ABSTRACT

Implicit Theories of Emotion and Social Judgment

Melissa Cesarano

Emotions are ever-present, transient, and powerful mental states that become especially relevant in social situations. As humans develop, we construct lay intuitions about the nature of emotions and about how emotions function in the mind and body. Specifically, we accrue beliefs about the controllability and malleability of emotions. Entity theorists regard emotions as being relatively fixed and difficult to control. On the other hand, Incremental theorists view emotions as being relatively malleable and controllable. These dichotomous implicit theories are known to propagate different cognitive, affective, and behavioral effects. While implicit theories have been researched in the context of social judgment previously, these studies were limited to implicit theories of psychological attributes, like personality/morality/intelligence, and not theories of mental states, like emotions. In this dissertation, I draw from the various fields of cognitive science, moral philosophy, and social psychology to posit: are Implicit Theories of Emotion related to Social Judgment? And if so, what is the specific relationship between these constructs? Thus, in Study 1, I sought to answer these questions by using Tamir et al. (2017) Implicit Theories of Emotions Scale to measure emotion beliefs and by creating narrative scenarios for a blame attribution task. Study 1 also explored the relationship between Implicit Theories of Emotion and self-perceived emotion regulation tendencies, emotion regulation self-efficacy, and the perceived value of emotion regulation. The results of Study 1 demonstrated that Implicit Theories of Emotions are related to Social Judgment. Specifically, being an Incremental theorist was associated with attributing more blame to actors behaving transgressively than being an Entity theorist. This was a correlative trend reversal from the extant research that studied the relationship between Implicit Theories of Psychological Attributes (such as Personality and Morality) and Judgment. In these studies, Entity theorists tend to attribute more blame to actors behaving transgressively. Study 1 also demonstrated that that being an Incremental theorist was related to frequent use of cognitive reappraisal, having an augmented emotion regulation self-efficacy, and a perception that being able to
emotionally regulate is an important human quality. In contrast, Entity theorists were associated with ascribing less blame to actors, less frequent use of cognitive reappraisal, attenuated emotion self-efficacy, and were less likely to believe that emotional self-regulation is an important quality. Study 2 measured subjects’ Implicit Theories of both Emotions and Personality and correlated these variables with blame attribution across different types of narrative scenarios. I was able to replicate the correlations from Study 1, which demonstrated that being an Incremental theorist is associated with placing harsher blame on actors behaving transgressively. Additionally, Study 2 established a causal relationship between Implicit Theories of Emotion and Social Judgment by manipulating subjects’ implicit theories using contrived scientific articles and priming activities. Participants who were taught the Entity theory of emotions attributed more blame to actors behaving transgressively than those who were taught the Incremental theory of emotions. I theorized that when people are taught a strong Entity theory of emotions, the concept of ‘emotions’ becomes more like the concept of a psychological attribute (a stable ‘trait-like’ entity). Therefore, when judging others, ‘person control’ judgment variables (such as intentionality and foreseeability) are not as relevant and these individuals become vulnerable to affect biases and to judgments based on dispositional inferences. Teaching an Incremental theory of emotions, on the other hand, had the effect of attenuating aggressive judgment. These findings have important educational and clinical implications.
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“I will always carry you inside
outside
on my fingertips
and at brain edges
and in centers
centers
of what I am of what remains”

- Bukows
A king dreams his young son has died. He falls into such grief in the dream that the world darkens, and his body grows inert. Suddenly he wakes into a joy he’s never felt.

His son is alive! He thinks to himself, such sorrow causes such joy. It is a kind of joke on human beings that we are pulled between these two states as though with ropes on the side of a collar.

- Rumi, ‘The Prince of Kabul’

INTRODUCTION

The various implicit beliefs that humans accumulate about emotions often manifest themselves in art and literature, usually long before they become explicit ‘expert’ scientific theories. As with Rumi’s poem above, the ‘king’, through experience, acquires a naive belief: that the feeling of deep sorrow allows for a subsequent juxtaposing sensation of extreme joy. This intuited theory of affect, if you will, enlightens the king to a second intuition, which we infer from Rumi’s use of a rope and collar metaphor: that humans have very little control over their emotional states. Instead, our emotions control and enslave us. Like the king, people acquire many of their naive beliefs about the human emotion system through experience. Might these emotion-specific beliefs have any implicit effects on how we perceive or judge individuals for their behavior? If so, these intuitions would have potentially malignant and/or beneficial intrapersonal and interpersonal consequences. Especially if people never become consciously aware of how these emotion beliefs influence their lives.
Chapter 1: Theoretical Foundations

The Epistemic Hunger of the Human Mind: Cognitive Basis of Naive Intuitions

The human cognitive system is inherently curious; it desires to make sense of experience. From our very first sensations, perhaps the rush of breath into our newly formed lungs, the sound of our own voices screeching into existence, or even the first felt flesh of another human, our mother’s skin, the nervous system begins to engage in epistemic processes that help us to understand the shifting sensations that surround and engulf us. As our cognitive faculties mature, in an attempt to comprehend, predict, and control our internal and external realities, the mind begins to spontaneously construct implicit models of the world, which continuously adjust throughout our lives (Wellman & Gelman, 1998; Ben-Artzi, 1995-1996; Craik, 1943; Johnson & Laird, 2006; Anderson, J.R., 2009). For example, it has been well established that people accrue naive beliefs about their physical reality, beliefs about gravity and matter and forces, before ever setting foot into a physics classroom (Slotta & Chi, 2006; Reiner, Slotta, & Chi, 2000; Chi, 2008; Chi et al., 1981; Disessa, 2002). Additionally, through a combination of observing others, explicit instruction, and self-discovery, humans acquire intuitions about their own ‘selves’ collectively known as the ‘conceptual self’ (Neisser, 1988; Anderson, 1990). These lay theories include beliefs about our physical bodies, abilities, interpersonal communication, as well as abstract internal conceptions of entities such as the ‘soul’, ‘free will’, moral responsibility, and various mental states (Neisser, 1988; Dweck, 1986; Nichols and Knobe, 2007). Consequently, these beliefs labelled ‘naive beliefs/conceptions/intuitions’, ‘lay intuitions’, and ‘implicit theories’ (as they are referred to in the cognitive, philosophical, and psychological literature), create semantic frameworks that are implicit in the development of inferences, motivations, goals, and ultimately behavior. Implicit beliefs provide us with a ‘cognitive lens’ through which we can interpret reality (Epstein, 1989; Murphy and Medin, 1985; Cabello, 2015; Ben-Artzi, 1995-1996; Wellman & Gelman, 1998).
Naive theories of ‘self’, ‘other’, and ‘world’ have several intrinsic features of interest. I’ve previously discussed that these beliefs are experientially acquired and comprise epistemologically relevant cognitive structures. Additionally, they are thought to be ‘implicit’ because they are implied rather than held explicitly, and the influences of these knowledge structures work in ways that are not consciously, and thus introspectively, known (Greenwald & Banaji, 1995). Also, albeit they serve an interpretive function by helping us understand the world, many naive beliefs have a precarious connection to language (Disessa, 2002). To clarify, when intuitions guide cognitions and behaviors, they achieve such ends without any explicit verbalizations from the person holding them (Miller, Burgoon, Hall, 2007; Dweck, Chiu, Hong, 1995). Thus, because of their implicit nature, these theories become difficult to study empirically, and scientists must make a meticulously systematic effort to identify them, establish nomological networks, and map out their effects (Dweck et al. 1995).

An additional feature of lay theories is that they are not necessarily ‘correct’ or ‘objectively true’ since they are accrued through experiential and not scientific means. In fact, decades worth of research has been dedicated to the empirical examination of differences in understanding between novice naive theories and expert (non intuitive) beliefs, particularly in domains such as physics and biology, in an effort to identify firmly-held robust misconceptions that may be particularly resistant to instruction. More often than not, lay theories, such as in the domain of physics, are at least partially inaccurate even after substantial experience (Slotta & Chi, 2006; Reiner, Slotta, & Chi, 2000; Chi, 2008; Disessa, 2002). The meticulous cataloguing of changes that a lay conception must undergo to transition from ‘novice’ to an ‘expert’, has even given rise to a field of inquiry called ‘conceptual change’. These scientists postulate that some of the misconceptions in naive thinking are particularly ‘robust’ because students have difficulties making adjustments to the ontological nature of concepts (Slotta et al. 2006). This means that as naive conceptions develop, novices incorrectly assign ontological labels such as processes, mental states, and entities to things in their internal and external reality prior to expert instruction (Slotta et al. 2006). For example, Chi & Slotta (1994) explain that many novice physics students often believe gravity to be an entity, a ‘thing’ that is ‘in the earth’. However, gravity is actually an emergent constraint-based interaction between the earth and
other objects, and thus, a process (Chi, Slotta, and de Leeuw, 1994). Not only can people have misconceptions in lay knowledge about the entities in the world, but they can also have varying inaccurate (or accurate) beliefs about the nature of their intelligence, morality, and personality (Dweck et al. 1995). For example, a person can believe that ‘morality’ is a fixed trait, and that people are inherently either immoral or moral individuals, while another individual can hold the opposite view, namely, that morality is a malleable attribute that can change with experience and education. In the forthcoming sections of this paper, I will demonstrate why the inaccurate ontological labelling of our naive conceptions is particularly relevant with respect to implicit theories of emotions and the social consequences that this knowledge perpetuates.

Emotions are an essential part of our intrapersonal and interpersonal worlds. Human beings construct knowledge structures about the nature of emotions and about how emotions function in the mind and body (Flavell, 2004; Lakoff, 1987; Chi, 2008; Wranick, Barrett, & Salovey, 2007; Barrett 2006). These knowledge structures are not necessarily ‘objectively correct’ or align with expert emotion theories (as is the case with naïve theories of ‘physics’ or ‘biology’), but nonetheless implicitly impact cognition, and ultimately, behavior. However, lay theories of emotion have yet to be studied extensively in the cognitive sciences, although they appear to have much relevance in the realm of social judgment (Dweck et al. 1995). Thus, this theoretical chapter will continue a specific line of inquiry in the context of Implicit Theories of Emotion, naive beliefs pertaining to the malleability and controllability of emotions, adapted by Tamir et al. (2007) from Dweck’s original research on mindsets (Dweck & Leggett, 1988; Livingstone, 2012; Tamir et al. 2007). The underlying premise is that emotion theories act as knowledge structures that implicitly affect social perception, specifically, social judgment of actors’ displaying negatively valenced behavior.

The Duality of Man’s (Implicit Knowledge): Incremental and Entity Implicit Theories

In the 1970s, Carol Dweck conducted studies that highlighted two divergent ways in which children respond to academic challenges. When encountering failure in the school environment, one subset of children was inclined to respond with a ‘helplessness’ pattern, which means they experienced distress and
became disengaged from the study’s challenges. Interestingly, these children also shirked opportunities to develop and improve their skills if it meant that they might encounter future failures (Dweck & Reppucci, 1973). However, the other subset of children responded with a ‘mastery oriented’ pattern; they sustained engagement while executing tasks and did not experience severe stress over challenges. Moreover, they did not view failure as a sign of their shortcomings. Instead, for these kids, failure had less utilitarian implications; it was an indication that they should increase their effort or change their problem-solving strategies (Dweck et al. 1973). Thus, for the mastery-oriented children failure was not necessarily an end, but a potential means to a more fruitful end.

What contributed to the motivational differences observed by the children in Dweck’s (1973) study? Dweck believes that the differences were associated with two distinct implicit theories of psychological attributes: Entity vs. Incremental theories. Entity theorists view psychological attributes as being fixed and beyond one’s own control, while incremental theorists view attributes as being malleable and controllable. According to Dweck’s research, the two implicit theories act as frameworks that propagate distinct goals and attributions, which then impel respective cognitive, affective, and behavioral responses (Dweck et al. 1995; Dweck 1999).

Implicit theories have been studied across various psychological attribute domains, and are considered to be domain specific (Dweck et al. 1995; Chiu, Dweck, Tong, & Ho-Ying Fu, 1997). Therefore, people can hold different implicit beliefs depending on the specific kind of psychological attribute in question (personality, morality, intelligence). It is entirely possible for an individual to believe that morality and personality can be malleable across the human lifespan, but that intelligence is relatively fixed (Dweck et al. 1995; Chiu et al. 1997). Additionally, implicit theories, as predictor variables, are most related to outcome variables within the same domain (Dweck et al. 1995; Romero et al. 2014; Yeager 2014). For example, implicit theories of intelligence are related to outcome variables like academic achievement and college enrollment. Implicit theories of personality are related to outcome variables in the social-emotional realm, like peer support and general well-being (Dweck, 1986, 1999; Dweck et al. 1995; Chiu et al. 1997). However, there isn’t always an immediately obvious domain match between implicit theories and the
outcome variables in experiments. For example, research has demonstrated that students with incremental theories of intelligence, using their mastery-oriented goals and strategies, are often able to overcome not just academic obstacles during adolescence, but are also more successful at navigating significant life transitions such as the progression from elementary school to high school (Blackwell et al., 2007; Cabello, 2015). Theories of intelligence (Dweck, 1991; Dweck et al. 1995), personality (Chiu et al. 1997; Erdley & Dweck, 1993), and morality (Chiu et al. 1997; Haidt, 2001; Miller, Burgoon, & Hall, 2007) make up the bulk of implicit theory research.

The entity and incremental views of attributes differ in their foundational assumption; they’re either static or evolving over time. Consequently, this fosters different epistemic approaches to understanding the ‘self’ and ‘others’, that is, either by quantifying and measuring stable traits or by analyzing them in flux (Whitehead 1938; Johnson, Germer, & Overton, 1988; Dweck et al., 1995). The differing epistemic approaches have fascinating implications. For entity theorists who believe that their attributes are static, the epistemic approach is to treat every performance-type instance as an evaluation of self (Dweck et al. 1995; Chiu, 1997). This is because, although entity theorists believe that their attributes are fixed, these theorists don’t know if the attributes are fixed at a level of ‘sustained-mastery’ or ‘sustained-incompetence’ (Dweck et al. 1995; Chiu, 1997). The lack of clarity engenders extreme self-scrutiny. So, every success or failure is a glimpse at one’s own dispositional ability (or inability), and thus, self-worth. Dweck explains that, in addition to abstaining from difficult tasks, entity theorists will also exhibit a preoccupation with validation and will incessantly attempt to safeguard their own image to themselves and others (Dweck, et al. 1995). Sadly, a hypervigilant ego seems misplaced when individuals could otherwise be focusing on the effort and passion necessary to effectuate true learning, in all of its desired difficulties (Landauer & Bjork, 1978).

However, the entity strategy tends to create a seemingly knowable and readily identifiable reality (Dweck et al. 1995). For incrementalists, ‘the self’ and ‘reality’ cannot be known at a particular moment. Rather, to interpret events, they tend to consider the psychological and situational mediators of a situation, things like emotional state and prior beliefs (Dweck et al. 1995). But, believing in the malleability of features suggests that the reality of one’s abilities can never be understood with conviction, since one is always in flux.
An existentially precarious thought, for some. Perhaps the incremental theorists can find some solace in Voltaire, “Uncertainty is an uncomfortable position. But certainty is an absurd one.” As previously noted, incremental theorists fare better than entity theorists as they employ mastery-oriented strategies when faced with obstacles such as academic challenges and life transitions (Dweck et al. 1995; Chiu et al. 1997). However, this should not imply that an Incremental theory is always the most beneficial theory to hold for every person and across all contexts. While the Incremental position is generally associated with better outcomes, Dweck argues that either theory can become adaptive and ideal in different situations (Dweck et al. 1995).

A logical follow-up question to be asked is: Can people hold more than one implicit theory within the same domain? Dweck and colleagues (1995) explain that, logically, the two perspectives are mutually exclusive; having a belief that the world or a particular attribute cannot be changed and controlled is the polar opposite of believing that it can (Dweck et al. 1995). However, Dweck further elaborates by explicating that people can also hold both theories, and that in certain scenarios with specific constraints, one intuition can be biased over the other (Dweck et al., 1995). As psychologists and cognitive scientists can affirm, our heuristics often impel us to hold logically contradicting beliefs; and people don’t usually go to great lengths to sift through the various inconsistencies in their minds (Dweck et al., 1995; Tversky & Kahneman, 1975). To clarify, one implicit theory may take precedence over the other by more often contributing to a person’s cognition and behavior, but it may also become temporarily impotent during particular situations. In cognition research, researchers have also demonstrated the ability to ‘induce’ participants with an entity or incremental perspective by exposing them to ‘contrived’ scientific articles that argue for the static or malleable facets of personal characteristics (Chiu et al. 1997; Levy et al. 1998; McConnell, 2001; Plaks et al. 2001). These studies are doubly important because they reveal that 1. People can be experimentally convinced to hold temporary implicit intuitions, which may not match their default ones and, because of this 2. Scientists can establish causal, and not just correlational relationships, between implicit theories and the psychological outcomes that they determine (Dweck et al., 1995; Chiu et al., 1997; McConnell, 2001; Plaks et al., 2001).
To operationalize the construct of ‘implicit theories’, Carol Dweck devised a scale that has since been adapted to suit several different attribute domains. The items assess the constructs of ‘control’ (how much control we have over our psychological attributes) and ‘malleability’ (how substantially attributes can change over time). The items of Dweck’s Implicit Theories of Intelligence Scale (Dweck, 1999) can be seen here.

*Item 1 [reverse scored]: You can learn new things, but you can’t really change your basic intelligence*
*Item 2 [reverse scored]: Your intelligence is something about you that you can’t change very much*
*Item 3 [reverse scored]: You have a certain amount of intelligence and you really can’t do much to change it*

**Implicit Theories of Emotions: Theory and Empirical Findings**

There is a paucity of emotion intuitions research in cognitive science even though both child and adult laypersons have a cache of naive beliefs about the nature of emotions (Flavell & Green 1999; Flavell, Green, & Flavell 1998; D’Andrade, 1987; Wellman & Hickling, 1994). For example, many people recognize that just as we can have unintended and undesired thoughts, we can experience unintended and undesired emotions (Flavell & Green, 1999). Also, children and adults are inclined to believe that stopping sad thoughts is more difficult than interrupting neutral thoughts (Seja, 1995). Flavell & Green (1999) agree that, as with other naive conceptions, many beliefs pertaining to various mental states can also be ‘inaccurate’ or ‘deceptive’. For example, individuals tend to overestimate the utility of suppression as a regulation strategy to attenuate negative affect (Flavell & Green, 1999). With respect to controllability, Flavell & Green (1999) argue that this is a particularly pertinent construct to study because a pivotal part of understanding a mental state hinges on how much control we have over its occurrence, intensity, and duration (Flavell & Green, 1999). And not only does this knowledge of a mental state help us to regulate it, but it also helps us distinguish it from other mental states (Flavell & Green, 1999; John & Gross, 2013; Frijda 1988). Lisa Feldman Barrett theorizes that folk conceptions of emotion controllability and
automaticity tend to dictate our rendering of emotions in both ‘self’ and ‘other’, and can be reflected in our social institutions and protocols (Barrett, Ochsner, & Gross, 2005). She cites Dressler (2001), for example, and explicates that in the US a violent crime determined as having stemmed from the ‘sudden heat of passion’ can reduce the sentencing of an ‘intentional homicide’ to an offense of ‘voluntary manslaughter’ (Dressler, 2001; Barrett et al., 2005). It is no wonder then, that the few existing attempts at unearthing naïve emotion beliefs have focused mainly on the controllability and malleability of these mental states.

But what other research on emotions intuitions exists? In 1995 and 1996, Ben-Artzi created a scale to measure lay theories of emotion by asking participants to freely name and describe salient facets of emotions. When he qualitatively assessed these answers, he found that people spontaneously appraise emotions as fitting into eight categorical characteristics, which are subsumed by two superordinate theories: a threat appraisal and a benefit appraisal (Ben-Artzi, 1995; Ben-Artzi & Mikulincer, 1996). The characteristics of emotion that people noted, subsumed under these two appraisals, are: 1. (Threat) uncontrollability; bizarreness; disturbance; instability; and unpredictability 2. (Benefit) motivational power; intensity; and experiential significance (Ben-Artzi, 1995). Interestingly, participants spontaneously noted their inability to control emotions, rather than their ability to control emotions (hence control isn’t under the ‘benefit’ appraisal), which may indicate that ‘emotion controllability’ is generally seen as a saliently precarious construct for lay persons. Additionally, emotion theorists agree that the definition of the word ‘emotion’ is unclear and ambiguous, which is a major challenge when studying lay intuitions of emotion (Ben-Artzi, 1995; Ben-Artzi, 1996; Frijda, 1988; Barrett, 2006; Ratcliffe, 2005). However, just because people can’t define exactly what emotions are, doesn’t mean they can’t harbor beliefs about them (Ben-Artzi, 1995; Ben-Artzi, 1996; Nichols & Knobe, 2007). Ben-Artzi believes that the empirical study of emotion naïve beliefs is important because: 1. Lay theory content can contribute to expert knowledge (further clarifying what lay persons mean when they refer to ‘emotions’) 2. Individual differences in intuitive beliefs can help explain different appraisals of a given emotional episode and how these appraisals affect behavior (Ben-Artzi, 1995; Ben-Artzi, 1996; Nichols and Knobe, 2007). Ben-Artzi was the first researcher to use free-response to categorize attributes that people ascribe to emotional phenomena and,
subsequently, these qualitative categorizations helped create The Lay Theories of Emotion (LTE) scale. The scale enabled Ben-Artzi to conduct further studies to assess individual differences among the identified lay characteristics of emotion (Ben-Artzi, 1995; 1996).

