Historical Repetition and Development Narratives in Guyana’s Coastal Drainage and Irrigation System

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Abstract
This article takes a critical look at the historiography of development in Guyana as it appears in archival materials and the primary (governmental and non-governmental reports) and secondary (scholarly) literature. I ask why development schemes were so heavily focused on drainage and irrigation (D&I), how this focus was justified, and whether there is another way to think about the possibilities for development in Guyana in the future. It is argued that, in Guyana, various development actors attempt to relocate what they perceive to be the previous regimes failures through discourses on racial and political difference. Their solutions to these problems are often subsequently portrayed as corrections to the failures of the previous regime despite the significant repetition of certain themes. Finally, it offers insight into how these development projects might be reconsidered.

Keywords: Drainage and irrigation, agriculture, Guyana, planning, historiography, repetition

“One of [British Guiana’s] fundamental needs is the improvement of the main drainage system in the coastal areas without which no progress towards the adoption of a better system of agriculture will be possible.” – Extract from secret despatch from Sir Wilfrid Jackson to the Secretary of State for the Colonies, dated 2 April, 1940.

“Lack of maintenance of the [drainage and irrigation] system is the main constraint mentioned by farmers and is the most frequently cited reason for land abandonment” – Region VI Sub-Regional Land Use Plan, September 2004.

1. Introduction

When Karl Marx famously stated that “all great world historic facts and personages appear, so to speak, twice […] the first time as tragedy, the second time as farce” (Marx, 1852) he seemingly failed to account for the necessary double role that the effects of these reappearances would play. For many, the reappearance of historic facts is always, at least in part, a tragedy. This is especially true when experiences of “underdevelopment” collide with relatively recent experiences of colonialism and are read as mutually-occurring processes (cf. Rodney, 1972). As a result, the third-world development experience requires an understanding of the
Consilience

Mullenite: Guyana’s Coastal Drainage

lasting political, economic, and social effects of colonialism in its many forms. It has been made clear by Allan Pred (2004) and others (e.g., Haraway, 1989; Mbembe, 2001; Stoler, 2013; Trouillot, 1995) that history (and particularly colonial history) is not a sequence of events that have happened only in the past with no bearing on the present, nor is it ever a complete and factual representation of what has happened. Instead, history is an on-going process that both structures and is structured by the present and by the systems of power when events were transcribed and when they are interpreted. That is to say, history is an on-going process of transcription and translation.

For Guyana, a country on South America’s Caribbean rimland, this means many things but, importantly, it has meant that development schemes focusing on increasing agricultural production have been transcribed and read in ways that allow for repetition, not only in their overarching goals (e.g. to grow more food domestically) but also in the ways in which they plan on achieving these goals. This has meant expansion of the country’s drainage and irrigation (D&I) system. In each decade beginning with the 1940s, references to major coastal D&I projects can be found throughout the colonial and postcolonial archives as well as in the other governmental and non-governmental literatures on economic development in Guyana. In this article, I ask why development schemes were so heavily focused on D&I, how this focus was justified, and whether there is another way to think about the possibilities for a more sustainable development in Guyana’s future. To answer this, I critically examine the historiography of development in Guyana as it appears in archival materials and the primary and secondary (scholarly) literature. I argue that, in Guyana, various development actors attempt to relocate what they perceive to be the previous regimes failures through discourses on racial and political difference. Their solutions to these problems are often subsequently portrayed as corrections to the failures of the previous regime. What results is a nearly complete repetition of the schemes they claim have failed. Because this model of development rests on the breakdown of the previous attempts, it is inherently unsustainable. To overcome the challenges associated with this repetition-based system of development, new ways of understanding the politics of infrastructure and the vibrancy of nature are required. By viewing D&I infrastructure as political, and by giving nature agency, sustainable development practice will be able to more adequately account for them in their design and implementation.

I am not the first to note the repetition of economic factors of development in Guyana. Kenneth Jameson (1980) spoke of the “repetition to most measures of performance in the economy,” particularly as they dealt with international trade deals with the IMF (p. 77). While Jameson offers important insights into the role of transnational trade agreements in the postcolonial era, his work does not speak directly to how these affected development initiatives on the coast. That is, while he looks at the goals of development from a multinational financial perspective, he does not explore the means by which these goals are to be met. This paper takes the idea of repetition further. It is not just that development’s ends and the actors are being repeated, but the means are as well.
2. Situating Guyana

Before delving into the developmental historiography, it is important to understand a few, somewhat unique, facets of Guyana’s history, and thus its present state. This is the historical geography of Guyana’s population density, the country’s reason for relying so heavily on drainage and irrigation, and the political conditions Guyana has experienced through its history. While many authors have focused on certain of these aspects in regards to Guyana’s development, often mixing them (e.g. Hintzen, 1989; Hope, 1985; Mistry et. al., 2009; Pierce, 1984; Williams, 1991; etc.), there has yet to be what might be called a historical political ecology of Guyana. I attempt to outline one below, but it is not meant to be in-depth.

