journalism.\(^1\)

<table>
<thead>
<tr>
<th></th>
<th>Pakistan</th>
<th>Yemen</th>
<th>Somalia</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total # years of conflict</strong></td>
<td>10</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td><strong># strikes</strong></td>
<td>405</td>
<td>72-84 (^2)</td>
<td>6-7 (^3)</td>
</tr>
<tr>
<td><strong># strikes per year on average</strong></td>
<td>41</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td><strong># killed</strong></td>
<td>2,400-3,888</td>
<td>371-541</td>
<td>1</td>
</tr>
<tr>
<td><strong># killed</strong></td>
<td>9.6</td>
<td>6.44047619</td>
<td>0.142857143</td>
</tr>
</tbody>
</table>

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1 The source is the Bureau of Investigative Journalism. See the weblink [http://opencanada.org/features/the-think-tank/graphics/a-drone-field-guide/](http://opencanada.org/features/the-think-tank/graphics/a-drone-field-guide/).

2 Kreps and Zenco identify approximately 100 drone strikes, that is 20 more than what the chart says.

3 Kreps and Zenco identify approximately 18 drone strikes, that is 11 more than what the chart says.
This chart is based upon the data gathered in the research led by Sarah Kreps and Micah Zenko:\footnote{Numbers caught from the following article: KREPS, Sarah, ZENCO. Micah, “The next Drone Wars, Preparing for Proliferation.” Foreign Affairs, April 2014. http://www.foreignaffairs.com/articles/140746/sarah-kreps-and-micah-zenko/the-next-drone-wars.}

<table>
<thead>
<tr>
<th>Total # years of the conflict</th>
<th>Iraq</th>
<th>Afghanistan</th>
<th>Libya</th>
</tr>
</thead>
<tbody>
<tr>
<td># strikes</td>
<td>48</td>
<td>1,000</td>
<td>145</td>
</tr>
<tr>
<td># strikes per year on average</td>
<td>12</td>
<td>167</td>
<td>145</td>
</tr>
</tbody>
</table>

**Focus on the intensification of UAV utilization under Obama’s first mid-mandate, compared to the George W Bush mandate**
Variations in the utilization of UAVs in ‘the post 2000 years’ are of different magnitude and intensity, according to whether UAV strikes took place under Bush’s, or Obama’s first or second mandate. Notwithstanding the difficulty in gathering reliable data on this issue, several independent researchers have concurred on the fact that the highest number of strikes and surveillance missions with UAVs took place during the opening months of Obama’s first mandate.

The first US strike operated by a targeting UAV (a Predator) occurred on 11 March 2002 in Yemen. The strike, ordered by the CIA, was directed against and killed Al Qaeda member Al-Harethi. Al-Harethi was suspected of having planned the 2000 deadly attack against the USS Cole, a US Navy Destroyer harbored in the Yemeni port of Aden, in which 17 US sailors died. The Bush administration regarded this UAV strike with such satisfaction that it did not resist signalling ‘this success’ to the rest of the international community, to the detriment of Yemen’s credibility. Indeed, ‘Bush officials were so pleased about the strike in Yemen that news of the attack quickly leaked out, puncturing the thin cover story put out by Yemeni officials about the exploding gas can’. If, this time, the Bush administration publicly contradicted the Yemeni cover story of the killing of Al-Harethi, this had not been necessarily the case for previous UAVs strikes. Several studies explain that the first UAV strikes probably took place in Afghanistan in the aftermath of 9/11. Therefore, it is highly likely that this strike against Al-Harethi is, in fact, just the first strike in the official history of US targeted killing with UAVs.

The first US strike operated by a targeting UAV (a Predator) in Waziristan (Pakistan) occurred on 17 June 2004. It was aimed at killing Nek Muhammad, a Pakistani Taliban whom CIA then ranked as a powerful and dangerous leading opponent against governmental Pakistani troops. While several persons surrounding him were killed by the strike, Muhammad suffered from very severe injuries and died on his way to the local hospital. The Pakistani Army was vindicated as the initiator of this strike, as their helicopters and artillery were unable to strike

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with this level of accuracy.\textsuperscript{1} It was only several years after that the US officially recognized its entire responsibility in the strike (The Pakistan authorities are however not cleared of responsibility in the strike because they authorized the US to strike).\textsuperscript{2}

From this first strike until the end of the Bush Presidency (including the end of his first mandate and his entire second mandate), an estimated number of 51 strikes were carried out by targeting UAVs. Approximately 410-595 persons were killed during this period, with an estimation of 167-331 civilians among them. Even though determining the number of strikes per year is slightly artificial (in the sense that it does not take into account what actually happens on the ground, including the number of Taliban killed or neutralized by ground forces), it still provides us with an idea of the willingness of the CIA and President Bush to have recourse to this means. With an average rate of less than one strike per month (51 strikes for 55 months in power), we can hypothesize with some confidence that the Bush Administration perceived the recourse to UAVs more as a last resort than a useful and central weapon with which to combat those they perceived as terrorist groups. The utilization of surveillance UAVs was also very important, but not as systematic as during Obama’s mandate. This assumption is based on two hypotheses. First, many surveillance missions in the first years of the Iraq war were led by Apache helicopters (whose overall number has been slowly decreasing since 2000), and satellites. Secondly, the budget for UAVs was not as important as it was at the beginning of Obama’s mandate. The number of surveillance UAVs – and therefore the number of their missions – was therefore necessary lower than it was during Obama’s mandate.

Indeed, a different conclusion stands out from the analysis of Obama’s mandates. The latter authorized the first drone strike on 23 January 2009: that is three days after his inauguration. In less than one year (December 2009), the Obama administration authorized as many drone strikes as Bush did as a President, as the overall number of drone strikes launched after Muhammad’s death reached 100. In 27 June 2010, that is one year and a half after his

\begin{flushright}

inauguration, Obama’s administration had already doubled the number of strikes Bush made in his entire mandates, reaching the overall total of 100 strikes (an average rate of 5.5 strikes per month, multiplying by five Bush’s “productivity”). The fiercest month of drone strikes was December 2010, with 23 strikes authorized and 102 resulting in deaths (not only in Pakistan but also Yemen and Somalia). Finally, the Obama administration’s drone strikes reached a total of 200 in 24 March 2011, and the level of 300 on 1 December 2012. As the following chart clearly shows, we can thus observe a significant increase in the recourse to drones in the middle of Obama’s first mandate (from July 2010 to March 2011), as their frequency jumped from an average of 6 strikes per month to an average of 12.5 per month.

Chart summarizing variations in US drone strikes throughout Obama mandates (until 2012)

<table>
<thead>
<tr>
<th># of overall strikes authorized by Obama’s Administration</th>
<th>100</th>
<th>200</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td># of months</td>
<td>17</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Average # strikes per month</td>
<td>5.88</td>
<td>12.5</td>
<td>5</td>
</tr>
</tbody>
</table>

Provisory conclusion: utilization of UAVs increased considerably in 2010, especially from July 2010 to March 2011

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1Based upon the data provided by Bureau of International Journalism, http://www.thebureauinvestigates.com/2014/06/18/interactive.timeline-10-years-of-drone-strikes-pakistan/
The intensification of UAV utilization

Based on the previous numbers and developments, it can be arguably said that UAV utilization has considerably intensified during Obama’s first mandate, especially from July 2010 to March 2011. More specifically, four factors support this conclusion.

First, the very number of UAVs at the disposal of militaries has never stopped increasing. This therefore means that the demand for UAVs has never ceased to increase.

Secondly, though it is very hard to quantify the frequency of UAV utilization on the battlefield, the significant increase in drone strikes, coupled with the ongoing increase in the budget for surveillance UAVs, allows us to hypothesize with confidence that a peak in UAV utilization was reached between July 2010 and March 2011.

Thirdly, UAVs have seen their maximum flight time considerably increase too. This factor allows them to remain for a longer period in the air. This also supports the assumption that UAVs have been increasingly deployed, and for longer missions.

For all these reasons, it can be argued that a significant quantitative shift occurs in 2010, and more specifically between July 2010 and March 2011.

UAVs are more used because they are perceived as more legitimate

Information depicting variations in US drone strikes supports our hypothesis that the Obama administration’s attitude to recourse to drone strikes has drastically shifted at two moments.

The first moment is the inauguration of Obama at the White House after the departure of the Bush Administration. This shift in administration and leadership is decisive. During the very first months it exercised power, Obama’s administration multiplied the recourse to drones by up to five times. This significant increase in the frequency of the recourse reveals that the Obama administration held a different relationship with and perceptions toward recourse to
UAVs. It leads us to hypothesize confidently recourse to drones was perceived as more legitimate by Obama’s than it was by Bush’s administration.¹

The second shift occurs within Obama’s first mandate, from July 2010 to March 2011. The frequency of the number of strikes per month doubled, from 5.88 to 12.5. This increase is significant. Based on this observation, we are inclined to think that UAVs had probably gained even more legitimacy in the eyes of Obama’s administration than they already had at the end of Bush’s mandate. The sudden increase in drone strikes and surveillance missions is blatant, and can only be explained by the fact that actors (more specifically Obama’s administration and the CIA) decided to rely more upon this practice.

Finally, another interesting shift is the significant decrease that followed the acceleration: from April 2011 to January 2012, the frequency of drone utilization by Obama’s administration decreased back to the level it reached in the first months of his mandate (i.e. an average frequency of 5 strikes per month). This significant decrease underlines even more the particularly high frequency of Obama first mid-mandate, as it was an anomaly limited in time. Understanding this anomaly – how can we explain the fact that Obama’s administration doubled its recourse to drone strikes only for a short period of 7 months? - is what the next paragraphs is concerned with.

**Understanding the variations in the utilization of UAVs**

As explained in the theoretical chapter, the concept of legitimacy is extremely wide: hence our focus on what we hold are the three common sources of legitimacy in the evaluation of a weapon. First, a weapon is more legitimate when it appears as not costly (1). Secondly, a legitimate weapon might also be the weapon that is perceived as more efficient (2). Thirdly, a legitimate weapon is the weapon that abides by – or at least does not blatantly violate – international law (3). Of course, perceptions of these three sources of legitimacy vary depending on the subject who perceives, whether they are statesmen, militaries, etc. The following paragraphs will examine the three sources of legitimacy, and attempt to determine which is the most decisive one when it comes to explaining the variations previously described.

¹ See the theoretical chapter for the definition of legitimacy.
Explaining the intensification of UAV utilization

Examining the cost efficiency theory

This part proposes to analyze three indicators or drivers regarded as decisive in evaluating the cost of a weapon: cost of development, maintenance and functioning, cost of education, and substitutability.

The measure of each criterion often leads to dissenssions, as they are generally analyzed with different set of assumptions and data. Our concern here is less to evaluate the most accurate measure of those criteria than to try to understand the perception Obama’s administration shared as to the cost of UAVs. We will thus rapidly try to understand how those costs were perceived, and why.

Cost of development, maintenance, and functioning

This category of cost can be divided into three sub-categories: costs of development, costs of the infrastructures that are needed to operationalize UAVs, and cost of education and recruitment for pilots.

The cost of development represents the costs necessary to design, create, build and produce the UAVs. These costs are extremely hard to assess because they include a wide range of expenses, from engineers to materials used to construct the UAV. It can reasonably be said that the final cost of a UAV does not cover all the expenses that had been incurred upstream. Yet, it is possible that those expenses might be compensated and therefore removed from the final equation. This is notably the case when UAVs are sold to civilian firms, and even sometimes exported to other states.¹

The cost of maintenance and infrastructure represents the costs necessary to operationalize the UAV, to make it fly and work. These costs are extremely high for UAVs. Indeed, deploying the most recent targeting UAVs (i.e. Predators and Reapers) requires a logistic support that surveillance and 1900s UAVs did not need: that is, *inter alia*, highly sophisticated technology, including a sufficient satellite bandwidth and highly trained engineers.¹ Moreover, certain analyses also evaluate that one UAV necessitates a team of no less than 150 persons to function normally.² Although these costs are sometimes the main impediment for many states considering developing or even acquiring the latest UAVs, they are often dismissed or removed from the equation of costs.³ Yet, interviews with militaries tend to considerably nuance this cost. They indeed assert that jets and certain types of helicopter remain as costly to maintain as UAVs.

Finally, the last sub-category of cost is the cost of education and recruitment. Indeed, only a very specific type of soldier is knowledgeable and trained enough to be an operator of UAV. A drone operator needs an average of two years of training. Additionally, courses discussing the conditions under which UAVs can be deployed and can target are provided to every US Army officer. Those costs are extremely hard to evaluate. Data on the number of

1 "They need actionable intelligence, sophisticated communications, access to satellite bandwidth, and complex systems engineering -- all assets presently beyond the reach of most states.” KREPS, ZENCO, 2014.

2 “The apparent simplicity of a drone aloft, with its pilot operating from the United States, can be misleading. Behind each aircraft is a team of 150 or more personnel, repairing and maintaining the plane and the heap of ground technology that keeps it in the air, poring over the hours of videos and radio signals it collects, and gathering the voluminous intelligence necessary to prompt a single strike.” In SHANE, Scott, SHANKER, Thom. “Strike Reflects U.S. Shift to Drones in Terror Fight.” *The New York Times*, October 1, 2011, International New York Times edition. http://www.nytimes.com/2011/10/02/world/awlaki-strike-shows-us-shift-to-drones-in-terror-fight.html.

Substitutability

The targeting UAVs have some advantages that other weapons do not have, namely being able to approach a target very closely without endangering its pilot. Yet, the unique aspect of this disposition does not mean that all the strikes of targeting UAVs could not or would not have been made in its absence. More simply, the targeting drones achieve what other weapons – essentially submarine missiles and jets – were used to achieve before. During our interviews with militaries, several of them underline the fact that targeting drones do not represent a rupture with previous practices. More interestingly, UAVs seem to represent to them more of a continuation of former weapons, offering some improvements in terms of intelligence gathering, pilot’s vision and engine accessibility.¹

The cost calculus should thus not be restricted to the sole estimation of what UAVs cost. It should also compute – or rather subtract - the costs of development, maintenance, functioning of the other weapons that cease to be used because they are replaced by targeting UAVs, and also the costs of education and recruitment of pilots of those other weapons. From this perspective, it is interesting to contrast the cost of recent targeting UAVs with the costs of jets, as the comparison is often made between the two weapons. Official numbers show that jets remain 10 times more costly than the latest model of Predator. Indeed, “the top-of-the-line Predator or Reaper model costs approximately US$10.5 million each, compared to the US$150 million price tag of a single F22 fighter jet.”. ² An interesting research agenda would be to estimate this cost in the long range (price of acquisition + the different costs previously outlined and compare it with the cost of UAVs.

¹ Author interview with Major Shane Reeves (07/12/2013).
Examining the strategy efficiency of UAV utilization

Has there been a shift in the perception of the strategic efficiency of targeting UAVs between and during each of the temporal sequences described above (Bush mandate – Obama’s mandate until July 2010 – Obama’s mandate from August 2010 to January 2012)?

In order to answer this question, it is important to clarify the criteria used to evaluate the level of efficiency reached by UAVs. Basing our analysis upon interviews with militaries, we will use the following criteria: achieves the tactical goal (1), the strategic goal (2), and is convenient to deploy for militaries (3).

Achieving the tactical goal

The capacity to achieve the tactical goal is defined in the light of the benefits/tactical assets of the actions potentially achieved by the weapon. For UAVs, it is measured in light of their capacity to wage surveillance missions and to strike precisely.

Interviews with militaries support the analysis that militaries generally perceive surveillance and targeting UAVs as tactically efficient. The surveillance UAVs are able to reach places that are inaccessible to human intelligence or satellites. In that sense, they are potentially able to follow and spy on more persons and places than other weapons are. They thus potentially considerably extend the surveillance capacity. Yet, militaries often nuance this aspect, dwelling on the idea that this extension of the surveillance capacity does not mean that the surveillance capacity is globally improved. They generally express their preference for a joint combination of surveillance UAVs and human intelligence. Regarding the targeting UAVs, they are generally regarded as not significantly more precise than other weapons able to launch missiles (jets or submarines). Targeting UAVs do not appear as more efficient in that regards.

Another measure of tactical efficiency is the number of combatants actually neutralized by UAVs. Some reports written in 2011 state that no more than 2,000 “militants and civilians”
have been killed in drone strikes.\textsuperscript{1} The previous charts have shown that an average number of 4,430 people have been killed so far in Pakistan,\textsuperscript{2} Yemen and Somalia. No records can be found on the number of combatants killed in Iraq.

\textbf{The limits of UAVs’ tactical efficiency}

The measure of tactical efficiency generally excludes one point that this thesis holds as central: this is the impact of the retrospective legal justification as regards the definition of the status of the person targeted/killed or wounded. Put differently, if drone strikes actually shoot down their target, how can they be sure that their target is a terrorist? If drone strikes kill, do they kill terrorists or civilians? This thesis argues that the very process of arguing over drone strikes has a decisive impact on this identification (civilians/terrorists), and, \textit{in fine}, on statistics. In the arguing process, each side clarifies who it holds as civilians, who it holds as combatants, and upon which normative presupposition it bases its judgment. As we will see in the next part, the lack of the arguing process impedes clarification as to the status of persons killed in drone strikes. Therefore, the arguing process allows statisticians to arrive at precise numbers, mostly because they can reduce their wide range (i.e. the gap between the lower and the higher threshold). For example, the Bureau of Journalism explains that between 416 and 957 of the persons that have been killed in the drone attack from 2004 to June 2014 in Pakistan are civilians. The range – from 416 to 957 – is extremely wide as the higher threshold is more than twice the lower threshold. Therefore, the ratio between civilians and the total number of killed persons is necessarily multiplied by more than 2, whatever the overall number of dead people


\textsuperscript{2} See also Bureau of International Journalism, http://www.thebureauinvestigates.com/2014/06/18/interactive-timeline-10-years-of-drone-strikes-pakistan/.
is.\(^1\) Diminishing the range is thus an important stake, as the interpretation of the event is necessarily very different if the ratio is calculated as two times higher than it really is. Obviously some technical problems (i.e. finding and identifying the bodies) prevent actors from having a clear-cut estimation of the number and status of persons killed in the strike. Yet, the process of arguing generally tends to diminish the breadth of the range. It helps observers to classify the status of persons killed, especially when those persons cannot be clearly established as terrorists (i.e. those who do not belong to the lists of researched terrorists), or as civilians (i.e. children who did not take part in hostilities). As will be further discussed within the third part of this chapter, this arguing process is all the more vital, in that targeted persons are officially classified, by default, as combatants. This classification ‘by default’ considerably increases the burden of proof on those who are targeted, as they have to produce the proof that they are not combatants.

Members of Obama administration (but also academics, see the literature review) also diverge more fundamentally on the benefits of killing “terrorist leaders”, but also of destroying their facilities and resources. These concerns are more linked to the second criteria of efficiency, the capacity to achieve the strategic goal.

**Achieving the strategic goal – drones versus boots**

The “acceleration” and intensification of the utilization of drones by Obama’s administration (especially during its first mid-mandate) coincides with the arrival in the public sphere of a virulent debate on the goal and nature of American “grand strategy”.\(^2\)

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\(^1\) As a result, the ratio killed civilians/total number of killed persons varies significantly. For an overall number of victims of 2,311 we have a ratio ranging from 416/2,311=0,18 to 957/2,311=0,41. The difference of 0,23 is pretty significant and therefore blurs the interpretation.

Drones versus boots- the public debate

In order to understand the debates that frame the different perceptions attached to drones, many articles, public debates and official discourses on the Grand Strategy were analyzed. From this analysis, two ideal-types of discourse stand out, captured in the following simple dichotomy drones versus boots. Each discourse holds a specific conception of which “grand strategy” the US should implement. Their promotion by different figures (journalists, members of think tanks, politicians) have divided the American public sphere, but also Obama’s very administration.

On the one hand, adherents of “drones” generally value the following discourse. First, the most important current threat the US has to face is terrorism. Secondly, specific persons, who are hiding in places unreachable for conventional weapons and troops, are currently fueling this terrorism. Therefore, only a specific weapon able to reach those places and precisely strike those persons might correctly address and confront this threat. This weapon is the UAV: hence the necessity to develop, acquire, and massively deploy them in order to eradicate terrorism.

On the other hand, adherents of “boots” promote a different type of action. First, unlike “drones adherents”, boots promoters do not regard terrorism as the most dangerous threat the US has to currently face. They rather stress “conventional threat” associated with states such as China, Iran, etc. Secondly, even if terrorism is a major threat, targeting the hidden important figures is generally counter-productive. The reasons for this are twofold. Killing those figures either reinforces terrorism, or is considered as insufficient to entirely eradicate the threat. Boots are the solution: the troops that are needed on the ground to correctly address and fight terrorism.

Drones versus boots – Obama Administration

This debate has strongly divided the Obama administration. There has been a recurrent and profound discussion throughout the entire Obama mandates on assessing which Grand Strategy the US should implement. In this light, the trajectory of Leon Panetta is extremely interesting. Panetta presided over the CIA from February 2009 to 2011, which is exactly when the UAV utilization significantly intensified. Panetta was originally a strong supporter of
UAVs, explaining in 2009 that he considered them as “the most effective weapon the Obama Administration had to combat Al Qaeda’s top leadership”.