It has been suggested that emotion conceptual knowledge shapes emotion perception, phenomenological experience, and behavior (Warnick, Barrett, & Salovey, 2007; Barrett, 2006). Accordingly, in 2007, Maya Tamir & John Gross adapted Dweck’s Implicit Theories of Intelligence Scale to suit the ‘emotions’ domain. They wanted to observe if these emotion-specific implicit theories might be connected to affective and social outcomes across major life transitions, such as the transition from high school to freshman year of college (Tamir et al. 2007). The study had several interesting findings. First, Implicit theories of emotion and emotion regulation tendencies, operationalized using the Emotion Regulation Questionnaire (ERQ), were analyzed for a correlational relationship (Gross & John, 2003; Tamir et al. 2007). Results indicated that, before entering college, entity theorists made less use of cognitive reappraisal than incremental theorists. However, there was no statistical correlation between implicit theories of emotion and use of expressive suppression as a regulation strategy (Tamir et al. 2007). Second, during the first academic semester of college, entity theorists were found to have less favorable emotional experiences and received decreased social support from their new peers (Tamir et al. 2007). Weekly entries in personal diaries corroborated this finding (Tamir et al. 2007). Additionally, by the end of freshman year, both self and peer reports demonstrated that entity theorists exhibited more symptoms of depression, a decreased sense of well-being, and less social adjustment to their college environment as compared to incremental theorists (Tamir et al. 2007). The Tamir & Gross study prompted several other implicit theories of emotion studies which looked at correlations to other outcome variables like ‘ability emotional intelligence’ (operationalized by scores on the MSCEIT) (Cabello 2015; Mayer, Salovey, Caruso, & Sitarenios, 2003), emotional functioning in middle schoolers (Romero, 2014), and mental health symptoms and hypothetical treatment choices among college students (Schroder, Dawood, & Yalch, 2015). In all of these studies the researchers found significant correlations between the implicit theories of emotion and the outcome variables listed above. Specifically, the studies emphasized that entity theorists (rather than
incremental theorists) were associated with having lower ability emotional intelligence and social-emotional functioning, show more symptoms of mental health disorders such as depression and anxiety, and had a predilection toward choosing pharmaceutical interventions over therapy (Cabello, 2015; Romero, 2014; Schroder et al., 2015). The Tamir & Gross (2007) Implicit Theories of Emotion Scale can be seen below. Two of the scale’s items specifically address the construct of ‘control’, while the other two address the construct of ‘malleability’. Additionally, there are two items meant to test for incremental beliefs, and two items meant to test for entity beliefs (Tamir et al., 2007):

*Item 1 [Incremental; Control]: Everyone can learn to control their emotions*

*Item 2 [incremental; Malleability]: If they want to, people can change the emotions they have*

*Item 3 [entity; reverse scored; Control]: The truth is people have very little control of their emotions*

*Item 4 [entity; reverse scored; Malleability]: No matter how hard they try, people can’t really change the emotions that they have*

Before I proceed, an important clarification must be made. Emotions are inherently different from the other implicit theory constructs that have been previously analyzed by Carol Dweck and colleagues. Intelligence, morality, and personality are psychological *attributes*, which means that they are trait-like constructs. Emotions, however, are *mental states*. And mental states differ from attributes in their temporality, as they are much more ephemeral in nature (Tamir et al., 2007). So, how might this make studying implicit theories of emotion different than studying other implicit theories? Might this discrepancy bias people to believe that emotions are generally more malleable and, thus, produce greater proportions of incremental theorists than in other domains? Perhaps. But there is also reason to believe that many people perceive emotions as being more ‘trait-like’, like psychological attributes, and therefore less malleable. This stems from the *incorrect ontological categorizations* of many lay theories (akin to the robust misconceptions that novice physics learners display). Instead of perceiving emotions as *mental states*, which they are, people can also view emotions more like ‘things/objects’, like entities. Lakoff (1987) emphasizes that our use of language, particularly metaphoric language, reinforces the ‘robust misconception’ that emotions are *entities* rather than emergent *mental states*. Idiomatic phrasings such as
‘he let out his anger’ and ‘I can barely contain my rage’ are linguistic manifestations of this incorrect ontological categorization of emotions (Lakoff, 1987; Chi, 2008). These metaphors liken emotions to ‘objects’ that can be contained and released. Additionally, Lisa Feldman Barrett (2006) states that even affect scientists have historically based psychological models of emotion on the assumption that emotions are entities. Only very recently in the history of psychological science have researchers progressed from thinking about emotions as ‘unitary faculties of the mind’ to thinking about them as ‘emergent phenomena that vary within the immediate context’ (Barrett, 2006). Barrett implies that this misconception is pervasive, even among experts, because unlike other cognitively gestaltian phenomena like attention, emotions have specific words for specific categories (sadness, anger, fear), which reinforces the idea that emotions are natural kinds or entities in nature (Barrett, 2006). Ultimately, Barrett asserts that emotions are more like thoughts and beliefs: they are states and not things (Barrett, 2006). The implicit theory consequences for ontologically different constructs (psychological traits vs. mental states) warrants further research.

**Fig 1.** This diagram distinguishes psychological attributes and mental states as belonging to different ontological categories. Mental States and Psychological attributes encompass different psychological phenomena.
Implicit Theories, Moral Sensibility, and Social Judgment

Psychologists and philosophers have both come to believe that moral and social intuitions are manifestations of underlying implicit conceptions of self, society, and the world (Sandel, 1984; Chiu et al. 1997; Knobe, 2007). Together, explicit moral beliefs and their underlying intuitions encompass a semantic framework that drives moral sensibility and subsequent action (Schwartz, 1992; Epstein 1989; Knobe, 2007). Specifically, intuitive beliefs can then drive specific patterns of social characterization and judgment that occur in a manner akin to perception (Molden, Plaks, & Dweck 2006; Haidt, 2001). This is known as the Social Intuitionist Model: moral and social judgment are generally the result of quick, automatic evaluations known as intuitions (Haidt, 2001; Uleman, Saribay, & Gonzalez, 2008). Thus, it is no surprise that the constructs of social perception and judgment have made their way into the cache of studies that utilize implicit theories scales. Some of Dweck and colleagues’ (1995; 1997) initial implicit theories experiments included evaluative judgments of others as their outcome variables. However, it must be noted that the theory measures in these paradigms were implicit theories of morality and personality, which are theories of attributes and not mental states (different ontological categories). In Chiu (1997), after being tested for personality implicit theories, participants were exposed to narrative scenarios that described undesirable behavior among school children and were asked to provide ratings of blameworthiness and recommend punishments (Chiu et al., 1997). What these studies discovered was that entity theorists were placing more blame on misbehaving school children and recommended harsher punishments than incremental theorists. Additionally, entity theorists were apt to make quick, often generalized judgments of others, even on the basis of very little contextual information (Dweck et al., 1995). These judgments tended to be on-line trait-based judgments (McConnell, 2001; Chiu et al., 1997). Thus, observing (or reading about) a single instance of transgressive behavior (in a very particular context) is enough for the entity theorist to conclude that the actor-in-question has a stable underlying trait(s) that matches (and potentially even caused) this particular behavior, an attribution that Uleman (2008) would characterize as a ‘spontaneous trait inference’ (STI) (Dweck, 1995; Uleman et al., 2008; Chiu et al., 1997; Uleman 2015).
Chiu & Dweck, et al. (1997) also observed that entity theorists were less understanding of behavior that deviates from role expectations (Chiu et al. 1997). Incremental theorists, alternatively, were inclined to focus on the situational and psychological mediators (in immediate situations and across contexts), such as goals/feelings/states of mind, when making judgments of others’ behaviors (Dweck et al., 1995). Additionally, they were also more tolerant of deviant behavior if it served the agenda of a personal right or freedom (Chiu et al., 1997). In sum, these studies imply that entity theorists may attain a greater sense of ‘who someone is’ from first impressions and with very little situational detail. Incremental theorists’ judgments may have an advantage when given behavior to examine over time and across various contexts, using what McConnell (2001) would call ‘memory-based’ judgments. However, Dweck clarifies that the entity ‘on-line’ judgments advantage may work best only when the target truly fits a stereotype or when there is no situational information that would create dissonance with a simple trait assignment (McConnell, 2001; Chiu et al., 1997).

In 2001, McConnell designed both correlational and experimental paradigms, in which he manipulated participants’ implicit theories, to understand the association between personality implicit theories effects on social judgment. As mentioned previously, his studies suggested that perceivers vary systematically in their readiness to form on-line and memory-based judgments (McConnell, 2001). He explains that incremental theorists, for example, will not always form memory-based evaluations. Instead, attributions and judgments, are affected by both situational variables (in the vignettes) and perceiver-relevant variables (cognitive load, processing goals, and time constraints/delays) (McConnell, 2001). Lastly, his results largely demonstrate that entity theorists appear to spend more cognitive effort in forming superficial evaluative impressions of the social targets, while incremental theorists use their cognitive resources on the situational information and/or the transient features of the actor, such as the actor’s goals and mental state (McConnell, 2001). Incrementalists make more objective inferences by seeking situationally-appropriate rather than dispositionally apposite information and, therefore, make attributions that rely less on stereotypes (Miller, 2007; Dweck, 1996; Gervey, Chiu, Hong, & Dweck, 1999). These findings replicate the trait-focused vs. mediator-focused duality that Dweck and colleagues established
previously (Dweck et al. 1995; Chiu et al. 1997), and also the ‘contextualist’ nature of lay intuitions that experimental philosophers have elucidated in the context of moral judgment (i.e. that implicit beliefs can be manipulated experimentally) (Chiu et al., 1997, McConnell, 2001; Weinberg et al., 2001; Woolfolk et al., 2006). Consequently, even in the domain of cognition, an implicit theory bias can be (at least temporarily) attenuated and affected by the activation of its counterpart theory via exposure and learning. This transient inducement of a theory can actually change the theory-relevant epistemic vectors that become meaningful to a participant during social inferences and judgment (Molden, Plaks, & Dweck, 2006). The entity theorists tend to focus primarily on the trait inferences that may match the negative behavior, while incrementalists attend to the situational and psychological variables that may have caused the behavior.

However, Molden, Plaks, & Dweck (2006) demonstrated some seemingly contradictory results. They found that when entity and incremental theorists possessed their full cognitive resources (no cognitive load constraints, for example) the participants did not differ in their judgments of behavior (Molden et al. 2006). However, in this study’s paradigm, the vignettes were crafted specifically to provide information that conflicted with simple trait vs. situational attribution of target’s behaviors so as to provide alternate interpretations of behavior. Additionally, the researchers gave participants the specific goal of either forming a dispositional or situational impression (instead of just asking to ‘form an impression’ or rate on a ‘blameworthiness’ scale). Lastly this study was interested in examining not just behavior categorization, but also the situational vs. trait corrections that occur after an inference goal/behavioral categorization is already reached (Krull, 1993; Krull and Erickson, 1995a; Molden, et al., 2006). This ‘post-hoc’ correction is considered to be considerably more resource-dependent and effortful judgment task (Krull, 1993; Krull and Erickson, 1995a; Molden et al., 2006). Therefore, the research question in this study was looking at a different phase in the social perception processes than previous studies (the post-hoc judgments rather than the initial intuitive judgments). Molden et al., (2006) found that when entity and incremental theorists are presented with information that provides alternative trait and situational explanations, they may look beyond their preferred interpretations. Specifically, under certain conditions (cognitive load), entity theorists may also form stronger situational impressions and incrementalists may also form stronger
dispositional impressions (Molden et al., 2006). Ultimately, this doesn’t debunk previous implicit theory work, but in fact expands our understanding of how implicit theories function under cognitive load and during different phases of the judgment process. For the remainder of this paper, the moral and social judgments I will be referring to are those that occur due to initial inference goal categorizations, under no experimental cognitive load, and without conflicting trait and situational information.

**Implicit Theories of Emotion and Social Judgment**

In their research Miller, Burgoon, & Hall (2007) manipulated implicit theories of moral character to understand the relationship between these theories and responses to social transgressions. What made this study fascinating is that, not only did Miller and colleagues (2007) look at cognitive responses, via attribution of ‘blameworthiness’ to transgressors, but they also looked at the link between implicit theories and affective responses to the socially inappropriate behaviors (Miller et al, 2007). Thus, these researchers recognized the relevance of emotions in implicit theory and social perception research, even if affective responses and not beliefs about emotions were the target variables. Although interestingly, Miller et al. (2007) cite Weiner and colleagues (1987; 1993) who argue that, ‘more attention should be paid to naive theories of emotion’ specifically (Miller, 2007; Weiner, Amirkhan, Folkes, & Verette, 1987; Weiner, 1993). The reason being that, since we all consciously (and subconsciously) attempt to ‘understand and influence the emotions of others, the average person must use implicitly held rules or laws related to feeling states’ in social situations (Miller, 2007; Weiner et al., 1987; Weiner, 1993). The results of the Miller et al. (2007) study demonstrate that entity theorists respond to actors’ transgressive behaviors with augmented levels of negative affect, and they tend to rate the actors more harshly than incremental theorists (Miller, 2007). The theoretical implication given by Miller and colleagues is that because transgressive episodes cause more negative affect in entity theorists, these individuals will rely on dispositional information, an easier alternative to the cognitively taxing strategy of analyzing context and psychological mediators (Miller, 2007). However, the direction (and precise location) of affect mediation in this experiment is not entirely
clear. It’s also possible that the negative affect is caused by the judgment itself (i.e. the act of blaming someone harshly itself makes you feel angry). In fact, attributions of blame are critical in the generation of angry and aggressive behavior (Scherer, Schorr, Johnstone, 2001; Weiner, 1995). But, the intuitionist models in moral psychology posit that moral intuitions and moral emotions *come first and directly cause* moral judgments (Haidt, 2001; Scweder & Haidt, 1993; JQ Wilson, 1993). So, what might be happening is that after perceiving the transgressive behavior, moral implicit theories (along with negative affect) bias the salience of dispositional or situational information. This information then affects intentionality inferences, which finally affect judgment [e.g. blame rating]. And subsequently, the judgment itself may perpetuate/augment/attenuate the negative feelings. Future research in this area is needed to determine the precise relationship of affect responses to judgment, as moderators, mediators, and/or outcome variables. Nevertheless, a connection between emotions and social attributions is apparent. Emotions (generally) seem to be domain-relevant in the realm of implicit theories and social cognition. Now, if our affective responses may be biasing our inferences and attributions, how is our emotion knowledge impacting social judgment?

Lisa Feldman Barrett elegantly explicates the association between lay emotion knowledge and behavior interpretation when she states, ‘It is not difficult to imagine how the experience of seeing anger in another person might result when *knowledge about anger* [and emotions in general] shapes the conceptualization of a person’s ongoing behavior’ (Barrett, 2006). She then cites Gilbert’s (1998) assertion that, ‘observers identify behavioral actions in terms of the target’s intentions, which gives meaning to the behavioral act’ (Barrett, 2006; Gilbert 1998). *Thus, observers need to solve the ‘intention problem’*(how intentional was the actor’s behavior?) *in order to categorize behaviors (and judge them)*. Barrett argues that *knowledge about emotions, specifically, aids in forming these inferences* (Barrett, 2006). It is possible that emotion implicit theories will bias intentionality inferences to align with either situational (presumably incremental theory) or dispositional/trait-based (presumably entity theory) categorizations of behavior, and thus driving judgment. Upon seeing a woman repeatedly kick a wall, an entity theorist for example, may quickly and effortlessly attribute this behavior to the woman’s generally rageful disposition (a spontaneous trait inference, STI) (Barrett, 2006; Uleman et al., 2008). Thus, the ascribed intention is closely linked to a
perception that this woman has a stable emotional trait (Barrett, 2006; Uleman et al., 2008). Here, an entity theorist’s belief that emotions are stable, ‘trait-like’, and not very malleable, may drive (potentially cause) dispositional inferences about the woman and her actions. Alternatively, an incremental theorist believes that emotions are malleable and transient. The woman’s single instance of behavior cannot possibly be explained by an underlying emotional trait. Therefore, an incremental theorist may infer intentionality by assessing the situational details instead (and not primarily by making dispositional inferences). For example, the fact that the woman was insulted immediately before kicking the wall, may become a salient epistemic vector for understanding the nature of this woman’s intent, rather than a stable trait inherent to the woman’s character (Barrett, 2006). In sum, it is theoretically plausible that emotion implicit theories (emotion knowledge) will drive intention evaluations, which drive inference goals and ultimately behavior categorization.

![Diagram of Social Inference Model](image)

**Fig 2.**

Adapted from the ‘Model of Social Inference’ (Krull, 1993; Krull & Erickson, 1995a) to include possible effects of Implicit Theories of Emotion. The parentheticals contain the hypothesized implicit theory relationships.
How does all of this tie into judgment? Most moral philosophers and social psychologists agree that judgment attributions are influenced most by an actor’s perceived causal role in a behavior (Alicke, 2000; Weiner, 1995; Schlenker, Britt, Pennington, Murphy, Doherty, 1994). Consequently, responsibility will be ascribed to an actor to the extent that the behavior is under the actor’s personal control (the actor demonstrated intentionality and foreseeability over their actions and the action’s consequences) (Alicke, 2000; Weiner, 1995; Schlenker, Britt, Pennington, Murphy, Doherty, 1994). In other words, ‘if a behavior is caused by factors outside of the actor’s control [and the behavior is not explicitly intended by the actor], then the actor is not morally responsible for that behavior’ and will ascribe less blame to outcomes (Woolfolk et al., 2006). So let’s bring this back to implicit theories of emotion and social judgment. Assuming that there is an association between these constructs, and emotion intuitions are domain-relevant, then there are several plausible hypotheses.

Using the logic above, the first hypothesis is that since incremental theorists perceive emotions as controllable, they may attribute more emotional intentionality to the actor, and thus judge the actor harshly (Alicke, 2000; Weiner, 1995; Schlenker, Britt, Pennington, Murphy, Doherty, 1994). To clarify, if an actor can ‘control their emotions’ then they should be able to regulate their emotions, and consequently, their behavior. Conversely, because entity theorists believe that emotions cannot be controlled and are not malleable, it follows that entity theorists will ascribe less blame and responsibility to target’s negative behaviors than incremental theorists [who believe that emotions can be controlled] (Alicke, 2000; Weiner, 1995; Schlenker, Britt, Pennington, Murphy, Doherty, 1994). For entity theorists, the woman [from the example above] cannot be blamed for kicking the wall because she can’t control her angry emotions and, thus, her angry actions. In this case, STIs do not drive harsh judgment…it is the notion of ‘control’ that drives judgment. This could be due to the ontological distinction between emotions and psychological attributes (traits). Because emotions are seen as ‘more ephemeral and malleable’ than psychological attributes, even entity theorists’ judgment inferences may not be based on actor traits or dispositions. This runs counter to the way implicit theories of psychological attributes drive judgment. Implicit knowledge about psychological traits propagates (mostly for Entity theorists) inferences about dispositions and
underlying traits (driving the subsequent judgment), but implicit knowledge about transient mental states (emotions) propagates inferences based on perceived control (or lack thereof) for both entity and incremental theorists (Alicke, 2000; Weiner, 1995; Schlenker, Britt, Pennington, Murphy, Doherty, 1994). This hypothesis would be a complete pivot from all of the prior research conducted by Chiu, Dweck, and others in this realm.

The extant research leads us to a second hypothesis: entity theorists will actually be harsher in their attribution of blame than incremental theorists. In light of the implicit theory and social cognition research discussed earlier, this hypothesis has more empirical support than the first. The reasoning here is that since entity theorists are more likely to make trait attributions [in general], they may believe that the behavior is indicative of the actor’s ‘habitually negative emotional self’. Additionally, entity theorists view behavior as diagnostic and predictive of analogous behavior in future contexts, whereas incrementalists don’t (Chiu et al., 1994; Dweck et al., 1995). So, even though the actor can’t control their emotions, he/she is a person with inherently ‘bad emotional character’, who will probably continue to perform similar emotionally driven behaviors, and should thus be judged critically for it. Incremental theorists, however, view emotions as malleable and controllable, and so the emotionally-driven behavior is just one manifestation of reactivity that is contextually entangled and does not need to happen again. Another, perhaps more intriguing possibility, is that very strong entity theorists of emotion may view emotions as being more like ‘traits’ and not at all like mental states. Thus, they conceptually categorize emotions as being akin to ‘psychological attributes’ (a robust ontological misconception), consequently their emotion knowledge affects judgment in the way that implicit knowledge about traits like ‘intelligence’, ‘morality’, or ‘personality’ would (Lakoff, 1987; Chi, 2008).

Nevertheless, the actual relationship between emotion knowledge and judgment is most likely not this straightforward. Inferences and attributions will change according to the kinds of vignettes participants are exposed to, cognitive load, the stage of social judgment (post-hoc corrections and reasoning), etc. Additionally, there are probably many psychological mediators and moderators involved in the nomological network. Variables such as emotion regulation tendencies, emotion regulation self-efficacy, baseline affect,
the perceived importance of emotion regulation, and the perceived separation between emotions and behavior can all conceivably interact with emotion intuitions in the model. In short, there is plenty of empirical work to be done here, and there are many exciting potential interdisciplinary research trajectories.

Nomological Associations: Implicit Theories of Emotion and Emotion Regulation

A framework that elucidates the role of conceptual emotion knowledge in emotion generation and regulation is Lisa Feldman Barrett’s ‘Situated Conceptualization’ theory (Barrett, Mendenhall, Barsalou, 2014). In this framework, emotions emerge out of a recursive and continually modified process that makes sensory inputs meaningful (Barrett et al. 2014). In an ongoing and constructive fashion, the brain receives sensory input, interoceptive sensations, and conceptual knowledge, and combines these variables to create situated conceptualizations (Barrett et al. 2014). Thus, knowledge itself is a variable that contributes to the top-down appraisals of stimuli, which then give rise to emotions (John et al. 2007; Barrett, Ochsner, Gross, 2007; Barrett, 2006; Barrett et al. 2014; Ochsner & Gross, 2009; Ochsner, Ray, Hughes, McRae, Cooper, Weber, Gabrieli, Gross, 2009). And since emotion regulation describes the changes between consecutive situated conceptualizations, emotion beliefs/knowledge, and thus emotion implicit theories, fundamentally impact regulation too (Barrett et al. 2014). Wranik, Barrett, and Salovey (2007) support this perspective by explicating that, “appraisals reflect the conceptual knowledge (both conscious and unconscious) that an individual has about the self, the context, and emotions in general” (Wranik, Barrett, Salovey, 2007). Consequently, lay emotion knowledge contributes to the ‘top-down’ information that integrates with bottom-up phenomenology to create emotional episodes and drives the regulation of these episodes (Wranik, Barrett, Salovey, 2007).

Gross and colleagues (2007) believe that lay emotion theories influence regulation via self-efficacy mediation (John & Gross, 2007). He explains that individuals who intuit that emotions generally can’t be controlled will ‘likely apply these beliefs to their own emotions too’ (John et al. 2007). If entity theorists believe that they are destined to fail at self-regulating because emotions cannot be controlled, then this will attenuate the confidence individuals have in themselves and, thus, there will be little motivation to spend

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resources on emotion regulation strategies (John et al. 2007). On the other hand, incremental theorists who believe that emotions are generally malleable are more likely to modify their emotions because they have assurance in their regulation abilities (John et al. 2007). Following this logic, those that hold an incremental theory are more likely to spend cognitive resources in order to modify their emotional states. It appears that internal locus of control and achievement motivation are elements that contribute to regulation, and that these factors stem from underlying intuitions of emotion controllability and malleability (John et al. 2007).

But what does the research say?

As mentioned earlier, Miller and colleagues (2007) demonstrated that having an entity theory tends to generate more negative affect during social judgment than holding an incremental theory. Additionally, Kappes & Shikowski (2013) measured implicit theories of emotion and exposed participants to an unpleasant movie clip. They then correlated the emotion theories with negative affect while watching the clip and avoidance of the affective stimuli (Kappes et al. 2013). They found that implicit theories significantly predicted all of these outcome variables. Endorsing entity intuitions about emotions was associated with more negative affect during the movie, *attentional deployment away from the clip*, and subjects were less likely to watch the same clip again to learn about how the scene actually ends (Kappes et al. 2013). In this experiment, the negative stimulus was a movie, while in the previously discussed social perception studies, the negative stimulus was a behavioral scenario. *Thus, we see a parallel tendency for entity theorists to disengage from the negatively affecting stimuli* (Schroder et al., 2015). To illustrate, in Kappes & Shikowski (2013) subjects turned away from the movie clip to escape the increased negative affect associated with an entity theory. In Miller et al. (2007) entity theorists (also influenced by negative affect) defaulted to trait attributions, thereby avoiding the extra situational attention needed to sift through various epistemic vectors. This *attentional deployment*, may be akin to the Dweckian observation that entity wielding children usually disengage during challenging tasks and avoid future challenges (Schroder et al. 2015; Gross & Thompson 2007). Consequently, the empirical evidence indicates that lay theories of emotion play an important role in *how people manage their negative emotions* and handle challenging situations (Kappes & Shikowski, 2013; Miller et al. 2007; Schroder et al. 2015; Gross & Thompson, 2007).
Other implicit theories studies also tackled regulation, but they did it by using the Emotion Regulation Questionnaire (ERQ) to operationalize regulation tendencies (Tamir et al. 2007; Schroder et al. 2015; Gross & John, 2013). In these studies, emotion implicit theories were repeatedly correlated with cognitive reappraisal, but not with emotion suppression (Tamir et al. 2007; Schroder et al. 2015; Gross & John, 2013). To clarify, wielding incremental emotion theories was associated with more frequent self-reported use of cognitive reappraisal, while entity-dominant subjects are less likely to use this antecedent-focused strategy (Tamir et al. 2007; Schroder et al. 2015; Gross & John, 2013). Emotion suppression, which is a response-focused regulation strategy, was not significantly correlated with implicit theories of emotion (Tamir et al. 2007; Schroder et al. 2015; Gross & John, 2013). So, when we examine the cumulative evidence thus far, we see that knowledge about emotion controllability and malleability seems to be associated with antecedent-focused regulation (attentional deployment & cognitive reappraisal), with entity theorists using attention deployment as a strategy and incremental theorists adopting cognitive reappraisal as a regulation strategy (Kappes et al. 2013; Tamir et al. 2007; Schroder et al. 2015; Gross & John, 2013).