Currently home to 90 per cent of the country’s population, the coastal plain remained largely uninhabited until permanent colonial settlement of the region in the eighteenth century (Evans & Meggars, 1960). The plain itself sits largely below sea level on nearly impermeable clay/silt soil and granite bedrock (Williams and Johnson-Bola, 2009). Aside from a few areas of higher elevation scattered throughout, it was historically inhospitable due to the constant inundation and poor drainage resulting from its low elevation and the inability of water to escape through soil and bedrock into the aquifer. As a result, indigenous populations settled further inland and only ventured to the coast on occasion to work for or trade with the colonialists (Rodway, 1912; see also Williams, 2003).

Originally a Dutch colony, the land along the coast had to be “reclaimed” using a complex system of levees and canals before being settled. The initial construction and continued colonial maintenance of infrastructure was by African slave labor and later indentured labor from Portugal, China, Africa, Indonesia, and India (Rodney, 1981). Regardless of the elevation in comparison to sea level, the most populated areas remain those that have been reclaimed for use in the plantation economy along the northern coastal plain with 39 percent of the population and 43 percent of the GDP on land that is considered to be at serious risk of flooding (Hickey and Weis, 2012). As a result, the majority of the current Guyanese population live in an almost entirely built environment; an environment which is only partially connected to the historical ecological processes of the region prior to colonialism, and one which is tied directly to the colonial-agricultural export economy.

The built landscape of the Guyanese coast was designed specifically for the development of a plantation agriculture system with sugar production in mind (Rodney, 1981). The trenches to drain rainwaters and divert flooding from the country’s many rivers doubled as a system of irrigation and transport for cane fields along the coast (Jenkins 1871). The trenches also acted as logical boundaries for the various plantations that made up the coastal environment and currently, along with the rivers, help to define the boundaries of the country’s coastal Neighbourhood Democratic Councils. The seacoast is protected from intrusion by a large sea wall broken up by water management control devices, which drain the canals via gravity

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2 It is possible that there had been some settlement on the coast in prehistoric Guyana and settlement upstream, but what were to become the most populated areas were seemingly uninhabited. For more on pre-Contact archaeology of the region see Williams, 2003.
feed at low tide. In some areas, mechanical drainage (in the form of pumps) is used so that water can be pumped out any time, but these are not as common, existing primarily on the largest plantations only (Hickey & Weis, 2012). Since water on much of the coast drains naturally to the north (i.e. toward the sea, where the largest plantations and the capital city of Georgetown are located), large drainage conservancies were built slightly inland as well to keep the draining water from backing up to the point of running into the seawall and causing flooding (Hickey & Weis, 2012). This does little when heavy rains cause flooding in the coastal areas to the north during the rainy season and the water has nowhere to escape (see, e.g. Vaughn 2013). The impact of such flooding is felt especially in the city of Georgetown, which has been built up massively since the planning and inception of original D&I system (see Hickey & Weis, 2012; Pelling, 1999).

Aside from Georgetown, the remainder of the coast is made up of a patchwork of small villages connected by a levee-top roadway. These villages are the remnants of the plantation system and bear the names of the plantations that once occupied that space. The houses are in the same spaces as the plantation worker houses and much of the labor force works in the sugar and rice fields that were once a part of the plantation agricultural system. They are a part of what Ann Stoler (2013) has called “imperial debris,” the ‘protracted imperial processes that saturate the subsoil of people’s lives and persist, sometimes subjacently, over a longer durée’ (p. 5). Each village, with its associated fields and canals, act as a reminder of the history and legacy of this system as well as the tensions between life and water which exist along the coast.