Panetta’s appointment to the position of United States Secretary of Defense in July 2011 is hard to interpret. Panetta was reluctant to leave the CIA. The official motive for his nomination at the Pentagon did not seem to result from the necessity to change drones policy. Rather, many observers believe that Obama needed Panetta at the Pentagon to smooth the process of decreasing of the defense budget. General Petraus, Panetta’s successor, was also said not to have real liberty of action, and in that sense, perpetuated, rather than terminated, what Panetta previously implemented.

Yet, the aftermath of Panetta’s resignation in late 2014 reveals that profound dissentions divided Obama’s administration in relation to UAV policy, even when the very administration intensified its UAV utilization. Panetta explains that he deeply regretted and disagreed with the departure of the US Army from Iraq. He also advocated an actual intervention in Syria. These statements reveal that, as for him, “boots” should play a central role in the US struggle against terrorism. He also considerably downplays the importance of UAVs, notably by declaring in his Memoirs:

“But to call our campaign against Al Qaeda a “drone program” is a little like calling World War I a “machine gun program.” Technology has always been as aspect of war: The North developed repeating rifles to use against the South in the Civil War; machine guns and tanks debuted in World War I; the Allies used radar, code-breaking, and nuclear weapons to defeat Nazi Germany and Imperial Japan during World War II. Those breakthroughs saved American lives and secured historic victories, though sometimes at great cost.”

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While observers disagree on the actual reasons that drove him to nuance – and even minimize – the intrinsic efficiency and the specific assets that the drone option could offer, they concede that the “drone option” has been considerably debated and criticized since the end of Obama’s first mandate. The late publication of a CIA report by wikileaks is another example of the increasing criticism of the drones option. While the report aims at presenting an impartial assessment of the efficiency of drone strikes against terrorism, many voices prefer to picture the report as the recognition of the failure of the drone option.1

Convenient to deploy – are US militaries comfortable with using targeting UAVs?

The targeting process, from surveillance to signature strikes

The trajectory of UAVs retraced in part 1 shows that the recourse to UAVs, as well as their status within military organization has varied considerably over time. One of the proposed hypotheses is that the increasing recourse to UAVs by Obama’s administration is due to a shift of perception within the military. Indeed, this hypothesis is extremely powerful in explaining variations in the use of certain weapons, such as machine guns.2 The increasing recourse to drones might be explained by the fact that the US Army and the Obama administration newly perceived UAVs as more appropriate for use at this time. Based on our interviews with US militaries, the criteria for appropriate weapons are defined as the following: rapid and easy to set a strike, good reputation of the weapon, and reliability. The following paragraphs will attempt to determine whether the drone strikes of Obama’s administration satisfy these criteria.

Rapidity and Ease of strike


2 This point is more detailed in the theoretical chapter.
A specific protocol has to be completed before the strike is triggered. The protocol might be divided into eight different steps: the permission to gather intelligence (1), the identification of the target (2), the CIA’s approval (3), the President’s approval (4), the hosting state’s approval (5), the JAG’s approval (6), the strike (7) and the post strike (8). This protocol is sometimes shortened as certain steps are sometimes skipped. Most of the information contained in this paragraph is inferred, drawn from various documented books, as the striking process is held in secrecy.

At the beginning of the strike process, the launcher must generally obtain the housing state’s approval to fly over its territory and proceed to intelligence gathering. Once the permission is granted, the drone can fly over the territory “legally” to initiate its research, to identify and localize the target. The duration of the target identification might vary, depending on several factors: the quality of the intelligence already gathered by fieldwork agents, the location of the target, its proximity to civilians, the means it uses to communicate, the assistance from the host state, etc.

Once the target is located, the strike requires three different permissions. The Obama administration generally asks the authorization of the host state before striking. This step is not as formalized as other steps, though, for several reasons. First, the host state sometimes grants permission unofficially, while officially declaring that it was unaware of or reluctant as to the strike. This has happened several times, especially with Yemen and Pakistan. Secondly, it also happens that the state decides to disengage its responsibility for the strike after it happens. This disengagement does not, however, prevent the US from proceeding with strikes, officially doing them without the host state’s authorization. Finally, the consent can sometimes be reflected in a more or less imperceptible way: host states sometimes attribute the strike to their own force. That is what happened with the first US drone strike in Pakistan. Once the consent of the host state is accepted, the striker has to request the CIA’s approval. The CIA approval seems to be more a collegial decision, debated and decided with the President. It seems that the CIA makes

\[1\] This was the case after what the US strikes in Madrassa (“called by several newspapers the “Madrassa massacre”). In 30 October 2006, eighty civilians were killed by strikes that were looking for Ayman al Zawahiri. In the following days, Pakistan officially declared that they would stop taking responsibility for those strikes. US Strikes have then been perpetuated without the official consent of the host state. Yemen also expressed its dissatisfaction with US strikes on its soil.
the case (or refuses to make the case) to the President, who then decides whether he signs the strike or not.

The impact of Judge Advocate Generals (JAGs) on this process is unclear. Within the battlefield, the JAG is generally consulted right before the strike. JAGs give the green light if they consider that all the conditions for abiding within the laws of war are fulfilled. If they think the conditions are not fulfilled, they either propose to postpone the strike, or they provide recommendations that, if they are respected, make the strike legal.

For the case of drone strikes, the process seems more complex. Contrary to the other types of strikes that occur within the battlefields, the president and the CIA are generally included in the loop of decision. It seems that the JAGs make their recommendation to the CIA, which then makes the case to the President. The President’s approval is the final approval. Once the President signs, the drone strike’s order is immediately transmitted to a pilot. The pilot, located in a hangar, drives the drone with a monitor. With the green signal, the pilot launches the drone strike on the identified target.

_Drone strikes and targeted killing (Iraq versus Pakistan, combatants versus terrorists)_

The process previously described occurs under the following specific conditions: when a target has been previously defined as a dangerous threat (1), which generally implies that he has been involved in terrorist or combatant activities since a certain time (2) and that he was extremely difficult to locate and reach (3). In other words, drone strikes are mainly used in the context of targeted killings, and negligibly in counter-insurgency situations. This was notably the case in Iraq, where drone strikes were used to target combatants (the targets were not said to be terrorists, in contrast to the large majority of strikes in Pakistan). In those cases, the process of the drone strike is similar to that generally respected in a context of war. The pilot sees a target, asks for his commander’s and the JAG’s approval, and strikes, if both of them validate the strike. The protocol therein does not include the president’s and CIA’s approvals. Sometimes, in the middle of combat, in extremely intense moments, it does not even include the JAG’s approval.

_The identification of the target and the signature tracks_
The second step of the process – identification of the target – requires a meticulous, sometimes very long recollection of clues, information and testimonies from fieldwork agents. This process can turn out to be extremely long and costly, both on financial and human levels. Progressively, this ‘human’ gathering of clues (as a recollection only operated by human agents) has been challenged by what is presented as a new method of identification, and is called “signature strikes”\(^1\). This ‘new identification’ is based upon the following (debatable) principle: persons suspected of “terrorist activities” would develop similar sets of behaviors, and routine gests (i.e. meetings in specific places, habits of communication, etc). Therefore, if an algorithm identifies those who develop these repetitive sets of behavior and routine gests, then, it would identify potential ‘terrorists’. This rationale constitutes the core of signature strikes. It relies on a behaviorist belief: behaviors that are thought to be distinctive of ‘terrorists’ would make the “terrorist”. This algorithm is used in the prospect of pinning down those who develop a “suspicious behavior” (i.e. reproducing the behaviors considered as typical of terrorists). In some cases, an identification based solely on this algorithm is regarded as sufficient to clearly identify a ‘terrorist’. This algorithm raises many substantial issues, the most obvious one being the possibility of the identification of behaviors that would solely be proper to terrorist activities. More generally, any identification of a ‘terrorist’ is problematic as no unequivocal definition of terrorism is officially acknowledged, and as the conceptual fuzziness surrounding the concept is even acknowledged by the top sphere of the US State Department.\(^2\)

Once the person is identified as a combatant or a ‘terrorist’, the striking process can be furthered with steps 3,4,5 and 6.

\(^1\) “Under the rules of so-called signature strikes, decisions about whether to fire missiles from drones could be made based on patterns of activity deemed suspicious. The bar for lethal action had again been lowered.\(^1\) For instance if a group of young “military-aged males” were observed moving in and out of a suspected military training camp and were thought to be carrying weapons, they could be considered legitimate targets. (…) Using such broad definitions to determine who was a combatant and therefore a legitimate target allowed Obama administration officials to claim that the drone strikes in Pakistan had not killed any civilians.” (…) in MAZZETTI, Mark. The Way of the Knife: The CIA, a Secret Army, and a War at the Ends of the Earth. New York: The Penguin Press, 2013.

\(^2\) For example, there is no clear line on the status members of Taliban have, whether they should be qualified as combatants or terrorists.
The rationale of the signature strikes obviously raises many questions, if not skepticism. First, it introduces an instrument that operates a calculation/estimation of the status of the target that is traditionally trusted to human judgment. It also questions more fundamentally the status of terrorist (which movements or behaviors can be objectified as being proper to terrorists? On which moral and normative basis?), and of civilian (what is the level of implication or proximity with terrorist that is required to transform a civilian into a combatant?). The rationale of signature strikes also questions the degree of threat probability that has to be reached before having the legitimacy to strike (redefinition of preemptive war?). All these questions fundamentally examine the meta-norms of fighting justly, and just war. They will be further discussed in part 3 of this chapter.

*The post strike process*

The process of striking also includes a final step that is generally overlooked, but that this thesis holds as central: the post-strike arguing. This step can generally be divided into 3 sequences. The first sequence is the fastidious and painful listing of dead bodies, estimating the number of persons who were actually killed in the strike. This step is generally long, and operated by local police or NGOs present in the field. As said earlier, the number of the overall persons killed in the strike might vary because of the advanced decomposition of bodies. There are also important political stakes involved in the process of counting. A very high number of overall persons killed by the strike might embarrass the striker for several reasons discussed in part 3, but mostly because it will incur international scrutiny of its actions, and thus create a higher risk of being criticized and shamed. A low number of persons killed in the strike might be interpreted as a sign that the strike was surgical and thus successful.

Once the list of victims is finalized, the international arguing process might start. By convention, all the victims killed in the strike except the children are classified as ‘terrorists’ or combatants by default. The relatives, and sometimes the state’s government have to produce the proof that the targeted person (or the person killed during a strike) was neither a terrorist nor a combatant. The burden of proof, in that sense, is reversed: the victim has to prove his innocence. Notwithstanding the difficulty of actually demonstrating a person’s innocence, this process also requires that someone stands up and initiates the claim for the shot down victims. These difficulties shred a real doubt upon the claimed number of actual civilians hurt by the
strike. Moreover, and this is the third part of this last step, JAGs and legal advisors might contest the identification of the victims operated by NGOs or government. Fearing that the strike might arouse international scrutiny, they release a legal statement justifying the strike and providing their own numbers of the number of civilian and combatants killed. They engage in the debate with NGOs and the state’s government, over the status of persons killed, and, in fine, on the legitimacy and the legality of the strike.

This process of arguing just after the strike is fundamental to an understanding of whether this process is accepted, and why it might have been increasingly developed during Obama’s mid mandate. The legal justification provides a discursive support for the strikes; it provides them with a rationale and a justification.\(^1\) It also confers to the practice legitimacy, at least within the military organization. Arguments and justifications are made more and more easily available to militaries so they can rationalize but also legitimate their practice. Part three of this chapter will analyze more precisely the arguing process and the impact of legal justification on the use of targeting UAVs. It is also interesting to notice that JAGs participate in the striking process for the second time, both before and after the strike.

**Good reputation of the weapon**

Has the UAV a good reputation among members of the United Nations, statesmen and militaries? Evaluating the reputation of UAVs is not an easy task for three kinds of reasons. First, there is no established or acknowledged methodology in International Relations that investigates reputation (1). Second, information on the reputation of UAVs (i.e. how actors perceive UAVs) is difficult to gather, as their utilization is mainly regarded as a national security stake (2). Finally, contrary to the three other weapons studied in the dissertation, drones are used both by the US Army and by the CIA. Therefore, the reputation of the drones interferes with and is impacted by the potential tensions, rivalries or – on the contrary - complementarities between the two institutions (3).

\(^1\) An interesting element to look for is the number of legal statements published by each Administration. It could be hypothesized that a high number of legal statements means that the weapon is more and more subjected to external pressure coming from International Institutions such as the UN, NGOs or public opinion.
Reputation, weapons and morality

As detailed within the theoretical chapter, the notion of reputation is complex and needs to be handled with precaution and prudence. This dissertation does not contribute to fostering the understanding of the concept of reputation, nor does it propose to overcome the problems this concept raises (the theoretical chapter listed four main problems: defining reputation, building reputation, impact reputation, bargaining reputation). Several issues commonly related to reputation, especially issues around measuring the influence of scrutiny on states’ action and evaluating the benefits for the development and enforcement of moral practices, are, the author believes, encompassed within the analysis of symbolic power, which will be developed in part 4 of this chapter. This part will focus more precisely on the reputation of the weapon UAV among militaries. This focus on militaries is justified by two reasons.

First, militaries are perceived as those who know weapons, and therefore who are the most reliable source of weapons’ evaluation. Militaries are those who handle and use the weapons; they are therefore thought (especially by statesmen) to have a specific knowledge of them. This specific knowledge might explain why their perceptions of the efficiency and advantage of a weapon – and reputation is one type of perception – are perceived as the most accurate ones by statesmen. Based on these assumptions, we hypothesize that the reputation of a weapon among militaries tends to become the general perception of that weapon’s efficiency.

Second, the trajectory of the UAV reveals that this weapon has only just started to attract the attention of domestic opinion. Reasons for this hitherto lack of interest are unclear. It might be because domestic opinion does not know about this weapon, or because the weapon was rarely used and also rarely visible on media, pictures and photos until the 1990s. Similarly, and as we will see in the following development on ‘international pressure’, the United Nations did not develop a real interest in UAVs until the 1990s. Therefore, these two actors (the UN and domestic opinion) have only started to discover, judge and evaluate UAVs since the 1990s. We hypothesize that this recent interest has led the two actors to develop very friable, contrasted perceptions on UAVs. In one sense, UAVs do not really have a reputation, in that they are not attached to a durable, constant, normative label (good or bad weapon). The weapon rather raises

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1 See theoretical chapter for further detail.
very strong, indecisive, antithetical feelings that, somehow, go beyond and outweigh simple evaluation of its technical capacities. In that sense, we believe it more fruitful to study the reputation of the weapon as an efficient weapon (rational evaluation) by focusing on militaries. We will integrate domestic opinion and statesmen’s perceptions of UAVs (that seem to be more irrational) via the prism of symbolic power.  

Reputation of UAVs

Interviews with militaries reveal that targeting UAVs are not perceived as being an “exceptional” weapon, that is a weapon that would fundamentally differ from other weapons then at disposal on the battlefields. The UAV is very commonly compared to – and reduced to - other vehicles that can target precisely, or to missiles. The comparison is systematically made, and put forward as an argument to illustrate what is considered as the common nature of the weapon. In this sense, UAVs do not raise the same types of concerns and considerations as weapons generally regarded as “exceptional”, such as nuclear weapons. The latter are perceived as being of a different nature, involving different types of judgments (as to level of destruction, procedure to strike, counter-moves, etc.). In contrast, UAVs are commonly compared to a sort of improved version of jets.

Therefore, based on these analyses, we would tend to hypothesize that targeting UAVs do not really have a “specific” reputation, or a reputation as a ‘weapon of choice’. They are most commonly regarded as a new kind of aerial vehicle that does not need pilots inside its cockpit and that can strike precisely in places unreachable to other weapons. The general idea that stands out from the interviews is the “unexceptional” nature of drones, which strikingly

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1 Not to say that militaries’ perceptions are unitary, not friable or not tainted with strong feelings. Many militaries also perceive UAVs as a symbol, and we will investigate this aspect in part 4 of this chapter. Yet, militaries also develop an analysis that they want to be ‘objective’, capable of depicting the qualities of the weapons and evaluating them with regards to their tactical benefits and efficiency. By doing so, they act as experts and build the reputation of the efficiency of the weapon.

2 Author interview with Major Shane Reeves (07/12/2013), author interviews with Major Ian Fishback (07/12/2013), author interview with Dr John P. Caves Junior, Dr Seth W Carus and Dr John Mark Mattox (11/12/2013).

3 This comparison is problematic as it raises many ethical issues that will be discussed in the third part of this chapter.
contrasts with the doxa and journalistic discourse, which commonly portray a weapon that is fundamentally different from others. This conclusion, however, is limited for several reasons.

First, our interviews were conducted with militaries and not with CIA agents. The latter might have been those who suddenly (at Obama mid-mandate) started to perceive UAVs differently. They would have thus influenced the Obama administration, to resort to a more frequent recourse to UAVs. Interviews with them would be necessary to offer a complete test for this hypothesis. Secondly, interviews cannot reflect the entirety of opinion and perceptions of the US Army. Our sample is limited and does not pretend to be exhaustive.

Reliability

The evaluation of the reliability of the weapon is mostly underpinned by two criteria: the capacity to achieve its goal at the desired time, and the risk of the soldier being hurt while deploying the weapon.

Targeting UAVs are sometimes said to be more reliable for one reason: they minimize the risks undertaken by militaries while targeting. Pilots are not directly exposed to combat, as they drive UAVs from hangars located miles away from the target. In that sense, UAVs guarantee a certain protection to militaries. Yet, this judgment is often counter-balanced by another twofold judgment. First, pilots of certain aerial vehicles (such as jets) sometimes strike from a very high distance, far away from ground-missiles, and with the protection of an anti-missile system. In that sense, they said to be as secure as pilots who target from a distanced hangar. Therefore, the UAV does not offer more ‘reliability’ than jets. Secondly, certain militaries do not think that the utilization of drones particularly exempts soldiers from taking risks. If, to be sure, they protect pilots from being targeted, they might force other soldiers (on the ground) to take more risks on the field, than they would otherwise have done. Finally, several studies have recently documented the fact that drone pilots also suffer from Post Severe

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Because PSTD is extremely handicapping for a soldier’s everyday life, UAVs might be seen as causing a different but equally painful sort of war wound. In this sense, the UAV would not protect soldiers from being hurt, or, more precisely, it would not protect them more than other weapons.

**Examining the International pressure theory**

The following paragraph will retrace the occasions when the words “UAV” or “drones” have been mentioned within UN documents. It will more specifically study the contexts in which they have been mentioned. This will highlight when, and how states have tried to limit, frame or justify their use of UAVs in the eyes of the United Nations. Because the United Nations is an arena that legitimizes and regulates the ‘process of arguing, a study of debates that took place within it reveals one of the major aspects of international pressure. This trajectory is limited for two reasons: not all UN documents are available to public access, and the documents cannot be and are not aimed at transcribing the overall informal discussions that take place within the UN arena. It also leaves aside the mobilization of other key actors, such as NGOs, who also incentivize states to argue over the meta-norm of fighting justly.

**The first mention in a released official document: a US surveillance mission in Libya (1982) and the problem of sovereignty**

The first mention of UAVs within a UN official document can be found in a statement made at the 19th Plenary Meeting of the 37th Session of General Assembly that took place in New York on 6 October 1982. The allocution is made by Al-Obeidi, a Libyan politician close to Muammar Gaddafi. In this statement it is declared that:

“*The present Government of the US of America is increasing its acts of intervention and pressure for the purpose of achieving political, economic and military hegemony. It has gone back to the policy of installing military bases in many parts of the world. (...) The last act*

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2 See the theoretical chapter that explains why the UN might be regarded as a legitimizing arena.

3 His nationality is more specifically stated as Libyan Arab Jamahiriya; that is the name given to Libya by Muammar Qaddafi.
of aggression was on 3 September 1982, when a United States aircraft violated our airspace at 7.59 pm. It was an unmanned reconnaissance aircraft”.

The analysis of this document reveals three elements. The first official mention of the UAV is released in a context of peace, or at least in a non-conflict situation. Libya and the US are not engaged in a frontal armed conflict at the time of the claim. Secondly, the first official statement mentioning UAVs concerns surveillance UAVs. This is not surprising, as the then existing targeting UAVs (i.e. hot balloons charged with explosives) had been rarely used within battlefields. Finally, this mention pinpoints how UAVs challenge the conception of sovereignty. In the document, the utilization of the UAV is denounced as a problematic violation of sovereignty, an aggression perceived as hegemonic.

If Libyan discourses have always been perceived as rather hostile to occidental democracies, and in that sense deliberately use a violent semantic, this nevertheless steadily raises the issue of sovereignty. The issue of sovereignty – are the reconnaissance missions led by UAVs an aggression, a huge violation of sovereignty, or a small infraction? – is therefore closely linked to the first breakthrough of the word UAV within the official debates held in the UN.

The 1980s-1990s mentions: a dangerous weapon that needs to be controlled

Throughout the decade of 1980-1990, UAVs are mentioned in two different situations: within the debates over controlling Iraq’s disarmament in the aftermath of the first Gulf War (1) and in the claims made by North Korea while denouncing the danger represented by South Korea’s growing armaments (2).


2 The term hegemonic will later be re-used by many actors who perceive UAVs as the symbol of American oppression.

3 Another mention comes from the Permanent Representative of Iraq who addresses a letter to the Secretary General mentioning the US use of unmanned weapon to drop leaflets hostile to Iraq, 15/07/1997, Q/1997/548, http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N97/196/73/PDF/N9719673.pdf?OpenElement. Yet, this issue is only
Several reports from the Secretary-General reaffirm the necessity to control the
development and proliferation of three types of weapons in Iraq: chemical and nuclear weapons
but also missiles. The missile section (also called Missile Technology Control Regime) also
includes “unmanned air vehicles capable of delivering at least 500 kilogram payload to a range
of at least 300 kilometers”\(^1\). In 1996, the report of the Secretary General, which recalls the
necessity to limit weapons proliferation, substantiates the category of UAVs. UAVs are defined
as “target drones and reconnaissance drones”\(^2\).