In the context of social cognition and emotion knowledge, the extant research points to a fascinating nomological role of emotion regulation. The evidence indicates that those who have the cognitive resources to reappraise their emotions more frequently, tend to be the individuals that also have the cognitive resources and motivation to evaluate the situational and psychological epistemic vectors that may be contributing to behavior (Incremental theory), rather than simply interpreting behaviors by defaulting to trait-like inferences (Entity theory). These individuals are inclined to be less harsh in their judgments as they consider things like context and the actor’s goals, needs, and desires. So, according to my hypothesis 2 which aligns with Dweck’s psychological trait research, a person’s seemingly angry behavior is not characteristic of his enduring curmudgeonly self, but the behavior is as fleeting and contextually entangled as the ephemeral and ever-changing emotions themselves. Those who default to trait-like inferences also appear to harbor more negative affect, and consequently attribute more blame to the actors. The dispositional entity strategy presumably requires less attentional, and overall cognitive, resources than the
incremental strategy of searching for and evaluating mediators. But because entity theorists aren’t considering things like context and the actor’s immediate mental state, they are missing out on the opportunity to consider alternatives to trait inferences, and thus, the opportunity to judge less intensely. However, this relationship between emotion beliefs and social judgment is still purely speculative in nature and needs to be proven empirically. What we do know from extant research is that having an incremental theory is associated with frequent use of cognitive reappraisal (emotions), cognitively complex behavioral inference strategies during judgment (moral character; personality; intelligence), and sustained engagement with negatively affecting stimuli (emotions; moral character). An entity theory is associated with less frequent use of cognitive reappraisal (emotions), less cognitively complex strategies during judgment (moral character; personality; intelligence), and a tendency to divert attention away from negatively affecting stimuli (emotions; moral character) (Kappes et al. 2013; Tamir et al. 2007; Schroder et al. 2015; Gross & John, 2013; Miller et al. 2007). However, it is possible that we may see a different relationship between implicit theories of emotion and social judgment (entity theorist may blame less harshly than incremental theorists), perhaps due to the ontological difference between psychological traits and mental states. Once a correlation between implicit theories of emotion and social judgment is specified, the exact moderator/mediator role of variables such as emotion regulation tendencies will be a valid and necessary follow-up investigation.

Additionally, a significant determinant of behavior categorization and judgment appears to be motivation, which is influenced by the underlying emotion intuitions. If an entity theorist quickly and effortlessly concludes that a behavior is indicative of an enduring emotional or moral trait, then, he/she may be less likely to take the extra cognitive step of evaluating the context because they already have an immediately salient answer to the ‘intention problem’. However, since the incremental theorist is less burdened by negative affect and doesn’t rely on simple dispositional answers to the ‘intention problem’, he or she may have the motivation to consider how other variables factor into an actor’s behavior.

All of this nomological mapping is both theoretical and speculative. It is based on previous research and theory (giving more weight to hypothesis 2). However, what is clear is that future studies should
consider potential mediators and moderators when analyzing the relationship between implicit theories of emotion and social cognition. Based on extant research, negative affect, emotion regulation strategies, and perceived emotion regulation efficacy appear to be good places to start.

**Projected Pedagogical Implications**

The above perspective has significant implications for interventions in the educational and clinical spheres. Previous implicit theories intervention studies have demonstrated that the experimental induction of an incremental theory leads to improvements in academic achievement (intelligence domain), interpersonal relations (personality domain), and to a preference for therapy over pharmaceutical interventions (emotions domain) (Schroder et al. 2015; Blackwell et al. 2007; Yeager et al. 2014; Yeager et al. 2011; Burnette et al. 2013; Miu and Yeager 2014; Walton 2014). Emotion Incremental theorists are also associated with having less severe depression and anxiety symptoms, better interpersonal relationships, and also with achieving higher scores on tests of emotional intelligence such as the MSCEIT (Schroder et al. 2015; Cabello, 2015; Tamir, 2007). Additionally, individuals who hold incremental emotion theories are associated with a habitual use of cognitive reappraisal, a regulation strategy that has generally been found to lead to better psychosocial and clinical outcomes (John, 2013; Tamir, 2007; but see Bonanno & Burton, (2013) for an alternative viewpoint). Lastly, this paper has made the theoretical prediction (hypothesis 2) that incremental theorists may also look beyond trait features during behavioral categorizations and attribute less blame to actors who perform negative behaviors. Consequently, a logical pedagogical and clinical intervention may be to teach the incremental theory of emotion: emotions can be controlled and are malleable.

However, this may not be the ideal intervention strategy, particularly in an educational setting. Dweck and colleagues have posited that neither implicit theory is objectively ‘better’ or more adaptive (within domains and across all domains) (Dweck et al. 1995; Chiu et al. 1997). The benefits or costs of these intuitions would realize themselves differently across various situations. Additionally, educators should use what is scientifically known about emotions and emotion generation to direct their pedagogical
strategies. First, there is a tendency to ontologically mislabel emotions as ‘entities’, thereby skewing some students’ perceptions of them toward the entity theory (Barrett, 2006; Lakoff, 1987; Chi, 2008). Contemporary emotion experts have postulated that emotions are neither entities nor attributes, but ‘mental states’, which inherently differ in their temporality (Barrett 2006; Barrett et al. 2013). Therefore, my first recommendation would be to correct this robust misconception. Emotions are transient mental states that are always in flux. Therefore, instruction that highlights this aspect of emotions is critical. My second recommendation is to teach that, not only are emotions mental states, but that they are mental states that emerge out of a multitude of underlying mental processes (Barrett 2006; Barrett et al. 2013; Ochsner et al. 2009; Ochsner et al. 2009; Roseman & Smith, 2001). There are causal principles that drive emotion generation and phenomenology (Barrett 2006; Barrett et al. 2013; Ochsner et al. 2009; Ochsner et al. 2009; Roseman & Smith, 2001). Teaching these underlying principles, including fundamental concepts such as appraisal and reappraisal, would help convey the fact that emotions are neither completely controllable nor completely out of our control (John et al. 2007; Barrett, Ochsner, Gross, 2007; Barrett, 2006; Barrett et al. 2013; Ochsner & Gross, 2009; Ochsner, Ray, Hughes, McRae, Cooper, Weber, Gabrieli, Gross, 2009). This highlights the potentially misleading effects of relying on an isolated incremental emotion theory intervention. The incremental theory posits that emotions are controllable, when in fact expert theories from affect science strongly suggest that there are only some aspects of the emotion system that we have volitional control over (John et al. 2007; Barrett, Ochsner, Gross, 2007; Barrett, 2006; Barrett et al. 2013; Ochsner & Gross, 2009; Ochsner, Ray, Hughes, McRae, Cooper, Weber, Gabrieli, Gross, 2009). In sum, using the incremental theory as an intervention may prove to be overly reductive as it does not comprehensively address how emotions truly function in the human body and mind. For example, initial emotion appraisals happen quickly and automatically, while our emotion reappraisals are a regulation strategy that we do have volitional control over (John, 2013; Bonanno and Burton 2013; Ochsner & Gross, 2009. Teaching the human emotion system (HES) and its central principles in its entirety (or something close to it) would have the effect of providing students with a more complex, scientific, and comprehensive emotion mental model of emotionality. Wranik, Barrett, & Salovey (2007) state that, “individuals with
complex emotion knowledge will perceive and adapt to a variety of emotional signals or feelings and will probably generate more suitable plans for regulation, whereas those with less complex knowledge may be comparatively limited” (Wranik et al. 2007). We don’t want to make the mistake of limiting the potential depth of emotion knowledge we impart to our students by teaching them the incremental theory in isolation.

Conclusion

I have made a theoretical case for the need to conduct empirical research on the relationship between implicit emotion theories and social judgment using Maya Tamir & John Gross’ (2007) Implicit Theories of Emotions Scale. Emotion lay theories are relevant to the realm of social cognition and may interact with variables such as negative affect, emotion regulation tendencies, perceived emotion regulation self-efficacy. The connection between emotion knowledge and social perception seems to be that entity and incremental theories of emotion implicitly establish dichotomous inference strategies for interpreting and judging an actor’s behavior. These diverging inference strategies ultimately lead to differences in social judgment. Mapping of correlational relationships will allow for the implementation of pedagogical and clinical interventions that can enlighten humanity to its own emotional functioning and implicit knowledge about emotions. To conclude, art (poetry, dance, theater, literature, visual art) allows our intuitive knowledge about emotions to become salient and embodied. Educational and clinical interventions can explicitly augment our awareness of our own emotional worlds. An interdisciplinary approach to Social-emotional awareness by employing art, explicit classroom instruction, and clinical intervention can help humans consciously regulate the implicit effects of emotion knowledge. But this is no easy feat. In the words of John Locke, “The understanding, like the eye, whilst it makes us see and perceive all other things, takes no notice of itself; and it requires an art and pains to set it at a distance and make its own object.”
Chapter 2: Study 1

Study 1 aims to explore the relationship between Implicit Theories of Emotion and attributions of Blame to actors displaying negative behaviors across different scenarios. There are several possible outcomes for this research endeavor. First, if emotions beliefs are not related to social judgment, I expect to find that there is no correlation between the Implicit Theories and attribution of Blame. However, if Implicit Theories of Emotion are related to Social Judgment, then I expect to see that the Emotion Theories will be significantly correlated to attributions of Blame. Specifically, I anticipate a negative correlation between the Emotion theories and Blame indicating that Incremental theorists attribute less Blame to actors displaying transgressive behaviors than entity theorists. This hypothesis is based on previous implicit theories (of attributes) research findings that have indicated a tendency for Incremental Theorists (of Morality and Personality) to make social judgments based on situational mediators, while Entity Theorists tend to make judgments based on trait information. Consequently, implicit theories of emotion may set up diverging ‘intentionality inferences’ of the situational or dispositional kind upon perceiving actors behave in negative ways. This could drive differences in blame attribution.

Establishing Nomological Associations

Additionally, a secondary goal of this study is to begin mapping a nomological network by proposing various other variables that might mediate and/or moderate the relationship between implicit theories of emotion and attribution of blame. To do this, I will conduct exploratory correlational analyses on the proposed variables. If these other emotion-related variables are correlated with both predictor variables (Implicit Theories) and outcome variables (scenario Judgments), then this will signify a mediational relationship. If the variables are correlated with only the predictor variables (Implicit Theories), then this may imply a moderation relationship. Past research that used Tamir’s (2007) scale has demonstrated significant correlations between Implicit Theories of Emotion and self-perceived Emotion Regulation Tendencies operationalized by the Emotion Regulation Questionnaire (ERQ) (Tamir et al. 2007; Livingstone, 2012; Schroder, Dawood, Yalch, Donnellan, & Moser, 2015). This study attempts to replicate
this relationship and, since observing an actor’s negative behaviors can be construed as that actor’s failure to ‘self-regulate’, we suspect that this variable could be a potential moderator (Bandura, 1986; Seligman, 1975; Tamir et al. 2007). Additionally, emotion regulation Self-Efficacy has been shown to be a mediating variable with respect to implicit theories of emotion and outcomes such as emotional well-being and clinical symptomatology after a major life transition (Tamir et al. 2007). This variable would account for a participant’s belief that they are or are not efficient regulators of emotion. For this reason, I will also analyze emotion regulation-self efficacy’s relationship to implicit theories of emotion and attribution of blame. However, Tamir and colleagues found that the mediator effects of self-efficacy only occurred on outcome variables that had to do with ‘the self’. Mediation was lost when outcome variables that included ‘others’, such as peer assessment of emotional-well-being and other manifestations of social adjustment (Tamir et al. 2007). They then suggested that ‘other focused’ or ‘general’ beliefs about emotion-regulation might be better suited to social outcomes (Tamir et al. 2007). Thus, I also included another potential moderator/mediator, which I call ‘Emotion Regulation Value’, because it may be better suited for my ‘other focused’ social judgment outcome variable. This variable is meant to capture a person’s general belief about the importance of humans’ capacity to emotionally self-regulate (i.e. how strongly participants agree with the statement: ‘How important is it for people to manage their emotions effectively?’). Consequently, I hypothesize that there will be a relationship between Implicit Theories of Emotion and Emotion Regulation Tendencies, emotion regulation Self-Efficacy, and Perceived Value of emotion regulation. I also hypothesize that these variables will also be related to blame attribution, which, if true, would signify that they mediate the relationship between implicit theories of emotion and social judgment.

**METHODS**

**Participants**

112 participants (58% male, 42% female; age: M= 24.22, SD= 0.66) were recruited using Amazon Turk. The respondents were all considered to be ‘master level’ users, which meant that they had a history of answering surveys completely and accurately. This digital platform is ideal for naive theory research
because data can be collected from a very large and diverse sample of adults across various different geographical regions. I asked the participants to indicate their level of exposure to psychology, which we took to be a proxy of prior formal education on emotions. Most people had at least some exposure to psychology (no exposure= 23%, some high school=10.71%, some undergraduate= 49.11%, undergraduate psych degree= 6.25%, some graduate= 3.57%, and graduate psych degree= 7.14%). I also asked participants to indicate the highest level of education achieved. All individuals had at least a high school education, and most had achieved an undergraduate degree (None= 0%, High School= 24.11%, Undergraduate= 41.96%, Graduate 33.93%). For future naive theory research, acquiring some adult participants with no high school education (and those who have dropped out) will be important for generalizability as there is a large population of adults that still, unfortunately, have little to no schooling at all.

Procedure

Participants were given an entirely digital survey on Amazon Turk. First, I gave them a cover story, which explained that they would be partaking in two different and unrelated short surveys. One survey was related to beliefs about human emotions and the other survey wanted to collect individual’s responses to a database of fictional scenarios. Lastly, the participants were told that for both surveys there were no right or wrong answers, and that the two surveys together should be completed in one sitting. The ‘emotions survey’ included the Implicit Theories of Emotions Scale, The Emotion Regulation Questionnaire (ERQ) (Gross and John 2003), the emotion regulation self-efficacy item, and the emotion regulation perceived value item. The ‘database survey’ included twelve fictional scenarios that participants had to respond to. Demographic data was collected after the completion of surveys 1 and 2.

Measures

Implicit Theories of Emotions

To measure lay intuitions about the controllability and malleability of emotions, I employed Tamir et al. (2007) Implicit Theories of Emotions Scale, which was adapted from Dweck’s (1999) Implicit
Theories of Intelligence Scale. The scale includes two incremental items, “Everyone can learn to control their emotions,” “If they want to, people can change the emotions they have,” and two entity items, “No matter how hard they try, people can’t really change the emotions they have,” “The truth is, people have very little control over their emotions”. Each item was rated using a 7-point Likert scale in response to the task: ‘Please indicate the extent to which you agree with the statement above (1= strongly disagree; 2= disagree; 3= somewhat disagree; 4= neither agree nor disagree; 5= somewhat agree; 6= agree; 7= strongly agree). Additionally, I followed the scoring protocol of Tamir et al. (2007) by reverse scoring the two entity items and then averaging across all items. Therefore, higher scores indicated incremental theories and lower scores indicated entity theories of emotion (4 items; Cronbach’s $\alpha = .78$).

**Scenarios for Judgment**

I presented participants with twelve fictional scenarios. Subjects were asked to read each scenario, which portrayed actors displaying different negative or neutral behaviors. Then subjects were asked ‘how blameworthy is the [target actor] for his/her actions?’ and had to rate the actor on a 9-point Likert scale (1= not at all blameworthy; 9= completely blameworthy). Blameworthiness has been used to operationalize negative behavior judgment both in experimental philosophy lay intuitions research and in prior implicit theories studies (Miller, Burgoon, & Hall, 2007; Woolfolk, Doris, & Darley, 2006; Alike, 2006; Knobe, 2006; Knobe, 2003b; Nadelhoffer, 2006).

Four of the fictional scenarios were ‘neutral’ scenarios, which depicted an actor behaving in relatively ‘neutral’ ways. These scenarios were meant to capture each participant’s baseline blame tendencies. The rest of the 8 scenarios were ‘negative’ scenarios that portrayed actors displaying emotionally charged negative behaviors. Five of these ‘negative’ scenarios were grouped into the ‘emotionally reactive’ category, and the last three scenarios were grouped into the ‘moral decision’ category. Emotionally Reactive scenarios were meant to portray actors in a reactive ‘heat of passion’ state, where the transgressive behavior is very tied to emotional action tendencies. In the Moral Decision scenarios, the actors clearly intended to commit the behavior and had foresight of the possible consequences.
of their behavior. Examples of the ‘Neutral’, ‘Moral Decision (negative)’, and ‘Emotionally Reactive (negative)’ scenario groupings can be seen below (12 items; Cronbach’s $\alpha = .85$). All 12 of the scenarios can be viewed in the appendix.

Neutral: ‘Sitting on a bench by a lake, a woman reads the paper. Small birds skip around nearby, looking for crumbs. The woman realizes that she is cold, but does not put on her jacket.’

Moral Decision [Negative]: ‘A woman sits down to take her career’s certification exam; she has failed once before. As she begins to answer questions, her anxiety increases steadily. She begins to peer at her neighbor’s answers and copy several of them. She does this continually until she finishes the exam.’

Emotionally Reactive [Negative]: ‘A man enters his apartment and notices that most of his girlfriend’s belongings are gone. He then hears a voicemail from her saying that she no longer loves him. The man begins to cry and eventually kicks the wall multiple times leaving several large holes.’

**Emotion Regulation Tendencies**

The Emotion Regulation Questionnaire (ERQ) created by Gross & John has been employed to operationalize emotion regulation strategy use, particularly of the antecedent-focused ‘cognitive reappraisal’ strategy and the response-focused ‘expressive suppression’ strategy. It is important to note that this questionnaire captures strategy frequency and not strategy ability (McRae, Jacobs, Ray, & Gross, 2011). The questionnaire contains ten items: 6 reappraisal items (e.g., “When I want to feel less negative emotion, I change the way I’m thinking about the situation”) and 4 suppression items (e.g., “When I am feeling negative emotions, I am careful not to express them”). To answer each item, participants are presented statements meant to capture a particular strategy, and with a 7 point Likert scale (1= strongly disagree; 4= neutral; 7= strongly agree). The Gross & John recommend that the item order should not be changed, and that none of the items are reversed scored (Gross & John, 2003). Reliability for the ERQ has been well established as the scale has been used and tested multiple times.
Emotion Regulation Perceived Self-Efficacy and Perceived Value

To measure perceived emotion regulation self-efficacy, I asked participants to rate, on a 7-point Likert scale, the extent to which they agree with the statement ‘I am very good at managing my emotions’ (1= Strongly Disagree; 4= Neither agree nor disagree’ 7= Strongly Agree). To measure perceived emotion regulation value I asked participants to rate, also on a 7-point Likert scale, the extent to which they agree with the general statement: ‘It is important to manage emotions effectively’ (1= Strongly Disagree; 4= Neither agree nor disagree’ 7= Strongly Agree). Reliability cannot be calculated on scales containing less than three items, therefore a reliability score was not calculated. This is a self-acknowledged study limitation and future studies should include more items for both perceived self-efficacy and value.

RESULTS

Part 1: Descriptive Statistics

As demonstrated in previous studies, participants tended to view emotions as being more malleable, thus displaying slightly more incremental theories (M= 5.1, SD= 1.1, range= 1-7) than entity theories. This pattern can be seen in the figure below.
From figure 3, we can see that there is a left skewed, bimodal distribution of implicit theories scores. There are spokes at scores of 3.5, 4.2, 5.0, 5.2, 6.0, and 6.2. In general, we can see that there is a higher proportion of Incremental theorists to Entity theorists. While there are some very strong Incremental theorists (score of 7.0), there is a lack of very Strong Entity theorists (scores below 2.0).

Moral decision vignettes were rated more harshly than the Emotionally Reactive vignettes and the neutral vignettes. (Moral Decision: M= 7.65, SD= 1.34, range= 1-9; Emotionally Reactive: M= 6.52, SD= 1.57, range= 1-9; Neutral: M= 4.98, SD= 2.60, range= 1-9). The difference between these two types of negative scenarios (Emotionally Reactive and Morally Decision), as indicated by a paired-samples t-test, was significant (t(112)= 7.67, p< .05, |d|= .4), which implies that the respondents actually perceived these two types of scenarios as being different, and also indicates that I successfully created a semantic difference.
when writing the vignettes. The Emotionally Reactive Scenarios and Moral Decision blame means were also both significantly different from the Neutral scenario means (Emotionally Reactive & Neutral: \( t(112) = 7.21, p < .05, |d|= .7 \); Moral Decision & Neutral: \( t(112) = 11.21, p < .05, |d| = 1.0 \)). The relationships between all of the judgment scenarios can be viewed below in figure 4.

Fig 4. Comparison of blame means for the different types of judgment scenarios.
**Part 2: Correlation Matrix**

**Table 1. Bivariate Correlations for Study 1. Implicit Theories of Emotions were scored to reflect the incremental theory. The ERQ is the Emotion Regulation Questionnaire, 'ER' refers to Emotion Regulation, and 'All Negative' refers to Emotionally Reactive and Moral Decision vignettes grouped together.**

<table>
<thead>
<tr>
<th></th>
<th>ERQ (Reappraisal)</th>
<th>ERQ (Suppression)</th>
<th>Emotionally Reactive</th>
<th>Moral Decision</th>
<th>All Negative Scenes</th>
<th>Neutral</th>
<th>ER Value</th>
<th>ER Self-Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental Theory of Emotions</td>
<td>.383**</td>
<td>-.081</td>
<td>.159</td>
<td>.217*</td>
<td>.194*</td>
<td>-.035</td>
<td>.286**</td>
<td>.320**</td>
</tr>
<tr>
<td>ERQ (Reappraisal)</td>
<td>--</td>
<td>-.128</td>
<td>.112</td>
<td>.166</td>
<td>.153</td>
<td>-.137</td>
<td>.285**</td>
<td>.352**</td>
</tr>
<tr>
<td>ERQ (Suppression)</td>
<td>--</td>
<td>--</td>
<td>-.038</td>
<td>-.05</td>
<td>-.059</td>
<td>.048</td>
<td>-.086</td>
<td>-.007</td>
</tr>
</tbody>
</table>

* *p < .05; **p < .01

Table 1 presents the correlations among implicit theories of emotion and the various judgment scenarios and emotion regulation variables. There was a significant correlation between implicit theories of emotion and the Negative Scenarios (Emotionally Reactive + Moral Decision), and therefore confirms the hypothesis that these implicit theories are domain relevant with respect to social judgment ($r = .194, p < .05$). However, the correlation was positive, which is inconsistent with previous implicit theories (of psychological attributes) studies that demonstrate entity theorists blaming more harshly (negative correlation). Since the Implicit Theories of Emotions variable was scored to reflect the Incremental theory, we are seeing the reverse relationship, that incremental theorists are attributing more blame to actors who behavior negatively. Additionally, while there was a significant correlation between implicit theories of emotion and all negative scenarios, when looking at the sub-groups, there was a significant correlation with the Moral Decision scenarios ($r = .217, p < .05$) and no significant relationship between the implicit theories and Emotionally Reactive scenarios. To see if any outliers are creating the effect of significance, particularly because the correlations are small, I plotted and analyzed the scatterplots of these relationships.
(Figures 5 and 6 below). These scatterplots contain a ‘jitter’ to reflect a more accurate visual representation of the data trends.