The period leading up to and immediately following independence brought with it a new way that Guyana’s built agricultural landscape would become politicized. Though it started as a broad Marxist front united by a history of colonial exploitation, the PPP would soon divide along racial lines with the urban, primarily Afro-Guyanese portion, leaving to form the People’s National Congress (PNC) led by Forbes Burnham, while the rural, mostly Indo-Guyanese base, stayed with Cheddi Jagan (see Hintzen, 1989). Though the two political parties were approximately the same size, the PPP maintained a more active political base that allowed it to win all of the pre-independence, tutelage era elections. However, leader Cheddi Jagan’s ties to the Soviet Union provoked US intervention that would lead to Forbes Burnham becoming the first independence-era president (Rabe 2005). The now geographically divided political base would have divergent interests, not only in how terms of how the economy should be managed, but also of the importance of D&I infrastructure expansion and maintenance. The PNC would remain in power under Burnham until his death in 1985 and would lose the 1988 election to the PPP, inverting at least some aspects of Guyana’s racially bifurcated political system.

I think it is important to recognize that it is problematic to call the spaces in which people live ‘debris.’ Despite this, the idea remains a useful to think about why people live in the places they live.
3. Infrastructure Expansion, Development, and Decolonization

The victories of Marxism and the global processes of decolonization (and the corollary process of development) after World War II had a profound effect on Guyana. Guyana’s first major trade union movement (which consisted primarily of agricultural workers) coincided with the creation of the first specifically developmental discourse globally (see PPP, n.d.; Escobar, 1995). Occurring alongside all of this shifting in the global and local political economies was a reinvestment in agricultural industry as a means to alleviate labor unrest through the economic stabilization of the colony as a whole. According to the 1955 Annual Report of the colonial government, the total expenditure on agricultural development, including D&I expansion and repair, between 1951 and 1955 was BWI$8,678,912, or around 12.5 percent of total development expenditure (British Guiana, 1955). The 1959 Annual Report stated that the D&I system, including sea defenses, required BWI$11 million, which was more than half of the total development expenditure for the year (British Guiana, 1959). The goal of this development was to produce food (specifically rice) for the global market to feed “the progressive increase in population” while ostensibly also increasing national income and prosperity (British Guiana, 1959).

Many of the plans set out by the colonial government during the 1940s and which were to be carried out through the 1950s never came fully to fruition (though many others did, at least according to the Colonial Report of 1955; see British Guiana 1955). Happening simultaneously to the new development and expansion of water control systems was a focus on increasing rice production along the coast. A 1941 report from the Director of Agriculture in British Guiana mentions a “Grow More Food Campaign” that, in part, rested on increases in rice production, but failed ostensibly due to weather constraints – specifically a lack of rainfall (British Guiana, 1941). The 1944 Drainage and Irrigation Scheme map and supplement released by the Bureau of Publicity and Information (BPI) mentions that water shortages were a major part of the expansion of the D&I system (BPI, 1944). Rice is the only crop mentioned by name in the supplement and has a whole page dedicated to how the expansion will aid the industry. Sugar, long a staple crop and a source of considerable power within Guyana’s unions, is not mentioned. The projects culminated with the creation of the Black Bush Polder land settlement scheme in the early 1960s which reclaimed 27,000 acres of land for rice production and population settlement along a previously unusable part of the coast (Standing & Sukdeo, 1977). These projects were deemed failures, in part due to climatological “factors which led to crop failure in 1976 [and] demoralised most of the farmers, who subsequently drifted away, mostly back to Georgetown” (Standing & Sukdeo, 1977, p. 312).

A 2011 report from the Guyana Ministry of Agriculture titled “Food and Nutrition Security Strategy for Guyana” (FNSS) continues the emphasis on the rice

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4 This is about £105,000,000 or 2013 US$170,173,500. However, since the currency no longer exists there is some difficulty in converting it.

5 The quote comes from an ad placed at the beginning of a number of issues of the official agricultural journal of Guyana, Timberi, in the 1950s.
and sugar industries and notes the role of the deficiencies of the current D&I system. A part of maintaining rice production and keeping its costs low is the creation of the Agriculture Support Services Project, (ASSP) “which aims to increase rural incomes by increasing the efficiency of agricultural production” (Ministry of Agriculture, 2011, p. 9). Increasing efficiency, and “rural incomes,” is directly tied to the maintenance of the D&I system which also falls under the control of the ASSP as a part of rehabilitation projects which began in 2009 under the Agricultural Export Diversification Program (ADP). These projects, while a part of the FNSS, are also a part of the 2006 National Competitiveness Strategy, which shared many of the same goals. A partial goal of these projects is to enhance Guyana’s food security while also increasing the country’s food sovereignty and agricultural exports (Ministry of Agriculture, 2011).