UAVs are also mentioned by North Korea (or Democratic People’s Republic of Korea)
on two occasions from 1997 to 1999. North Korea fears the “weapon proliferation” of South
Korea. It describes a desire of South Korea to develop “air supremacy”, UAVs being one of the
means to achieve this goal.\(^3\) North Korea also appeals to the President of the Security Council,
in order to denounce the US support to South Korea via the “Operation Plan 5027-98”, which
would allegedly “deploy and reinforce” some aerial weapons, including “unmanned planes”.\(^4\)

\(^1\) Report of the Secretary-General, General and Complete Disarmament: Non Proliferation of Weapons
of Mass Destruction and of Vehicles for their Delivery in all its Aspects, 49\(^{th}\) session, A/INF/49/3, 20


\(^3\) “The reinforcement of the air force is aimed at building a "strategic air force" for air supremacy, depth strike and support for ground and naval forces. From 1994 to this year (...) some 100 Harpy unmanned attack planes and to import four mid-air refueling planes by 1999.”, Letter from the Permanent Representative of the Democratic People's Republic of Korea to the United Nations addressed to the Secretary-General, 16 September 1997, A/52/353, available in http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N97/243/04/PDF/N9724304.pdf?OpenElement.

The 2000s: the involvement of UAVs in international tensions

The mentions of UAVs in the 2000s are polarized on two issues: Iraq’s proliferation of weapons of mass destruction (1) and the Middle East tensions between Israel, Lebanon and Palestine (2). UAVs are successively regarded as a weapon that might be extremely dangerous in the hands of states regarded as potentially hostile, a weapon that violates states’ sovereignty, but that also might be very helpful in monitoring problematic situations.

First, several mentions of UAVs reiterate and prolong the 1990s concern with regards to Iraq’s weapons proliferations'. Interestingly, the development of unmanned aerial vehicles is quoted and classified as a risky behavior that needs to be monitored by the United Nations Monitoring Verification and Inspection Commission (UNMOVIC). The development of the UAV has become a major concern for a commission initially created to search for and monitor weapons of mass destruction.1 Ironically, several countries will propose to develop UAVs to monitor those missions of surveillance over Iraq. The German Government notably proposes to deploy surveillance UAVs, helped in this task by the Government of Cyprus’ authorization to set up a field office to control UAVs within its territory.2 The concerns over Iraq’s development of UAVs will be expressed at several times throughout the 2000s, climaxing during the debates over the necessity to intervene there to suppress the “weapons of mass destruction threat”. Later, starting from March 2007, the same types of concerns will be expressed over Iran, which is also developing UAVs.3

Secondly, UAVs are mentioned in the context of the Middle East tensions between Israel and its neighbors, especially the “Palestinian question”. UAVs are known to be part of Israel’s arsenal.4 The presence of UAVs within the Israeli arsenal is perceived as problematic for the

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1 Mentions of UAVs as a crucial issue that should be investigated by the UNMOVIC are repeatedly made within documents addressed to the Security Council, by Nigerian representatives (12 March 2003, S/PV/4717), UNMOVIC representatives (19 March 2003, S/PV/4721)
4 The military budget report for the years 1998/1999 issued by the International Institute of Strategic Studies states that Israel has probably become the sixth largest military powers in the world. It has (…) unmanned surveillance planes. In General Assembly Official Records, 55th session, 1st
Permanent Representative of Lebanon. The latter denounces Israeli deployments of UAVs during the December 2004 attacks on Beit Lahiya. The Permanent Observer of Palestine mentions for the first time the utilization of targeting drones that fired rockets in South Gaza on 3 August 2006. UAVs will be mentioned several times in the fact-finding mission on the Gaza Conflict (Cast Lead).

The word UAV is also mentioned as part of the Palestinian arsenal. Palestinian groups are said to have launched a UAV from the Lebanese side of the Blue Line. The role of this UAV (surveillance, decoy or targeting) is not clearly stated within the UN document. The intrusion of an unmanned air vehicle is also denounced on 9 November 2004, on 14 July 2005 and on 12 July 2006.

The 2004 salience of a contradiction: UAVs as useful surveillance weapons or weapon of mass destruction?

Official international debates that took place from the very eve of 2004 to the end of 2010 reveal and build an ambivalent picture of the UAV. More precisely, profoundly contradictory perceptions over UAVs came to the fore during this period. UAVs are either perceived as powerful means to monitor and wage surveillance missions, especially in counter-
terrorist and peacekeeping missions. In that sense, UAVs are promoted as a means to enforce peace. Yet, UAVs are also regularly mentioned next to “weapons of mass destruction”. Several states advocate for their limitations, especially when they are in the hands of “problematic” states such as Iraq, or, later, Iran. Those concerns echo a more general movement in favor of writing and enforcing specific rules limiting the utilization, development and transfer of UAVs.¹ Yet, UN members struggle or fail to consider UAVs as a weapon that would need a new legal dispositive, to frame its use and production.

*The weapon to enforce peace*

In a letter addressed to the President of the Security Council, the utilization of UAVs is mentioned as a means that could be mobilized for counter-terrorism measures. UAVs are mentioned as being used by Headquarter Border Patrols in the US in order to patrol the borders between the US and its neighbors (especially Mexico).² UAVs are said to be military-proven technologies in another note describing counter-terrorist measures adopted by the US.³

The utilization of UAVs is also preconized in several letters as reliable surveillance means that could be used by UN Forces to monitor a situation (Chad and Central African Republic, but also Georgia, Congo⁴. Their utilization will even be preconized in several UN peacekeeping operations by the Decolonization Committee⁵. The surveillance UAV is therefore erected as a reliable means that could considerably help the international community to enforce peace, or at least, to keep a territory safe and secure.

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¹ Several documents reveal that UAVS were also mentioned by Georgian representatives who deplore the incursion of Russian drones over their territory. We decided not to mention those debates as they also reiterate the sovereignty issues raised by UAVs.


⁵ Summary Record of the 18th meeting: special political and decolonization committee, 31 October 2013, A/C4/68/SR18.
The threatening weapon

On the other hand, UAVs are increasingly mentioned in the context of Proliferation of Weapons of Mass Destruction and their means of delivery. In the report of the Secretary General of 12 July 2004, Ireland (on the behalf of the European Union) reiterates its concern to see certain states – especially Iraq and Iran - developing UAVs:

“Specifically, development by several countries of concern of ballistic programs, of autonomous capacity in the production of medium- and long-range missiles, as well as cruise missiles and unmanned aerial vehicles are a growing cause of concern”\(^1\)

Several countries also include UAVs as weapons that need to be monitored and limited, as tightly as it should be with weapons of mass destruction.\(^2\)

2010s: hesitations between denouncing UAVs and denouncing their utilization

The beginning of 2010 coincides with a form of detachment or distance of actors from the previous associations and mentions of UAVs. UAVs are no longer mentioned as weapon of mass destruction. If several actors still discuss UAVs, their discourse now dwells on what they perceive as inherent problematic aspects of the UAV (1) or of their intensive recourse for targeted killing (2).

An object soon to be framed by international law?

At the end of the 2000s, several documents start to question the existing legal framework that regulates the use and development of UAVs – without mentioning weapons of mass destruction.


\(^2\) Verbal notes were released by Poland, Liechtenstein. Letters underlining this concern were also addressed to the Secretary General by China,
destruction. They start to really focus on the UAV as a weapon *per se* – and not on its potential users or on the context of utilization – and ask whether a specific set of rules should not be created in order to limit the weapon. Indeed, the Netherlands wonders if a category on electronic warfare should not be created and limited.¹ This concern is reiterated in the Report on the Continuing Operation of the United Nations Register of Conventional Arms, presented by a 2009 Group of Governmental Experts working on conventional arms. In point 49 of this report, experts stipulate that a new sub-category of “armed unmanned aerial vehicles” should be added in the more general category of “combat aircraft”.²

2010s: Drones are problematic insofar as they are used for targeted killing

Finally, one of the most recent mentions of drones within an accessible UN document comes from the Special Rapporteur on extrajudicial, summary or arbitrary executions. The Human Rights Council indeed has mandated Philip Aston to evaluate the practice of targeted killing, perceived as having considerably intensified in the most recent years.³ In this report published in 2010, the drone is mentioned as the primary means states are using to achieve their targeted killings. Drones are solely tackled here in this perspective: as a means to achieve targeted killing.⁴ The opprobrium charge is therefore entirely placed upon the shoulders of those who authorize the targeted killings. Drones are not depicted as being problematic *per se*. If Alston underlines that the utilization of drones raises several key questions (Playstation mentality, lack of precaution, distance from the target), he explicitly mentions that “a missile fired from a drone is no different from any other commonly used weapon, including a gun fired

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by a soldier or a helicopter or gunship that fires missiles”\textsuperscript{1} . However, he does acknowledge that the utilization of drones outside contexts of clear warfare is problematic as it is ‘never likely to be legal’. Yet, this point is rapidly discussed (4 lines for the whole argument) and is not followed by substantial recommendations.

\textbf{Provisory conclusion: Arguing over the meta-norm of fighting justly might shed a new light on the variations in the utilization of UAVs}

The provisory conclusion drawn from the previous developments reveals two points. First, our analysis confirms the sudden intensification of UAV utilization during the Obama first mid-mandate. Secondly, the three theoretical explanations do shed light on the UAV proliferation process, but in varying degrees. More importantly, they do not really highlight why the sudden intensification occurred in 2010. All of them would, though, be enriched by a closer examination of the impact of the meta-norm of fighting justly on the practices of war.

\textbf{The shift in UAVs’ trajectory}

First, the trajectory of UAVs shifted in 2010. The pace of UAV utilization (both surveillance and targeting UAVs) has significantly intensified, especially from July 2010 to March 2011, under Obama’s mandate. Even though this utilization slightly decreased after March 2011, UAVs have been erected at the core of US arsenals. More importantly, US militaries, US Congress and State Administration have perceived UAVs, for the first time since used in war, as a “must-have” means of warfare.

Explaining the shift

The second element that stands out from the previous analyses is that none of the potential explanations based on cost, efficiency and international pressure seem to entirely explain the intensification of UAV utilization in 2010.

The examination of the cost explanation (i.e. UAVs are perceived as less costly than other weapons) leads to very mixed conclusions. Even if the actual construction of UAVs is cheaper than jets or other weapons, its deployment engages many hidden costs that in fine considerably increase its overall cost. UAVs require a whole infrastructure, a specific training and many new automatisms that are in the long-term extremely costly to implement. Recent debates over the real cost of UAVs show that it is very hard to assess their exact price, and that they are in fact extremely costly to use in the long-range.1 Moreover, when Obama’s administration started to justify its drone policy in 2012, the belief that UAVs were less costly than other weapons had already been widely contested. Several reports had already contested this as early as in 2010, and the academic literature rapidly followed the same path.2

It therefore seems possible to conclude with confidence that the cost of UAVs (and more precisely their allegedly lower cost compared to other technologies) could not be the main driver of this sudden intensification in UAV utilization and deployment, even in a context of a decreasing defense budget.

The efficiency explanation highlights possible drivers for the intensification of UAV utilization. Undoubtedly, the Obama administration found the UAVs to be a particularly efficient weapon by which to eradicate what they label as the terrorist threat. The weapon fits well with their grand strategy, which preconizes that it will precisely target and kill the alleged terrorist leaders. Yet, this explanation fails to answer the following question: why did the


2 See CIA. “CIA Best Practices in Counterinsurgency: Making High-Value of Targeting Operations an Effective Counterinsurgency Tool,” July 7, 2009. http://www.commondreams.org/sites/default/files/wikileaks_secret_cia_review_of_hvt_operations.pdf. It is one of the CIA reports evaluating the utilization of UAVs that has been recently released via wikileaks. For the academic literature on the cost of UAVs, see the cost section of this part.
Obama administration abandon other options, such as ground troops, precisely at this moment? Why did it suddenly believe that this “strategy” of targeted killings, and more specifically targeting killings with drones, was the more efficient one? This question is all the more puzzling as the tactical advantages offered by UAVs are not very different from what other weapons, such as jets, were offering. Therefore, why exactly were UAVs perceived as more efficient than other weapons? Why have UAVs been perceived as serving the US Grand Strategy better than other weapons already at the disposal of US militaries?

The international pressure hypothesis might fill this gap and explain why the UAV option stood out in 2010. More precisely, the then lack of international pressure on the weapon might explain why UAVs were regarded as easier to deploy for US militaries. In 2010, the UN had yet failed to develop a clear and univocal position on UAV status. More importantly, UAVs were alternately seen as either an efficient or a problematic weapon. This very contrasted picture of UAVs, from a very dangerous weapon to a potentially powerful means to enforce peace, was probably perceived as a window of opportunity for the Obama administration. The first concerns that the UN should limit UAV utilization with specific legal rules, or with a specific new categorization, were only raised at the end of 2010, and were only shared by a minority of states. The mention of UAVs by the Special Rapporteur in the Human Rights Council does not really create a sort of international pressure upon UAVs. Indeed, Alston denounces more the way states are using UAVS than the UAVs themselves. The key question becomes then: why did the United Nations, and major NGOs, advocate only from 2010 on, for limitations on the utilization of drones in warfare and in counter-terrorism contexts?

The missing key of fighting justly

There is obviously a temporal coincidence between the decreasing pace of UAV utilization by Obama’s administration and the beginning of a wider international debate over the very practices of UAV deployment. The decreasing utilization of UAVs coincides with the first publication of official legal statements justifying UAV utilization. Indeed,

“By early 2010—a year after Obama had ordered a major increase in the pace of drone strikes in Pakistan, and as the success of that program in eliminating al-Qaeda’s middle
management was becoming clear—the lawyers were given the job of coming up with an acceptable public justification for [targeted killings].”¹

Put differently, Obama’s lawyers became engaged with the arguing process over UAVs in late 2010. At this very moment, they officially clarified the administration’s reasons to recourse massively to UAVs for the first time since the creation of the weapon. Lawyers’ justifications made salient their own conceptions of fighting justly, and constituted the starting point of the arguing process that followed, engaging with other international actors (i.e. NGOs and international institutions). Before this arguing process started (i.e. the end of 2010, beginning of 2011), the absence of justifications and replies, probably gave all the necessary latitude for Obama’s administration to continue its intense utilization of UAVs.

“Just as lawyers for President Bush had redefined torture to permit extreme interrogations by the CIA and the military, so had lawyers for President Obama given America’s secret agencies latitude to carry out extensive killing operations.”²

Yet, this dissertation argues that once the US entered the arguing process, which ultimately forced it to clarify its perception of fighting justly, the US started to feel constrained in its utilization of UAVs. This constraint explains why the Obama administration decreased its recourse to UAVs in 2011. This constraint notably took two different forms.

First, the Obama administration felt constrained in its utilization of UAVs because it started to consider that their utilization was in fine not strategically efficient. Yet, as explained in the theoretical chapter, the perception of what is strategically efficient is intertwined with the meta-norms of fighting justly and just war.³ The then prominent conception within the US administration held that a war is strategically efficient or successful when it can be proved as


³ See theoretical chapter for further detail.
just, and when it is fought with just means.\textsuperscript{1} What if your justifications reveal that your conception of a just war and just means of war is problematic (i.e. raises new problems and contradictions)? That is why the beginning of the arguing process – that is the moment when the US had to explicitly state its conception of the meta-norm of fighting justly – coincides with the first investigation of UAVs’ strategic efficiency. The US started to feel the burden of proof to justify its UAV utilization on strategic grounds, and might therefore have preferred to lower its utilization before the undermining of its overall strategy.

Secondly, the arguing process logically incentivizes states to provide justifications. The arguing process creates a marketplace of ideas where different justifications and conceptions of fighting justly are exchanged and placed at the disposal of other actors.\textsuperscript{2} The marketplace of ideas can thus be fueled and used by every other actor, including international actors (i.e. NGOs and international institutions). Therefore, the US engagement in the arguing process over UAVs directly created a form of international pressure. Because other states had more arguments in hand, it became easier for them to denounce the validity of the US argument, and \textit{in fine} to avoid scrutiny over their own practices. This is the second type of constraint that might explain why the Obama administration started to decrease its UAV utilization.

Therefore, shifts in the meta-norm of fighting justly impacted decisively on the perceptions of Obama’s administration as to their utilization of UAVs. The shifts in the meta-norm of fighting justly, and the overall arguing process, need to be studied if one wants a more comprehensive account of variations in the utilization of UAVs. This is what the next part of this chapter proposes to do.

\textbf{Part III – How the Arguing Process on UAVs Impacts the Meta-norm of Fighting Justly}

\textsuperscript{1} \textit{In fine}, actors cannot unravel the strategy from the meta-norms of just war and fighting justly. See the literature on the “return of just war”, for instance \textit{Le retour de la guerre}. Paris: Presses de sciences Po, 2004.

\textsuperscript{2} See theoretical chapter for a thorough definition of ‘marketplace of ideas’.
**The meta-norm of fighting justly and the arguing process**

The following part analyses the different arguments put forward by a set of actors arguing over UAV utilization.

This analysis details how the arguing process over UAVs utilization has affected actors’ understanding of the meta-norm of fighting justly. The arguing process over the weapon leads to the refinement of the principle of distinction in two opposite trends. On the one hand, different arguments denouncing UAVs have largely focused on the norm of distinction, and have contributed significantly to a refining and tightening of its expected standards. The level of distinction a weapon now has to reach is much higher than it was before the arguing process. A weapon is now expected to be extremely precise. On the other hand, the lack of interest in, or discussion about, the status of UAV targets has nourished and fostered an important confusion over the norms of ‘Just War’. Justifications over UAVs fueled a form of uncertainty or fuzziness over the definition of a combatant, especially in a counter insurgency context. These two contradictory tensions have led to what I call ‘the paradox of precision’, and that is further described within this part of the chapter. If on the one side, the level of destruction a strike may achieve has been considerably clarified and tightened, on the other side, the arguing process has considerably obscured the status of the person who might be legitimately targeted by the drone (with a high level of restraint). This is why I define this dual tension as “the paradox of precision”. The gain in precision is paradoxical because it leads *in fine* to greater confusion.

Because the arguing process over drones is ongoing, this chapter will not aim at providing new insights into how actors succeed in enshrining their conception of the meta-norm of fighting justly at the international level (contrary to the other chapters). Rather, this chapter aims to illustrate two points held as crucial:

1. First, and this is the most significant contribution of this chapter, the arguing process over UAVs has not only remolded the meta-norm of Fighting Justly, but it has also transformed the meta-norm of Just War. Arguing over UAVs has contributed to stretching the grey area between war and intervention, but also between war and
peace. *In fine*, this extension of the grey area obscures the conditions under which the laws of war might be applied – and therefore, on the overall coherence of laws of war.

(2) Secondly, the arguing process over UAVs supports the general overall theory of this dissertation as to the “war of gods”\(^1\). The original two ideal-types of fighting justly (humanitarian concern versus military necessity) are based on different premises. If sometimes those different premises do not prevent actors from engaging an argument, they sometimes come to the fore vividly. UAVs are an example of this sudden but clear revelation of profound disagreement on the understanding of the meta-norm of fighting justly. Arguing over UAVs has stalemated because actors face the paradox of precision. This profound disagreement might explain why states have waited so long before considering framing UAVs (1) and why the creation of a strong legal norm is currently at stalemate.

**Methodology to analyze the arguing process**

In order to retrace and analyze the arguing process, we will use the following methodology. We had selected a set of texts considered as being representative of the overall arguing process. These texts share three common characteristics: they mention the utilization of UAVs (1), they are official texts (2), and are addressed to an authority, be it an international organization, public opinion or the state who deployed the weapon (3).\(^2\)

Two States have publicly argued over their utilization of UAVs: the United States and Israel. The analysis therefore focuses on the arguments of their legal advisors justifying their utilization of UAVs. Several legal statements have been released lately, and they constitute the basis of the discursive analysis.

Very few international actors (i.e. international institutions and NGOs) have participated in the arguing process over UAVs. Three reports produced by major NGOs and one report written by the UN Special Rapporteur on extrajudicial or arbitrary executions gave rise to

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\(^1\) The concept of ‘war of god’ is defined within the theoretical chapter.

\(^2\) Those categories are extremely broad, mostly because official discourses and legal statements rarely have only one interlocutor. Yet, what is important is that because they are addressed to an interlocutor, they are the result of a desire to communicate and argue.
particular attention because of their wide diffusion. The three reports reveal the official line of those NGOs, a line that is also shared by several members of the UN and of domestic opinion.

We did not have access to the current debates taking place within the UN, hence our major focus on these reports. Finally, interviews with militaries were also helpful to a reading of their perceptions of how UAVs challenge their understanding of the meta-norm of fighting justly.

Refining the norm of distinction: the paradox of precision

The weapon that cannot not comply with the principle of distinction

NGOs generally value and emphasize three aspects of UAVs: precision, prudence and transparency. Those three allegedly intrinsic qualities grant the possibility for soldiers to respect the distinction principle. Via their reports, NGOs argue by accentuating these three values. By doing so, they contribute to tightening/narrowing the principle of distinction, and, ultimately, transforming the meta-norm of fighting justly.