*Fig 5. Scatterplot of the significant relationship between Implicit Theories of Emotions and Blame for the Moral Decision (Negative) Scenarios. A ‘jitter’ was added to improve the visual representation of the overall trend.*

There is a clear Incremental Theory outlier at an implicit theories score of 6.0, but this outlier would actually be pulling the relationship in the opposite direction of my significant trend. So, it doesn’t seem like this outlier is responsible for pulling the correlation toward significance. We can also see from this scatterplot, that the relationship between these variables is not very linear. Additionally, the data are aggregated towards the top right corner of the scatterplot. Therefore, as the correlations indicate, being an incremental theorist (above a score of 4.0) is associated with placing more blame on the Moral Decision scenarios. The stronger the incremental theory, the higher the blame score.
Figure 6 represents the non-significant relationship between Implicit Theories of Emotion and the Emotionally Reactive scenarios. Comparing this scatterplot to the one in figure 5, we see that the points are more spread out and less ‘grouped’ toward the upper right quadrant of the graph. Again, there are a few outliers, but they aren’t creating a trend because the relationship between these variables is not statistically significant.

This study also replicated the significant relationship between implicit theories of emotion and habitual cognitive reappraisal tendencies ($r= .383$, $p<.01$) and the non-significant relationship with expressive suppression tendencies shown in past research (Tamir et al., 2007; Schroder et al. 2015). Other replicated findings included the significant relationship between implicit theories of emotion and emotion regulation self-efficacy ($r= .320$, $p<.01$), and between cognitive reappraisal and emotion regulation self-efficacy ($r= .352$, $p<.01$) (Tamir et al. 2007). Additionally, emotion regulation value (how much participants
valued emotion regulation generally) was significantly correlated with both implicit theory of emotions (r = 2.86, p < .01) and tendency to use cognitive reappraisal (r = .285, p < .01). Therefore, in addition to attributing more blame, incremental theorists were associated with habitual use of cognitive reappraisal, having higher perceived regulation self-efficacy, and believing that emotion regulation is important.

The constructs of emotion regulation value and self-efficacy were both not significantly correlated with any of the neutral or negative scenarios. Likewise, reappraisal and suppression strategies were both not significantly correlated with any of the judgment scenarios. Thus, the postulated nomological variables appear to not be mediators in this network. However, there is still a possibility that they might be moderators. Future research should explore this possibility by replicating the present correlations and performing multiple regression analysis.

**DISCUSSION**

The main findings of this study are that implicit theories of emotions are significantly correlated with attributions of blame, and that incremental theorists are attributing more blame to actors behaving negatively than entity theorists. The latter part of these results comes as a complete surprise since extant implicit theories of psychological attribute studies have demonstrated that entity theorists are associated with attributing more blame than incremental theorists. Researchers explain this previous trend by emphasizing that entity theorists tend to experience more negative affect when faced with negative scenarios, and they tend to categorize behavior by making dispositional and spontaneous trait inferences (Chiu et al 1997; Miller, 2007; Dweck, 1996; Gervey, Chiu, Hong, & Dweck, 1999; McConnell, 2001). Incremental theorists, however, differ in their intentionality inferences in that they focus on situational and psychological mediators; they also experience less negative affect and tend to attribute less blame (Chiu et al 1997; Miller, 2007; Dweck, 1996; Gervey, Chiu, Hong, & Dweck, 1999; McConnell, 2001).

So what is causing the reverse trend in the present study? The reason appears to be that emotions (and other constructs like ‘thoughts’) belong to a different ontological category than intelligence, morality, and personality. Emotions are *mental states*, while the other constructs used in the implicit theories research
are psychological attributes. Thus it is possible that, due to the transient and ever-changing nature of mental states (unlike attributes which are more ‘stable’), things like underlying dispositions, traits, and maybe even certain situational mediators are not the principle drivers of social inference making. Instead, perhaps, the issue of actor ‘controllability’ becomes more relevant (for both Entity and Incremental theorists) and negative transgressions are seen as ‘failures to regulate’ or ‘failures to emotionally control’ (Bandura, 1986; Seligman, 1975; Tamir et al. 2007). As mentioned previously, perceiving others’ negative behaviors can be construed as that person’s failure to ‘self-regulate’ (Bandura, 1986; Seligman, 1975; Tamir et al. 2007). So, for entity theorists, because emotions cannot be controlled and don’t really change, actors are not responsible for their emotionally derived behavior because they can’t regulate their emotions. In other words, there is less intentionality, foreseeability and physical control, and thus less blame is ascribed to the actor (Alicke, 2000; Knobe 2006). Conversely for incremental theorists, emotions are controllable and malleable, and therefore actors are viewed as responsible for regulating their emotional behavior (Alicke, 2000; Knobe 2006). For incrementalists, the actor’s behavior is intentional because emotions can be controlled. This is bolstered by the significant correlations seen among implicit theories of emotion and ‘moral decision’ scenarios, but not ‘emotionally reactive’ scenarios. Both incremental theorists and entity theorists might perceive the ‘emotionally reactive’ behaviors as happening in ‘the heat of the moment’, with little intentionality and control, whereas with the actors in ‘moral decision’ scenarios portray augmented intentionality since a more ‘top-down’ (although not necessarily entirely conscious) emotionally-driven ‘decision’ to act occurs (Haidt, 2001; Krull et al. 1995; Lerner et al. 1998; Uleman et al. 2008). Thus, there is a higher degree of intentionality and foreseeability inherent to the moral scenarios that doesn’t exist in the emotionally reactive scenarios. To clarify this further, I will employ a moral attribution model posited by Knobe (2006), which can be seen here in figure 7.
Fig 7. Knobe’s (2006) model about the role of moral considerations in people’s concept of intentional action. The key claim of the model was that people’s intentional action intuitions tend to track the psychological features that are most relevant to praise and blame judgments. Here we propose that emotion intuitions, measured by Tamir’s implicit theories sale, tend to track the psychological features that are most relevant to intentionality analysis and consequently blame attribution.

According to this model, not only are entity and incremental theorists sensitive to different contextual ‘features’ during judgment within implicit theory domains (entity vs. incremental), but the present study indicates that categorical feature salience may also change between certain ontological domains (attributes vs. mental state). Here, it could be that mental state vs. psychological attribute implicit theories are ontologically distinct enough to perpetuate the salience of distinct epistemic vectors. For mental state domains, subjects’ perception of actor ‘control’ appears to drive intentionality inferences (and thus blameworthiness). This may take precedence over ‘attribute-type’ actor features such as underlying traits, dispositions, and relevant situational vectors that might be more salient in psychological attribute implicit theory domains. To clarify, in the domain of emotion implicit theories an actor’s personal ‘control’ over their emotions and behaviors drives the tendency to blame harshly, whereas in the domain of psychological attributes theories ‘dispositional and trait’ inferences drive the tendency to blame harshly. However, this is just an inductive extrapolation of the data. In order to make empirical claims about the effects of implicit theories across ontological categories, a new study must be created in which both kinds of implicit theories are included (psychological attributes and mental states).

Another interesting finding was the correlation relationships among implicit theories and all of the emotion regulation variables. According to this study, incremental theorists are associated with more frequent use of cognitive reappraisal strategies, have higher emotion regulation self-efficacy, and also
perceive emotion regulation as being generally important. With respect to social judgment, this makes sense. If someone uses more cognitively complex regulation strategies, believes they are competent emotional self-regulations, and views regulation as being generally important, then it is logical that they would attribute more blame to those behaving negatively. This is likely due to the fact that incremental theorists may perceive transgressive behavior as a ‘decision not to regulate’ since emotions are ‘mental states that can be controlled’ (Bandura, 1986; Seligman, 1975; Tamir et al. 2007). On the other hand, if someone is less likely to use a cognitively complex strategy like reappraisal, believes that they are incompetent at self-regulating, and views emotion regulation as not being very important, then it is also logical that they might not attribute much blame to actors transgressively behaving. Entity theorists probably do not view negative behavior as a ‘decision not to regulate’, since people can’t really volitionally regulate to begin with (Bandura, 1986; Seligman, 1975; Tamir et al. 2007).

Lastly as mentioned in the results, because emotion regulation strategies, self-efficacy, and value were not significantly correlated with any of the neutral or negative (moral or emotionally reactive) judgment scenarios (outcome variables), this is an indication that none of these variables are mediators in the nomological network of implicit theories of emotion and social judgment. Therefore, these variables will be dropped for Study 2 of this dissertation. However, it is possible that these constructs act as moderators, and this relationship should be explored in future research.

LIMITATIONS AND FUTURE DIRECTIONS

A limitation of this study is that it was purely a correlative exploration. Therefore, I did not establish causality. Additionally, the correlations are significant, but small (even though they’re in approximately the same order of magnitude as the correlations in Tamir et al., 2007 and Schroder et al., 2015). Future studies should manipulate implicit theories of emotion by temporarily imbuing subjects with either an incremental or entity theory and then exposing them to scenarios for judgment (Dweck, 1995, Chiu et al. 1997), thereby bolstering the theoretical and empirical claims made by this correlational analysis. This manipulation has yet to be attempted in the domain of implicit theories of emotion. Additionally, the present study only
analyzed the relationship between implicit emotion knowledge and negative behaviors. It is possible that positive behaviors may bias the salience of different epistemic vectors during intentionality analysis and ultimately social judgment (Knobe, 2006). Also, one could argue that these particular scenarios do not have ecological validity, implying that our scenarios are ‘observational’ snapshots of situations rather than face-to-face situations that may have more longitudinal contextual detail. While this is a general criticism, Miller et al. (2007) posit that people are often very offended through indirect ‘observational’ pathways when they see news in the papers, on the internet (Twitter, Facebook, Instagram, YouTube), on the TV, or hear about stories from friends. Many of these accounts do not directly involve individuals or their peers, as is the case with global social or political news (Miller et al. 2007). Interestingly, this ‘superficial’ and ‘observational’ social-media type judgment appeared to play a particularly pertinent role in the 2016 United States presidential elections; constituents superficially judged candidates online via ‘status update’ ‘and ‘Facebook/Twitter feed’ descriptions of candidate behavior. Future studies may want to manipulate scenarios to include actor behavior over time and maybe even face-to-face type scenarios that involve the use of narrative, or even video or virtual reality paradigms.

Lastly, an important distinction must be made about this research. My study demonstrated that implicit theories of emotion are related to social judgment, and that incremental theorists tend to blame more harshly than entity theorists when observing negative behavior. However, judgment is not punishment. Just because incremental theorists are attributing more blame, it does not mean that they will also prescribe more retributive punishment as a consequence (Chiu et al. 1997; Dweck et al. 1995). Incremental theorists could still be more likely to withhold punishment and choose alternative, more educational or rehabilitative ways of changing actor behavior (Chiu et al. 1997). This is due to their fundamental perception, as indicated in this study, that emotions are mental states that can be controlled and changed. Additionally, the intense negative affect that respondents might feel upon observing negative behaviors, indicated by the harsher attribution of blame than entity theorists, may actually motivate them to want to educate actors more so than entity theorists. Past research on implicit theories of personality has demonstrated that holding an entity theory is associated with a desire to ‘get back at’ actors for their transgressive behavior, and dream
of ways to ‘give these transgressors what they deserve’ (Yeager et al., 2011, Chiu et al., 1997, Dweck et al. 1995). Examining the role of retributive punishment will be an important next step in implicit theories of emotion and social cognitive research. This will allow for the unveiling of a more comprehensive nomological network (and an understanding of more tangible behavioral effects), which will affect future emotion intuitions interventions that may manifest in social-emotional learning (SEL) curriculums and clinical therapy approaches.

CONCLUSION

I have demonstrated that Implicit Theories of Emotion are related to Social Judgment in the form of Blame Attribution. Significant correlations appeared for the ‘Moral Decision’ negative scenarios, which were semantically created to have the highest level of actor intentionality, and therefore incite the highest blame attribution of all the scenarios. Judgment on the ‘Emotionally Reactive’ scenarios did not display a significant relationship with Implicit Theories, as these negative scenarios were created to have lower actor intentionality. Being an Incremental theorist of emotions was associated with placing harsher blame upon actors in the ‘Moral Decision’ scenarios than being an Entity theorist. I infer that this is due to a difference the way that participants are perceiving an actor’s ‘personal control’ over their emotions and behaviors. Participants whose lay theories suggest that emotions are ‘controllable and malleable’, may view actors’ negative behavior as a failure to emotionally regulate. My results do not contradict past implicit theories (of psychological attributes) research that has demonstrated the opposite trend in attribution of blame, that Entity theorists blame harshly while Incremental theorists attribute less intense blame to actors during judgment tasks. In fact, the results actually expand the field’s knowledge of how implicit theories are related to social judgment within domains and across ontologically distinct domains.
Chapter 3: Study 2

Study 1 established that Implicit Theories of Emotion are related to Social Judgment. Specifically, this study demonstrated that wielding an Incremental theory of emotions was related to attributing more Blame to actors behaving transgressively than participants with an Entity Theory. The correlation was significant for all Negative transgressive scenarios when grouped together and, specifically, for the Moral Decision scenarios. I theorized that this pattern of blame attribution was being driven by subjects’ inferences of actor ‘control’ propagated by either the Entity or Incremental theory. To clarify, since Incremental theorists believe that humans have the ability to control and change their emotions, they may believe that actors chose not to regulate their emotions (but could have regulated their emotions) and, thus, should be blamed harshly (Alicke, 2000; Knobe, 2003; Knobe, 2006). Conversely, since Entity theorists intuit that humans have little control over their emotions, the target actors did not intend to behave negatively and, thus, should be blamed less harshly (Alicke, 2000; Knobe, 2003; Knobe, 2006). However, these are just potential theoretical explanations of the data. The validity of these claims requires continued empirical investigation. Therefore, Study 2 was created to address the specific limitations of Study 1, such as a lack of causality, and also to expand the scope of the research paradigm to include additional predictor and outcome variables.

First, Study 2 attempted to replicate the significant correlation between Implicit theories of Emotion and Social Judgment found in Study 1. However, to draw conclusions about judgment differences across ontological categories (between mental states and psychological traits) it was necessary to include implicit theories of Psychological Attributes (such as Personality) and replicate the patterns found in the literature. The extant research has indicated that Incremental theorists of Personality attribute less blame to actors behaving transgressively than Entity theorists, and the results from my Study 1 demonstrate the opposite (Miller et al. 2007; Chiu et al. 1997; Levy et al. 1998; McConnell, 2001; Plaks et al. 2001). Therefore, in Study 2, I also included Chiu and Dweck’s Implicit Theories of Personality Scale (Chiu, Dweck, & Hong 1997) in addition to Maya Tamir’s Implicit Theories of Emotions Scale. These two predictor variables (implicit theories of Personality and Emotion) were then correlated with the outcome variable of Blame.
Attribution across several scenario types. I hypothesized that Incremental Emotion Theorists and Entity Personality Theorists would attribute more blame to actors behaving transgressively, while Entity Emotion Theorists and Incremental Personality Theorists would attribute less blame to these actors (Miller et al. 2007; Chiu et al. 1997; Levy et al. 1998; McConnell, 2001; Plaks et al. 2001).

While Study 1 demonstrated a statistically significant relationship between Implicit Theories of Emotions and Social Judgment, it did not establish a causal relationship between these variables. Therefore, Study 2 not only sought to replicate the correlations from Study 1, but it also attempted to establish causality by manipulating subjects’ Implicit Theories of Emotion via exposing them to ‘contrived’ scientific articles. The articles were intentionally crafted to temporarily shift participants’ emotion controllability and malleability beliefs toward either an incremental or entity theory (Miller et al. 2007 & Chiu et al. 1997; Levy et al. 1998; McConnell, 2001; Plaks et al. 2001). Carol Dweck and Colleagues have employed this method of manipulating Implicit Theories of Psychological Traits for decades, thereby demonstrating the transient experimental malleability of implicit theories. In fact, I modeled my ‘contrived’ scientific article after their specific manipulations (Miller et al. 2007; Chiu et al. 1997; Levy et al. 1998; McConnell, 2001; Plaks et al. 2001). The participants were further primed into entity or incremental beliefs by answering ‘reading comprehension questions’ related to the scientific article and by providing examples of personal experiences when participants felt that their emotions could or could not be controlled/changed (depending on their assigned experimental group). This priming and manipulation check methodology has also been used by previous implicit theories researchers and was modelled after their specific study materials (Miller et al. 2007 & Chiu et al. 1997; Levy et al. 1998; McConnell, 2001; Plaks et al. 2001).

The last major changes to Study 2’s paradigm were applied to the Judgment Scenarios. To understand the changes that I made, we must turn to the cognitive underpinnings of social judgment. Moral philosophers have posited several models of blame attribution, the most widely accepted being Alicke’s Culpable Control Model (CCM) (Lagnado & Channon, 2008; Alicke 2000). This model describes the psychological processes involved when people make ordinary evaluations and attributions of responsibility and blame (Alicke 2000). It rests on two assumptions: 1. That people assess potentially blameworthy actions...
in terms of the actor’s personal control over the harmful or otherwise negative consequences; and 2. That people make spontaneous evaluations of these actions that encourage blame rather than mitigation (Alicke 2000; Lagnado & Channon, 2008).

With respect to personal control (the first assumption), there are three types: 1. Volitional Behavior Control—links mental states and behavior; this addresses whether someone’s actions are freely chosen or compelled by internal or external forces (intentionality); 2. Causal Control—the link between behavior and consequences in the world; this addresses whether someone’s behavior causes consequences (physical causation); 3. Volitional Outcome Control—the link between mental states and outcomes—this addresses whether someone desired and anticipated the consequences of their actions (foresight/foreseeability) (Alicke 200; Lagnado & Channon, 2008). Therefore, according to this model, causality, intentionality, and foreseeability are the dimensions that affect our perception of an actor’s personal control, thus driving our blame attributions. However, a person’s perception of these dimensions is not always perfectly logical (Lagnado & Channon, 2008; Alicke 2000). There are lapses in rationality due to biases in our cognitive processing. This is where Alicke’s second assumption comes into play. He argues that the biases in our cognition are a result of our affective evaluations of the actors and the harmful events they cause. These evaluations are said to be less consciously calculated than judgments of personal control, and they can have both indirect and direct influences on people’s subsequent attributions of cause and blame (Alicke, Davis, and Pezzo 1994; Alicke 2000; Lagnado and Channon 2008; Knobe 2003; Knobe, 2006). A direct influence can be observed when a person responds to negative consequences of behavior without carefully considering the actor’s intentions or foresight. Here, blame comes before an assessment of actor control. On the other hand, an indirect influence is observed when emotional evaluations alter the way a person perceives an actor’s personal control before they ascribe blame (Lagnado & Channon, 2008; Alicke 2000). In this case, a person’s intentionality and foreseeability evaluations are not being bypassed (although they might still be affected by the emotional biases).

Taking the CCM into consideration, I came up with four different semantic categories of judgment scenarios for Study 2: Emotionally Reactive, Moral Decision, Neutral, and Accidental. In the ‘Emotionally
Reactive’ semantic category, actors are behaving transgressively and in a very viscerally emotional manner but with little foresight of the future consequences of their actions (moderate to high level of intention; low foreseeability; physical causality is present). In the ‘Moral Decision’ category, actors are making a calculated decision to behave in a certain transgressive way precisely because of the potential consequences of that behavior (high intentionality; high foreseeability; physical causality is present). In the ‘Neutral’ category, actors are not behaving transgressively. They are simply carrying out benign behaviors (high intentionality; mid-high foreseeability; physical causality is present). The last category, ‘Accidental’, portrayed actors accidentally carrying out harmful actions (no intentionality; no foreseeability; physical causality is present). The inclusion of these four categories therefore gave me a comprehensive understanding of how prior implicit beliefs and the manipulation’s effects varied across different levels of CCM variables. The Study 2 judgment scenario categories were tested for reliability and semantic appropriateness in several pilot studies. The results of these pilot studies (and the logic for inclusion and exclusion of certain scenarios) can be found in the Appendix.

Using the results from Study 1, I hypothesize that Implicit Theories of Emotion and Personality will again be related to Social Judgment. Therefore, I will find significant correlations between these constructs. Specifically, Incremental theorists will be associated with attributing more blame then Entity theorists across all the Judgment scenario types. Additionally, I hypothesize that there will be a causal relationship between Implicit Theories of Emotion and Social Judgment. Using the logic above, I believe that participants who are taught a strong Incremental theory of emotions will blame scenario actors more harshly than participants who are taught a strong Entity theory of emotions.
METHODS

Participants

I recruited 425 participants using the Amazon Mechanical Turk platform. All respondents were considered ‘master level’ users, which means that they had an established history of answering surveys completely and accurately. This digital platform is ideal for implicit theory research because data can be collected from a very large and diverse sample of adults across various different geographical regions. Demographic information included: gender (Male 51%, Female 49%); age (21-73 years; M= 37 years); highest level of education achieved (elementary school 0%; high school 27.5%; undergrad 48.7%; graduate 23.8%); and exposure to psychology (none 33.6%; high school 14.4% some undergrad 41.9%; undergrad degree 4.9%; graduate degree 1.9%). All data were anonymized and participants could choose to end the experiment whenever they wanted. Partially completed surveys were excluded from analysis.

Procedure

Participants were given an entirely digital survey on Amazon Turk. First, participants read a cover story, which explained that they were about to partake in two short and unrelated surveys.

You are invited to participate in two short surveys about human emotions and behavior. The two surveys are unrelated and will take a total of 14-20 minutes to complete. Each survey individually takes about 7-10 minutes to finish. In Survey 1, you will be asked to answer questions based on your beliefs about personality and emotions. Then, you will read a scientific article related to these topics and respond to questions about the article. In survey 2, you will be asked to respond to fictional scenarios for a moral philosophy research database. All of your responses will be anonymized. Please take the two surveys in one sitting. Thank you!

Survey 1 included the Implicit Theories of Emotions Scale and The Implicit Theories of Personality Scale. Subjects were then randomly assigned to either the Entity or Incremental ‘scientific article’ condition and were asked to answer questions related to the article that they received. After this, subjects were specifically told that they had completed Survey 1 and would be moving on to a different survey. In survey 2, subjects read and reacted to the 16 fictional judgment scenarios. Lastly, after the completion of Survey 1 and Survey 2, demographic data were collected and a suspicion probe question was asked. If participants guessed the
that the two surveys were actually part of one study, their data were removed from the final analyses. At
the conclusion of the study, subjects were debriefed and compensated for their time.

**DEBRIEF:** Now that you've finished the surveys, we can explain their true purpose! In fact, all of the
preceding surveys were part of a single study and the scientific articles that you read were not real. We
were interested in whether temporarily manipulating people's beliefs about emotion controllability and
malleability might affect social cognition in the form of blame attribution. We theorized that an individual’s
prior theories about emotion and personality might affect the efficacy of the manipulation and that the
manipulation's effects would vary across scenarios with different levers of actor intentionality and
foreseeability.

The entire study (including all questions and manipulation materials) can be viewed in the appendix of this
dissertation.