In 2008, the Ministry of Agriculture furthered these efforts with the establishment of the ‘Grow More Food Campaign’ (Ministry of Agriculture, 2011, p. 8). This campaign, despite its nominal allusion to its 1940s counterpart, encourages “households to become involved in backyard gardening” and thus removes a portion of the burden of project failure from the state and places it within the households. A similar plan had been inacted before in relation to structural adjustments programs (SAPs) which emerged in the 1980s as part of Guyana’s requirements to re-enter the IMF (Ferguson, 1995; Pelling, 1999). One of the goals of the SAPs was the democratization and liberalization of development in the country and, as a result, there was an increase in petit agriculture as the FNSS and current “Grow More Food Campaign” suggest. According to Mark Pelling (1999), though, many of those who had engaged in petit agriculture during that period had given up due to losses resulting from a general failure of the D&I system. The solution, which in part was intended to address the failures of the state-led development in the previous thirty years, failed at the hands of the still state-maintained D&I system. As Pelling (1999) shows, some of the least vulnerable to the effects of flooding on the Guyanese coast were the informal (i.e. squatter) housing settlements that attempted to live outside of the official, state-sanctioned housing system. He argues that this may have been partly the result of grassroots communal action taken by these groups (Pelling, 1999). The state had failed the market-led system and the market failed to address the shortcomings of the state.

Given this, it would seem that Guyana has learned partially from its past while still re-enacting the schemes it seeks to correct. D&I are scantly mentioned in the 2011 Food and Nutrition Security Strategy. However, the National Land Use Plan released in 2013 goes into much more detail on the role of D&I systems, not only in the “Grow More Food Campaign,” but also in developmental plans in general. This includes “The development of new D&I areas (particularly for rice)” that will undoubtedly result in the reclamation of the remaining “usable” coastal system, harkening back to the development of the Black Bush Polder scheme in the 1960s, which has its own contentious socio-political history (Burrowes, 1984; Government of Guyana, 2013, p. 11). The land use plan also mentions plans to rehabilitate the Canals Polders D&I system which, if its near-constant mentioning in
official reports published in the British Guiana Gazette\textsuperscript{6} are any indication, was a major area of interest in the 1950s. The reason areas like Canals Polders and other parts of the D&I need work is relegated to the negligence of the past. These are required, according to the local development discourse, for continued agricultural development, including mass increasing rice production. The land-use plan mentions “historically poor maintenance” as one of the primary reasons for the large amount of unused land in these areas, putting one idea before the other when it would perhaps be best to think about them as mutually reinforcing (Government of Guyana, 2013, p. 99). How can one say with any certainty whether the land is unused due to poor maintenance or that poor maintenance is the result of lack of need? If one is more true than the other, what made it so, and how is this to be avoided this time around?

Development historiography places the blame for lack of development on past practices without recognition that the historicity of these claims is potentially problematic. In development discourse in the region, the colonial government and the nominally socialist regime that followed it failed to maintain the infrastructural system that would have allowed Guyana to prosper (Munslow, 1998). This ignores the fact that, for the majority of Guyanese, the country has never been particularly prosperous regardless of how well the system was or was not maintained. However, we can also see that the plans put in place are largely the same as those which are described as being at fault for the current conditions. The role of the state has changed in the different “Grow More Food Campaigns” but the methods and goals, when viewed in a larger context, remain largely the same. Growing more food no longer means just an intensification of rice production but also an increase in petit agriculture so that more rice can be exported—similar means to reach a similar end. The ideas and planning have not actually changed significantly over the course of several decades; they have simply swapped the names of the actors around.

The D&I system has been and largely remains the cornerstone of agricultural development in Guyana. Without it, one cannot imagine life on the coastal plain. Perhaps that is where some of the problem lies. The need for a functioning drainage system to populate the coast is a result of historical paths which make populating the coast a necessity. The result has been a constant search for solutions to coastal problems as well as a constant reference to the D&I system and the need to expand coastal agriculture to support it. This raises an important question that I think must be considered, especially in light of the potential impacts of sea level rise and increasingly volatile weather patterns associated with climate change: what does a Guyana without a coast look like? This is almost impossible to imagine no matter how likely of a scenario it may be. This is particularly true when viewing Guyana’s future from a position which ignores the problems of the present in order to place the blame in the past.