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An intrinsically precise weapon

Within their official reports but also throughout their official declarations, NGOs portray targeting UAVs as extremely precise weapons. Their technical characteristics enable pilots to strike very precisely, and with restraint. Indeed, the report denouncing Israel’s utilization of drones during Operation Cast Lead, describes the targeting UAV (i.e. herein the model Hermes) in the following sentences:

“Due to drones’ small size relative to manned aircraft, and therefore limited payload, they typically carry small missiles. These munitions have smaller warheads with limited collateral effects. For example, where a 500-pound bomb would destroy a house, a drone-launched missile can limit destruction to a specific room. Recent advances in drone-launched missiles have reduced the damage further by replacing the missile’s anti-tank warhead with a fragmentation sleeve meant to destroy targets in the open, such as personnel or soft-skinned vehicles, while limiting collateral damage.”

NGOs stress what they perceive as the intrinsic qualities of the UAVs, and so they more persuasively articulate the following argument: if certain weapons fail to be discriminate by nature because of their technical capabilities (such as napalm or chemical weapons), recent targeting UAVs stand out from those weapons. Not only do they enable pilots to strike precisely, they also supposedly have a very limited firepower. This limited firepower grants the chance to considerably limit potential collateral damage. Therefore UAVs enable soldiers to mitigate the risk of killing persons surrounding the targets. More importantly, UAVs morally constrain soldiers not to kill anyone but their target. In fine, UAVs morally constrain soldiers to comply with the principle of distinction. Conversely, any violation of this principle is presented and perceived as a moral failure.

The weapon of prudence

The NGOs’ reports also portray the UAVs as a cautious weapon that enables soldiers to entertain a twofold distance with their target. First, UAVs create a geographic distance between

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the one who targets (who is in a hangar located several, even sometimes thousands of kilometers away) and the target. This geographic distance allows the operators to disengage themselves from the fear of being killed while striking. It provides them with a feeling of security that should, logically, help them to act with less anxiety and more lucidity. The lack of imminent threat is perceived as a guarantee for them to act cautiously and methodically. Moreover, UAVs also create a temporal distance. Because UAVs are indeed able to record, zoom, dissect and analyze images of the target, they offer the possibility to verify and double-check their target.¹

This dual distance – provided by no other weapons than UAVs but satellites, with a lower degree of precision – enables UAVs operators to be sure to have all the necessary preconditions before striking (identification of the target, presence of civilians surrounding the target, identification of the location). In that sense, UAVs enable operators to strike fearlessly, with an extreme precaution, and with an extreme precision. Again, in fine, UAVs’ qualities morally constrain soldiers to comply with the principle of distinction. Conversely, any violation of this principle is presented and perceived as a moral failure. The following sentence drawn from the conclusion of a NGO report illustrates this implicit condemnation of moral failure: “The technological capabilities of drones and drone-launched missiles make the violations even more egregious.”²

The weapon of transparency and accountability

NGO reports underline that UAVSs are equipped with cameras that record and broadcast all their actions. These recorded images provide a material proof and a memory of the targeting. NGOs perceive these images as providing the possibility to verify the validity and the legality of any strikes launched by a UAV, and even any actions that took place under its camera. In other words, the records provide the possibility for accountability. As stated within the report on Cast Lead:

¹ “Drones carry an array of sensors, often combining radars, electro-optical cameras, and lasers. These advanced sensors can provide a clear image in real time of individuals, with the ability to distinguish between children and adults” in Precisely Wrong, Gaza Civilians Killed by Israeli Drone-Launched Missiles.” HUMAN RIGHTS WATCH, July 2009. http://www.hrw.org/sites/default/files/reports/iopt0609web_0.pdf.

“Fully cooperate with the commission of inquiry appointed by the United Nations Human Rights Council and headed by Justice Richard Goldstone, including by providing the gun-camera video of drone-launched missile attacks in which civilians were wounded or killed.”

UAVs are thus painted as the weapon of transparency and accountability. Again, the possibility is converted as a moral responsibility. If States can provide the video of their drone strikes, they are morally entitled to do so whenever the situation requires it. Conversely, the resistance or refusal to release images is immediately analyzed as the concession that those images are controversial.

The moral responsibility and the weapon that cannot provoke collateral damage

In a nutshell, NGOs portray UAVs as weapon of a “highly discriminate nature”. Reports and official discourses argue that the intrinsic qualities represent the possibility for soldiers to act with distinction, prudence, with the approval of civil society. More than a possibility, these qualities impose a moral responsibility for soldiers and armies to avoid civilian casualties and collateral damage \textit{whatever} the conditions and situations are. The implicit rationale is indeed that these extremely precise weapons will \textit{in fine} eradicate the killing of civilians within the battlefields. Conversely, the direct corollary is that the killing of civilians cannot be incidental. In that sense, civilians who are killed cannot be justified and legitimised as “collateral damages”. Killing of civilians necessarily results from a moral failure, either provoked by a lack of feasible precaution, or by a deliberate intention to kill civilians. This alternative leads, in any case, to the following conclusion: the killing of civilians constitutes a serious violation of the principle of distinction.

\textit{A revealing weapon}

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As the latter developments suggest, NGOs hinge their argument of “moral failure” on the intrinsic qualities of the UAV. NGOs essentialisent the UAV as the weapon of precision, restraint and prudence. Contrary to the other weapons used within battlefields, such as incendiary weapons, cluster bombs, bombs, drones cannot fail to target accurately. The possible killing of civilians resulting from their utilization is attributable solely to soldiers’ mistakes. In a sense, the intrinsic qualities of UAV automatically dismiss the very weapon as a potential justification for the violation of the principle of distinction. The extreme precision of the drone is erected as a sort of revelator that always highlights when soldiers fail in their duty, to act distinctively. The nature of soldiers’ failures can be classified on a spectrum of possibilities: from the lack of feasible precautions to the very intent to kill civilians.

_The weapon that allow soldiers to take all feasible precautions_

At one extreme of the spectrum, the mistake is unintended, or by default. Civilians are killed because the soldiers did not take all the feasible precautions they should have taken before striking. This failure is problematic because the principle of feasible precautions – defined as the duty of each party to take all feasible precautions to protect the civilian population and civilian objects under their control against the effects of attack - is a customary norm of Jus in Bello, and therefore a pillar principle of the meta-norm of fighting justly. This principle is understood by a majority of states as follows: “military commanders and others responsible for planning, deciding upon or executing attacks necessarily have to reach decisions on the basis of their assessment of the information from all sources which is available to them at the relevant time.” NGOs perceive UAVs as a means to considerably extend the level and precision of information militaries might gather before attacking. By doing so, militaries should necessarily

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1 It seems that there is no strict equivalence of the word ‘essentialisent’ in English. NGOs present the weapon as if its intrinsic qualities were objectively measurable, and in that sense, unquestionable. They act as if the weapon as an essence, and that this essence is to be precise, moderate and transparent.

2 The feasible precaution principle is declined in the rule 15,22, 23 and 24 of the customary norms of International Humanitarian Law”. In this development, we refer to the rule 15. For a more detailed description of the principle, see https://www.icrc.org/customary-ihl/eng/docs/v1_rul_rule15. This principle is generally brandished in two cases: when attacks on military objectives occurred in densely populated areas (1) and when civilians and civilian objects are in the vicinity of the military target (2). In both cases, the extreme proximity of civilians should impede military to attack.
be able to distinguish human shield from combatants. They thus should be able to clearly identify when a strike will potentially kill civilians, and when it will not. And because their firepower is limited and precise, UAVs should only kill combatants. In that sense, the discourse of NGOs on UAVs invalidates any argument that justifies the killing of civilians with UAVs as the failure of the principle of feasible precaution.

Killing civilians with UAVs is necessarily intentional

At the other extreme of the spectrum of soldier’s failures stands the intention to kill. Militaries kill civilians because they have the intention to do so. This situation represents the more egregious violation of the laws of war. Soldiers would take advantage of a situation they know and estimate as complex (a civilian area) to hide their real intent, which is to kill civilians. They therefore willingly violate the principle of distinction, and commit a violation of the laws of war: equivalent to a crime of war.

The NGOs portrayal of UAVs is such that any strike that would kill civilians largely leans toward this extreme of the spectrum, and thus is be qualified as an intended killing. As explained in the previous paragraph, UAVs’ intrinsic qualities are perceived as automatically dismissing any justification for killed civilians based on a lack of feasible precaution. As a consequence, the NG0s’ discourse over UAVs shortens the spectrum of possible justification, leaning toward the “intention killing” extreme.

The traditional spectrum of justifications for civilian killings:

- lack of feasible precaution (LFP)
- grey area between LFP and ITK
- Intentionality to Kill
The traditional spectrum of justification for civilian killings with UAVs, according to NGOs reports:

A weapon that dissipates the fog of war

Generally, NGOs do not focus on weapons they perceive as precise. On the contrary, they have published several reports denouncing the utilization of indiscriminate weapons (i.e. white phosphorus weapons).¹ With UAVs, they reverse their usual argument. Instead of focusing on the weapon to denounce its limits, NGOs reports highlight the benefits an extremely precise weapon offers. UAVs reveal the true intention of the one who targets, notably by considerably shortening the spectrum of possible justifications. The UAV user cannot any longer argue (at least with good faith) that he lacked feasible precaution. The intrinsic qualities of the weapon literally prevent the pilot from failing to examine the vicinity of the strike, to check if ideal conditions are present, to strike with calm and precision. In a sense, NGOs uses UAVs to dissipate the fog of war.

As demonstrated earlier, UAVs makes it particularly hard for soldiers to prove that they did not intend to kill civilians. It also tends to delegitimize all justifications based on the moral hazard idea. Intentionality excludes de facto the potential impact of uncertainty or unpredictability. More precisely, even though there is a fog of war, it does not excuse or justify an intended killing of civilians. In that sense, UAVs dismiss the “fog of war” argument as they put all the burden of proof upon soldiers’ shoulders.² The killing of civilians necessarily results from a moral failure of soldiers in the field, or of military strategists who conceived the

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¹ See chapter four on incendiary weapon, and more specifically the case of white phosphorus weapon.
² The fog of war argument is more precisely detailed within the theoretical chapter.
operation. And this moral failure is all the more problematic and serious, as it could have been avoided.

The refinement on the meta-norm of fighting justly

The NGOs’ discourse on UAVs in fine considerably tightens the understanding of the notion of distinction. They indirectly newly impose very high standards on the level of precision a strike should reach. Militaries from democratic armies have now the possibility to use a weapon that enables them to act with prudence, precision and accountability. Not using this weapon is in fine depicted as the sign of an intention to hurt. This constitutes a violation of the principle of distinction, a pillar principle of the laws of war (jus in bello). UAVs are depicted as a moral weapon, in that their use creates the moral obligation for soldiers to comply with the distinction principle under any circumstances. By delegitimizing the discourse on the fog of war, by removing moral hazard from war, those reports indirectly erect distinction as the “horizon indepassable” of war. Distinction is achievable, and because it is achievable, it has to be achieved. This rhetoric transforms expectations and standards of what should be done and which weapons should be used to comply with the principle of distinction.

This refinement of the norm of distinction (toward a very high standard) reintroduces precision – more specifically a high standard of precision - in the counter-insurgency field that commonly excludes – or rather incapacitates because of its complexity compared to conventional battlefields – the possibility to be precise. This reintroduction is problematic for the following reason: it considerably mitigates – if not overlooks - the complexity of both drone utilization and of counter-insurgency. Yet, those two assumptions are at the core of militaries arguments. The latter – as we will see – base their arguments – and their discussion with NGOs – upon the two following and opposed premises: first, drones are not that precise, and second, the situation of counter-insurgency and terrorism are incompatible with a high standard of distinction.1 These side effects are extremely damaging as they lead to an aporia, here called the paradox of precision. This paradox, which is dismissed or underestimated by NGOs, reduces

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1 Interview with Letta Tayler, researcher for Human Rights Watch, led by Amélie Ferey, (27/11/2014)
According to Tayler, drone strikes are less precise than what the common wisdom suggests.
the process of arguing to a “war of god”, ultimately undermining the cohesive and constraining power of the meta-norm of fighting justly.

**The paradoxical weapon**

The NGOs refinement of the meta-norm of fighting justly seems to lead actors to face an “aporia”.\(^1\) Indeed, UAVs reveals the paradox of precision: weapons are required to be more and more precise to be legal. Yet, this call for precision only makes more salient the complexities – and the profound limits - of the category of combatants.

*The burden of proof on the civilian shoulder*

As detailed in part 2 (i.e. the striking process), targeted people are by default considered as combatants. Governments or NGOs have to present proof that they are not combatants, for the victims to be numbered as civilians. The burden of proof is in that sense reversed, as victims hit by drones are sealed with the identity of combatants. Drones strikes directly contribute to dissipating the ambiguity inherent in the process of victims’ identification, and more precisely on the categorization of those victims. By doing so, they seem to dissipate the fog of war. Drone strikes allow the US militaries not to have to argue about the status of combatants, and more specifically, about the complexity of the status of combatants. Because drones are precise, they can only strike well. And if they strike well, they can only kill combatants. The circular argument is made, preventing a deeper reflection on the status of combatant. By underlining the extreme precision of drones, NGOs indirectly reinforce the paradox of precision.

*Civilian/grey area/combatant*

In counter-insurgency contexts, combatants are not easily identifiable. Contrary to contexts of conventional battle, soldiers in counter-insurgency contexts do not wear apparent weapons, nor do they hold symbols that signal they are combatants. Therefore, determining who is actually a combatant is extremely difficult. A consideration of combatant status as a

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\(^1\) See definition in the theoretical chapter.
gradient rather than a dichotomy (combatant/non-combatant) is more relevant and appropriate
to capture the complexities of counter-insurgency situations. The consequence of using the
gradient is that it creates an entire grey area between who is undisputedly perceived as a civilian
or as a combatant. One example underlines the limits of the dichotomy civilian/soldier: the case
of human shield. It is indeed very hard to determine whether persons surrounding the targets
have chosen to be there, or whether they have not, and thus are hostages of a situation. If they
have chosen to be there, and, more precisely, if they have chosen to protect someone known as
being a combatant, it might be argued that they are combatants themselves.\footnote{This argument is of course highly debatable, and several authors in normative theory advocate
and disagree with this idea, depending on their conception of responsibility in war, degree of
engagement, etc. The idea of this paragraph is to show that those points are not discussed while actors
argue over UAVs. This lack of precision is problematic because those points are crucial and at the core
of the principle of distinction.} On the contrary, if
they are not aware or have not chosen to surround a combatant, then categorizing them as
combatant is more debatable. In either case, arguing over these situations should contribute to
clarifying the norms of both civilians and combatants. Yet, because drone strikes take for
granted that the person shot is a combatant, they do not answer or aim at clarifying these
questions. NGOs mostly only focus on clear-cut cases where no combatant (and no alleged
combatant) is known to have been present. This focus is understandable (they look for
credibility on the international scene and therefore focus on hard/clear cases they are sure to
win) but undermines the clarification of the norm of combatants. Therefore, if the process of
arguing over drone strikes does impose a new standard of precision, it certainly does leave aside
the question of who shall be or shall not be targeted. If, on the one hand, the fog of war is
removed from the distinction standard, the fog of war still shadows the question of who should
be precisely targeted.

*Increasing risks for civilians? Targeting killings and hostage-taking*

Another interesting element that highlights the possible aporias created by the arguing
process is the relationship between targeted killings operated by UAVs and a recrudescence in
hostage-taking policies. Indeed, several groups acknowledged as terrorists by the United
Nations and who have been victims of targeted killings have increasingly intensified their
politics of hostage-taking. More recently, these same groups have also been increasingly violent

toward their hostages, to an extent that has deeply shocked public opinion. Yet, what interests us here is that there might be reinforcement between the recrudescence of targeted killings and the recrudescence in the recourse to and the violence of hostage takings. Because the ‘terrorists’ cannot compete with US targeting drones, they overcome this failure or frustration by attacking the first representatives of the country they meet, by violent and deadly hostage-taking. It is not to say that these violent actions are justified by the massive recourse of drones. Rather, it shows that emphasizing high technological weapons and their precision might reinforce practices that are extremely costly for civilians. Civilians might be exposed to some extremely violent practices – beheading and burning. These practices will be analyzed in more detail in the fourth part of this chapter on symbolic power. We will analyze more particularly how the drone has been increasingly erected as a symbol of civilization, and how its ‘targets’ have increasingly brandished, in reaction, symbols of barbarism.

The arguing process between the US, NGOs and the United Nations has incentivized those actors to clarify what they believe is the just level of destruction a weapon should be allowed to reach (restraint and precision). However, their discussions also cast doubt and uncertainty over the question of who constitutes a just target. This indecision and uncertainty around the question of who might be shot or neutralized has spilled over into the consideration of the further question of when states might justly wage war. Indeed, if the state does not really know who it has the right to shoot or neutralize, then it might lose clear guidelines as to when it is authorized to wage war. The Just War tradition is indeed largely built upon the idea that the principle of self-defense conditions the legitimacy to go to war. This is not to say that this principle of self-defense is the sole criterion to define what is a just and what is an unjust war (and the following part will discuss those other criteria). Rather, the self-defense principle is the sine qua non condition for a war to be qualified as just. Yet, it becomes very clear that if you cannot identify whom you might fight against, then the notion of self-defense becomes extremely broad and potentially applicable to anyone who seems to undermine your safety. The imprecision in the idea of fighting justly also spreads over many other key areas of the Just War tradition, and the following paragraphs will discuss them.

In a nutshell, the arguing process around UAVs has not only challenged and forced actors to remold the meta-norm of fighting justly, but it has also challenged actors’ perception of the meta-norm of waging just war (i.e. the meta-norm of jus ad bellum, that is the set of principles that determines the conditions under which it is just to wage war).
The disruption of drones within the meta-norm of jus ad bellum

The irruption of surveillance and targeting drones in the 1990s coincided with the first investigations into the transformations those weapons would inflict on the laws and practices of war. More precisely, militaries, but also ethicists, started to wonder which norms specifically would be affected by this “new” means of warfare, and how. If commonly used weapons are framed by the meta-norm of fighting justly (jus in bello), both surveillance and targeting UAVs seem to transform the meta-norm of waging just war (jus ad bellum). If both meta-norms are generally perceived as normatively separate, they are actually interdependent and intertwined in the discourses of actors arguing over UAVs. In that sense, UAVs reveal that any shift of understanding in one of the meta-norms might impact on the understanding of the other meta-norm. While some political theorists pinpoint and discuss this inter-dependence, very few studies actually analyze how this inter-dependence might affect practices of war. This dissertation holds this impact as crucial. By promoting and being willing to enshrine specific conceptions of the meta-norm of fighting justly via their denunciation of certain weapons, actors might impact on a wider range of practices of war than they originally wanted to. Promoting UAVs might lead to the acceptance and enshrinement of new practices of intervention. These practices of intervention are problematic because they reveal the potential aporias of laws of war, ultimately undermining the cohesion of this body of law. The following part sketches how UAVs actually impact on the meta-norm of waging just war (1), and then demonstrates why this impact potentially undermines the coherence of the entire laws of war (2).

Roadmap

This impact of the meta-norm of fighting justly on the meta-norm of waging just war comes to the fore in five types of ongoing discussions that took place at the international level. Three of them emerged in the 1990s and concern the following points: the threshold of war (1), the boundaries between preventive and preemptive war (2), and the relevance of the last resort.
argument (3). The massive utilization of drones during the Obama administration also clearly reveals the inherent ambiguities in the extant definition of terrorism (4). More precisely, three questions vividly came at the fore in 2010: how should terrorism be defined? Which rights should be granted to a state that is fighting terrorism? When does terrorism become war, and therefore when should a state “switch” from compliance with judiciary laws (terrorism) to laws of war (war)? The fifth debate that has become extremely controversial in the aftermath of Obama’s drones policy concerns the norm of assassination (5).

**UAVs and the threshold argument: UAVs facilitate intervention**

The “threshold argument” raises the question of the “just cause” and the “proportionality” of a war.¹ What is the proportional response a state is permitted to engage if it is to wage a just war?

The traditional answer underlines a sort of trade-off or calculus between the two principles: if the cause is just, the intervention to remove the threat is legitimate. The “strength” of the intervention is justified by the nature of the cause of the intervention. The more the cause seems just, the higher the scale of engagement to intervene.

**An intervention of low scale and engagement**

UAV deployment challenges the calculus between just cause and proportionality because it considerably lowers the scale of engagement. UAVs have considerably rekindled focus in the literature on the “use of force short of war” (sometimes called ‘jus ad vim’). As this name indicates, it investigates those occasions when states ‘use force’ against another state,

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¹ A more detailed explanation: “It is that drones lower the threshold against lethal action (and war more generally) to a morally dangerous degree. They do this by being easier and cheaper to use (both monetarily and in lives lost for the side that employs them) and thereby less politically costly to national leaders than alternative means of war. That is, they make war too easy. This has become known as the threshold argument or threshold problem.” In STRAWSER, Bradley Jay, ed. *Killing by Remote Control: The Ethics of an Unmanned Military*. Oxford ; New York: Oxford University Press, 2013.
but do not wage war, as it is conventionally understood (sending massive troops on the field and officially engaging in a war with the other state).¹

UAVs indeed seem to offer the possibility to wage a low engagement - that is an engagement on a small scale, with a supposedly light impact – for three reasons: UAVs can make intermittent and brief flights back and forth over the frontier (1), strike with a very restrained firepower or wage missions of surveillance (2) and do not carry humans (3). This possibility to offer a low engagement upends the calculus of just cause/proportionality. If a cause held as particularly just allows a high scale intervention, then does a cause regarded as “less imminent” allow a low scale intervention?²

**Crossing borders easily**

The capacity of UAVs to go back and forth intermittently over borders not only undermines the notions of frontier and sovereignty, but also enables the UAV’s owner to fly over another state, spy on it and even strike some of its citizens. Yet, is a fleeting intrusion of drones within foreign borders equivalent to crossing borders with an entire army, tanks, artillery and planes? Is sovereignty undermined when it is breached for a couple of minutes or seconds? Does the nature of the drone (surveillance or targeting) change the nature of the breach of the frontier? When the mission is reduced to surveillance missions? Depending on the answers to those questions, a rapid incursion made by a flying object into another State can successively be qualified as an intervention, an intrusion, a lethal action, an undercover mission...