**Implicit Theories of Emotion**

To measure lay intuitions about the controllability and malleability of emotions, I employed Tamir
et al. (2007) Implicit Theories of Emotions Scale, which was adapted from Dweck’s (1999) Implicit
Theories of Intelligence Scale. The scale includes two incremental items, “Everyone can learn to control
their emotions,” “If they want to, people can change the emotions they have,” and two entity items, “No
matter how hard they try, people can’t really change the emotions they have,” “The truth is, people have
very little control over their emotions.” Each item was rated using a 7-point Likert scale in response to the
task: ‘Please indicate the extent to which you agree with the statement above (1= strongly disagree; 2=
disagree; 3= somewhat disagree; 4= neither agree nor disagree; 5= somewhat agree; 6= agree; 7= strongly
agree). Additionally, I followed the scoring protocol of Tamir et al. (2007) by reverse scoring the two entity
items and then averaging across all items. Therefore, higher scores indicated incremental theories of
emotion and lower scores indicated entity theories. This created implicit theories of emotion as a continuous
variable, which was used for correlation analysis and to test assumptions for a MANCOVA analysis (4
items; Cronbach’s $\alpha = .84$). I also transformed the prior implicit theories of emotion scores into a categorical
variable by creating a median split: Entity Theorists (score 1.0- 3.5) and Incremental Theorists (score 3.51-
7.0). The categorical variable was used for 2-factor MANCOVA analysis.
Implicit Theories of Personality

To measure intuitions about the controllability and malleability of personality, I used Chiu and Dweck’s *Implicit Theories of Personality Scale*, which has been used by the researchers in their studies for decades. The scale includes only entity items, and there are 3 total items, “The kind of person someone is... is something basic about them and it can't be changed very much.” “People can do things differently, but the important parts of who they are can't really be changed.” and “Everyone is a certain kind of person and there is not much they can do to really change that.” Each item was rated using a 7-point Likert scale in response to the task: ‘Please indicate the extent to which you agree with the statement above (1= strongly disagree; 2= disagree; 3= somewhat disagree; 4= neither agree nor disagree; 5= somewhat agree; 6= agree; 7= strongly agree). To reflect incremental scores, I reverse scored the three entity items and then averaged across all items. Therefore, higher scores indicated incremental theories of personality and lower scores reflected entity theories. This created a continuous variable for implicit theories of personality, which was used for correlation analysis and to test assumptions for a MANCOVA analysis (3 items; $\alpha = .96$). I also transformed the prior implicit theories of personality scores into a categorical variable by creating a median split: Entity Theorists (score 1.0-3.5) and Incremental Theorists (score 3.51-7.0). The categorical variable was used for 2-factor MANCOVA analysis.

Entity and Incremental ‘Contrived’ Scientific Articles

To establish causality, I created two ‘contrived’ scientific articles with the intention of temporarily shifting participants’ emotion beliefs toward the entity or incremental end of the spectrum. The articles were made to look like they came from a credible and popular scientific source and cited various neuroscience and psychology ‘studies’ from various ‘researchers’ that attended an international conference on Emotions and Cognition. The two articles looked identical and were worded verbatim except for a few key words and phrases, which expressed that emotions are either controllable and malleable or fixed and cannot be controlled. Participants were randomly exposed to either the entity or incremental article, but not
both. In a pilot study that tested the efficacy of these articles, participants mentioned that while they thought the article was credible and that it altered their previously held beliefs about emotion, it’s not wise to base belief completely on one or two studies (the participants were also psychology graduate students at Columbia, thus being a bit more discerning than the general population). Therefore, the final iteration of the articles also mentioned and cited a ‘metanalysis’ that pooled over 200 scientific studies on the topic of emotion control and malleability. Additionally, to further prime subjects without solely relying on the articles, I included ‘reading comprehension questions’ that had participants repetitively type and choose answers like ‘emotions can be controlled’ or ‘emotions cannot be controlled’. Finally, depending on the group participants were assigned to, they were then asked to write about a time when they could or could not control and change their emotions. Also, they were asked to write about a time when they witnessed someone else being able to control or not control and change their emotions. Two of the ‘reading comprehension’ questions served as my manipulation check. If both of these questions were answered incorrectly by a subject, then that person’s data were removed from the final analyses. The questions were:

Manipulation check question 1 (Entity and Incremental): In a sentence or two please answer, what does this article claim about our ability to change and control emotions?

Manipulation check question 2 (Entity): True or False: This article claims that we have very little control over our emotions (negative emotions in particular).

Manipulation check question 2 (Incremental): True or False: This article claims that we have a lot of control over our emotions (negative emotions in particular).

For both versions of Manipulation check question 2, the correct answer was ‘True’. For manipulation check question 1, answers had to specifically include phrases that specifically addressed the appropriate incremental or entity theory of emotion according to their assigned condition. Examples of ‘incorrect’ or ‘inadequate’ or ‘inappropriate’ answers for manipulation question 1 (from excluded participants):

E.g. 1: Emotions show our habit, thoughts, and behavior.
Judgment Scenarios

After completing ‘Survey 1’ participants were told that they were about to start a new and unrelated ‘Survey 2’. In this survey, they were exposed to 16 scenarios for judgment. The vignettes included four different semantic categories: Emotionally Reactive (4), Moral Decision (4), Neutral (4), and Accidental (4) scenarios. As a departure from study 1, I added the new category ‘Accidental’ to include a diverse range of dimensions such as ‘intentionality’ and ‘foreseeability’ that affect blame attribution during social judgment (Shaver 1986; Heider 1958; Kelley 1973; Alicke 2000; Lagnado & Channon 2008). The scenarios were randomized so that each participant received a different order of the four scenario kinds.

Subjects were asked to read each scenario, which portrayed actors displaying different negative ‘transgressive’ or neutral behaviors. Then the subjects were asked ‘how blameworthy is the [target actor] for his/her actions?’ and rated the actor on a 9-point Likert scale (1= not at all blameworthy; 9= completely blameworthy). Blameworthiness has been used to operationalize social judgment in experimental and moral philosophy, social psychology, and implicit theories research for its strong relationship to the constructs of intentionality, causality, and foreseeability (Miller, Burgoon, & Hall, 2007; Woolfolk, Doris, & Darley, 2006; Alicke, 2006; Knobe, 2006; 2003b; Nadelhoffer, 2006; Chiu et al. 1997). Theorists argue that the more causality, intentionality, and foreseeability an actor exhibits over his/her actions, the more blame will be attributed to this actor (Miller, Burgoon, & Hall, 2007; Woolfolk, Doris, & Darley, 2006; Alicke, 2006; Knobe, 2006; 2003b; Nadelhoffer, 2006; Chiu et al. 1997). Additionally, participants’ own affective
reactions to an actor’s behavior and that behavior’s consequences have been tied to the construct of ‘blame’ as well (Alicke 2000; Lagnado & Channon 2008).

In Study 1, I found that implicit theories of emotions were not significantly correlated with the ‘Neutral’ scenarios. However, I still included the ‘Neutral’ category in Study 2 for several reasons. First, these scenarios were meant to capture each participant’s ‘baseline’ blame tendencies. Additionally, I did not want to overly sensitize my subjects to negatively-valenced emotional vignettes, which could have skewed judgment as they advanced through the survey. Ultimately, these ‘Neutral’ scenarios served the purpose of re-calibrating participants’ negative affect between negative scenarios.

Examples of the Judgment Scenarios can be found below (and all 16 vignettes can be found in the appendix):

**Neutral**: A jogger is making his way through the park at an easy pace. It is dusk, and families are gathering at the picnic areas with food. The jogger looks at the time on his phones, notices that it’s been 15 minutes since he left home, and continues jogging. (4 items; Cronbach’s $\alpha = .88$)

**Moral Decision [negative]**: A woman sits down to take her career’s certification exam; she has failed once before. As she begins to answer questions, her anxiety increases steadily. She decides to peer at her neighbor’s answers and copy several of them. She continues this strategy until she finishes the exam. (4 items; Cronbach’s $\alpha = .82$)

**Emotionally Reactive [negative]**: Early one evening, a neatly dressed man runs up to a city bus station in hopes of being on time for an interview. The bus pulls away just as the man arrives, without taking notice of the man’s attempts to flag it down. Left behind and upset, the man curses at the bus driver and throws down his briefcase to the ground close to a few other pedestrians. (4 items; Cronbach’s $\alpha = .77$)

**Accidental [negative]**: A teenager is walking down the school hallway with several books in his hand. The tiles beneath his feet happen to be wet and he trips, falling on another student in front of him. They both hit the ground and acquire several scrapes and bruises. (4 items; Cronbach’s $\alpha = .76$)

As you can see, in the ‘Moral Decision’ category the actor makes a calculated and emotionally charged moral decision before behaving. The actor also has substantial foresight over the consequences of his/her actions. In the ‘Emotionally Reactive’ category, the actor’s behavior is very visceral and tied to emotional action tendencies. The actor’s foresight is not as clear as the foresight of the actors in the Moral Decision vignettes. Finally, in the ‘Accidental’ category, the actor physically causes the negative behavior,
but the behavior is an accident and therefore not intended. All 16 of the scenarios can be viewed in the Appendix of this dissertation.

To prepare the Judgment Scenario Likert scores for statistical analysis, I averaged across the different scenarios for each semantic category. Consequently, this gave me the mean scores for each scenario category. I used these average scores as variables in SPSS for statistical analysis.

RESULTS

Part 1: Descriptive Statistics

Implicit Theories of Emotion and Personality Means and Frequencies

Subjects’ prior Implicit Theories of Emotions scores indicated that they viewed emotions as being pretty malleable, thus displaying theories that reflected Incremental beliefs (M = 4.7, SD = 1.3, range = 1-7). The frequency diagram, in figure 8 below, displays that the data is skewed to the left. The distribution is also bimodal, and it is also non-symmetric because my sample contained less prior Entity theorists (score < 4.0) than Incremental theorists (score > 4.0).
While participants’ mean theories of emotions reflected incremental beliefs, their mean prior implicit theories of Personality fell closer to the middle of the incremental-entity spectrum (M= 4.1, SD= 1.7, range= 1-7). Again, we see a bimodal frequency distribution that distinguishes entity theorists from incremental theorists. As compared to theories of emotion, I was able to collect a more even distribution of solid entity vs. incremental personality theorists. The frequency diagram can be seen below in figure 9.
When comparing the two prior theories, participants tended to view emotions as being more malleable and controllable than personality. Given that emotions are in the ontological category of ‘mental states’ and not ‘psychological traits’, people’s lay theories seem to align with these categories and view mental states as being more mutable while perceiving traits as being more stable human qualities. The difference between the priors theories of Personality and Emotions was significant ($t(425)= 7.93$, $p< .05$; $|d|= .40$). The graph of these means can be seen in figure 10 below.
Judgment Scenarios

The following section is a frequency analysis of the dependent variables, which in this case are the Judgment Scenarios (Emotionally Reactive, Moral Decision, Neutral, and Accidental). The Q-Q plots of these dependent variables can be found in the Appendix. They were used to test for multivariate normality.
Figure 11 shows us that, overall, subjects judged the actors in the Emotionally Reactive scenarios pretty harshly (M = 7.03, SD = 1.39, range = 1-9). The data are skewed to the left, and the highest frequencies occur around a score of 7 and 9.
Figure 12 demonstrates that subjects rated the actors in the Moral Decision Scenarios very harshly (M= 8.14; SD= 1.2; range 1-9). The data are skewed to the left, and the highest frequency of blame occurred around a score of 9. Whereas the frequencies in the Emotionally Reactive category seem to increase gradually with blame scores, here we see a drastic and sharp increase above a score of 8.
For the Neutral scenarios, figure 13, we see a bimodal pattern in the frequency chart. There is a cluster of data around the blame score of 1 and the score of 9. However, the frequency spike at a score of 9 is sharp and more drastic than the spike that occurs at 1.
Overall, participants did not blame the actors harshly for the Accidental scenarios (M=3.67, SD=1.7, range 1-9). As seen in figure 14, the data are right skewed, and there are frequency peaks around scores of 3.5 and 5. The bulk of the data occurs below a blame score of 5.5.

As predicted by Alicke’s Culpability Control Model (CCM), participants blamed actors most harshly in the Moral Decision scenario category (M= 8.14; SD= 1.21; range 1-9), followed by the Emotionally Reactive (M= 7.03; SD= 1.39; range 1-9) and Neutral (M= 4.99; SD= 2.70; range 1-9) scenarios and, finally, the Accidental category (M= 3.67; SD= 1.70; 1-9) had the lowest blame ratings. Paired t-tests were performed to make sure that there was a significant difference in the means between these categories: Emotionally Reactive and Moral Decision (t(425)=18.106, p< .05, |d|= .88); Neutral and Accidental (t(425)= 9.019, p < .05, |d|= .44); Emotionally Reactive and Neutral (t(425)= 15.889, p < .05,
\[ |d| = 0.77; \] Emotionally Reactive and Accidental \( (t(425) = 31.645, p < 0.05, \ |d| = 1.54); \) Moral Decision and Neutral \( (t(425) = 23.151, p < 0.05, \ |d| = 1.12); \) Moral Decision and Accidental \( (t(425) = 38.861, p < 0.05, \ |d| = 1.89). \] All six paired t-tests are significant, which means that I was successful in creating different semantic categories. These means can be seen below in figure 15.

**Fig 15. Comparison of Blame Score Means Across Scenario Categories**

![Blame Means Across Judgment Scenarios](image)

**Part 2: Correlations Matrix**

In the present study, I sought to replicate the correlations found in Study 1 for Implicit Theories of Emotions and Judgment. I also wanted to replicate the correlations found in the literature between Implicit Theories of Personality and Judgment. Thus, in table 2 below, we can see the results of the Spearman’s Rho
correlations between both types of Implicit Theories of and Judgment across the different scenario categories. I also included Age, Gender, Education Level, and Exposure to Psychology as variables in the correlation matrix to further discern the relationship between all of these variables.

Table 2. Spearman’s Rho Correlation Matrix for Selected Variables. ** indicates significance at the .01 level (2-tailed) and * indicates significance at the .05 level (2-tailed). The Gender variable reflects Female. The first four categories (Emotionally Reactive, Moral Decision, Neutral, and Accidental) are the different kinds of scenarios presented to participants during the judgment task. ‘Ed Level’ refers to education level and ‘Psych Exposure’ refers to prior exposure to psychology.

<table>
<thead>
<tr>
<th></th>
<th>Emotionally Reactive</th>
<th>Moral Decision</th>
<th>Neutral</th>
<th>Accidental</th>
<th>Age</th>
<th>Gender</th>
<th>Ed Level</th>
<th>Psych Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental Theory of Emotions</td>
<td>.095*</td>
<td>.090*</td>
<td>-.005</td>
<td>-.070</td>
<td>.150**</td>
<td>.093</td>
<td>-.104*</td>
<td>-.012</td>
</tr>
<tr>
<td>Incremental Theory of Personality</td>
<td>.007</td>
<td>.030</td>
<td>-.049</td>
<td>-.147**</td>
<td>.027</td>
<td>.045</td>
<td>-.105*</td>
<td>-.022</td>
</tr>
</tbody>
</table>

As we saw in Study 1, wielding a prior Incremental theory of Emotions is associated with harsher blame placed on the actors in the Moral Decision scenarios (p < .05). Additionally, having an Incremental theory is related to placing more blame on actors in the Emotionally Reactive scenarios (p < .05). There were no significant associations between prior Implicit Theory of Emotions and Neutral or Accidental scenarios. Being an Incremental theorist of Emotions was also related to being older in age (p < .01). Scatterplots of the relationship between prior Emotion Theories and Blame attribution for the Moral Decision and Emotionally Reactive scenarios can be seen in figures 16 and 17 below. These scatterplots contain a ‘jitter’ to reflect a more accurate visual representation of the data trends.
In figure 16, we see the data are aggregated in the upper-right hand corner of the graph. In particular, we see a dense cluster of participants who have implicit theories scores from 4.5 to about 6.2 blaming solidly at a score of 9.0. This demonstrates that Incremental Theorists are associated with placing higher blame on the actors in Moral Decision scenarios. There are a few outliers, but otherwise the pattern is pretty consistent.
In figure 17, the pattern isn’t as visually clear as in figure 10, but there is a cluster of data where participants who have implicit theories scores from 4.5 to 6.0 are blaming at around a 7.0.

Contrastingly, as evidenced by the prior implicit theory literature, being an entity theorist of personality (psychological attribute as opposed to a mental state) is associated with ascribing higher blame. However, this was only significant for the Accidental category (p < .01) and not the Moral Decision or Emotionally Reactive categories. The scatterplot of this relationship can be seen in Figure 18 below.
Fig 18. Scatterplot of the relationship between Implicit Theories of Personality and Blame on the Accidental Scenarios.

As opposed to the last two figures (16 and 17), here the data are aggregated at the bottom half of the scatterplot because, generally, subjects were placing less blame on Accidental Scenarios than on Moral Decision or Emotionally Reactive scenarios. We also see that participants with Implicit Theories of Personality scores from 2.0 to 3.5, entity theorists, are placing more blame at scores from 4.5 to 6.0. However, although the correlation trend is mathematically stronger than for the previous two scatterplots, visually it is a bit harder to detect.

Interestingly, for both categories of Implicit Theories (emotions and personality), having an entity theory was related to having achieved a higher level of education. And lastly, it is curious that the significant relationship between Implicit Theories of Emotions and blame on the Moral Decision Scenarios is stronger in Study 1 than Study 2. A possible explanation is that the correlations were not as ‘pure’ in Study 2 as they
were in Study 1. Participants in Study 2 were exposed to the judgment scenarios after they had already been exposed to the entity and/or incremental manipulation. Therefore, the manipulation could have solidified their existing theories, contradicted them, or had no effect for certain participants. Ultimately, this probably attenuated the strength of all the correlations. To further explore this issue, I created two different correlation matrices that differ by condition. This let me analyze the affect that my manipulation had on the pivotal correlations between prior implicit beliefs and judgment.

**Part 3: Correlation Matrices by Condition**

Table 3. Spearman’s Rho Correlation Matrix of selected variables for the Incremental manipulation condition.

<table>
<thead>
<tr>
<th></th>
<th>Emotionally Reactive</th>
<th>Moral Decision</th>
<th>Neutral</th>
<th>Accidental</th>
<th>Age</th>
<th>Gender</th>
<th>Ed Level</th>
<th>Psych Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental Theory of Emotions</td>
<td>.181**</td>
<td>.125*</td>
<td>.054</td>
<td>-.070</td>
<td>.128</td>
<td>.125</td>
<td>-.121</td>
<td>-.056</td>
</tr>
<tr>
<td>Incremental Theory of Personality</td>
<td>.113</td>
<td>.076</td>
<td>-.009</td>
<td>-.185**</td>
<td>.059</td>
<td>.081</td>
<td>-.161*</td>
<td>-.002</td>
</tr>
</tbody>
</table>

In Table 3, we see that for those in the incremental condition, the correlation matrix reflects the same significant correlations between implicit theories and blame attribution as the aggregated (both experimental groups) correlation matrix. However, here the correlations are stronger and are more akin to the magnitude of the correlations I found in Study 1. Again, we see that being an Incremental theorist of emotion is associated with placing higher blame on actors in the Emotionally Reactive and Moral Decision scenarios. Additionally, holding an Entity theory of personality is associated with placing higher blame on actors in the Accidental scenarios. But, in this matrix, we lose the correlations between implicit theories of emotion and age and education level.
Table 4. Spearman’s Rho Correlation Matrix of selected variables for the Entity manipulation condition.

<table>
<thead>
<tr>
<th></th>
<th>Emotionally Reactive</th>
<th>Moral Decision</th>
<th>Neutral</th>
<th>Accidental</th>
<th>Age</th>
<th>Gender</th>
<th>Ed Level</th>
<th>Psych Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental Theory of Emotions</td>
<td>.020</td>
<td>.061</td>
<td>-.051</td>
<td>-.079</td>
<td>.176*</td>
<td>.056</td>
<td>-.097</td>
<td>.033</td>
</tr>
<tr>
<td>Incremental Theory of Personality</td>
<td>-.103</td>
<td>-.020</td>
<td>-.087</td>
<td>-.103</td>
<td>-.003</td>
<td>.009</td>
<td>-.049</td>
<td>-.042</td>
</tr>
</tbody>
</table>

When we look at the correlation matrix for the Entity condition, Table 4, we see that the previously significant correlations between implicit theories (of both personality and emotions) and judgment are lost. The only significant relationship that remains is the correlation between implicit theories of emotions and age. Thus, it seems that the nature of the incremental condition of my manipulation perpetuated the relationship between implicit theories of emotion and judgment found in Study 1 and in the aggregated Study 2 matrix. My incremental condition also perpetuated the relationship between implicit theories of personality and judgment found in the literature. Looking at these two new matrices simultaneously implies that something about my Entity manipulation may have affected participants’ lay concepts of emotions (and maybe even personality). The entity condition could have completely contradicted people’s beliefs about emotion controllability and malleability to the point that their understanding of emotions has changed. This intriguing possibility will be further evaluated in forthcoming sections.

In the figures below, we see the new scatterplots for the significant (and now stronger) relationships between Implicit Theories of Emotion and Personality and Blame Attribution for participants in the Incremental Condition.
Fig 19. Scatterplot of the relationship between Implicit Theories of Emotions and blame in Emotionally Reactive Scenarios (Incremental Condition).

Fig 20. Scatterplot of the relationship between Implicit Theories of Emotions and blame in Moral Decision Scenarios (Incremental Condition).
In addition to running the regressions analyses, I tested whether the differences between the Implicit Theories and Blame correlations across the Incremental and Entity experimental groups were actually significant. I conducted a Fisher’s r to z transformation to perform a z test on the correlations of interest. The Emotionally Reactive correlations were significantly different from one another (z = 1.67, p < .05), but the Moral Decision (z = .67, p > .05) and Accidental (z = .86, p > .05) correlations were not. Thus, the disruptive effects of the Entity manipulation on the existing relationship between implicit theories and blame might only really be present for judgment on the Emotionally Reactive scenarios.

**Part 4: MANCOVA Analysis of the Implicit Theories Manipulation**

The means for each judgment scenario category across experimental condition were recorded. For the Emotionally Reactive, Moral Decision, and Accidental Scenarios subjects in the Entity condition were
placing more blame on actors than subjects in the incremental condition (Emotionally Reactive: Entity M=7.10, SD=1.40; Incremental M=6.97, SD=1.42; Moral Decision: Entity M=8.23, SD=1.10; Incremental M=8.00, SD=1.29; Accidental: Entity M=3.72, SD=1.61; Incremental M=3.62, SD=1.80). For the Neutral Scenarios, participants in the Incremental Condition were placing more blame on actors (Entity M= 4.89, SD= 2.68; Incremental M= 5.08, SD= 2.72). The blame means across condition can be viewed in table 5 and figure 22 below.

Table 5. Blame means (M) and standard deviations (SD) for each scenario category by condition

<table>
<thead>
<tr>
<th></th>
<th>Emotionally Reactive</th>
<th>Moral Decision</th>
<th>Neutral</th>
<th>Accidental</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entity</strong></td>
<td>M = 7.10</td>
<td>M= 8.28</td>
<td>M= 4.89</td>
<td>M= 3.72</td>
</tr>
<tr>
<td></td>
<td>SD= 1.36</td>
<td>SD= 1.10</td>
<td>SD= 2.68</td>
<td>SD= 1.60</td>
</tr>
<tr>
<td><strong>Incremental</strong></td>
<td>M= 6.97</td>
<td>M= 8.00</td>
<td>M= 5.08</td>
<td>M= 3.62</td>
</tr>
<tr>
<td></td>
<td>SD= 1.42</td>
<td>SD= 1.29</td>
<td>SD= 2.72</td>
<td>SD= 1.79</td>
</tr>
</tbody>
</table>
I performed a MANCOVA to test the difference in mean blame scores by condition with prior Implicit Theories of Personality, Age, and Education Level as covariates in the statistical model. Age was held constant at 36.87 years, Education level at 2.96 (Undergraduate degree), and Implicit Theories of Personality at a score of 4.14. Implicit Theories of Emotion had a non-significant effect on the model as a continuous covariate, so I left it out of this analysis. For the remaining covariates, I had to test the assumption that they were acting similarly across experimental conditions. In Tables 6 and 7 below, we can see that the assumption has been met because the mean Age, Education Level, and score on the Implicit Theories of Personality Scale are all virtually the same for the Entity and Incremental manipulation conditions.
Table 6. Descriptive statistics for Implicit Theories of Emotions and Personality for the Incremental Condition

<table>
<thead>
<tr>
<th></th>
<th>Number of Subjects</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>213</td>
<td>37.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Education level</td>
<td>213</td>
<td>2.9</td>
<td>.7</td>
</tr>
<tr>
<td>Implicit Theories of Personality</td>
<td>212</td>
<td>4.14</td>
<td>1.74</td>
</tr>
</tbody>
</table>

Table 7. Descriptive statistics for Implicit Theories of Emotions and Personality for the Entity Condition

<table>
<thead>
<tr>
<th></th>
<th>Number of Subjects</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>212</td>
<td>36.0</td>
<td>9.4</td>
</tr>
<tr>
<td>Education level</td>
<td>212</td>
<td>3.0</td>
<td>.7</td>
</tr>
<tr>
<td>Implicit Theories of Personality</td>
<td>213</td>
<td>4.14</td>
<td>1.72</td>
</tr>
</tbody>
</table>

The overall multivariate Wilks’ lambda model was significant, which indicated that there was a significant difference between means of the entity vs. incremental conditions across the judgment scenarios (F(4, 417)= 3.55; p< .01; Wilks’ Lambda= .967; partial eta^2= .033). Thus, the implicit theories of emotions manipulation affected judgment, reflecting a causal relationship between Implicit Theories of Emotion and Blame Attribution. An analysis of the between- subjects effects indicated that there was a significant difference between Entity and Incremental Conditions for all four scenario kinds (Emotionally Reactive (F(4, 425)= 15.54; p < .01; partial eta^2= .129); Moral Decision (F(4, 425)= 15.47; p < .01; partial eta^2= .128); Neutral (F(4, 425)= 2.60; p < .05; partial eta^2= .024); Accidental (F(4, 425)= 5.78; p < .01; .052).

The difference in blame means between conditions shown in figure 18 and figure 19, demonstrates that participants in the Entity condition were placing more blame on actors than participants in the Incremental condition for the Moral Decision, Accidental, and Emotionally Reactive vignettes, but not the Neutral vignettes. In these scenarios, Incremental theorists were actually attributing more blame to actors! Thus, for scenarios in which the actor is displaying a transgressive ‘negative’ behavior, the Entity theory
intervention caused harsher judgment from the participants. In contrast, when the actor behaviors were ‘Neutral’ (or as neutral as possible), the Incremental intervention caused more aggressive judgment. Even though numerically the differences between the means across conditions were not very big, the statistical significance was very strong with $p < .01$ for all of the scenarios with ‘negative’ transgressive behaviors (Emotionally Reactive, Moral Decision, Accidental) and $p < .05$ for the Neutral scenarios.

**Part 5: Two Factor MANCOVA Analysis of Prior Implicit Theories by Condition**

The Study 2 result, that being taught a strong Entity theory of emotions leads to significantly more blame attributed to actors behaving transgressively, seems to contradict the correlation trends that were found in both Study 1 and 2. To further understand this perplexing finding, I conducted a two-factor MANCOVA to capture the potential interaction between Prior Implicit Theories and my manipulation. It is possible that depending on one’s Prior Theory of Emotion or Personality, the manipulation had different effects on judgment. For both of these separate two-factor analyses, I removed the ‘Neutral’ scenarios from my dependent variables because in both Study 1 and Study 2 there was no correlation between prior theories and judgment for the Neutral scenarios. Therefore, the new MANCOVA models contained three dependent variables instead of four. The details of these analyses are explored below.

**Judgment Effects of Prior Implicit Theories of Personality by Condition**

I conducted a two-factor MANCOVA analysis to capture the potential interaction between prior implicit theories of Personality and my manipulation. It is possible that depending on one’s prior theory of personality, the manipulation had different effects on judgment. I added Age and Education Level as covariates to the model because, according to the correlation matrices, they are related to Prior Implicit Theories of Personality. Additionally, both covariates were strong predictors in the one-way MANCOVA analysis conducted in the previous section.
I executed a median-split to transform the prior personality theories into a categorical variable. The frequencies per level ended up being pretty even (189 prior Entity vs. 236 prior Incremental participants), and Box’s test indicated equality of covariance matrices (M= 21.3; p > .05).

The Wilks’ Lambda Multivariate test was not significant, which indicates that there wasn’t a significant interaction between prior implicit theories of Personality and Experimental Condition (F(3, 417)= 1.49; p= .22; Wilks’ Lambda= .99; partial eta^2= .01). However, there was a significant multivariate main effect for the manipulation (F(3, 417)= 4.09; p < .01; Wilks’ Lambda= .97; partial eta^2= .03). Additionally, the univariate tests indicate that this main effect was significant for the Emotionally Reactive (F(1, 419)= 3.81; p= .05; partial eta^2= .01) and Moral Decision (F(1, 419)= 11.11; p < .01; partial eta^2= .03) scenarios. Therefore, the plots of the estimated marginal means for the Emotionally Reactive and Moral Decision Scenarios can be found below in figures 23 and 24. The main effect for the Accidental Scenarios was not significant.
From the plot, we can see that both kinds of prior Personality theorists were placing more blame in the Entity Condition and less blame in the Incremental Condition. Additionally, prior Personality Entity theorists were attributing much more blame to actors in the Entity Condition than prior Incrementalists. However, the difference across conditions was only significant for prior Entity theorists (F(1, 189)= 5.20; p < .05; partial eta^2= .03). This means, that for the Emotionally Reactive Scenarios, when Entity theorists of Personality were taught the Incremental theory of Emotions, they tended to attribute less blame than when they were taught the Entity theory of Emotions. Also, this manipulation appears to have a significant impact on the Entity theorists of Personality and not the Incremental theorists. Lastly, the univariate interaction is not significant for the Emotionally Reactive scenarios (F(1, 419)= 1.85; p=.18; partial eta^2=.004).
Fig 24. Blame Means Plot of Prior Emotion Theories by Condition (Moral Decision). The main effects are significant (p < .01). Education level is held constant at 2.96 (Undergrad) and Age is held constant at 36.9 years.

For the Moral Decision scenarios, we can see that again both prior Personality theorists were placing more blame when they were taught the Entity Theory of Emotions than when they were taught the Incremental theory. The difference across conditions is significant for both Entity Personality theorists (F(1, 189)= 5.29; p< .05; partial eta^2= .03) and Incremental Personality theorists (F(1, 236)= 5.51; p< .05; partial eta^2= .02). Therefore, when participants are judging actors in Moral Decision scenarios, the implicit theories manipulation was effective for both kinds of prior Personality Theorists. It was successful in lessening the severity of blame attribution for all participants. This wasn't the case for the Emotionally Reactive scenarios (seen in figure 23). Another curious observation about the Moral Decision plot above is that for both conditions, prior Incremental theorists were blaming a bit harsher than prior Entity theorists.
Judgment Effects of Prior Implicit Theories of Emotion by Condition

I ran a 2-factor MANCOVA to see if my manipulation had different judgment effects according to participants’ prior theories of Emotion. Age and Level of Education were once again the covariates for this model. After conducting the median-split to turn my Implicit Theories of Emotion variable into a categorical variable, I was left with 103 prior Entity Theorists vs. 322 prior Incremental theorists. Because I was left with a small cell size for the Entity level, I did not meet the equality of covariance matrices assumption for MANCOVA (as evidenced by Box’s test (M= 35.5; p=.01). Additionally, prior Emotion Theories did not add significance to the multivariate model. Therefore, even though there were still main effects for this model, I omitted the plots for this 2-factor analysis. It’s interesting that for both the one-way MANCOVA and the two-way MANCOVA, prior Implicit Theories of Emotion did not make it into the final model. They did not seem to add much (if at all) to the various analyses. This phenomenon could be explained by the fact that there weren’t enough prior Entity Theorists of Emotion collected to make a difference. I have a feeling that if more Strong Entity theorists were included in my sample, the prior Emotion Theory variable (as a cofactor and/or covariate) would have added to the statistical models. However, it is very hard to find very Strong Entity theorists of Emotion in a random sample of people.

DISCUSSION

Study 2 was able to replicate the correlation finding from study 1, that Incremental theorists of Emotions are associated with placing higher Blame on actors in Moral Decision Scenarios. Study 2 also found that Incremental theorists of Emotion tend to place higher blame on actors in Emotionally Reactive scenarios as well. Study 1 did not find this relationship to be significant. However, I believe this discrepancy was caused by the more accurate Judgment categories of Study 2 (the pilot studies ensured that I was creating accurate semantic representations between Moral Decision, Emotionally Reactive, etc.). Also, due to the much larger sample size of Study 2, I had a more even proportion of Entity Theorists to Incremental Theorists of Emotion. Study 1 represented mostly Incremental theorists (due to random chance) and probably the makeup of the Mechanical Turk pool of participants at that time. It makes sense that Implicit
Theories of Emotion are related to Moral Decision Scenarios and Emotionally Reactive scenarios (and not the Neutral or Accidental scenarios), because the behaviors in these vignettes are more closely related to the actor’s own passionate emotions and emotional impulses. From the Incremental perspective, because emotions can be controlled and can be changed, observing an actor who is very clearly demonstrating a failure to regulate their emotions and behavior will incite a desire to blame harshly. From the Entity perspective, because emotions are difficult to control and change, observing an actor’s transgressions is not as worthy of judgment because the actor can’t really ‘help’ that they are acting in an emotional manner.

With respect to Implicit Theories of Personality and Judgment, I had hypothesized that, in line with the implicit theories of psychological attributes literature, Entity theorists of Personality would be associated with placing more blame to actors on the judgment task (Miller et al. 2007; Chiu et al. 1997; Levy et al. 1998; McConnell, 2001; Plaks et al. 2001). This hypothesis was supported by Study 2. Specifically, Entity theorists were associated with harsher judgment of actors in the Accidental category. Therefore, I was able to demonstrate an interesting difference between Implicit Theories and Social Judgment across two ontological categories (psychological attributes (Personality) and mental states (Emotions). Additionally, it makes sense that wielding a prior Entity Personality theory is more closely related to harsh blame on Accidental scenarios than having an Incremental theory. Since actors in these scenes do not display intentionality or foresight (only physical causality), Entity Personality theorists may explain the actor’s behaviors (and their consequences) by looking to stable, underlying traits like ‘clumsiness’, ‘forgetfulness’, ‘inattentiveness’, etc. (Alicke, 2000; Miller et al. 2007; Chiu et al. 1997; Levy et al. 1998; McConnell, 2001; Plaks et al. 2001; Uleman et al. 2008). Let’s take, for example, the scenario of the woman drinking close to the edge of a balcony. Her friend surprises her from behind and she drops her drink, injuring pedestrians below. From the Entity perspective, the actor is at fault because ‘she’s probably always this clumsy’, ‘she’s ‘dumb’ because she was drinking close to the ledge in the first place’, ‘she’s inattentive because she probably should have heard her friend approaching’. These dispositional traits may be perceived as having caused the behaviors in the scenarios, thus driving blame attribution (Kressel & Uleman, 2010, 2015). On the other hand, the Incremental theorists may have noticed that the
actor did not intend to hurt the pedestrians. She also did not foresee dropping her drink. Thus, the actor in this scenario is not worthy of blame.

Generally, the correlations found in Study 2 were smaller than the correlations found in Study 1. This is likely due to the fact that in Study 2, participants completed the judgment task after they had undergone the Implicit Theories manipulation. In Study 1, there was no experimental manipulation, so the correlations were ‘pure’ in that sense. Consequently, the experimental manipulation probably attenuated the magnitude of the correlations. It is probable that in Study 2, prior implicit theories were strengthened, contradicted, or not changed due to the experimental manipulation before exposure to the judgment scenarios. Therefore, to account for this discrepancy I ran the correlation analyses separately for each manipulation condition. When I ran the correlations using subjects in the Entity condition only, I observed a loss of the significance in the relationships between both kinds of Implicit Theories and Blame Attribution across scenarios. The only relationship that remained significant was that of Implicit Theories of Emotion and Age. Being an older participant was associated with being an Incremental Theorist of Emotion. Contrastingly, when I ran the correlations using only the subjects in the Incremental condition, all of the relevant Implicit Theories associations reappeared. And this time, the correlations had the magnitude of those from Study 1 (for Implicit Theories of Emotions) and of past research (for Implicit Theories of Personality) (Cabello et al. 2014; Tamir et al. 2007). Consequently, it seems that my Incremental manipulation perpetuated the existing relationships between Implicit Theories and Judgment. My Entity manipulation, on the other hand, dissipated these relationships. Therefore, it’s possible that being taught a very strong Entity theory of Emotions (that emotions are not at all malleable and not at all controllable), may skew people’s existing mental models of what emotions (and even personality) are (is). This claim is bolstered by the fact that in Study 1 and Study 2 and previous Implicit Theories Studies, prior theories of Emotion tend to be, on average, more Incremental than Entity leaning. This makes logical sense given that the transience of emotionality is a generally salient aspect of the human experience (Tamir et al., 2007; Flavell & Green 1999; Flavell, Green, & Flavell 1998; D’Andrade, 1987; Wellman & Hickling, 1994). The strong Entity manipulation in my study, then, might have created a prevalent dissonance between what
people had believed emotions to be and what they were taught in the ‘contrived’ scientific article, even if they are more Entity leaning to begin with. Since the ephemerality of emotional states implies that emotions are always changing, learning from a scientific article that emotions can never change or be manipulated was probably jarring on some conceptual level.

Because of the correlation trends found in both Study 1 and Study 2, I had expected that an Implicit Theories of Emotion experimental manipulation would affect blame attribution. The MANCOVA analysis verified this causal relationship. Additionally, the correlation trends prompted me to hypothesize that subjects who were taught the Incremental theory would attribute more blame to actors than those who were taught the Entity theory. Surprisingly, the manipulation had the opposite effect! Participants in the Entity Condition were ascribing more blame to actors behaving transgressively than those in the Incremental Condition, specifically to actors in the Moral Decision, Emotionally Reactive, and Accidental vignettes (controlling for prior theories of Personality, Age, and Education Level). Intriguingly, this judgment pattern occurred for the ‘transgressive’ scenarios where the actor demonstrated intentionality (Emotionally Reactive and Moral Decision) and for the transgressive scenarios where intentionality did not exist (Accidental). The difference in blame means between the two experimental conditions were very statistically significant at p < .01 for all three kinds of transgressive behavior vignettes. Additionally, with respect to the Neutral scenarios, subjects in the Incremental Condition were blaming more harshly than those in the Entity Condition. Therefore, when there was no overtly transgressive behavior present, being taught a strong Incremental theory led to more intense blame attribution than when actors were not behaving transgressively. It is funny to think that being taught the Incremental theory may make people less judgmental of actors committing transgressive and immoral behaviors, but more judgmental of actors executing simple and benign behaviors like eating a granola bar during a commute, sitting on a park bench, letting an unimportant phone go to voicemail, and jogging at dusk.

An important question still remains: Why were the participants in the Entity condition placing more blame on actors committing transgressive behaviors? This finding corroborates the decades of extant research in which Implicit Theories of Psychological Attributes (Personality and Morality) were
manipulated to affect Social Judgment (Miller et al. 2007; Chiu et al. 1997; Levy et al. 1998; McConnell, 2001; Plaks et al. 2001). In these studies, being taught the Entity theory (of Personality or Morality) or having a prior Entity theory (of Personality or Morality) was associated with higher attribution of blame toward transgressors and greater negative affect in response to the vignettes from judgment tasks (Miller et al. 2007; Chiu et al. 1997; Levy et al. 1998; McConnell, 2001; Plaks et al. 2001). Therefore, a possible explanation for my Study 2 finding is that when you teach people that Emotions cannot change and cannot be manipulated (a very Strong Entity theory), their new Implicit Belief of Emotions affects judgment in the way that holding an Entity theory of Personality would. In other words, the Implicit Belief of Emotions now functions more like those of the Psychological Attribute ontological category would. To further bolster this claim, it is incredibly difficult to find strong Entity theorists of Emotion in the general population. Most people believe that there’s a degree of mutability to emotions and emotional states even if they have observed that emotion regulation requires effort (Tamir et al., 2007; Flavell & Green 1999; Flavell, Green, & Flavell 1998; D’Andrade, 1987; Wellman & Hickling, 1994). This ties back to the notion of temporality. One obvious quality about emotions is that they have a different degree of temporality than attributes like morality and intelligence (Tamir et al., 2007; Flavell & Green 1999; Flavell, Green, & Flavell 1998; D’Andrade, 1987; Wellman & Hickling, 1994). Unlike our traits, emotions come and go constantly as they are carried by the river of our consciousness. Consequently, learning that emotions are fixed and cannot be manipulated, may cause the new Implicit Theory of Emotion to drive judgment in the way that Implicit theories of Psychological Attributes do. The concept of ‘emotions’ may have fundamentally changed from something that is phenomenologically transient, and therefore inherently pretty malleable, to something that is more ‘trait like’. And finally, another piece of evidence for this theory comes from the Entity Condition vs. Incremental Condition correlation matrices. While the Incremental matrix preserved the Implicit Theories and Judgment correlations found in Study 1 and from prior research, the Entity matrix reflected a loss of the relevant associations. Subsequently, it appears that learning a very strong Entity theory of Emotions fundamentally skews the naturally (or most prevalently) occurring relationship between prior Implicit Theories and Judgment.
If we think back to Alicke’s CCM, this finding continues to make sense. If you teach people that emotions cannot be controlled and cannot be manipulated, this attenuates the degree of ‘Personal Control’ (intentionality, foreseeability, and physical causality) that people have over their emotions and behaviors. In other words, people can no longer intend behaviors or foresee the consequences of their actions because they are not the master of their own emotional worlds. Given the close link between emotions and behavior, when emotions cannot be regulated, people no longer control their behavior as well (Frijda 1988, Weiner 1985, Weiner 1995, Crick and Dodge, 1994). Thus, the CCM ‘control’ variables (intention and foreseeability and physical causality) play less of a role in judgment, and instead Spontaneous Trait Inferences (STI’s) and affective reactions bias judgment (Alicke 2000; Nichols & Knobe, 2008; Nadelhoffer 2004 & 2005; Uleman et al. 2008; Kressel & Uleman, 2010, 2015). Participants’ affective reactions to the actors’ behaviors (and the consequences of those behaviors) override the ‘cool’ and logical evaluations of variables such as context and mental state, leading to harsher judgment (Alicke 2000; Nichols & Knobe, 2008). Normally, because people see emotions as transient and having some degree of changeability, Implicit theories of Emotion will affect judgment via personal control variables (e.g. intentionality inferences). This is why the correlations from Study 1 and 2 depict a pattern in which Incremental theorists of Emotion are placing more blame on actors in Moral Decision scenarios and Emotionally Reactive scenarios than Entity theorists. Blame attributions are being driven by the belief that Emotions can be controlled and changed, so there is an assumption that scenario actors have the ability to regulate their emotions and behaviors as well. However, when people can’t control or change their emotions at all, it is likely that they can’t control and change their behaviors (Tamir et al. 2007). Under this premise, actors’ behaviors are indicative of stable ‘trait-like’ qualities and, reciprocally, these qualities are thought to cause the actors’ behavior (Kressel & Uleman, 2010 & 2015). With respect to the Accidental scenarios, the Entity participants could be inferring actor dispositions such as ‘clumsiness’, ‘carelessness’, ‘unfocused’, ‘dumb’, and ‘incompetent’. In the case of the Moral Decision and Emotionally scenarios, subjects might be inferring dispositions like ‘dishonest person’, ‘lacking in trustworthiness’, ‘inherently malicious’, etc. Researchers have demonstrated that ‘trustworthiness’ is the most inferentially pertinent trait
variable to judgments of who is moral; and it is the attribute that people most attend to in forming impressions of others (Leach, Bilali, & Pagliaro, 2015). Since the CCM personal control variables no longer drive judgment for those in the Entity condition, the ‘lack of trustworthiness’ portrayed by actors in the Moral Decision scenarios may have exacerbated blame attribution via affect biases and dispositional inference biases. In fact, previous research in this realm has emphasized that Entity theorists (of personality and morality) feel more anger when judging morally transgressive behaviors (Miller et al. 2007; Levy et al. 1998; McConnell, 2001; Plaks et al. 2001). This intense anger likely increases cognitive load, thus making it harder for participants to search for contextual or mental state clues to an actor’s intentionality, foresight, and physical control over the situation. As a result, dispositional inferences become more cognitively accessible during social judgment.

I also conducted a 2-factor MANCOVA with prior Implicit Theories as a factor in the model. This allowed me to observe whether my manipulation had divergent effects on subjects depending on their lay theories of Emotions and Personality. When I included prior Implicit Theories of Personality into the MANCOVA, there was no significant interaction but the experimental Condition still had a main effect. However, the univariate tests indicated that the main effect was significant for Emotionally Reactive and Moral Decision scenarios. When looking at the plot (figure 22) of the Blame means across Condition for Emotionally Reactive scenarios, I observed that the manipulation had the same effect for both prior Theories. Namely, the manipulation increased blame attribution for prior Entity and Incremental Personality theorists that were placed in the Entity Condition and decreased blame attribution for all prior theorists in the Incremental Condition. But, this difference between Conditions was only significant for the participants wielding prior Entity Personality theories. For these individuals, the manipulation decreased their Blame from M= 7.3 to M= 6.9. Therefore, for scenarios where actors were executing transgressive ‘emotionally reactive’ behavior, prior implicit Theories of Personality really made a difference in judgment when exposed to an Entity theory intervention. An important takeaway is that the manipulation did not affect the prior theories in the same way. Prior Entity theorists of personality (and potentially of emotions) may benefit more from this kind of intervention.
When I looked at the plot (figure 23) of the Blame means across Condition for Moral Decision Scenarios, I observed that (like the Emotionally Reactive scenarios) teaching participants the Entity theory caused all prior theorists to attribute more blame than when they were taught the Incremental theory. However, for Moral Decision scenarios both the prior Entity and Incremental Personality theorists change in judgment across conditions were significant. This implies that the manipulation didn’t just affect prior Entity theorists, it affected both prior theorists (and in the same way). Therefore, an Implicit Theories of Emotion Intervention or Manipulation targeted at reducing judgment of actors acting in ‘Immoral’ ways may be beneficial for participants with both Entity and Incremental prior theories of Personality.

Taking both the Emotionally Reactive and Moral Decision Scenarios into account (for the 2-factor MANCOVA) we learn that, for Implicit Theories of Emotions manipulations, prior theories of Personality matter. Understanding what people are bringing to the lab/classroom before teaching them emotion theories matters. But prior theories don’t seem to matter in the same way for all kinds of social scenarios. They matter more for situations in which people are behaving transgressively in an Emotionally Reactive way rather than making some sort of transgressive Moral Decision and behavior. So, implicit theories interventions aimed at attenuating judgment of Emotionally Reactive behaviors, may only work for those with a prior Entity theories of Personality (and probably of Emotion as well). But, for both Moral Decision and Emotionally Reactive social scenarios, it appears that teaching a strong Entity theory of Emotions ultimately leads to harsher judgment than teaching an Incremental theory (regardless of prior theory of Personality).