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Limited firepower, low scale intervention and regime change

The facility of UAV deployment is also combined with the fact that drones are perceived as having limited firepower, when they do have firepower. They cannot strike many targets, and this is sometimes perceived as an incapacity to severely damage an entire village or city. This limited firepower is often brandished by UAV users as a guarantee not to damage or hurt the state they invade. The strikes are depicted as precise and restricted, and therefore, the potential damages are necessarily limited in scope. This limitation inherent in the firepower of drones is therefore used as a guarantee not only that the violation of sovereignty is brief, but that the potential damages will be extremely limited. And this is all the more claimable for surveillance drones that cannot strike. Therefore, with the assurance of a limited scope in time comes the belief that UAVs will act “surgically”, removing the threat rapidly, without hurting the invaded state. This capacity to target the strike very precisely is presented as the guarantee of not externally imposing a regime change. This issue was largely debated when Israel struck the foundations of a future nuclear plant in Syria and Iran, and came to the fore during the Syrian intervention.¹ If UAVs can represent the guarantee that no regime change will be

imposed following the intervention, they are commonly represented as the opposite of regime change that is as a low-scale engagement that surgically removes a threat and does not go beyond this.

No pilot equals a low and risk-free engagement

The absence of pilots onboard is also brandished by UAV users as a guarantee to wage a low-scale intervention. The implicit assumption is the following: if no human is risking her life on the battlefield, then the intervention will not cause human losses for the state that intervenes. The lack of risk of losing one’s own combatant means that the engagement is not absolute. This lack of engagement transforms the UAV deployment into a low-scale intervention. Though this assumption is eminently problematic for several reasons, it seems to underpin many justifications of UAV missions. The absence of pilots onboard is held up as the guarantee of paying a very low cost in case the mission fails, because it is regarded as a dual asset. On the one hand, states are sure that they will not have to lose a military or negotiate for hostages in the case that the vehicle is neutralized. This possibility might indeed be perceived as an important obstacle for statesmen, who fear the possibility of negotiate hostages. Free from this concern, statesmen must be more inclined to launch drone strikes; On the other hand, militaries feel less entitled to justify the drones’ deployment, because in the eyes of domestic opinion no citizens is directly involved in the mission (directly involved meaning being on the very engine and risking a life).

Last resort, the red line and UAVs

The principle of last resort is underpinned by two ideas. First, all other possible solutions to solve the conflict must have been exhausted before deciding to wage war (1). The principle

strike-on-syrian-reactor-1.464033. But also the bombing of the Iraqi nuclear reactor in 1981 by Israel with the justification that “a mortal danger to the people of Israel progressively arose”.

1 Many different cases involving pilots of jets taken as hostages after surveillance or targeting missions can be quoted. One example that led to tough negotiations was the capture of French pilots Captain Chiffot and Lieutenant Souvignent in Bosnia and Herzegovina in 1995, This event was regarded as particularly damaging for French diplomacy.
is justified by the fact that war is costly, leading to heavy consequences and responsibilities for both sides (2).

Is the last resort principle relevant if unmanned missions can be led? Indeed, the norm of last resort conveys the idea that all other solutions must be weighed before deciding to launch an intervention with troops on the ground, precisely because war is extremely costly. It is costly in terms of men, weapons, and logistics for the state that intervenes. It is also costly for the population that endures war, likely to experience damage to infrastructures, human losses, fear and economic burden. Therefore, the calculus of costs is at the core of the last resort principle.

Yet, as the literature on the use of ‘force short of war’ points out, UAVs complicate this calculus of costs for two reasons.

First, the consequences of drone strikes on populations might be as disastrous and massive as, or even worse than consequences associated with ground intervention. Put simply, are the costs to the population that are associated with a long and massive campaign of drone strikes really lower than those of a ground intervention? If the answer to this question is yes, it would considerably undermine the notion of the ‘red line’ largely brandished by Obama’s administration.

The red line concept is underpinned by the logic of the gradation of threat. The first state refuses to choose the last resort option (i.e. intervene with human presence on the ground) because it estimates this solution as too costly or too disproportionate for the second state’s population, with regards to the second state’s threat. Yet, in order to still exert pressure upon the second state, the first state draws a red line. This red line represents the boundary that the second state must not cross, if it is to avoid the last resort option. The solutions chosen to constrain the second state before it crosses the red line should therefore logically be less costly for the second state’s population than the last resort option. Yet, if drone strikes are as costly as, or even more costly than ground intervention, this undermines the notion of gradation of threat (or graduated riposte). In fine, it undermines the coherence of the notion of red line and last resort.

According to the discourse of Obama’s Administration:
What if drone strikes are more costly than ground intervention:

- Punctual strike with UAVs
- Ground Intervention
- Red Line Last Resort
- Long Range UAVs strike

MINUS COST
First solution

MAJOR COST
After the Last Resort
Secondly, there is an inherent moral hazard in war. It is extremely hard to predict and gauge the consequences of drone strikes in the short and long term. It is even more complex to compare those risks and consequences with those of an intervention on the ground. Therefore, the whole rhetoric of red line that is used to legitimize drone strikes “objectivizes” what is, in fact, inherently uncertain. The problem of the moral hazard is not proper to the utilization of drones. Every practice of war, in fine, raises it. Yet, the arguing process led by Obama’s administration over their utilization in Syria or Libya considerably minimizes this aspect, and obscures the calculus involved in the principle of the last resort.

Terrorist and Combatant, Prisoner of War and Trial

The difference between the status of combatant and terrorist is extremely unclear. This chapter has already discussed the problematic notion of combatant in the context of counter-insurgency. It has shown that the notion of combatant is less a “have or have-not” status than a continuum that goes from the status of civilian to the status of combatant. The status of terrorist is even more difficult to define, for two reasons. There is no clear acknowledged definition of terrorism (1), which makes the label extremely malleable. Moreover, the term terrorist is attached to a very negative charge (2). Therefore, the very designation of “terrorist” might be used as a weapon, by which to legitimize or delegitimize actions and people.

In this chapter, we will only focus on the rights and duties entitled to each status. Simply put, our main focus will not be on whether states that claim that they are targeting terrorists with UAVs are right or legitimate. Rather, we analyze how those who use UAVs manipulate the notion of terrorism to justify their utilization of targeting UAVs.

The lack of a clear definition of what terrorism is – and the process of arguing over UAVs directly fuels this lack of precision – obscures the determination of when states are at war (and are therefore framed by the meta-norms of Just War) and when they are not (and therefore should abide by criminal law). Indeed, the division between the two competing frameworks (war or criminal justice) ultimately lies in the definition given to the context in

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which violence is exerted. UAVs complicate the clarification of this context. Indeed, the
discourse over drone strikes is generally very confusing as it rarely explicitly states whether
they target terrorists (domestic law) or combatants (fighting justly). Discourses sometimes
designate the targets of the drone strikes as terrorists against whom the US is at war. This
association entails a form of deliberate confusion about the status of the targeted people. This
official discourse of the State Department’s Legal Advisor Harold Koh exemplifies this
confusion:

“Third, some have argued that the use of lethal force against specific individuals fails
to provide adequate process and thus constitutes unlawful extrajudicial killing. But a state
that is engaged in an armed conflict or in legitimate self-defense is not required to provide
targets with legal process before the state may use lethal force. Our procedures and practices
for identifying lawful targets are extremely robust, and advanced technologies have helped to
make our targeting even more precise. In my experience, the principles of distinction and
proportionality that the United States applies are not just recited at meetings. They are
implemented rigorously throughout the planning and execution of lethal operations to ensure
that such operations are conducted in accordance with all applicable law.”

In fine, the chapter will demonstrate that the arguing process over UAVs has obscured
the meta-norm of waging just war, by clouding the notion of terrorism. Because the US
maintains a form of ambiguity as to whom they are targeting with UAVs, and because they fail
to make explicit the status of those they are targeting, the arguing process over UAVs exposes
the limits of the conditions for the application of the laws of war (as opposed as criminal law).
Laws of war are based upon principles which certain forms of violence resist, in the sense that
they do not fall into those categories. More precisely, the extant categories are not clear and
solid enough to dissipate the ambiguities of the status of those who are targeted. The arguing
process does not help to dissipate these ambiguities. It even makes matters worse, by constantly
mixing two different frameworks.

The weapon of extra-legality: switching and mixing the framework

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1 KOH, Harold Hongju. “The Obama Administration and International Law - Annual Meeting
of the American Society of International Law.” Annual Meeting of the American Society of

Therefore, because UAV deployment is fueling confusion between the frameworks, it maintains confusion over the status of the persons it targets or spies on. A sort of by default consensus seems to consider victims of targeting AUVs as terrorist combatants or combatant terrorists. Put differently, there is no real consistency or defined pattern that highlights the specific conditions under which each of the two frameworks is applied to each. This lack of consistency significantly undermines the coherence of the meta-norm of waging just war. The latter seems to be arbitrarily applied or dismissed. In a sense, it is always and never applied. Several actors acknowledge this tendency to ‘switch’ or even mix the frameworks in order to legitimate practices. Philip Alston, the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions, mentions this idea very clearly, as early as in 2010:

“In the legitimate struggle against terrorism, too many criminal acts have been re-characterized so as to justify addressing them within the framework of the law of armed conflict.”

Therefore, because the current doctrine of UAV utilization blurs the limits between the meta-norm of Waging Just War and the criminal law, it ultimately undermines the constraining power of the laws of war. In this sense, the UAV is the weapon of extra- legality.

The recent efforts made by Obama’s administration to clarify the status of its targets is in contrast with this tendency to “fuzziness” and “framework mixing”. The White House spokesperson James Carney has recently declared that Taliban shall not be named as terrorists but as ‘an armed insurgency’. Yet, this ‘clarification’ does not bring substantive arguments that clarify the difference between the two statuses, and was mainly made in a context of justifying previous negotiations over US hostages with Taliban groups. However, a growing
literature is starting to strongly engage with the topic, and therefore to provide new arguments that might be used by actors, and, eventually, lead to further clarifications.¹

*The weapon that kills combatants… or that never releases them*

The labeling of the fighter is a key issue, as each status entails specific rights and duties. Combatants’ actions are framed by the meta-norm of fighting justly. This paragraph will focus on two principles of this meta-norm: the status of prisoner of war, and the possibility to kill and be killed on the battlefield. Combatants must be treated as prisoners of war if they are captured, and released once the war is over. Moreover, they take the risk of being killed on the battlefield if they do not surrender.

UAVs are problematic for the norms of combatants, even without raising specific issues (i.e. issues specific to drones). Very few combatants have had the time to realize that they were being targeted by a drone strike. Generally, the surprise effect is decisive, which explains why the possibility to surrender – and to be captured- is not really offered to combatants hit by strikes. The targeting drones participate in undermining the status of prisoner of war, precisely because it barely offers the possibility for combatants to surrender.² Drones are sometimes said to be an alternative to a solution that has been increasingly regarded as politically costly: detention. Killing the combatant is a way to be sure that the prisoner will not be detained in jails under conditions that are regarded by a large part of the international community as a strong violation of human rights (especially when prisoners are tortured there)³. But this problem is not specific to drones *per se*.

*The weapon that targets terrorists without trial*

¹ See the literature review at the beginning of this chapter.
² The episode of the Iraqi soldiers’ surrender in the First Gulf War stands out as an exception. Moreover, the drone was a surveillance drone, and thus could not target those men even if its operator wanted to.
³ During the campaign, Obama had often spoken about how the secret detentions and interrogation techniques of the Bush era had sullied America’s image, and during his first week in office he announced a plan to close the prison at Guantanamo and ban all of the coercive interrogation methods used by the CIA since the September 11 attacks. In MAZZETTI, Mark. *The Way of the Knife: The CIA, a Secret Army, and a War at the Ends of the Earth*. New York: The Penguin Press, 2013.
Drones raise several problems when they target terrorists. Official discourses generally justify the drone strikes with the following argument: they target people who are terrorists, who participate in actions against their state. They are not part of an international or civil conflict. Rather they are a group of people that aim at hurting their state. The most famous example is that of the men who participated in the 9/11 attack. Terrorists are not “protected” by the laws of war, which proclaim that the killing of combatants is not permissible. Their actions are subject to domestic law. For democracies, this means that alleged terrorists should be tried if they kill. Conversely, killing terrorists before the trial is legitimized only in a situation of imminent threat (self-defense).

**UAVs and Assassination**

Finally, several observers perceive UAV strikes as a new form of assassination. The expression “targeted killing” would in fact be a euphemism hiding a much more violent reality. UAVs would be the new means to assassinate specific persons that are living outside of a state and that are perceived as a potential threat for the state, either because of their ‘terrorist status’ or because of their political role. The word “targeted killing” would be used to avoid the mention of the word “assassination”. Yet, the ban on assassination, which has been repeatedly violated but which has gained some constraining force recently, is based upon the principle of “treacherous killing”. This principle has been supposedly enshrined in the customary norms of democracies since 1907, and the condemnation via the Hague Convention.

“Thirty five years earlier, after the toxic details about the CIA’s efforts to kill foreign leaders seeped into public view, President Gerald Ford ordered a ban on assassinations that he hoped would prevent future presidents from being too easily seduced by black operations. But in the decade since the September 11 attacks, legions of US government lawyers had written detailed opinions about why the targeted killing operations carried out by the CIA and
Joint Special Operations Command far from declared war zones didn’t violate President Ford’s assassination ban.¹

The concept of assassination is a new instance of the blurring lines between criminal law and laws of war. Indeed, an assassination is perpetrated when a civilian who is not threatening anyone physically (i.e. they cannot be considered as a combatant) is killed. At the international level, an assassination often implicate a state and a person, generally not a citizen of that state, who is thought to represent an extreme threat. This paragraph will not further develop the argument as to whether UAV strikes constitute a new form of assassination. This would lead us to engage in a discussion on the notion of self-defense, and to answer several normative issues such as the legitimacy to kill political opponents. Rather, this part underlines the fact that that the arguing process over UAV utilization does not clarify the norm of assassination. On the contrary, it seems to considerably weaken a norm (i.e. political leaders must not be killed) that has been pretty consistent since the 1970s.² By not explicating whether their drone strikes were actually targeting political leaders, terrorists or combatants, the US can be said, in a sense, to have bypassed the assassination ban. The US common answer to these accusations consists in dismissing the term “targeted assassination” and stressing that “laws of war” frame their strikes. The US militaries do not assassinate political leaders or civilians from other states: they kill combatants. Implicitly, the rationale is the following: they do not kill political leaders but they kill combatants (more precisely, people who are killed are not killed because of their quality as political leader: they are killed because of their quality as combatants). And killing combatants is not reprehensible, like killing civilians or political leaders. Therefore, they are not violating the assassination ban or re-molding the norm of treacherous killing. In sum, actors invoke the meta-norm of fighting justly, so that they do not have to argue over the following questions: are they or are they not targeting people because they are political leaders? If yes, how do they justify their breach of the customary norm of assassination? What is their conception of a treacherous killing?


² Ward Thomas retraces the evolution of the norm of assassination ban, and convincingly demonstrates that the targeted killings represent a new but hidden violation of this ban. He deplores their utilization to kill political leaders, which is for him, a new form of treacherous killing. See THOMAS, Ward. “Norms and Security: The Case of International Assassination.” International Security 25, no. 1 (Summer 2000): 105–33.
“Fourth and finally, some have argued that our targeting practices violate domestic law, in particular, the long-standing domestic ban on assassinations. But under domestic law, the use of lawful weapons systems—consistent with the applicable laws of war—for precision targeting of specific high-level belligerent leaders when acting in self-defense or during an armed conflict is not unlawful, and hence does not constitute “assassination.”

The utilization of UAVs to achieve targeted killings and the absence of clarification on the status of those targeted (politicians, combatants, terrorists, civilians) have therefore considerably weakened the principle and the meaning of treacherous killing. This principle is yet a customary norm at the core of the ban on assassination. Therefore, by arguing over UAVs, actors maintain an opacity on what constitutes an assassination (especially of political leaders) as opposed to a killing of combatant. This lack of clarification on this norm is not specific to debates over UAVs. Yet, the point of this development is that the ongoing debate over UAVs does not contribute to any clarification of the norm of assassination. It might even be argued that it silently remolds the norm of assassination. I use the word silently, because the arguments brandished by the US considerably euphemize the fact that certain targeting UAVs were in breach of the ban on assassination. They remold it in a very permissive way, in that they considerably extend the limits as to whom it would be legitimate to kill outside its own borders.

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2 This debate over the legitimacy of assassination and what constitutes assassination came at the fore at several times throughout history. Ward Thomas provides a very detailed recollection of those moments in his article. He notably mentions, inter alia, debates over Hitler’s assassination, PLO leaders killed by Mossad, debates over killing Saddam Hussein at the end of the First Gulf War. See THOMAS, Ward. “Norms and Security: The Case of International Assassination.” International Security 25, no. 1, Summer 2000, p105–33.

3 These questions have been discussed by many articles, including WILL, George F. “Drones Have a Place in Modern Warfare.” The Washington Post, December 7, 2012. http://www.washingtonpost.com/opinions/george-will-drones-have-a-place-in-modern-warfare/2012/12/07/7a91c88a-409f-11e2-bca3-aad69b7e29c5_story.html?tid=wp_ipad.
Conclusive Chart: when UAVs blur the legal frameworks

As the following chart shows, the current doctrine of UAV deployment blurs the lines between criminal law and laws of war, becausejustifications to legitimize this deployment draw their argument from each of the frameworks. This fuzziness considerably undermines the constraining power of the meta-norm of waging just war. Actors are not explicitly justifying or clarifying the reason for their switching from one framework to another. Rather, actors are using a logic of mixing, blurring those frameworks. This logic prevents them from clarifying ambiguities on the nature of their very actions, but also prevents them from refining the two frameworks, in order to make them constraining. In other words, they perpetuate the grey area that inherently surrounds the conditions under which the meta-norm of waging just war should be applied.

<table>
<thead>
<tr>
<th>Framework</th>
<th>Criminal Law</th>
<th>Laws of War</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideal status of the target</td>
<td>Criminal</td>
<td>Combatant</td>
</tr>
<tr>
<td>When it is legal to kill?</td>
<td>Self-defense</td>
<td>Within the battlefield, when absence of surrender</td>
</tr>
<tr>
<td>If killing while illegal status</td>
<td>Assassination</td>
<td>Crime of War</td>
</tr>
<tr>
<td>(i.e. innocent, surrender and not criminal/combatant)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If the person is captured?</td>
<td>Trial</td>
<td>Incarceration with status of Prisoner of War (no torture)</td>
</tr>
<tr>
<td>When will the person be released?</td>
<td>Depending on the sentence of the trial</td>
<td>When war is officially declared as over</td>
</tr>
</tbody>
</table>
Provisory conclusion: Meta-norm of fighting justly molds the perceived strategic utility

The arguing process over UAVs, which really started in 2010, has revealed that actors have been sharing very different and sometimes contradictory perceptions on recent targeting and surveillance UAVs, such as the Reaper or the Predator. This chapter demonstrates that those actors were strongly in disagreement, in their gauging of the efficiency, reliability, utility, added value and price of these types of UAV. The second part of this chapter demonstrates that all these judgments are underpinned by meta-norms of fighting justly, and even of waging just war. This dissertation argues that these perceptions are crucial to understand two key points. First, understanding these meta-norms highlights how actors think about the strategic utility of a weapon (i.e. perceived strategic utility). Secondly and consequently, analyzing the meta-norm of fighting justly highlights why and how perceptions of strategic utility have evolved over time (2). Underpinned by the meta-norm of fighting justly, the perception of strategic utility logically evolves as soon as the norm of fighting justly is remolded. This ‘remolding’ occurs via the arguing process (described in the previous part of this chapter). In the case of UAVs, this chapter shows that the arguing process considerably clarifies certain principles of the meta-norm of fighting justly (level of destruction and precision), but, conversely, deepens the ambiguities and the lack of precision of other principles (status of combatant, conditions of waging war).

Irrational perceptions of UAVs: what are they? do they have a symbolic power?

The theoretical chapter details why this study separates those perceptions of strategic utility that, at least from the point of view of actors, are framed as if they were based upon calculus, from perceptions qualified as irrational. Perceptions are defined herein as irrational because they arouse strong feelings, carry strong visual representations that seem to go beyond a careful calculus and might activate strong repulsion or adoration.¹ In that sense, they cannot

¹ Rational and irrational perceptions defined as such are ideal-types. They will help us to understand what are the different types of arguments used in the arguing process, and which type seems to be the most persuasive. For more explanations on this typology, see the theoretical chapter.
be justified by a calculus, but rather draw their persuasiveness from striking images, strong feelings or emotions and a capacity to act as a focal point upon which actors fundamentally disagree. The following part will examine those irrational feelings associated to UAVs.

Part IV – Symbolic Power and UAVs

The following part analyses those ‘irrational feelings” attached to UAVs. This analysis proceeds in three ways. First, it reveals that contradictory but strong feelings are attached to UAVs (1). Secondly, militaries disagree over UAVs in that they perceive them either as a valuable technological improvement or as a weapon of dishonor. The chapter sketches an overview of how UAVs are depicted in the collective imagery, via the media. These collective images reveal that UAVs have been ever more associated to issues around civilization and barbarism, human intelligence and robots, clean war and imperialism (2). Finally, it questions whether the qualification of ‘symbol’ is relevant to describe the irrational perceptions attached to UAVs, and questions how these irrational feelings influence the ongoing arguing process over UAVs (3).

Methodology

In order to reveal the ideal-types of perceptions on UAVs, we mostly used an inductive methodology. To describe the arguing process, we have studied and reviewed many different discourses, debates, declarations and legal texts mentioning UAVs. We have also conducted several interviews with actors, and asked them how they have perceived UAVs, and whether they could objectify those perceptions (i.e. explain why they have this perception in particular, and not another one). We have then closely focused on the contexts of those mentions, their intended meanings, and the implicit imagery and emotional charges carried by them. We very soon observed that UAVs were repeatedly mentioned in similar contexts, but with very different, and even antagonistic feelings (especially in terms of repulsion/desirability). More particularly, they were mentioned in two broad discussions: Are new unmanned technologies
changing the practices of war and undermining the chivalric heritage of military conduct? (1)
Are the massive aerial strikes the expression of a hegemonic imperialism or of democratic war?
(2) UAVs were at the core of these questions, but were carrying opposing representations,
feelings and meanings.

**UAVs: embracing the revolution in military affairs or undermining military honor and chivalric codes?**

**The Distinguished Medal: honoring those who contribute to winning a new type of warfare**

The affair of the ‘Distinguished Medal’ reactivated strong ambivalent feelings toward UAVs.¹ A few days before leaving the US Defense Department, former CIA Director Leon E. Panetta proposed a medal that “provides distinct, department wide recognition for the extraordinary achievements that directly impact on combat operations, but that do not involve acts of valor or physical risk that combat entails.”² The rationale underpinning this proposition is clearly to offer the possibility for drone operators to be rewarded and honored for their actions. Panetta deplored the fact that, despite their efforts and engagement in combat, drone operators have not been eligible to earn any medal or award. Panetta argues that this lack of eligibility is a form of ‘archaism’ or denial of the changing nature of warfare (1) and a lack of acknowledgement for the substantial contribution of those operators (2). Indeed, the Distinguished Medal was first portrayed as a necessary ‘adjustment’ the Defense Department had to make in order to comply with the changing reality of warfare. Army General Dempsey supported the initiative of the Distinguished Medal, explaining that ‘this new medal recognizes the changing character of warfare and those who make extraordinary contributions to it’. Because he emphasizes the so-called changing character of war, Dempsey here takes a position

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¹ The theoretical chapter thoroughly discusses the definition of “affair”.
in the underlying debate on the revolutions in military affairs. Roughly, ‘Revolution in Military Affairs’ (RMA) refers to a wide reflection on the ‘American Way of War’. Proponents of RMA hypothesize that asymmetric warfare is going to be predominant in the coming years. These wars are thought of as creating challenges and difficulties that were not salient in conventional warfare. Proponents of RMA largely promote a new way of conducting war, and notably advocate for an increasing inclusion of new technologies such as UAVs. Not all militaries and academics share this idea that a Revolution in Military Affairs will actually occur. If they do think that asymmetric warfare has recently proliferated, they substantially mitigate the idea that these types of war would require a radically new way of conducting war. Rather, they advocate for the upholding of many practices and weapons used in conventional warfare.\(^1\) Coming back to the Distinguished Medal Affair, Dempsey clearly takes up his position in this debate on the RMA side.

Examples of strikes exerted by UAV operators (but also of cyber warfare) are mentioned as the most efficient responses in a context of asymmetric warfare. And these ‘new’ actions are depicted as having significantly contributed to the advancing of US strategic interests. Therefore, supporters of the Distinguished Medal insist that the range of actions of war has considerably widened, and, consequently, expanded the range of extraordinary contributions in war.\(^2\) And these extraordinary contributions should be awarded, hence the Distinguished Medal.

\textit{The Bronze Medal should precede the Distinguished Medal}

Panetta’s declarations on the Distinguished Medal immediately provoked not only skepticism but also a vibrant and strong opposition from a large part of militaries, veterans, and Congress members (especially those who belong to the Republican party). A majority of the adverse reactions contested this Medal not because it was rewarding drone operators (and therefore questioning the very act of awarding drone operators) but because the Distinguished

\(^1\) The whole literature ‘promoting’ the benefits of what is perceived as a Revolution in Military Affairs exemplifies this trend.

Medal was seen as preceding the Bronze Star and Purple Heart. Indeed, Senate Armed Services Committee Chair Carl Levin (D-Mich.) and ranking member James Inhofe (R-Okla.) sent Hagel (Panetta’s successor) a letter saying:

‘Although we are supportive of this new medal, we are concerned that it is given precedence above awards earned by service members for actions on the battlefield, such as the Bronze Star Medal and Purple Heart. (…)’

The Bronze Star Medal and the Purple Heart are combat awards. Put simply, only soldiers who are fighting directly in combat, risking their lives under dangerous conditions might receive these medals. They have to accomplish exceptional actions and undergo extreme risks on the battlefields, to be awarded with these medals. As explained earlier, the drone operator is not physically in the midst of combat. This ‘delocalization’ from combat removes any risks for the soldiers to be killed. Soldiers cannot risk their life physically. This absence of life risk is depicted as depreciating the value of their achievements on the battlefields. Indeed, even though actions they achieve are significant and valuable, the way they achieve them is necessarily less valuable than those who put their life at risk. Therefore, as Carl Levin and James Inhofe explain: "We believe that medals earned in combat, or in dangerous conditions, should maintain their precedence above non-combat awards."

Behind the distinction between combat and non-combat awards lies the idea of sacrifice. More precisely, it seems that to be qualified as honorable, an action necessarily entails a form of sacrifice. Yet, because drone operators cannot risk their lives, because they cannot be killed in action, they are deprived of the possibility to sacrifice. The Distinguished Medal is in fine accused of disrupting a symbolic order, based on a chivalric code that associates gallantry with


sacrifice. Indeed, the placement of the Distinguished Medal above the Bronze Star Medal and Purple Heart:

'...diminishes the significance of awards earned by risking one's life in direct combat or through acts of heroism. Moreover, the Distinguished Warfare Medal's placement directly above the Soldier's Medal -- an award for bravery and voluntary risk of life not involving conflict with an armed enemy -- diminishes the precedence given to acts of individual gallantry in circumstances other than combat.'

The conclusions from the Distinguished Medal Affair

Leon Panetta announced the creation of the Distinguished Medal a few days before leaving office. When Chuck Hagel replaced him at the Head of the Defense Department, he immediately took on the issue by ordering a review of the Medal. Three months after Panetta’s proposition, concluding that ‘no such medal was needed’, Hagel decided to replace it with a distinguishing device.² Hagel reiterates his admiration for drone operators (and also cyberwarfare combatants). He explains that “the servicemen and women who operate and support our remotely piloted aircraft, operate in cyber, and others are critical to our military’s mission of safeguarding the nation.”³ Yet, he finally concurred with the strong opposition against the ranking of the medal (more than the very medal itself). He shares with this opposition regrets at having ranked the medal ‘so high’. For him, the rank is too high because its placement above the Bronze Medal could be perceived as offensive for ground troops, for whom medals are very rarely awarded (Hagel even ended his discourse by deploring what he

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sees as the underrepresented number of Medal of Honors awarded to troops on the ground, especially in Iraq and Afghanistan”

A new symbolic order

The creation of a distinguishing device – instead of a new medal – to reward drone and ‘cyber’ operators is extremely interesting. We hypothesize that the ‘Distinguished Medal’ affair might be analyzed as a struggle between those who perceive chivalric codes as the essence of warfare (called ‘les Anciens’), and those who value pragmatism and efficiency in warfare (called ‘les Modernes’).

The reference to the French words ‘Ancients’ (i.e. proponents of the ancient orders) versus ‘Modernes’ (i.e. proponents of a new and modern order) is deliberate. The reasons underpinning the struggle over the ‘Distinguished Medal’ recall the very rationale of the dispute which opposed ‘les Anciens’ with ‘les Modernes’ in the 17th century in France. On the one hand, ‘les Anciens’ fought for the preservation of the ‘classic codes’ which, they believe, should remain the core of French literature. Even if these codes were strict, inherited from an old classical tradition, they were the ‘sufficient condition’ that makes French literature creative, beautiful and stimulating. On the other hand, ‘les Modernes’ fought for ‘revolutionizing’ these codes, for distorting and breaking them in order to create new approaches that would be more ‘connected’ to their time and society. Only from this distortion could there emerge a truly new and inspiring literature. This fight, I argue, echoes what is at stake in the dispute over the Distinguished Medal. On the one hand, a side fights to preserve a symbolic order inherited from chivalric codes, and these chivalric codes are perceived as the essence of honor. On the other hand, another side fights to implement a new symbolic order, in which new codes are promoted because only they could really reward what is now an honorable practice of war.

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As a result of this struggle a new symbolic order has been created. This symbolic order is qualified as new because it creates a novel hierarchy, putting forward qualities perceived as necessary for drone operators (responsibility, speed and dexterity with technology) to the detriment of ‘chivalric’ qualities valuing sacrifice, engagement and humanity. This new symbolic order is created apart from the ancient symbolic order. Because the device for drone operators is not a medal, it is not comparable with extant medals valuing chivalric qualities. Put differently, it is neither more nor less symbolically powerful: it is of a different symbolic power. This ‘trick’ allows actors to keep the ancient symbolic order as it was prior to the development of UAVs. The ancient symbolic order is not disrupted by the venue of drone operators. Yet, the co-existence of those two symbolic orders creates tension between actors, which helps to explain the irruption of irrational feelings attached to UAVs.

Chivalric codes and conventional warfare: les Anciens

Actors who opposed the Distinguished Medal used a vocabulary that is pertaining to chivalric values. As explained in the theoretical chapter, a large part of laws of war is inherited from ancient codes, often called codes of honor, designed and applied by knights and then aristocratic societies. War was the realm of aristocrats, that is a special class educated in a specific manner, and which abides by strict rules. Therefore, aristocratic values such as, honor, noble-mindedness, heroism, sacrifice and gallantry are mainly perceived as the essence of warfare. The noble hero is the one who sacrifices his life within the battlefields, risking everything he has, to save women and children. The noble hero does not kill those who do not combat, and, whenever he can, he gives his enemy the possibility to surrender and reach an agreement. These values, which are strongly embedded in the collective imagery of many States of former Empires, have molded a symbolic order. This symbolic order rewards with the highest honors the soldiers who demonstrate these qualities on the battlefields. The best concrete example of this symbolic order is the system of medals. The highest medal rewards the highest sacrifice, and vice versa.

Opponents of the Distinguished Medal strongly condemned the placement of the Distinguished Medal above extant medals that rewarded soldiers who risked their life on

1 A definition of ‘symbolic order’ is provided in the theoretical chapter.
battlefields. They perceived this medal as a profound breach of this symbolic order, because it indirectly changed the existing hierarchy. The vocabulary used by the Veterans of Foreign Wars and the Military Order of the Purple Heart (i.e. the two more vindicate groups opposing the Medal) while they were denouncing the weapon constantly referred to this chivalric code that underpins the symbolic order. Indeed, the Order of Purple Heart declared:

"To rank what is basically an award for meritorious service higher than any award for heroism is degrading and insulting to every American Combat Soldier, Airman, Sailor or Marine who risks his or her life and endures the daily rigors of combat in a hostile environment. The Military Order of the Purple Heart strongly urges the newly appointed Secretary of Defense and the Joint Chiefs of Staff to either reconsider the precedence of the Distinguished Warfare Medal or develop another way to recognize the achievements of those whose indirect actions contribute greatly to the accomplishment of the mission without diminishing the sacrifice of life and limb by those who confront the enemy firsthand on the battlefield. (...) The MOPH is unique among Veteran Service Organizations in that all its members were wounded in combat. For this sacrifice, they were awarded the Purple Heart Medal."

It is also very interesting to note that Leon Panetta used a vocabulary referring to chivalric values when he introduced the Distinguished Medal. He first refers to his profound admiration for those who sacrifice their lives on battlefields, which, implicitly, signals that he acknowledges the existing symbolic order based upon the chivalric code. Yet, later, he introduces the idea that drone operators also might greatly contribute to warfare. He therefore tries to embed a new value into the extant symbolic order, with the prospect, in fine, of changing the extant hierarchy. He indeed declared that:

‘Our military reserves its highest decorations obviously for those who display gallantry and valor in actions when their lives are on the line and we will continue to do so. But we should also have the ability to honor the extraordinary actions that make a true difference in combat operations. The contribution they make does contribute to the success of combat operations, particularly when they remove the enemy from the field of battle, even if those actions are physically removed from the fight.’

The cancellation of the Distinguished Medal, however, has shown that Panetta’s desire to change the extant symbolic order failed. The chivalric code is still strongly embedded within the extant symbolic order. The fact that veterans were the first to massively oppose the advent of this Medal shows that the ‘Ancients’ were not willing to transform the symbolic order whose perpetuation they had contributed to. The removal of the Medal and its replacement by a mere device might be interpreted as a measure of the strong embedment of chivalric codes within military cultures. In sum, arguments over UAVs, for militaries, touch, indirectly on those chivalric codes, and more importantly, on their symbolic power within military culture.

**Pragmatism and responsibility: Les Modernes**

*The Air Medal Affair in 1942*

While arguing over the Distinguished Medal, the ‘Ancients’ drew a parallel between this affair and a precedent that also vividly divided the different branches of the US Army. This affair occurred in 1942, when the Air Force submitted to President Roosevelt the project of a medal to honor the most valuable US pilots. This proposition aroused ‘a strong adverse reaction by the ground troops, particularly the infantry riflemen who suffered the heaviest losses and endured the greatest hardships.’ The latter felt betrayed by this highly ranked medal because they experienced a strong feeling of unfairness. They indeed believed this medal would reward a corps of militaries (i.e. pilots) who had allegedly not suffered as they had. Pilots would suffer less than infantrymen for two reasons: they suffer lower losses (1) and their physical distance from the targets allegedly diminishes the intensity of their engagement, and therefore their bravery, especially when compared with infantrymen (2). Again, the US infantry’s understanding of what constitutes sacrifice, engagement, and bravery explains the forceful contestations provoked by the Air Medal. The belief that sacrifice can only be measured with regards to chivalric codes is strongly embedded within US infantry culture. Sacrifice can only be understood as the absolute engagement in the battlefield, face to face with the enemy.

Because the Air Medal promotes a different definition of sacrifice, its establishment and its ranking (above existing medals for infantry) represent a significant stake in the eyes of militaries. For them, if established, the Air Medal enshrines a new notion of sacrifice within the
extant symbolic order. The Air Force Medal not merely distinguishes soldiers who are physically distant from their target, but it also makes them more honorable than those who are fighting face to face. Hence the strong opposition coming from the infantry, who did not accept their values being transformed by this new medal. ‘

In order to ease the hostility of ‘brave veterans who of our Nation’s wars’, General George Marshall recommended the creation of the Bronze Star Medal, to reward ‘the hardships borne by ground troops who bravely “lead miserable lives of extreme discomfort and are the ones who must close in personal combat with the enemy”’. This Bronze Medal ‘recognizes service members who distinguish themselves by heroic or meritorious achievement or service, not involving participation in aerial flight, in connection with military or naval operations against an enemy of the United States.’

Changing but reinforcing the existing symbolic order

We hypothesize herein that the creation of the Bronze Medal is the sine qua non condition that explains why the project of Air Medal was not cancelled. Put differently, the Bronze Medal has made possible the establishment of the Air Medal. On the one hand, the Air Medal did introduce a new value, especially a new conception of sacrifice, within a symbolic order originally valuing chivalric code. Yet, it did not profoundly disrupt this symbolic order. The simultaneous establishment of the Bronze Medal ‘compensated’ this irruption by reinforcing the US Army’s attachment to extant chivalric values.

Unlike the Distinguished Medal affair, the Air Medal affair resulted in the successful implementation of a new notion of sacrifice within the extant symbolic order. It did not create a parallel and unclear symbolic order, but rather enriched the existing one. The example of the Air Medal is probably exactly what Leon Panetta, and with him the ‘Modernes’, had in mind when he proposed to establish the Distinguished Medal. For them, the notion of sacrifice is not fixed and not sealed within the chivalric code of the 18th century. Rather, they consider the notion of sacrifice as malleable and idiosyncratic. They value less the chivalric codes per se.

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than the conditions under which the chivalric code has been created. Honors should therefore raise the morale of those who make current strategic victory possible, above those who comply with the chivalric code. This is why they often consider themselves as pragmatists: they value the rationale of honors (i.e. raising the morale of those who win) over the history and the original spirit that was attached to them.

The ‘new’ ethics of responsibility

Discussions over the Distinguished Medal reactivated feuds and disputes over the issue of ‘what sacrifice means’. Should those who engage distantly from combat be rewarded? Should those who are not even present in the combat zone (those even further removed than pilots, who are still regarded as distant from their targets) be rewarded? If yes, should they be more, equally or less honored than those who fight on the ground? Under which conditions should they be rewarded? Which type of behaviors and qualities should a drone pilot demonstrate in order to be honored?

The ‘Modernes’ perceive UAVs, and especially UAV operators, as the paradigmatic example of the urgent necessity to rethink the notion of sacrifice and, consequently, to rethink what should be regarded as the commendable qualities on the battlefield. How can we gauge the capacity to run fast, carry heavy weapons, hand-to-hand fight on the front line, and rescue comrades, against evaluation of the merit and honor of drone pilots? How can we take into account the number of losses within a troop, while we know that, even though drone pilot might suffer psychological side effects, they will certainly not die in combat?

Therefore, the ‘Modernes’ commonly advocate for the foundation of a new ethics of war. The aim of this paragraph is not to discuss the current debates on this ethics, nor to argue over the validity of its normative assumptions, but rather to show that the emergence of this new ethics is aligned with the new symbolic order the ‘Modernes’ want to create. These ‘Modernes’ generally value a new ‘ethics of responsibility’, and with it, certain qualities such as being prudent, evaluating the risk for civilians, taking all feasible precautions before

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1 We do not argue herein that the existing medals particularly reward those actions. What is striking though is that, even if drone pilots do have those qualities, they cannot express them, because the configuration of their missions does not allow them to use those qualities.
shooting, and analyzing a context that is far wider than merely the battlefield. According to ‘Moderns’, it is these qualities that must be now rewarded by medals and honors, and ranked highly within the symbolic order they want to create.

The enigma of persuasiveness

These affairs reveal some very interesting facets of the ‘enigma of persuasiveness’, which is at the core of this research. We have previously studied how arguments presented as rational might, under certain conditions, constrain actors. In this fourth part, we have rather focused on irrational arguments (i.e. arguments that convey a strong emotional charge that is not thought of in terms of calculus) and their potential constraining power in actors’ utilization of UAVs. Three key elements stand out from the affair of the Distinguished Medal.

First: an argument is more likely to raise opposition – and fail to be persuasive - when it disrupts the existing symbolic order

Indeed, When Panetta proposed a medal for drone and cyber operators to be ranked above the Bronze Medal (a medal regarded by infantry veterans as their highest award), he disrupted the existing symbolic order based upon chivalric code. It was this disruption that considerably angered, and even hurt, the branch of the US Army that most values those codes (i.e. infantry soldiers). This feeling of betrayal considerably fueled their desire to remove or re-rank this medal, and they expressed publically their profound consternation. In fine, this public expression of dismay in the name of ‘honorable veterans’ turned out to be extremely constraining for the Head of the Defense Department, and for all those who supported the medal. Panetta could convince neither the veterans nor public opinion, that this new idea of

1 “See NOËL, Jean-Christophe. “Occuper sans Envahir: Drones Aériens et Stratégie.” Politique Étrangère 3 (Automne 2013). In this article he notably explains that “Les armes à feu ont contraint par la suite le guerrier à devenir stoïque, acceptant que son sort ne repose plus sur ses simples qualités guerrières, mais aussi sur la chance et les lois de la balistique. Dans le cadre des guerres limitées, ce sera peut-être l’éthique de la responsabilité qui deviendra la valeur fondamentale du soldat éloigné physiquement du champ de bataille, comme un reflet des obligations de l’homme politique. L’opérateur devra lui aussi jongler, dans des délais encore plus contraints par une situation tactique mouvante, entre efficacité militaire et prise en compte d’un contexte bien plus large.”

2 Veterans might also have launched other initiatives in order to remove the Distinguished Medal. It would therefore be extremely interesting to lead further research on what they decided to do.
sacrifice should be enshrined in this medal. The strong emotional charges attached to this debate cast obscurity on the entire discussion, finally forcing Panetta and his successor to remove the Distinguished Medal from the existing symbolic order. Panetta ultimately failed to persuade others, and especially those affected by the medal (veterans and militaries).

Second: if an argument disrupts the symbolic order, it might eventually be persuasive if it is compensated by a reinforcement of the extant symbolic order.