The 2- factor MANCOVA with prior Emotion theories as a factor, did not make it into this dissertation. Even though there were main effects, the equality of covariance matrices assumption was violated and the cofactor itself didn’t seem to add any statistical significance of the overall model. The same can be said for the 1-factor MANCOVA in which prior theories were considered for inclusion as covariates. However, I don’t believe that prior Implicit Theories of Emotion do not matter for an Implicit Theories of Emotion manipulation or intervention. Instead, I believe that they didn’t affect statistical significance in my study because there weren’t enough strong prior Entity theorists of Emotion to make a difference. A
replication of this study in a population that specifically contains a higher proportion of Entity theorists of Emotion, a clinically depressed population for example, may demonstrate significant effects (Tamir et al. 2007). For this population, we might observe really interesting prior Implicit Theories of Emotions interactions with the manipulation and main effects on judgment.

Another theory to explain the opposite trend between the correlations in Study 1 and 2 and my manipulation is that, the Implicit Theories of Emotions scale may not actually be accurately measuring Implicit Theories of Emotions. In fact, it is probably more accurate to say that the scale is measuring self-perceived implicit theories of emotion, which may not be reflecting subjects’ actual theories. My manipulation, on the other hand, was not targeting self-perceived beliefs, but was instead trying to implicitly imbue subjects with very specific pieces of emotion knowledge. Additionally, the above logic can also be applied to the Implicit Theories of Personality scale, which was also used in my study. The self-perceived nature of this measure may explain why I did not find a significant interaction between prior Implicit Theories of Personality and my intervention when I ran the two-factor MANCOVA. It is possible that my manipulation interacted with participant’s actual beliefs about personality, but not the beliefs measured by the scale used in this study. The self-perceived beliefs (of both personality and morality) might not reflect ‘real’ beliefs due to response biases such as demand characteristics. A participant may feel like ‘society’ or ‘the researcher’ wants them to say that emotions are controllable, when in reality they feel the opposite way about emotions. Additionally, it is difficult to know what participants perceived ‘emotions’ to be while answering items on the Implicit theories of Emotions scale. The term ‘emotions’ to one participant might have meant the ephemeral mental states that come and go incessantly. But to another participant, the term ‘emotions’ might have meant something more akin to a prolonged mood state (like depression or anxiety), which is likely given that Tamir et al. found correlations between scores on the Implicit Theories of Emotions Scale and depression and anxiety symptoms (Tamir et al. 2007). Thus, because it’s unclear what the scales are measuring and how individuals are interpreting words like ‘emotions’ and ‘personality’, making theoretical extrapolations (without qualitative interview data) becomes a bit challenging.
To conclude, Study 2 was able to demonstrate that there is a causal relationship between Implicit Theories of Emotion and Social Judgment. Subjects in the Entity condition placed more blame on actors in Moral Decision, Emotionally Reactive, and Accidental ‘transgressive’ scenarios than subjects in the Incremental condition. Contrastingly, when there was no overtly transgressive behavior (Neutral vignettes), participants in the Incremental condition displayed more aggressive blame than those in the Entity Condition. The variables Age, Level of Education, and prior Personality theories added to the variance of the statistical model. Additionally, prior Theories of Personality mattered for Emotionally Reactive scenarios. While the manipulation didn’t have an effect for Judgment on prior Incremental theorists, it had a large effect on those with prior Entity theories. Overall, it appears that participants in the Entity condition were placing more blame on actors executing transgressive behaviors because their concept of emotions had changed from mental states that (even for prior Entity theorists) are pretty malleable and potentially controllable, to something that is more stable and ‘trait-like’. Because of this, affective reactions (anger) and spontaneous trait inferences (STIs) affect blame attribution more so than personal control variables like intentionality and foreseeability.

LIMITATIONS AND FUTURE DIRECTIONS

Despite the strong statistical significance, the manipulation did not have a numerically large effect on judgment means across conditions. This is because the intervention was relatively short and only made use of one scientific article with reading comprehension questions. While past studies have shown powerful results with the use of one ‘contrived’ article as a manipulation, future classroom or clinical interventions (and future laboratory manipulations) should be more comprehensive in their conceptual priming methodology and it should last for longer periods of time (Miller et al. 2007; Dweck & Chiu et al. 1997; Levy et al. 1998; McConnell, 2001; Plaks et al. 2001). Teaching theories of Emotions could include multiple ‘contrived’ or real scientific articles, and the knowledge could also be delivered through various media such as videos, virtual reality simulations, and literary narratives (Chan & Black, 2006). For long-term interventions, judgment effects should be measured longitudinally over months or even years.
My theory about the Entity Condition changing people’s lay concepts of emotion to be more ‘trait-like’ thus leading to dispositional inference strategies, could benefit from more empirical support than that of Study 2. Making use of qualitative, and not just quantitative data, could help researchers grasp the specific nuances of the emotion conceptual change. For example, asking participants interview questions like ‘How did this scientific article change your beliefs about emotions, if at all?’, ‘If the scientific article about emotions changed your prior beliefs, did it contradict or augment them?’, ‘What specifically about this article changed your concept of emotions?’, ‘Was there anything about this article that wasn’t convincing?’, ‘Do you now believe that emotions cannot/can be changed? Do you think this will affect your perception of yourself and/or others? If so, how?’, ‘Does this article’s claims match your personal experiences with emotions? Why or why not?’, etc. These questions would also serve as additional manipulation checks. My only manipulation checks were two of the Reading Comprehension questions, which is potentially problematic. Therefore, qualitative data would serve two important purposes: 1. It would help the researcher analyze the specific ways that emotion concepts are evolving 2. It would provide the researcher with additional evidence that the manipulation actually imbued subjects with the intended emotion knowledge. Additionally, interview questions about the Judgment Task could be useful as well. This kind of qualitative information could help prove that participants in the Entity Condition are relying on dispositional inferences while those in the Incremental condition are relying on personal control variables during judgment. Questions for subjects can include, ‘Why did you place blame this amount of blame on the actor?’, ‘Why is this actor deserving (or not deserving) of blame?’, etc.

Another way to prove that the Entity Condition participants are relying on dispositional judgment inferences is by timing all of the participants on the Judgment Task. Because a dispositional inference strategy requires less cognitive effort than an inference strategy, we can assume that the Entity Condition participants would spend less time on the judgment task than subjects in the Incremental Condition (Kappes & Shikowski, 2013; Miller et al. 2007; Schroder et al. 2015; Gross & Thompson, 2007). Additionally, studies have shown that Entity theorists divert attention away from distressing social stimuli rather than engaging with them and using a more cognitive strategy during perception and judgment (Kappes &
Shikowski, 2013; Miller et al. 2007; Schroder et al. 2015; Gross & Thompson, 2007). Contrastingly, an Incremental theorist, who tends to take into account personal control variables (intentionality, foreseeability), would probably be using more cognitive effort and, consequently, take a longer time to make judgments. Thus, the cognitive effort, especially the sustained attention, required for either a dispositional inference vs. person control inference strategy could result in tangible differences in time to complete the judgment task. Researchers should consider using this method in their future implicit theories studies’ paradigms.

Another interesting future direction for this study is to measure subjects’ emotional responses to the judgment task. Prior research has established that Entity theorists of Psychological Attributes tend to feel more negative affect after social judgment tasks (Miller et al. 2007; Kappes et al. 2013). It would be interesting to see if this finding extends to the realm of Implicit Theories of Emotions. In my study, I could have asked participants about their emotional state prior to starting the study and after the judgment task (Miller et al. 2007; Kappes et al. 2013). Or, instead of asking them about their ‘general’ emotional state, we can ask them specifically how angry, sad, and/or afraid they are after the entire judgment task or after individual scenarios. Asking about specific emotions, but also allowing for elaboration, may result in a more targeted understanding of how emotional reactions may affect blame attributions and bias judgment.

Like I mentioned in the discussion of my Study 1, a limitation of Study 2 is that I only targeted ‘blame attribution’ as a dependent variable. However, just because a person tends to ‘blame more harshly’ this doesn’t mean that they will desire to retributively punish actors as well. It’s possible that someone who attributes a high amount of blame may still rather educate or rehabilitate an actor rather than punish them retributively. Therefore, in future studies, dependent variables such as ‘desire to retributively punish’ and ‘desire to rehabilitate’ and ‘desire to educate’ should be included along with judgment. The construct of social judgment is an informative one, but doesn’t always translate to how an individual might behave once they’ve observed another person’s transgressive or immoral behavior.

Lastly, a really obvious improvement to this study is that I could have added prior Implicit Theories of Morality as another relevant prior variable and covariate. These theories might interact with the
manipulation in a significant way, especially for the Moral Decision scenarios. Unfortunately, this obvious connection didn’t occur to me until after running my dissertation study.

**IMPLICATIONS FOR PEDAGOGY AND CLINICAL PRACTICE REVISITED**

‘More attention should be paid to naïve theories of emotion in the realm of social judgment. The reason being that, since we all consciously (and subconsciously) attempt to ‘understand and influence the emotions of others, the average person must use implicitly held rules or laws related to feeling states’ in social situations.’


Humans make use of implicit beliefs about emotion to (for better or for worse) understand, interact with, and manipulate others in social situations. Social Emotional Learning (SEL) educators and clinical therapists can play a pivotal role in helping people understand the ways in which their acquired emotions beliefs affect their emotional states, action tendencies and behaviors. This will help people become more mindful of their emotional world and regulatory capabilities. Let’s think of a real-world implicit theories example. I often hear my relatives say things like, ‘I am depressed, which means that I have a lack of dopamine in my brain. Therefore, I cannot control it when I’m sad. It’s my brain doing that. It’s my chemistry. Not me. There’s nothing I can personally do to make the sadness go away.’ First, depression is a psychopathology, and thus is not reflective of the general ephemerality of emotions (Gross & Thompson, 2007). However, this kind of reductively biological belief, while having some scientific basis, can skew people into having more of an Entity Implicit Belief of Emotions than an Incremental one. In fact, Tamir et al. (2007) found that being an Entity theorist of Emotion is associated with displaying symptoms of depression during the transition from high school to freshman year of college (Tamir et al. 2007; Cabello et al. 2014). My Study 2 showed that, regardless if someone is a prior Entity theorist of Emotion and Personality (and possibly/probably depressed), they can be taught the Incremental Theory of Emotions and consequently become less hostile in their judgments towards other people’s emotionally reactive, immoral, and accidental behaviors. By extension, these individuals might become less judgmental toward their own emotionally reactive behaviors, immoral, and accidental behaviors. However, to really explore this possibility in future research, judgment scenarios must be ‘self-focused’ and not just ‘other focused’ as they
were in my study. Blame attribution, after learning new scientific emotion beliefs, may not display the same patterns for both self and other judgment. Nevertheless, my results show promise that interventions aimed at beliefs about emotion can have tangible effects on judgment, and can potentially benefit clinical populations, such as those with depression.

In 2013, Dweck and Yaeger created an Implicit Theories of Personality intervention designed to reduce adolescent aggression in response to peer victimization and exclusion. They used multiple strategies and sessions to imbue students with the Incremental knowledge that personality can change and is malleable trait. However, what they likely didn’t realize was that they were also teaching the Incremental Implicit Theory of Emotions as well. During session 3 (out of 6 sessions) during the intervention, facilitators told the students:

“Scientists have discovered that people do things mainly because of the thoughts and feelings that they have—thoughts and feelings that live in the brain and that can be changed. When you have a thought or a feeling, the pathways in your brain that lead you to do one thing or another...by changing their brain’s pathways or their thoughts and feelings, people can actually improve how they behave after challenges and setbacks. So, it’s not that some people are ‘rejects’ or that other people are ‘bad’. Everyone’s brain is a ‘work in progress’.

- Yeager, Dweck, & Trzesniewski (2013)

As you can see, researchers were targeting Implicit Theories of Emotions before any studies had even attempted to establish a causal relationship between these beliefs and outcome variables like judgment and aggression. Yeager and Dweck were successful in reducing aggression in their study, but it seems likely that they didn’t realize, not only were they manipulating implicit theories of personality, but they were also influencing emotion theories. At that point we weren’t yet aware of how these beliefs affected judgment and behavior. We cannot continue to assume that all of the research that has been conducted on implicit theories of psychological attributes can transfer seamlessly to the domain of emotion theories. In fact, my correlation matrices indicate that prior emotions theories affect judgment differently than prior personality theories do. While my study does ultimately point to the potential promise of teaching the Incremental Theory of Emotions for social, clinical, and educational interventions of attenuating aggressive judgments (like prior implicit theories research), I believe that scientists, educators, and clinicians should proceed with
caution. More research is needed before we can take the results of my study and run with them. As mentioned earlier in this dissertation, there are aspects of the emotion system that can be controlled (regulatory strategies like cognitive reappraisal and attentional deployment are examples). However, there are also processes of emotion generation that we have less conscious access to (like our initial emotion appraisals). Thus, it is scientifically inaccurate to teach individuals, whether in a Social Emotional Learning context or a clinical context, that the emotion system is completely under our control. Teaching a very strong Incremental or Entity theory would ultimately be misleading. And, there may be benefits to teaching that some aspects of our emotional functioning are not under our conscious control. In fact, Lyashevsky, Cesarano, and Black (2017) found that teaching 18-25 year olds about the concept of appraisal (by accentuating its fast, automatic, and subconscious nature) led to an augmented acceptance of scenario actors’ emotional responses and action tendencies even when actors desired to act transgressively (but ultimately did not). So, it may be fruitful to investigate how learning about emotion concepts such as appraisal and reappraisal might be related to changes in implicit emotion beliefs and subsequent changes in self-acceptance/judgment and other-acceptance/judgment. With more research, we may come to realize that relying on only the Incremental theory for interventions and manipulations might be overly reductive and in some clinical or educational settings, may be harmful in some surprising ways. My suggestion would be that, to optimize the efficacy and benefits of implicit theories manipulations, these interventions should be accompanied by attribution training (Graham, 1997; Hudley & Graham, 1993; Weiner B, 1985; Weiner B, 1995). This kind of training would teach people to think about an actor’s mental state relative to their behavior, any external variables outside of the actor’s control, the actor’s awareness of their behavior’s consequences, etc. Therefore, we would be turning individuals’ focus toward personal control variables such as intentionality and foreseeability in social situations, in the hopes that they would rely less on dispositional inferences and perhaps even dodge being completely biased by their affective reactions. This kind of training has shown promise in reducing peer-directed aggression among male schoolchildren (Graham, 1997; Hudley & Graham, 1993).
Ultimately, my research leads to more empirical questions than concrete answers...and this is exciting! Nevertheless, there are some important takeaways. First, Implicit Theories of Emotion are causally related to Social Judgment, in particular Blame Attribution. Teaching an Incremental theory of Emotions attenuates harsh judgments in scenarios where actors are displaying emotionally reactive, immoral, or accidental transgressive behaviors, while teaching an Entity theory has the opposite effect. Also, this manipulation has more of an effect on prior Entity theorists of Personality for emotionally reactive behaviors than it does for individuals with prior Incremental theories. Therefore, this points to the importance of understanding what people’s lay beliefs are before teaching them theories of emotion for some clinical, social, or educational benefit. Additionally, Implicit Theories of Emotions interventions could be potentially beneficial for individuals who display symptoms of depression (particularly adolescents), since there is a link between having an Entity theory and being depressed. However, educators and clinicians should consider teaching more comprehensive models of emotion functioning, which include concepts that reflect a more nuanced view of ‘emotion control’ (such as appraisal and reappraisal). Lastly, it appears that teaching a very strong Entity theory of emotions may have the effect of changing people’s concept of emotions to something that is less akin to a mental state and more akin to a stable trait, thus affecting judgments similarly to the way that beliefs about psychological attributes do.
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APPENDIX A: Judgment Scenarios for Study 1 [different from Study 2]

Negative [emotionally reactive]

(Anger and Frustration) Early one evening, a neatly dressed man runs up to a city bus station in hopes of being on time for an interview. The bus pulls away just as the man arrives, without taking notice of the man’s attempts to flag it down. Left behind, the man curses at the bus driver, and throws his briefcase to the ground close to a few other pedestrians.

(Anger and Frustration) An instructor is teaching a large class during the fall semester. One of her students sitting in the back row asks a great deal of questions, raising his hand every few minutes. One day, the student asks a long series of questions during a particularly complicated lecture. The instructor slams her textbook shut and yells at the student saying, ‘I need you to stop asking so many unnecessary questions and I need you to leave the classroom...now!’

(Anger and Frustration) A mother and her small daughter are walking through their neighborhood on a chilly evening. The mother is in a hurry to return home, but her child keeps stopping to point at things in the store windows. The mother yanks the child by the hand, for several blocks, to get her moving.

(Sadness and Anger) A man enters his apartment and notices that most of his girlfriend’s belongings are gone. He then hears a voicemail from her saying that she no longer loves him. The man begins to cry and eventually kicks the wall multiple times leaving several large holes.

(Embarrassment and Anger) A young student sits in math class after lunch and starts to feel sick. Eventually, she vomits in front of her classmates. She notices her peers watching with involuntary shock and disgust. She begins to cry and yells at her classmates saying, ‘What are you staring at you cows? Are you so dumb you’ve never seen someone get sick before?’

Negative [moral decision]
(Pride) At a summer dinner thrown by a wealthy friend, a poet gets praised by the host for a poem most of which was written by someone else. A number of guests add their own compliments. The poet basks in the glow of this praise and does not disclose the true authorship of the piece.

(Fear) A woman sits down to take her career’s certification exam; she has failed once before. As she begins to answer questions, her anxiety increases steadily. She begins to peer at her neighbor’s answers and copy several of them. She does this continually until she finishes the exam.

(Envy and Anger) A man notices that the woman whom he secretly loves is giving more flirtatious attention to his best friend, Tom, during a conversation. In desperation, the man starts joking about all the womanizing Tom has been known to do over the years.

Neutral

A jogger is making his way through a park at an easy pace. It is dusk. Families are gathering at the picnic areas with food and music. The jogger notices that the shoelaces on his left sneaker are untied, but does not stop to tie them.

Sitting on a bench by a lake, a woman reads the paper. Small birds skip around nearby, looking for crumbs. The woman realizes that she is cold, but does not put on her jacket.

On a brisk, sunny morning a man gets out of his car and heads toward an office building. He is in a hurry to get to the tenth floor. But though the elevator is working, he takes the stairs instead.

A woman sits alone in an office. It is after 10pm. She is concentrating on her work. She gets a phone call, glances to see who it is, but does not pick up.

APPENDIX B: Emotion Regulation Questionnaire (ERQ) taken from Gross & John (2003) [Study 1]

The Emotion Regulation Questionnaire is designed to assess individual differences in the habitual use of two emotion regulation strategies: cognitive reappraisal and expressive suppression.

Instructions and Items

We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale:

1. **When I want to feel more positive emotion (such as joy or amusement), I change what I’m thinking about.**

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2. *I keep my emotions to myself.*
3. *When I want to feel less negative emotion (such as sadness or anger), I change what I’m thinking about.*
4. *When I am feeling positive emotions, I am careful not to express them.*
5. *When I’m faced with a stressful situation, I make myself think about it in a way that helps me stay calm.*
6. *I control my emotions by not expressing them.*
7. *When I want to feel more positive emotion, I change the way I’m thinking about the situation.*
8. *I control my emotions by changing the way I think about the situation I’m in.*
9. *When I am feeling negative emotions, I make sure not to express them.*
10. *When I want to feel less negative emotion, I change the way I’m thinking about the situation.*

Note: Do not change item order, as items 1 and 3 at the beginning of the questionnaire define the terms “positive emotion” and “negative emotion”.

Scoring (no reversals): Reappraisal Items: 1, 3, 5, 7, 8, 10; Suppression Items: 2, 4, 6, 9.

**Appendix C: Pilot Data: Semantic Categorization Distributions for Judgment Scenarios [Study 2]**

Participants from Teachers College Columbia University were recruited to ensure the correct semantic categorizations for Study 2’s judgment scenarios (N= 43). Below are all of the scenarios from the pilot, some of which were ultimately omitted because the data didn’t indicate strong agreements with the intended semantic category. Additionally, the pilot data led to some diction changes in the scenarios to create stronger agreements with the intended semantic category. These omissions and changes are indicated below. After all the changes and omissions, 4 scenarios per category were left for Study 2.

**Negative (Emotionally Reactive) Scenarios**
These scenarios were meant to fall mostly (above 75%- at least 28 participants) under the ‘negative’ semantic categorization, but also display more of a spread, which includes a few ‘accidental’ or ‘filler/neutral’ categorizations because emotionally reactive behaviors are generally perceived as being less ‘controllable’ and ‘intended’ reactions than Moral Decision negative behaviors.

On a fall afternoon, a woman overhears some people at a restaurant expressing political views very different from her own. The woman feels a growing disgust, and finally blurts out, “You’re all complete idiots and should keep your mouths shut!”

Which of the following best categorizes this woman’s behavior?
Early one evening, a neatly dressed man runs up to a city bus station in hopes of being on time for an interview. The bus pulls away just as the man arrives, without taking notice of the man’s attempts to flag it down. Left behind, the man curses at the bus driver and throws his briefcase to the ground close to a few other pedestrians.

Which of the following best describes the man's behavior?
An instructor is teaching a large class during the fall semester. One of her students sitting in the back row asks many questions, raising his hand every few minutes. One day, the student asks a long series of questions during a particularly complicated lecture. The instructor slams her textbook shut and yells at the student saying, ‘I need you to stop asking so many unnecessary questions and I need you to leave the classroom...now!’

Which of the following best describes the instructor's behavior?

A young student sits in math class after lunch and starts to feel sick. Eventually, she vomits in front of her classmates. She notices her peers watching with involuntary shock and disgust. She begins to cry and yells at her classmates saying, ‘What are you staring at you cows? Are you so dumb you’ve never seen someone get sick before?’

Which of the following best describes the young student's behavior?
A man enters his apartment and notices that most of his girlfriend’s belongings are gone. He then hears a voicemail from her saying that she no longer loves him. The man begins to cry and eventually kicks the wall multiple times leaving several large holes.

Which of the following best describes the man's behavior?

Negative (Moral Decision) Scenarios
Moral Decision Scenarios will be semantically categorized as being more ‘negative’ than the Emotionally Reactive scenarios because there is more perceived intentionality and foreseeability of consequences. For scenarios to be used in study 2, they had to display at least an 85% ‘negative’ categorization [32 participants].

An author is given a very tight deadline by his publishing manager. He hasn’t produced publishable work in months and is feeling desperate and hopeless. One night, the author finds a riveting short story written by an unknown amateur on an online blog. He decides to use most of the story, word for word, and call it his own. He submits the piece to his manager and never contacts the amateur to discuss shared credit.

Which of the following best describes the author's behavior?

![Bar chart showing sentiment distribution]

A woman sits down to take her career’s certification exam; she has failed once before. As she begins to answer questions, her anxiety increases steadily. She decides to peer at her neighbor’s answers and copies several of them. She does this continually until she finishes the exam.

Which of the following best describes the woman's behavior?
A man notices that the woman whom he secretly loves is giving more flirtatious attention to his best friend, Tom, during a conversation. In desperation, the man starts joking about all the womanizing Tom has been known to do over the years.

Which of the following best describes the man's behavior?
Jim is an actor, and he shares an apartment with his friend, Frank, who is also an actor. They are getting ready to go to bed. Both friends are auditioning for the same role early in the morning. This is Jim’s dream role, but Frank is considerably more recognized in the industry by casting agents. Nervous and frustrated, Jim decides to secretly change Frank’s alarm settings so that Frank is late to the audition.