Actors might succeed in changing the extant symbolic order, provided that they operate a symbolic compensation. A symbolic compensation is defined as the reinforcement or the reaffirmation of the extant symbolic order. The Air Medal affair is an example of symbolic compensation. In order to include within the extant symbolic order a medal awarding pilots (i.e. the Air Medal), President Roosevelt accepted the need to re-signal the state’s attachment to the chivalric code via the creation of the Bronze Medal. It might therefore be hypothesized that arguments of actors might become persuasive, and finally be accepted, if actors compensate the symbolic disruption their argument proposes, with a symbolic reinforcement. Therefore, actors do not have to bring arguments that are perfectly aligned with the extant symbolic order. Their argument might diverge from it, but then they have to compensate, so their arguments become legitimate, and finally, persuasive.

Third: actors might also want to create a new symbolic order, which might increase the persuasiveness of their argument

Arguments that are, at first, associated with a negative emotional charge and that, consequently, provoke a strong opposition are not ‘condemned’ to be non-persuasive. The Distinguished Medal affair shows that the strong opposition among veterans, who were against the idea of rewarding drone pilots as highly as infantrymen, was bypassed by the creation of a new symbolic order. The Distinguished Medal was transformed into a ‘distinguished device’.¹

¹ Device refers here to symbol. The word ‘device’ was the one used by Panetta and, later on, by Hagel.

The status of the device is not entirely clarified, which makes vain any comparison between this device and the extant symbolic order. This ambiguity spares actors from having to clearly answer the question of the *rank* (Is the device a new but equally honorable award as the medal? Is it a more honorable award?). The Distinguished device is not higher or lower than the extant medal. Rather, it is different. Because this is different, it creates a new symbolic order. Therefore, arguments that defend the device do not collide with the arguments promoting the existing symbolic order. Rather, they coexist. This coexistence diminishes the negative charge attached to the argument. Deprived of a negative irrational tension, actors more easily advance their argument. *In fine*, actors are more likely to develop persuasive arguments when they cease to be attached to strong and negative irrational feelings.

**Provisory conclusion: How irrational do feelings constrain actors’ utilization of UAVs?**

Do these debates around medals, which might appear as extremely anecdotal, tell us anything about the variations in the utilization of UAVs? More generally, why and how would a symbol impact on the trajectory of a weapon?

The case of UAVs supports our hypothesis that a symbol might impact upon practices of war in two ways: as a ‘Pandora’s box’ (1) and as a revealing instrument (2).

**Pandora’s Box**

Symbols might be used by actors as powerful shortcuts, because they reactivate profound emotions and disagreements. This ‘reactivation’ tends to blur how actors think about a particular object, in the sense that it attaches the object with profound irrational and ambivalent feelings. These irrational feelings are resistant to arguments about efficiency. They are profound because actors understand that they do not share similar symbolic orders. They are ambivalent because the symbolic orders are very difficult, almost impossible, to reconcile (i.e. ‘the war of god’). The object that initially triggered the feud becomes then revelatory of the deep misunderstanding between actors: it is transformed into a symbol that ‘encompasses’ and ‘summarizes’ this deep misunderstanding. This symbol is therefore a ‘Pandora’s Box’: actors do not argue over this object in itself. Rather, they argue over differences between
different symbolic orders and fight to demonstrate the superiority of their own. In fine, actors use these symbols as powerful shortcuts, and these shortcuts blur and deprive the different arguments of persuasiveness.

Our focus on irrational feelings drove us to investigate those moments when actors were not merely discussing UAVs, but rather investing in their discussions wider debates and stakes. The cases of the medals are, in that sense, revealing. The questions of the ranking and the meaning of medals revealed profound dissensions between different branches of the US Army. Those dissensions concerned the UAV pilots, but not this matter alone. UAVs are, so to say, the hostages to a wider debate concerning fundamental concepts, such as the prevalence of the chivalric code, the qualities a good military should have, the notion of sacrifice. UAVs are used as shortcuts that actors might use to summarize their stance on the wider dividing questions. When Panetta promotes the Distinguished Medal, he also promotes drone pilots, and, consequently, he advocates for the recognition and the legitimization of the massive utilization of drones by the US Army. Talking about drones is therefore also promoting not only a specific way to wage war, but, as we have seen in this chapter, a new ethics of war. Therefore, when actors mention UAVs, they also mention this dispute between “les Anciens” and “les Modernes”. They also argue over which ethics should be implemented. In our example, the Distinguished Medal is a means that legitimizes, and therefore makes possible the intensification, of the utilization of UAVs. Those who argue against UAVs argue for a different type of strategic warfare, and a different type of ethics.

Symbols as revealing instruments of the dominant normative landscape

Contrary to what many studies suggest when they objectify and de-historicize weapons, our study reveals that weapons are always embedded within a context. Actors are not always aware of these contexts, and, therefore, are not always aware that their perceptions of the weapons might be attached to strong irrational feelings. Those irrational feelings are largely inherited from the symbolic order that prevailed before the intrusion of the weapon. In that sense, an analysis of these irrational feelings reveals the dominant normative landscape of actors. And it also reveals who disagrees with this normative landscape, and which normative landscape these new actors aim to impose.
The case of the UAV reveals that many actors in the US Army were in fact in disagreement over the ranking of honors and the preservation of the chivalric code within their symbolic order. Indeed, during the affairs mentioned earlier, the majority of US infantry veterans was extremely reluctant to accept a new symbolic order in which drone pilots were as honorable as those who die on the battlefields. The case of UAVs reveals the significant prevalence of the chivalric code within the symbolic order of the US Infantry. It also reveals that these chivalric codes are less embedded in other branches of the US Army, such as the Air Force.

The Enigma of Persuasiveness

In a nutshell, the case of UAVs reveals that when actors argue over them, they also argue over the entire normative context that frames their use. This chapter also argues that the analysis of this normative landscape is essential to an understanding of when an argument is persuasive. More specifically, the analysis of the existing symbolic order highlights certain variations in the degree of persuasiveness of the arguments deployed by actors. Indeed, when arguments align with or reinforce the existing symbolic order, arguments are more likely to persuade those who value – and are shaped by – this symbolic order. When they disrupt it, they are less likely to be persuasive as regards these groups. When actors disrupt but at the same time reinforce the existing symbolic order, as in the affair of the Air Force Medal, actors succeed in persuading their peers. When they merely disrupt the existing symbolic order, as Panetta did when he proposed the Distinguished Medal, they fail to persuade.

The degree of persuasiveness is therefore a key aspect in understanding the variations in the utilization of a weapon. As the previous parts have demonstrated, the more persuasive an argument is, the more likely it is to be enshrined by a state or an international organization. Subsequently, the more the argument is likely to be enshrined, the more it is likely to constrain actors’ practices of war.

Images, collective culture and drones

Previous developments on symbolic order and chivalric codes reveal that members of the US Army share different normative landscapes. These developments also help us to
hypothesize that the conflict between or the alignment of those normative landscapes might respectively undermine or increase the persuasiveness of actors’ arguments over UAVs. The following part will analyze how UAVs might reveal a ‘collective normative landscape’, of collective representations conveyed by the media. A shift in collective representation defines a sudden and significant shift in the way an object is represented.

We observe that a shift in the collective image of UAVs closely followed the decreasing utilization of UAVs. This temporal proximity is extremely interesting. In this part, we will hypothesize that the collective normative landscape might impact upon the persuasiveness of actors’ arguments in the following way. Because some media convey strong visual images, and because they provide empirical substance to the ambiguities of an argument, they make more salient those ambiguities and force a wide range of people to question them. In a sense, they force actors to sharpen their arguments, and to increase their persuasiveness. In the case of UAVs, we hypothesize that the recent portrayal of UAVs in several important US media forced actors to rethink their arguments as to their utilization.

Methodology

Our analysis of the ‘collective normative landscape’ is very limited for several reasons. First, this analysis does not pretend to be exhaustive (1). It cannot be so, in the sense that it would require a more diligent and in-depth analysis of what constitutes a collective representation, of the collective representations that matter, of how collective representations shape understanding, etc. We do not pretend to reach such levels of precision. Rather, we propose to study one popular television program – Homeland – because we believe this is highly representative of the recent important shift in the representations of UAVs.

Secondly, our analysis is purely interpretative. We do not pretend that the different symbols exposed here reflect militaries, Obama’s administration and the entirety of public opinion. We only hypothesize that representations of UAVs within this TV show might convey ambivalent representations, and therefore, fuel ambivalent arguments over UAVs.

The reasons for the choice to analyze the TV show Homeland are threefold. First, this TV show is extremely popular in the United States. It might therefore be hypothesized that it might have interested a wide audience, and influenced an important part of the domestic
opinion. Secondly, Homeland is rare in the media, in that it actually presents UAVs. Very few shows or movies portray this weapon. Thirdly, the TV show is extremely interesting because it conveys a contrasted picture of UAVs, providing many different and solid arguments, denouncing or supporting their utilization.

**Drones and Homeland: 3 debates, 3 symbols**

The TV show Homeland confronts ambiguities and ethical issues raised by terrorism, but also by counter-terrorism. Spectators watch a frantic succession of moves and counter-moves between hysterical CIA agents and over-determined “terrorists”. Highly ranked by reviews, and also by ratings, the TV show tackles many issues that can be labeled as typical of post 9/11 ‘obsessions’: terrorism, intelligence, double-agents, torture, undercover missions, terrorist attacks. Therefore, the intrusion of drones into popular culture coincides with the first substantial investigations of US policy in the post Iraq and post Afghanistan period.

In the show, drones are generally pictured in three different ways: as an extremely useful asset for undercover missions (including surveillance and targeting missions), as a weapon that can kill blindly, or as a reliable antidote to human weakness. Via these different portrayals, the show invites its viewers to think about four questions: Is omnipresent surveillance a guarantee for unveiling terrorist attacks? Are drones a necessary support for undercover missions? Can drones replace human flaws in their intelligence tasks? Can terrorism be eradicated with drone strikes? Homeland does not propose a Manichean treatment for these questions. It does not really answer them, but rather provides different interpretations that the spectator can question and discuss.

**UAVs as asset in surveillance missions**

Indeed, throughout the three series, CIA agents constantly use drones, especially when they proceed to perilous undercover missions. Drones allow them to have a clear picture of the environment, to trace with extreme precision a suspect or to back up one of their agents.

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1 It is even said to be the favorite TV show of Obama. See [https://www.google.fr/search?q=norah+o+donnell+obama+homeland&oq=norah+o+donnell+obama+homeland&aqs=chrome..69i57.6210j0j4&sourceid=chrome&es_sm=91&ie=UTF-8](https://www.google.fr/search?q=norah+o+donnell+obama+homeland&oq=norah+o+donnell+obama+homeland&aqs=chrome..69i57.6210j0j4&sourceid=chrome&es_sm=91&ie=UTF-8)
Alongside other technical improvements (micro, spyware), drones are presented as an inevitable and useful means of surveillance, a technology upon which depends the success of the missions.

*Technology versus human: which is the most reliable?*

Season 3 offers a more contrasted picture of drones. The whole season opposes two characters who are fighting for the leadership of the CIA: one recurrent character named Saul Berenson, a fieldwork man who believes in so-called old schools methods (i.e. human intelligence), and the character Senator Lockhart, who is largely pictured as a politician and technocrat. The opposition of those two figures is extremely stimulating, especially as they strongly disagree on the issue of drone utilization. Berenson values human intelligence, and is very skeptical, with regards to the benefits of reducing counter-terrorist actions, by drone surveillance and drone strikes. He often underlines the benefits of having human resources (human agents in key positions) in the field, even though he acknowledges that his method is riskier, as it introduces uncertainty at a high level of decision, and endangers men. The whole first season is dedicated to demonstrating that humans cannot be reliable, and that a double agent is almost impossible to detect. Yet, Berenson took the decision to continue to rely on human intelligence because he believes it remains the most efficient weapon to enforce long-term benefits for counter-terrorist policy. The senator strongly disagrees with Berenson on this point. Several times during the season 3, Senator Lockhart advocates for the removal of human agents, whom he does not trust. The solution for him is to rely on technology, which he perceives as more objective, more predictable, more flexible and more compliant than humans. His view is that of a technician, for whom drones remain a means to wage war without losing men on the ground, and to reduce an uncertainty (fog of war) that is impossible to control. Several times he asks for drones to be sent, either to gather intelligence, or to strike and kill people he perceives as enemy. In highly risky situations, he also advocates stopping reliance on human agents and using drones instead. Homeland pictures Senator Lockhart as someone who thinks from a short-term objective, and who often points out the lack of total reliability of human intelligence, combined with the political cost it represents. Each of those two antagonist figures carries a specific symbol of the drone. If season three does end with the senator being appointed as the head of CIA, the finale episode offers a more nuanced conclusion. It largely
delves on the success of Berenson’s reliance on human intelligence, which leads directly to the collaboration between Iran and the US on nuclear policy. The fact that Berenson is removed from his function shows that, even if human intelligence (and a very limited utilization of drones) remains the more efficient method on the ground, people at the top levels of state, the head of the CIA and the political administration, still impose their own perception – and their over-reliance on drones.

A cynical propaganda weapon: civilization or barbarianism?

The first episode of season 4 is called “The Drone Queen” as a reference to the nickname given by her staff to the female leading role of the TV show (i.e. Carrie Mathison). As the head of the CIA office in Islamabad, she has the final word on all the strikes ordered in her region. The episode opens with her authorizing a drone strike on a building allegedly hiding several terrorists, located near Islamabad. In reality, the building was hosting a wedding, and the drone struck in the very middle of the ceremony – probably a reference to the strikes that hit a wedding in Yemen. The day after the strike, the media spread the word that a US drone had decimated a wedding, with only civilians celebrating. The episode focuses on one of the victims of this strike who wakes up, before realizing he has lost his relatives, including his sister and mother, in the strike. The immense sadness and shock of his loss contrasts with the following images: these show CIA officials’ cynicism and detachment toward the strike. CIA agents first remain rather calm, not really concerned, because they count on the lack of interest or scrutiny from the media in this region of the world. Once they understood that this action will be scrutinized, they start to react differently. They begin to treat the entire strike as a propaganda war they have to win. Their goal is less to find solutions, so that this ‘mistake’ does not happen again, (qualifying the strike as a mistake prevents them from interrogating the validity and reliability of their practices) than to hide and then justify their mistakes. The drone is, at the beginning of this season, depicted as a weapon that kills silently (no sound can be heard when the strike hits the wedding), recklessly and cynically.

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However, at the end of the season, the CIA understands that the Taliban leader did everything he could to make the CIA strike the wedding of his own sister. The willingness to build a negative image of drones – and in fine of the US – supersedes his kinships. He instrumentalized the drone strike to win the hearts and minds of his population. His final aim was to erect the drone as the instrument of oppression. The Pakistani population, regularly present and represented in season four, is shown as having conflicted reactions toward UAVs. The majority of the crowd denounces the drone as an imperial means of oppression, a constant intrusion, a form of illegitimate domination imposed upon it.

**Conclusion**

The development of UAVs, and, more precisely, of targeting UAVs, undeniably raises many problems, and more specifically ‘forces’ the laws of war to face their inherent contradiction. Elevating the standard of restraint does not mean that fewer civilians will be killed. Neither does tightening up the standard of precision mean that violence will decrease. These are the paradoxes and aporias of the laws of war *revealed* by the UAV utilization of the Obama Administration.

Only the future could tell us whether these paradoxes will be overcome by states, and more specifically, whether the arguing process over the UAV will continue to generate contradictions between humanitarian concerns and military necessity. If it does, the laws of war might lose their constraining power, which would, in turn, considerably undermine the impact of the meta-norm of fighting justly on actors’ practices. If it does not, it will be interesting to see which new principles, or which redefined principle, will be used to evaluate the utilization of UAVs and how they will maintain the ‘deliberate ambiguity’ at the core of the laws of war.
Conclusion

The arguing process over fighting justly and its impact on weapons utilization

Why do weapons disappear from the battlefields? The three different examples of weapons trajectory (chemical, incendiary weapons and drones) have all accounted for the important role of both the meta-norm of fighting justly and the arguing process over it, to understand variations in weapons utilizations. If the role of norm is often neglected or overlooked when accounting for the practices of war, the present work reveals that norms (and meta-norms) are in fact crucial to fully understand variations in weapons utilizations. I also argue as to the necessity to approach the influence of the laws of war through the concept of the meta-norm of fighting justly. The different examples studied in the thesis prove that this concept provides a more comprehensive account of how actors are influenced by the laws of war when they use the weapons at their disposal. Finally, the present work participates in highlighting the mechanisms of the logic of arguing, and how it might ultimately impact on the practices of war, notably by exploring the notion of persuasive arguments, and the logics of symbolic power.

Weapons and meta-norm of fighting justly

The thesis investigates the trajectories of three different weapons, and focuses on the reasons underpinning the shift in their decreasing utilization. The following paragraphs briefly restate why and how the variations in each weapon’s utilization can also be explained by a shift in the dominant meta-norm of fighting justly.

Chemical weapons

Chapter III is devoted to understanding why chemical weapons (CW) almost disappeared from the battlefield after having been massively used during World War I, and whether the post World War I arguing process about meta-norm of fighting justly could explain this shift.
World War I indisputably represents the most significant peak in the entire trajectory of CW utilization: after one year of combat during which the French were the only ones to deploy low quantities of tear gas, all sides started to use, at an increasingly pace, chemical weapons filled with more and more aggressive and lethal gas. This ‘race for toxicity’ is generally described as a failure, of the laws of war, and more specifically of the 1899 Hague Convention banning the utilization of ‘projectiles filled with deleterious substance’. By retracing the decision process which led actors to use CW, chapter III reveals that this conclusion (failure of the laws of war) is partially true. Actors were in fact reluctant to use highly lethal gas because it clashed with their collective conceptions of fighting justly. When they finally decided to use highly lethal gas on the battlefield, invoking the principle of military necessity, they deployed it through canisters and not projectiles. This choice of delivery method was partly motivated by technical considerations, but also by the belief that cylinders, unlike projectiles, did not violate the Hague Conventions.

The Allies (especially France and Great Britain) only waited a few months before joining this chemical warfare, and chemical weapons utilization promptly escalated. Canisters and then projectiles filled with chlorine, phosgene and later mustard gas, abounded on the battlefields, and the utilization climaxed in 1918. In 1918, all sides of the conflict acknowledged that they had violated the 1899 Hague Convention. International pressure had failed to stop the CW utilization. The technical difficulties associated with the manoeuvering of the weapon, and a certain form of reluctance from the combatants to deploy it, did not prevent each side from recourse to it, on a massive scale. Yet, and surprisingly, the weapon was never used again at such levels of intensity, so massively, even on the European battlefields during World War II.

In order to explain this ‘enigma’, chapter III investigated the post World War I debates between the Germans and the Allies concerning their chemical weapons utilizations. It argued that these debates directly participated in refining states’ and militaries’ subsequent perceptions of the weapons in three ways, and that this refinement might highlight why Europeans were extremely reluctant to use CW in World War II.

First, each side sought to justify its CW utilization on the grounds of the laws of war. By doing so, they clarified the notions of deleterious gases and unnecessary sufferings. The 1925 Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases then ‘formalized’ this refinement, notably by banning the use in war of ‘asphyxiating, poisonous or
gases’ (regardless of their delivery method). Moreover, the debate reveals the paradox that, even though actors did violate the Hague Conventions, they still believed that the meta-norm of fighting justly structured and defined their actions. Actors spent a significant amount of time, after the war, proving that they had not violated the laws of war. They indeed argued that they were outside of the realm of the laws of war, because the other side, by being the first to use CW and to breach the reciprocity principle at the core of the laws of war, had ‘dragged’ them there. This argument reveals that the violation of the meta-norm of fighting justly does not necessarily mean that the meta-norm ceases to constrain and regulate actors’ utilization of weapons.

Finally, the different arguments deployed by each side to convince itself that the ‘other’ violated the laws of war by using CW often rely on the logic of symbolic power. Indeed, there were abundant representations of CW in the post WWI period, and these representations underlined the ‘barbaric’ and fundamentally ‘anti-chivalric’ nature of this weapon and the terrible fear and pain it created. These representations, fueled by violent ‘propaganda’ discourses aimed at delegitimizing the other side, participated in enshrining in the European collective memory the symbol of CW as an inhumane and uncivilized weapon. The chapter then demonstrated that this strong symbol constrained future European leaders, as it considerably increased their ‘burden of proof’ when they had to justify CW utilizations.

**Incendiary weapons**

Chapter IV retraced the trajectory of two specific incendiary weapons: napalm and white phosphorus. The contrast between the trajectories of the two weapons is, I argue, particularly illuminating in understanding how states reshape the meta-norm of fighting justly, and how this process influences their choice of using a specific weapon rather than another one. I indeed demonstrate that the arguing process over the meta-norm of fighting justly and the napalm utilization during the Vietnam War considerably influenced the actors’ perceptions on the right definition and conditions of utilization of incendiary weapons. Indirectly, this arguing process refined the actors’ understanding of incendiary weapons (which had been largely undefined before this), notably through the creation of Protocol III limiting Certain Conventional Weapons. Yet, the arguing process also largely excluded from the incendiary weapon category the white phosphorus weapon. Indeed, because the arguing process mostly focused on prohibiting napalm, it indirectly excluded from the incendiary category any weapons which
were not entirely similar to it. This exclusion might explain why WPW, which have incendiary properties but which also, and unlike napalm, screen, were not clearly encompassed in the incendiary category. Therefore, examining the arguing process over weapons also illuminates how certain legal categories are created, and why their definition is formulated in a particular way, rather than another.