Which of the following best describes Jim's behavior?

A young executive learns that a product they were responsible for has a defect and is going to be recalled, likely costing their company significant amounts of money. The executive is terrified of the consequences and decides to try to shift the blame on their deputy when explaining the situation to the company CEO.

Which of the following best describes the young executive's behavior?
Neutral ‘filler’ scenarios

These scenarios were meant to be semantically categorized as ‘neutral’. Neutral scenarios generally tend to be perceived less concretely and so to be kept in study two, they had to show at least a 70% [27 participants] ‘neutral’ categorization.

A jogger is making his way through a park at an easy pace. It is dusk, and families are gathering at the picnic areas with food. The jogger notices that the shoelaces on his left sneaker are untied. He stops jogging and crouches down to tie his shoes.

Which of the following best describes the jogger’s behavior?

![Graph showing categorization of scenarios]

To decrease the ‘positive’ categorization of this neutral scenario, I made the following change:
A jogger is making his way through a park at an easy pace. It is dusk, and families are gathering at the picnic areas with food. He looks at the time on his phone, notices that it's been 15 minutes since he left home, and continues jogging.

Sitting on a bench by a lake, a woman reads the paper. The woman realizes that she is a bit cold, but does not put on her jacket.

Which of the following best describes the woman's behavior?
It is morning, and a man gets out of his car and heads toward an office building. He is in a hurry to get to the tenth floor, but the elevator is taking too long to arrive. After another minute of waiting, the man decides to take the stairs instead.

Which of the following best describes the man's behavior?

A woman sits alone in an office. It is after 10pm and she is concentrating on her project. Eventually, her office phone begins to ring, but she does not pick up.

Which of the following best describes the woman's behavior?
A man finishes his evening workout at the local gym. Upon leaving the locker room, he checks his bag for water and a snack. He finds a granola bar and begins to take several bites.

Which of the following best describes the man's behavior?

To decrease the ‘positive’ nature of this neutral scenario, I made the following change:
A man finishes his evening commute from work. Upon leaving the train station, he checks his bag for water and a snack. He finds a granola bar and begins to take several bites.

Accidental scenarios  
*These scenarios were meant to be semantically categorized (at least 80%-30 participants) as ‘accidental’.*
A woman is enjoying the view from a balcony at a party. There is a glass of water sitting on the ledge of the balcony railing in front of her. After a few minutes, she leans over the railing to get a better view. Without warning, a friend suddenly grabs the woman from behind. Startled, the woman knocks over the glass of water, which shatters on the sidewalk below injuring a pedestrian.

Which of the following best describes the woman's behavior?

A man carries a package intended for his best friend to the post office. The friend is desperately awaiting the arrival of this package. After the man leaves, the post office incorrectly sorts the package. The friend never receives it.

Which of the following best describes the man's behavior?
A teenager is walking down the school hallway with several books in her hand. The tiles beneath her feet happen to be wet and she trips, falling on another student in front of her. They both hit the ground and acquire several scrapes and bruises.

Which of the following best describes the teenager's behavior?

A young woman is supposed to call a prospective employee for a phone interview. But when the time comes to make the call she discovers her phone has stopped working. The potential employee’s contact
information was in the phone. She is unable to get in touch with the person, who is left waiting with no word of what went wrong.

Which of the following best describes the young woman's behavior?

A man comes to stay with a friend. The friend owns a house with an unfenced backyard and a beloved dog. The young man goes out into the backyard, closing the door behind him. However, the door to the backyard has a bad latch. It slips open behind him, and the dog escapes.

Which of the following best describes the man's behavior?
D. Study 2: MTURK SURVEY (Survey 1 + Survey 2)

Dissertation Study

Start of Block: Intro Block: Cover Story

Cover Story

You are invited to participate in two short surveys about human emotions and behavior. The two surveys are unrelated and will take a total of 15-20 minutes to complete. Each survey individually takes about 7-10 minutes. In Survey 1, you will be asked to answer questions based on your beliefs about personality and emotions. Then, you will read a scientific article related to these topics and respond to questions about the article. In survey 2, you will be asked to respond to fictional scenarios for a moral philosophy research database. All of your responses will be anonymized.

CONSENT FORM

By clicking the 'Next' button you agree to participate in the 2 surveys based on the Informed Consent information provided below. You also affirm that you have not taken this study previously. If you realize that you have, please exit the survey.

INFORMED CONSENT

Introduction You are invited to participate in two short surveys about human emotions and behavior. The two surveys will take a total of 15-20 minutes to complete. Each survey individually takes about 7-10 minutes.

What Will I Be Asked to Do? Survey 1: You will be asked to answer questions based on your beliefs about personality and emotions. Then, you will read a scientific article related to these
topics and respond to questions about the article. Survey 2: You will be asked to respond to fictional scenarios for a research database.

**What Possible Risks or Discomforts Should I Expect?** Participating in these surveys involves very minimal risk, such as encountering hypothetical scenarios that involve characters exhibiting emotional reactions.

**What Possible Benefits Should I Expect?** Participating in these surveys is not likely to provide any substantive benefits to you, aside from monetary compensation.

**Will I Be Paid For Participating?** Yes. As per the terms provided via Amazon Mechanical Turk, you will be compensated for your participation.

**When Are the Studies Over? Can I Stop Early?** The surveys are over when you have completed all the online activities. However, you can stop at any time even if you haven’t finished. Note, however, that due to the nature of the Amazon Turk platform, you can only be paid if you submit your work from both surveys in a complete state.

**Protection of Your Confidentiality** Your participation is anonymous. No personally identifiable data will be shared with anyone outside the research team. All data will be password protected.

**How Will the Results Be Used?** The results of these two surveys may be published in journals and presented at academic conferences. Your name or any identifying information about you will not be published.

**Who Can Answer My Questions About The Surveys?** If you have any questions or concerns about either or both surveys, you can communicate with the Principal Investigator, Melissa Cesarano, at mmc2223@tc.columbia.edu. If you have questions or concerns about your rights as a research subject, you should contact the Institutional Review Board (IRB) (the human research ethics committee) at 212-678-4105 or email IRB@tc.edu. Or you can write to the IRB at Teachers College, Columbia University, 525 W. 120th Street, New York, NY 10027. The IRB is the committee that oversees human research protection for Teachers College, Columbia University.

PARTICIPANT’S RIGHTS * I have read the above information regarding the surveys. * I understand that my participation is voluntary. I may refuse to participate or withdraw participation at any time without penalty. * Any information derived from the research surveys that personally identifies me will not be voluntarily released or disclosed without my separate consent, except as specifically required by law. By clicking Next you agree to take part in the surveys.

End of Block: Intro Block: Cover Story

120
Survey 1
Emotion and Personality beliefs;
Scientific Article

In this survey you will be asked a few questions about your beliefs on human emotions and personality. Then, you will read a published scientific article about emotions and answer some questions regarding the article.

ITE 1 (I) Everyone can learn to control their emotions.

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<tr>
<th>Strongly disagree (1)</th>
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Please indicate the extent to which you agree with the statement above. (1)
ITE 2 (I) If they want to, people can change the emotions they have.

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Please indicate the extent to which you agree with the statement above. (1)

___   ___   ___   ___   ___   ___   ___   ___

ITE 3 (E) No matter how hard they try, people can't really change the emotions that they have.

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Please indicate the extent to which you agree with the statement above. (1)

___   ___   ___   ___   ___   ___   ___   ___
ITE 4 (E) The truth is, people have very little control over their emotions.  

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Please indicate the extent to which you agree with the statement above. (1)

End of Block: Part 1: Emotion Beliefs

Start of Block: Part 1: Personality Beliefs

ITP 1 (E) The kind of person someone is is something basic about them and it can't be changed very much.  

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Please indicate the extent to which you agree with the statement above. (1)
ITP 2 (E) People can do things differently, but the important parts of who they are can't really be changed.

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Please indicate the extent to which you agree with the statement above.

(1)

ITP 3 (E) Everyone is a certain kind of person and there is not much they can do to really change that.

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Please indicate the extent to which you agree with the statement above.

(1)
How much control do we really have over our emotions?

We experience emotions every day throughout the entirety of our lives. In fact, every event we perceive or interaction we have is fundamentally emotional in nature. And emotions are the driving force behind our thoughts and actions. Recently, scientists at the 2017 Convention for Emotions and Mind in Geneva, Switzerland presented extensive evidence demonstrating that people are less able to control and change their emotions than previously believed (Kramer & Baumann, 2014; Markz & Li, 2015-2016; Ilyashe & Duboule et al. 2016). The researchers explained that it is incredibly difficult to deliberately control our experience of emotions, in particular, negative emotions like fear or anger once our minds have interpreted the relevant stimulus (Kramer & Baumann, 2014; Markz & Li, 2015-2016; Ilyashe & Duboule et al. 2016). This new evidence comes from neuroscience, specifically brain imaging studies that looked at the functional activation of brain regions as people were experiencing emotions.

In their landmark studies, Jane Markz & Emily Li (2015, 2016) demonstrated that humans are largely unable to attenuate negative affect. The researchers had participants in the experimental and control groups view several aversive images. During this, the experimental group attempted to control their emotions either by reinterpreting the images (thinking of them in a more ‘positive’ way) or by psychologically ‘distancing’ themselves from the images (pretending they are a ‘fly on the wall’ or ‘observing without judgment’). Conversely, the control group was asked to simply view the aversive images in a passive way. Both groups underwent fMRI brain scanning while viewing the images. The results emphasized that while a few of the participants in the experimental group reported that they felt some short-term lessening of negative emotions, their emotional brain regions, like the amygdala and insula, and autonomic responses, like heart rate, showed the opposite to be true. Therefore, even though some subjects ‘felt’ like they were changing their emotional state, their brains and bodies showed no sign of the negative emotions actually going away. Additionally, the brain regions associated with
negative emotions continued to be active even while subjects viewed several minutes of "neutral" images in between each aversive image.

John Ilyashev & Lisa Duboule et al. (2016) were able to replicate the results of Markz & Li's landmark experiments, and they also asked the question whether the inability to consciously control negative emotions holds in the long-term as well. It is possible that the neural effects of conscious regulation only emerge after a longer period of time. So, Ilyashev & Duboule employed the same experimental methods and procedures as Markz & Li except that they extended the experiment to last several weeks. The fMRI and autonomic measures demonstrated the same level of negative emotion in both groups, even though the experimental group had consciously attempted to control their negative emotions throughout (Ilyashev & Duboule et al. 2016). In fact, over time the participants reported subjectively feeling more negative affect.

The topic of emotion control and malleability in the realm of psychology is not new. There have been many studies, employing both behavioral and neuroscientific paradigms, in the past several decades that have examined this issue. These studies originally produced mixed results, with some claiming that humans have more control over their emotions and others claiming otherwise. However, a new meta-analysis, a statistical analysis that combines the results of numerous scientific studies, bolsters the claim made at the 2017 Convention for Emotions and Mind (Kelley, Brodie, Singh, & Champlain, 2017). By incorporating updated standards for statistically evaluating outcomes and by using the latest analytical software to pool results, this meta-analysis of 237 studies found that people have much less control over a wide range of both positive and negative emotions than originally suggested by the research (Kelley et al. 2017).

Emotions affect our thoughts, decision making, and ultimately our behavior. Therefore, a deeper understanding of emotions can help us come to a better understanding of our actions. These studies offer strong evidence that while it may sometimes feel like we are the masters of our emotional experiences, neuroscience is uncovering the true difficulty of controlling and changing our emotional responses at will. The findings have broad implications for how we think about emotion and behavior in clinical, social, and legal contexts, but also for how we think about emotions in our day to day lives.
Q1 E In a sentence or two please answer, what does this article claim about our ability to control and change emotions?

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

Page Break

Q2 E True or False: in the studies described by the article, researchers employed fMRI to conduct scans of participants’ brain activity to obtain their results.

☐ True (1)

☐ False (2)

Page Break

Q3 E True or False: This article claims that we have very little control over our emotions (negative emotions in particular).

☐ True (1)

☐ False (2)

Page Break
Q4 E Fill in the blank: this article claims that we ________ change our emotions (negative emotions in particular).

   O Are able to (1)

   O Are mostly unable to (2)

Page Break

Q5 E In a few sentences, please write about a time in your life when it seemed like you had very little control over your emotions.

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

Page Break

Q6 E In a few sentences, please write about a time in your life when you witnessed someone else display very little control over their emotions.

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End of Block: Part 1: Scientific Article (Entity)

Start of Block: Part 1: Scientific Article (Incremental)
Humans are Able to Control and Change Their Emotions More Than Previously Believed

By Martha J. Clark

How much control do we really have over our emotions?

We experience emotions every day throughout the entirety of our lives. In fact, every event we perceive or interaction we have is fundamentally emotional in nature. And emotions are the driving force behind our thoughts and actions. Recently, scientists at the 2017 Convention for Emotions and Mind in Geneva, Switzerland presented extensive evidence demonstrating that people are able to control and change their emotions more than previously believed (Kramer & Baumann, 2014; Markz & Li, 2015-2016; Ilyashev & Duboule et al. 2016). The researchers explained that we are able to deliberately control our experience of emotions, in particular, negative emotions like anger or fear once our minds have interpreted the relevant stimulus (Kramer & Baumann, 2014; Markz & Li, 2015-2016; Ilyashev & Duboule et al. 2016). This new evidence comes from neuroscience, specifically brain imaging studies that looked at the functional activation of brain regions as people were experiencing and regulating emotions.

In their landmark studies, Jane Markz & Emily Li (2015, 2016) demonstrated that humans have considerable ability to attenuate negative affect. The researchers had participants in the experimental and control groups view several aversive images. During this, the experimental group attempted to control their emotions either by reinterpreting the images (thinking of them in a more ‘positive’ way) or by psychologically ‘distancing’ themselves from the images (pretending they are ‘fly on the wall’ or ‘observing without judgment’). Conversely, the control group was asked to simply view the aversive images in a passive way without any regulatory attempts. Both groups underwent fMRI brain scanning while viewing the images. The results emphasized that participants in the experimental group reported feeling a short-term lessening of negative emotions. Scans of these subjects’ emotional brain regions such as the amygdala and insula, and autonomic responses like heart rate, supported the claim that the participants were able to consciously control their negative emotions. Additionally, the brain regions
associated with negative emotions continued to be less active while subjects viewed several minutes of 'neutral' images in between each aversive image.

John Ilyashev & Lisa Duboule (2016) were able to replicate the results of Markz & Li’s landmark experiments, and they also asked the question whether the ability to control negative emotions holds in the long-term as well. It is possible that the neural effects of conscious regulation are not sustained over a longer period of time. So, Ilyashev & Duboule employed the same experimental methods and procedures as Markz & Li except that they extended the experiment to last several weeks. The fMRI and autonomic measures demonstrated that the experimental group still had greater control over their emotions (Ilyashev & Duboule et al. 2016). In fact, over time the participants became even better at controlling and changing their emotional states, and they reported subjectively feeling less negative affect.

The topic of emotion control and malleability in the realm of psychology is not new. There have been many studies, employing both behavioral and neuroscientific paradigms, in the past several decades that have examined this issue. These studies originally produced mixed results, with some claiming that humans have less control over their emotions and others claiming otherwise. However, a new meta-analysis, a statistical analysis that combines the results of numerous scientific studies, bolsters the claim made at the 2017 Convention for Emotions and Mind (Kelley, Broglio, Singh, & Champlain, 2017). By incorporating updated standards for statistically evaluating outcomes and by using the latest analytical software to pool results, this meta-analysis of 237 studies found that people have much more control over a wide range of both positive and negative emotions than originally suggested by the research (Kelley et al. 2017).

Emotions affect our thoughts, decision making, motivation, and ultimately our behavior. Therefore, a deeper understanding of emotions can help us come to a better understanding of our actions. These neuroscience studies offer strong evidence that we can control and shape our emotional experiences. The findings have broad implications for how we think about emotion and behavior in clinical, social, and legal contexts, but also for how we think about emotions in our day to day lives. It turns out that we are the masters of our emotions after all.

Q1 In a sentence or two please answer, what does this article claim about our ability to control and change emotions?
Q2 I True or False: in the studies described by the article, researchers employed fMRI to conduct scans of participants’ brain activity to obtain their results.

- True (1)
- False (2)

Q3 I True or False: this article claims that we have a lot of control over our emotions (negative emotions in particular).

- True (1)
- False (2)

Q4 I Fill in the Blank: this article claims that ________ to change our emotions (negative emotions in particular).

- We are able (1)
- We are mostly unable to (2)

Q5 I In a few sentences, please write about a time in your life when it seemed like you had a high level of control over your emotions.

________________________________________________________________
________________________________________________________________
Q6. In a few sentences, please write about a time in your life when you witnessed someone else display a high level of control over their emotions.

End of Survey 1
Thank you for your responses. You have reached the end of Survey 1! Please click the arrow below to continue to Survey 2.

End of Block: Survey1 End

Start of Block: Survey2 Intro
Survey 2
Fictional Scenarios

End of Block: Survey2 Intro
Judge
In this survey, you will respond to several fictional scenarios. We want to understand how participants react to these scenarios. Please go with your ‘gut feeling’ when responding. Your responses will be used to help researchers create a database of scenarios for future psychology and cognitive science research. After responding to the scenarios, you will answer a few questions about yourself.
There are no right or wrong answers. And again, all data are anonymized and kept confidential.

Q1J ER On a fall afternoon, a woman overhears some people at a restaurant expressing political views very different from her own. The woman feels a growing disgust, and finally blurts out, “You’re all complete idiots, and you morons should keep your mouths shut!”
How blameworthy is the woman for her actions?

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Q2J ER Early one evening, a neatly dressed man runs up to a city bus station in hopes of being on time for an interview. The bus pulls away just as the man arrives, without taking notice of the man’s attempts to flag it down. Left behind and upset, the man curses at the bus driver and throws his briefcase to the ground close to a few other pedestrians.
How blameworthy is the man for his actions?

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133
An instructor is teaching a large class during the fall semester. One of her students sitting in the back row asks many questions, raising his hand every few minutes. One day, the student asks a long series of questions during a particularly complicated lecture. Irritated, the instructor slams her textbook shut and yells at the student saying, ‘I need you to stop asking so many unnecessary questions and I need you to leave the classroom...now!’

How blameworthy is the instructor for his actions?

1= not at all blameworthy; 9= completely blameworthy

Q4J ER A young student sits in math class after lunch and starts to feel sick. Eventually, she vomits in front of her classmates. She notices her peers watching with involuntary shock and disgust. She begins to cry and screams at her classmates saying, ‘What are you staring at, you cows? Are you so dumb you’ve never seen someone get sick before? I hate all of you so much!’

How blameworthy is the young student for her actions?

1= not at all blameworthy; 9= completely blameworthy

An author is given a very tight deadline by his publishing manager. He hasn’t produced publishable work in months and is feeling desperate and hopeless. One night, the author finds a riveting short story written by an unknown amateur on an online blog. He decides to use most of the story, word for word, and call it his own. He submits the piece to his manager and never
contacts the amateur to discuss shared credit.

How blameworthy is the author for his actions?

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Q6J MD A woman sits down to take her career’s certification exam; she has failed once before. As she begins to answer questions, her anxiety increases steadily. She decides to peer at her neighbor’s answers and copies several of them. She continues this strategy until she finishes the exam.

How blameworthy is the woman for her actions?

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Q7J MD Jim is an actor, and he shares an apartment with his friend, Frank, who is also an actor. They are getting ready to go to bed. Both friends are auditioning for the same role early in the morning. This is Jim’s dream role, but Frank is considerably more recognized in the industry by casting agents. Nervous and frustrated, Jim decides to secretly change Frank’s alarm...
settings so that Frank is late to the audition.

How blameworthy is Jim for his actions?

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Q8J MD A young executive learns that a product he was responsible for has a defect and is going to be recalled, likely costing their company significant amounts of money. The executive is terrified of the consequences and decides to try to shift the blame on their deputy when explaining the situation to the company CEO.

How blameworthy is the young executive for his actions?

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Q9J N A jogger is making his way through a park at an easy pace. It is dusk, and families are gathering at the picnic areas with food. He looks at the time on his phone, notices that it's been
15 minutes since he left home, and continues jogging.
How blameworthy is the jogger for his actions?

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Q10J N Sitting on a bench by a lake, a woman reads the paper. The woman realizes that she is a bit cold, but does not put on her jacket.
How blameworthy is the woman for her actions?

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Q11J N A woman sits alone in an office. It is after 10 pm and she is concentrating on her project. Eventually, her office phone begins to ring, but she does not pick up.
How blameworthy is the woman for her actions?

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Q12 J N  A man finishes his evening commute from work. Upon leaving the train station, he checks his bag for water and a snack. He finds a granola bar and begins to take several bites. How blameworthy is the man for his actions?

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Q13 J A A woman is enjoying the view from a balcony at a party. There is a glass of water sitting on the ledge of the balcony railing in front of her. After a few minutes, she leans over the railing to get a better view. Without warning, a friend suddenly grabs the woman from behind. Startled, the woman knocks over the glass of water, which shatters on the sidewalk below injuring a pedestrian.

How blameworthy is the woman for her actions?

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Q14 J A A teenager is walking down the school hallway with several books in his hand. The tiles beneath his feet happen to be wet and he trips, falling on another student in front of him. They
both hit the ground and acquire several scrapes and bruises.

How blameworthy is the teenager for his actions?

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Q15J A A young woman is supposed to call an important prospective employee for a phone interview. However, right before the call her phone stops working. The potential employee’s contact information was on the phone. So, she is unable to get in touch with the person in time for the interview. They're left waiting with no word of what went wrong.

How blameworthy is the young woman for her actions?

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Q16J A A man comes to stay with a friend. The friend owns a house with an unfenced backyard and a beloved dog. The young man goes out into the backyard, closing the door behind him. However, the door to the backyard has a bad latch. It slips open behind him, and the dog escapes.

How blameworthy is the man for his actions?

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Age
What is your age?
________________________________________________________________

Gender
What is your gender?

 Male (1) ... Other (3)

Education Level
Education (highest level achieved):

 None (1) ... Graduate (4)

Psych Exposure
Exposure to psychology course(s) (highest level achieved):

 None (1) ... Graduate Psych Degree (6)

Suspicion Probe: In a few sentences, please explain what you believe to be the purpose(s) of Survey 1 and the purpose(s) of Survey 2.

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
Q81 Have you previously participated in an MTurk study or studies that are very similar or identical to any of the studies you just completed?

- I HAVE previously participated in a VERY similar study (1)
- I have previously participated in this exact study (2)
- I HAVE NOT participated in this study or a VERY similar study (3)

End of Block: Demographics and Suspicion Probe

Start of Block: Study End and Debrief

Q80 You have now finished Survey 2! Thank you for participating! When you have finished reading the following statement, please click the arrow below to record your responses and receive the compensation code.

DEBRIEF: Now that you've finished the surveys, we can explain their true purpose! In fact, all of the preceding surveys were part of a single study and the scientific articles that you read were not real. We were interested in whether temporarily manipulating people's beliefs about emotion controllability and malleability might affect social cognition in the form of blame attribution. We theorized that an individual's prior theories about emotion and personality might affect the efficacy of the manipulation and that the manipulation's effects would vary across scenarios with different levers of actor intentionality and foreseeability.

If you want any more information on these two surveys or have any questions about compensation, please email mmc2223@tc.columbia.edu.

End of Block: Study End and Debrief
APPENDIX E: Q-Q Plots for Multivariate Normality Assumption (Study 2)

Emotionally Reactive Judgment Scenarios

Moral Decision Judgment Scenarios
Neutral Judgment Scenarios

Accidental Judgment Scenarios