After having examined the arguing process over napalm utilization, I try to understand more specifically how actors largely rely upon a strong symbolic power to make their claim more persuasive. If, for the whole period from World War II to the first year of the Vietnam War, napalm appeared to be a normal means of warfare, this view rapidly shifted in the last year of the conflict. Just like chemical weapons, napalm was then regarded as an inhumane means of warfare, which inflicted terrible pain. Unlike the case of chemical weapons, though, a large part of the US domestic population started to perceive napalm as a weapon which killed children and ‘innocent people’. These negative representations were largely diffused and enshrined in the collective memory, through pictures, movies and photos with a worldwide audience. This contributed in considerably increasing the burden of proof for actors when they had to justify using napalm. In sum, after the Vietnam War, actors encountered a difficulty they had never had before: the need to justify why they were using a weapon that inflicted such terrible pain, in a highly indiscriminate way. Moreover, the loss of domestic support during the Vietnam War, the testimonies of combatants who used napalm and the growing consensus that napalm bombing was a strategic failure also led militaries to reconsider the efficiency of the weapon. The subsequent negative representations of napalm after the Vietnam War might explain why the US militaries considerably decreased their napalm utilization and even publicized, in 2001, the destruction of their remaining stockpiles. It might also explain why they relabeled their remaining incendiary weapons with names that could not give rise to suspicion, in their domestic and international audiences (firebombs and MK-77).

The chapter then explores the trajectory of another weapon with incendiary characteristics: the WPW. After having explained why this weapon was not originally included in the incendiary category, chapter IV focuses on the particular moment during which the status of the weapon was discussed at the international level. It shows that it was approximately thirty years after Protocol III, during Operation Cast Lead in 2009, that certain ‘international actors’ (namely NGOs and the Goldstone Commission), denounced within the United Nations the utilization by Israel of white phosphorus weapons (WPW). This denunciation ‘triggered’ an
arguing process, at the international level: Israel, certain NGOs (Human Rights Watch and Amnesty International) and UN members start to discuss the legality of white phosphorus weapons, and more particularly whether they could be qualified as an incendiary weapon. While the international actors promoted a new definition, or a new understanding of the category of incendiary weapon, encompassing WPW without any ambiguity, Israel ‘counter-argued’. Israel developed a legal argument justifying their WPW utilization, and by doing so, advocated for a strict understanding of the incendiary weapon category that largely excluded white phosphorus weapons.

The final part of chapter IV then focuses on the battle of legitimacy: that is how each ‘side’ argued in order to enshrine their argument as the most persuasive one at the international level. If it is probably too early to determine whether any one side ‘won’ this battle, the chapter concludes that several factors tend to support the conclusion that the category of incendiary weapons was not refined enough to clearly and unambiguously include WPW. Despite each side’s efforts to found their argument on a logic of symbolic power (notably by creating a huge controversy around the Goldstone report), none of them clearly imposed its conception of the meta-norm of fighting as the most legitimate one. The arguing process did not entail the creation of a legal treaty which clearly refined the category of incendiary weapons by unambiguously including WPW. Moreover, states continued to use WPW after the arguing process, and, more importantly, still justified their WPW utilization on the grounds of a strict understanding of the category of incendiary weapons. Yet, chapter IV also offered a nuancing for this conclusion of a ‘non successful refinement’ by pointing out that Israel officially announced the removal of WPW from its arsenal. The fact that Israel never again used WPW on the battlefields might support the assumption that ‘international actors’ (NGOs and the United Nations) did in fact refine the accepted meta-norm of fighting justly, and more particularly in the case of the incendiary weapons category, at the international level.

**Unmanned Aerial Vehicles (or drones)**

If drones are commonly associated with the ‘war against terrorism’, chapter V reveals that some UAVs had been in reality deployed on the battlefields since at least 1848, when hot balloons were programmed to launch explosives through a time-fuse mechanism. The rest of the trajectory of UAV utilization, from 1900 to 1970, can be described as a slow development
of remotely controlled aerial vehicles capable of decoying, blurring radars and waging brief surveillance missions (mostly taking picture and carrying out reconnaissance missions). If Israel was the first to integrate UAVs in its air doctrine during the Operation Peace in Galilee (1973), the United States were the first to deploy a significant number of UAVs (more than 40) during the First Gulf War. Rapidly, and especially during the Yugoslavia wars (1992), UAVs were presented as the key weapon of the “zero killed” war. UAVs were then perceived by many, including US military strategists, as a possibility to strike precisely without endangering men (be they civilians or pilots). This ‘new possibility’ is sometimes described as the first step in the Revolution in Military Affairs: that is, a profound transformation of military doctrine triggered by the development of a technology capable of revolutionizing the practices of war.\(^1\) Ironically, if the 2000s saw a rapid increase in the utilization and the development of UAVs, it was largely the CIA, rather than the US militaries, who ordered this utilization.

Chapter V then retraces the peak in UAV utilization in 2010, rapidly followed by a significant decrease in the number of strikes. The chapter investigated whether this decreasing recourse to UAV was ‘accidental’, ‘situation-based’ (the ‘terrorist threat’ decreased) or whether it coincided with the rise of a social opprobrium attached to the weapon. I finally concluded that UAVs were increasingly attached with opprobrium, and that this explained why the Obama administration preferred to decrease its utilization. This opprobrium has multiple sources. Several military strategists started to believe that the weapon was not very efficient in the ‘fight against terrorism’, and that targeting the combatants eroded neither their willingness to fight nor their contingents (men were rapidly replaced), and could even lead the US to lose its domestic support. Several official reports, even from the CIA, were released, advocating for a strategy that relied less on drones and more on ‘boots’ (men in the grounds). International pressure started to grow, and develop strategies to force the US to justify their weapons utilization (reports, shaming, fact finding, drafting of legal treaties, meetings at the United Nations). Finally, the ‘cost’ of drones was for the first time discussed, and some voices raised to denounce the high cost of such weapons in a situation of a decreasing budget devoted to

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\(^1\) I do not directly engage the topic of the Revolution in Military Affairs, despite the abundant literature on the topic. I largely assume that the RMA is a too controversial concept, and that the different shifts in US military doctrine are more largely caused by shifts in the US military culture. This assumption is right now shared by many specialists of military doctrine (Steve Biddle, Eliot Cohen) and by the majority of my interlocutors.
Defense and National Security. In sum, the three common theories (cost-based, efficiency based and international pressure) all highlight different facets which could explain why the Obama administration decreased its weapons utilization. Yet, the chapter argues that, even if these theories do provide relevant explanations for the decrease, they do not completely explain the timing.

Chapter V then retraced the arguing process over UAVs which was initiated by ‘international actors’ (NGOs HRW and Amnesty International), and joined by the Obama administration when President Obama hired legal adviser Harold Koh in June 2009. Koh then publicly articulated the first justifications for UAV utilization on the basis of fighting justly. By doing so, he revealed the dominant interpretations of fighting justly within the Obama administration. This then triggered an international debate over the meaning of two fundamental notions of fighting justly: distinction (and the status of combatants and civilians), and the right to go to war, also called jus ad bellum or waging just war (last resort principle).

The chapter contends that the US arguments were not regarded as particularly persuasive, for four reasons. First, their normative basis was unclear, as their justifications referred to both laws of war and domestic/criminal law. Secondly, UAVs could target with a very high restraint. This possibility to target with high precision creates a standard of precision which is too high for many states. This tends to create “dual laws of war”: there will be one law for those which can afford UAVs and therefore can reach this standard, and there will be one law for those who cannot afford UAVs. The latter will by default violate the laws of war because they are not able to reach this standard of precision. Moreover, I demonstrate that UAV utilization leads to the ‘paradox of precision’: if it is able to strike more and more precisely, the arguments over UAV utilization do not clarify who can legally be targeted. The lack of discussion over the status of the person who can be targeted by a drone is a paradox: if on the one hand, the UAV offers the possibility to strike with high restraint (and therefore avoid civilian casualties and damage), it does not clarify at all the status, and the definition of the status, of those who are targeted (combatant, terrorist, civilians helping a combatant, or a terrorist?). Finally, UAV utilization also disrupts the laws of war which regulate the intervention (also called jus ad bellum), notably by undermining the “last threshold” argument. For all these reasons, because it creates so many contradictions and aporias, the US justifications of UAV utilization were regarded as deeply infringing the dominant meta-norm of fighting justly, hence their failure to be enshrined at the international level.
In the chapter I finally argued that the UAV case might illustrate the “rhetorical entrapment”: that is the moment when states understand that their argument is not enshrined at the international level, and then decide to diminish or conceal their weapons utilization. Because the arguing process took place in 2009/2010, and because it was at this moment that the US justifications were discussed internationally, I argued that the Obama administration felt rhetorically trapped. In sum, the rhetorical entrapment is a possible explanation for why it was precisely in 2009/2010 that the UAV utilization decreased.

Finally, because the arguing process over UAVs is at its earliest stages, I have not tried to determine whether the UAV is attached with a strong symbolic power, but have rather investigated how the UAV is represented and perceived by both militaries and ‘domestic opinion’. I show that recent representations (TV, movies) generally depict the UAV as an ambivalent weapon, strongly associated to the ‘war against terrorism’. This strong association explains why contradictory images exist, between, on the one hand, a weapon that offers wonderful resources to fight against the ‘terrorist threat’, and, on the other hand, an imperialist weapon which transgresses borders and achieves extra-judicial killings. Finally, the chapter investigates the existing resistance from militaries against UAVs, and traces the origin of this to the fact that the UAV is perceived as an anti-chivalric weapon, which requires qualities that have not been, in the past, rewarded and promoted within the army. The debates over the creation of a specific medal for UAV pilots illustrate the tensions the weapon creates among the militaries, and how the UAV utilization indirectly promotes a specific conception of fighting justly which differs from, and even contradicts former conceptions still widely shared in the militaries.

Why study the meta-norm of fighting justly and weapons utilizations?

Norms matter, even in war

The first contribution of this thesis is to demonstrate the necessity to study the laws of war (and more generally, norms) in order to fully understand the variations in states’ practices of war. To the question of whether laws of war do impact on states’ weapons utilization, this thesis responds positively. It reveals that studying the ‘collective perceptions actors have of the laws of war’ also illuminates why certain weapons are, at a specific time, perceived as less efficient, more costly, or less legitimate – and therefore cease to be used on the battlefield. In a more general perspective, this thesis tends to agree with the ideational theories of International
Relations (liberal and constructivist), which maintain the necessity to perceive norms as being as fundamental as material factors. This dissertation is therefore part of a growing body of scholarly literature which acknowledges that norms, and more precisely norms of laws of war, do impact on practices of war.\(^1\) It shows more particularly that actors always evaluate their weapons through a normative prism. Even if the technical capabilities of a weapon do not change over time, the way actors evaluate the efficiency of these capabilities, their strategic utility, their cost and their legitimacy can vary considerably. This thesis argues and demonstrates that this evaluation is also underpinned by the meta-norm of fighting justly, hence the necessity to study the constitution and the constraining role of this meta-norm.

**Military doctrine, fighting justly and weapons**

A large part of the thesis aims at understanding how militaries perceive weapons, and how their conceptions of fighting justly ultimately impact their weapons utilization. Because militaries also share a specific conception of fighting justly, largely inherited from chivalric and aristocratic codes, and because this conception is deeply enmeshed in their military culture, they are generally reluctant to use weapons with ‘anti-chivalric’ qualities.\(^2\) This reluctance does not mean that militaries refuse to use the weapon under any circumstances, but it can highlight why certain weapons are deployed later than expected.

More broadly, the thesis reveals that focusing on the relationships between military culture and the meta-norm of fighting justly might be extremely illuminating for an understanding of why certain weapons, but also certain doctrines of utilization, are more likely to be used and developed than others. Yet, very few studies endorse this approach, and for two reasons. They either encompass the meta-norm of fighting justly within the broad term of “military culture”, or they believe that technologies and other materials are the real drivers of

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\(^2\) The resistance demonstrated by certain militaries to use napalm, chemical weapons or drones might be regarded as intriguing if we only consider the technical capabilities of these weapons. Napalm was regarded as being particularly useful to burn jungles and force the ‘opponent’ to uncover. Chemical weapons could kill in a short time entire units, should the latter not be protected by gas masks. Even when the soldiers were protected, chemical weapons could still be the weapons of attrition, eventually breaking the resistance of the opponents. Drones can target precisely without endangering the pilot.
military doctrine. A good illustration of the relative absence of consideration that laws of war can influence military doctrine (and weapons utilization) can be found in the debate over the Revolution in Military Affairs (RMA). The concept of RMA assumes that a revolution in military affairs happens when a new weapon or technology is created, and renders certain military doctrines useless and obsolete. Yet, we demonstrate through this thesis that the creation of a new weapon always has to be understood in a broader social context: weapons are never inherently positive, efficient or useful. Several studies rightly point out this aspect, and demonstrate that it is shifts in military culture, rather than an ‘irruption of new weapons’ or RMA, that explain why democratic armies change their way of going to war.¹ The weapon is not so much the cause of the shift in the military culture, as the consequence of such a shift. I entirely agree with this observation, and I find it surprising that these studies do not mention the meta-norm of fighting justly as a potential factor in the shift in military culture. Indeed, the new military culture promotes a conception based less upon annihilation and more upon restraint and distinction. In fine, this ‘new military culture’ is more likely to comply with the dominant conception of fighting justly, than the ‘annihilation culture’. My thesis then demonstrates that studying more carefully how fighting justly and military culture interact could be valuable, especially to gain a broader understanding of the shifts in weapons utilization.

A different approach to the impact of laws of war in International Relations

The thesis also contributes to demonstrating the necessity to endorse a new approach to understanding the wide range of effects through which the laws of war constrain actors in their practices of war. This approach pursues the line of several constructivist researches, which demonstrate that focusing on the regulative power of the laws of war through the notion of compliance, as liberals do, is limited.² The laws of war have to be studied both in their regulative


and their constitutive aspects. Put differently, the laws of war are not only rules which legally bind actors: they are also instruments that they can use to their advantage, ambiguous conceptions that they can internalize differently and, ultimately, constitutive aspects of their identity.¹

This thesis then develops an approach which more largely includes the customary norms of the laws of war (distinction, proportionality and military necessity), and the way they are both understood and instrumentalized by actors. If customary norms are generally regarded as very difficult to ‘capture’ (notably because of their broad and ambiguous meaning), a retracing of actors’ arguments justifying their weapons utilization, together with an analysis of military doctrine and manuals, can provide a clear idea of their dominant meaning. In fine, a new history of the variations in weapons utilizations might be drawn, should one include in the analysis the role of customary norms, and how it is understood differently over time. This history would offer a different, and complementary approach to that traced by the rationalist approaches.

The logic of arguing and the justifications in war

The dissertation finally pursues the line of the constructivist studies which more specifically focus on the ‘logic of arguing’, also called the ‘logic of truth seeking’.² Theorized by Kratochwil and Risse, this ‘third logic’ of international relations (after the cost-utility logic and the logic of appropriateness) can be summarized in three propositions.³ First, when members of an international institution, states are necessarily engaged in an arguing process. Second, while in the arguing process, states are constrained to develop persuasive arguments. Third, the state is finally constrained to conform its practices to what the most persuasive

¹ See notably the development on the barbaric nature of chemical weapons.
argument ‘requires’, through a logic of ‘rhetorical entrapment’ (the state has to conform to the most persuasive argument).

The dissertation has demonstrated that this logic of arguing reflects crucial aspects of how states behave and act, once engaged in war. Indeed, and in contrast with what the common view suggests, when engaged in war, states constantly seek to justify their actions, in the eyes of the other states, but also of their own domestic audience and militaries. Perhaps more than many other activities, war remains a decisive moment where each side brandishes arguments in order to prove that its cause, and its actions to achieve this cause, are more legitimate than these of the opponent. The three weapons trajectories support the idea that states always seek to justify their weapons utilization, and to prove that they were in conformity with what the laws of war advocate: states develop a strong legal argument in order to prove the legality of their weapons utilization and, simultaneously, the illegitimate character of the critiques addressed against their weapons utilization. States engage in a dialogue, answer the opposing arguments, and attempt to give the most persuasive argument.

The difficulties of the ‘logic of arguing’ mainly lie in what I call the ‘sociological leap’: that is, the translation of the normative sphere (one argument is regarded as more legitimate than the others) to the realm of action (states decide to conform to this argument). This dissertation offered the notion of rhetorical entrapment, theorized by other scholars, to explain why states feel constrained to change their practices when they acknowledge that their argument is flawed. The dissertation also reveals that this rhetorical entrapment does not necessarily lead to a change of practice, but sometimes to a concealment of the practice. Yet, even though this concept is illuminated in the three cases studied in the dissertation, further research could probably expand its scope of application. The thesis briefly discusses the relationship between the ‘micro level’ (militaries) and the ‘macro level’. More importantly, it tends to assume a form of direct relationship or dialogue between the two (militaries-states and vice versa), as if the two levels could implement decisions rapidly. This perspective is explained by my research design: I focused on the trajectory of weapons which were already produced, already available to militaries, and the retracing of the decision process to decrease their utilization reveals a direct relationship between militaries and states. Yet, it might not always be the case. Therefore, an interesting aspect for further research would be to investigate the bureaucratic logic, to shed a more complex but more complete light on why and when states feel rhetorically entrapped, and how this is translated in the decreasing utilization of weapons on the battlefields.
The logic of symbol in International Relations

Finally, the thesis discusses the understudied role of symbols in International Relations, along two research axes.

First, the thesis contributes to revealing how ‘specific’ representations of war actually impact on the very practices of war. It reveals that certain weapons can be associated with strong, visual representations, which create a gap between what the weapon did and how it was represented. This gap ‘distorts’ the perceptions actors have of the weapon, notably by attaching a strong opprobrium to it. The thesis lays out potential explanations of why these representations *in particular* were attached to the weapon, notably by mobilizing tools from anthropology, psychology, and sociology. This certainly needs to be completed by a more comprehensive work which could highlight why and when certain representations are more likely to be part of the collective imagery, and how this collective imagery finally influences actors’ practices of war.

Second, the research also reveals the disciplining aspect of symbols, which are not only a distortion of reality, but also objects which order, arrange and thus create important social hierarchies. Symbols are part of a larger symbolic order, which is in turn a form of organization of society. Several studies on military culture underline this crucial aspect and acknowledge the strong symbolic dimension underlying military culture. This dissertation pursues their line by revealing the disciplining role of military medals, which also contribute to fixing, through a logic of rewarding, the status of weapons. Finally, the dissertation also explores a literature which focuses, through genealogical studies, on the disciplining impact of the laws of war at the level of international order.

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1 The military culture is defined by Johnston as “"collectively held semi-conscious or unconscious images, assumptions, ‘codes’, and ‘scripts’ which define the external environment.” He then quotes Clifford Geertz and explains that culture is constituted of a "system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate and develop their knowledge about and attitudes toward life” in JOHNSTON, Alastair Ian. “Thinking about Strategic Culture.” International Security 19, no. 4, Spring 1995, p 32–64. He quotes GEERTZ, Clifford. The Interpretation of Cultures: Selected Essays. New York: Basic Books, 1973.

of their opponents. This logic provides interesting insights into aspects that need to be further studied. A prime example would be the ‘dual standard’ of weapons utilization in the XXth century, when European states refused to use chemical weapons against other European states, while they saw no contradiction in using these very same weapons, at almost the same time, against their former colonies. ¹

¹ See notably the chapter on chemical weapons for further detail on why Great Britain refused to use chemical weapons in World War II but massively used them against its former colonies in Mesopotamia in 1921.
# List of officials (militaries, NGO and OI members) interviewed

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<tr>
<th>Name</th>
<th>Position</th>
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Maritza S. Ryan
Colonel, US Army
Professor & Head,
Department of Law, USMA (Westpoint) 06/12/2013

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Center for the Study of Weapons of Mass Destruction
National Defense University 11/12/2013

John Mark Mattox
Dr,
Director of the Countering Weapons of Mass Destruction
National Defense University 11/12/2013

Seth Carus
Dr
Distinguished Research Fellow (biological warfare)
National Defense University 11/12/2013

Austin Long
Served in Iraq as an analyst and advisor to the Multinational Force Iraq
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Associate political scientists for RAND Corporation
Assistant Professor, Columbia 04/04/2012

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Journalist (articles on incendiary and chemical devices) 01/05/2013
Lucien Robineau  
General (French Air Force)  
Chief of Military History Department of French Air Force (Service Historique de la Défense) (1985-1994)  
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Michel Goya  
Former Colonel (Marines)  
Head Department of Military History at Ecole de guerre (2011-2013)  
Lecturer at Sciences Po  
22/05/2014

Philippe Frin  
LTC  
Chargé D’études Règlement Affaire Juridique  
Law Department /Rules of Engagement - Centre de Doctrine d’Emploi des Forces  
French Defense Department  
13/06/2014

Jean-Marie Guehenno  
Advisor for the French Foreign Affairs Department (1979-1981)  
President de l’Institut des Hautes Etudes de Defense Ntionales (IHEDN)  
15/04/2013

Jean-Marie Fardeau  
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Human Rights Watch’s office, France  
15/01/2010

Florian Monnerie  
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Human Rights Watch  
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Donatella Rovera  
Senior Crisis Response Adviser  
Amnesty International, International Secretariat  
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