\textsuperscript{6} The Gazette was a monthly report that outlined the administrative happenings in the colony and would include announcements of policy, listings of recent arrests, government property sales, etc.
3. The Impacts of Developmental Historiography and Sustainable Development

This article makes two important points. First, development discourse is a historiographical discourse, and the ability of development projects to take hold depends on a certain representation and understanding of the past, regardless of the historicity of those claims. Second, in the case of Guyana and other postcolonial agricultural states, these representations are themselves a product of what might be envisioned as an always inchoate development process. That is, repetitious development is self-defeating. New development projects are directly responsive to those that have passed. The projects repeat themselves in ways that, through certain discursive formations, appear to always be new and emergent rather than reimaginings of previous projects. Even then, they never truly develop completely before the next wave comes in to wash them away. As the threat of sea level rise and the volatile weather patterns associated with climate change become more imminent, it becomes increasingly important that countries seriously consider the impacts of climate change alongside development initiatives.

Recent scholarship on climate change in Guyana (e.g., Vaughn, 2013) has noted a discursive shift in the politics of vulnerability since the 2005 floods, but this shift in language may in fact obscure the repetition this article has sought to expose. Hickey and Weis (2012) have laid out a detailed analysis of Guyana’s infrastructural issues related to climate adaptation, mitigation, and the D&I system, but their main argument falls within the realm of what disaster sociologist Lee Clarke (2006) calls ‘probabilistic thinking.’ In this mode of thought, risk management is handled based on what will most likely happen rather than what could happen. As a result, populations remain at risk because risk planning fails to account for chain reactions, secondary effects, or, in the case of climate change, rapid shifts in the predicted impacts. While a system that ‘centres on rehabilitating and strengthening the crucial sea and river defences and drainage and irrigation system’ will in all likelihood provide some level of risk mitigation, it keeps a relatively large population tied to a potentially volatile coastal plain (Hickey & Weis, 2012, p. 72). This is presumably done for their own good, for economic development, through increased export in their agriculture and rice sectors—but who really benefits here? With decades of research on utilizing interior soils and an abundance of fresh water that could easily provide for a large population, why does the coast remain the focus of developmental schemes? Is this sustainable? Is there a viable alternative?

In presenting this research a simple question was posed to me, why not just move people away from the coast? There are a number of issues there, but regardless of this the idea still replays another idea of Guyana’s development history, which saw Amerindian groups displaced from their land in the name of progress (see Hennessy, 2013; Mistry et. al. 2009) or which saw the movement of peoples away from the coast to take part in economic (and agricultural) diversification (David, 1969; Standing & Sukdeo, 1977). It is also important to consider, as Mark Pelling (2012)

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7 See, e.g. discussion in (Robert R. Nathan Associates, Inc., 1974) for an early history of this, my own archival research at the University of Florida confirms not only important aspects of the history of development in the interior, but also that such research has continued.
Consilience

Mullenite: Guyana’s Coastal Drainage

has, that ‘flood control projects actually serve to encourage floodplain development’ (p. 77). As development occurs in the coastal plain and population increases, not only will more people come under currently existing threats, but risk will increase as more areas become impermeable and the drainage system becomes more taxed as a result. In short, the D&I-as-development and D&I-as-mitigation, while compatible and logical sentiments, are not sustainable in relation to the often non-considered possibilities of the future.

It is a challenging and troubling proposition to ask the question of what might be done to make development in Guyana more sustainable. The D&I infrastructure certainly needs to be updated, repaired, and, often times and in many places, replaced. The problem is thus not in existing developmental means but in the failure of these means to fulfill their promises of increased human security. This can be partially linked to the fact that projects have the potential to hurt economic incomes through the disruption of farming practices and therefore never come fully to fruition (see Marks & Ellis, 2013). The means, here, are used to reach an end which is to provide not just environmental security but, and primarily, economic security. If the means continously disrupts economic processes, it faces a contradiction in its own logic that must be overcome.

This points to a larger issue: the D&I system becomes viewed as somehow separate from the people who live within it. It is presented as asocial, and ahistorical. Its history only exists as a tool for social actors to manipulate in different ways to advance social ends rather than as something which may be able to inform future development. Infrastructure becomes a means or a burden without taking into account local affective understandings of it. Affective not only in the meanings ascribed to it through memory, but also in the ways in which the history and politics of the infrastructure itself shape Guyanese identity. As Langdon Winner (1989) puts it,

“In our accustomed way of thinking technologies are seen as neutral tools that can be used well or poorly, for good, evil, or something in between. But we usually do not stop to inquire whether a given device might have been designed and built in such a way that it produces a set of consequences logically and temporally prior to any of its professed uses. […] If our moral and political language for evaluating technology includes only categories having to do with tools and uses, if it does not include attention to the meaning of the designs and arrangements of our artifacts, then we will be blinded to much that is intellectually and practically crucial” (p. 25, original emphasis).

Drainage and irrigation on Guyana’s coast is a technology, no doubt, and it is a technology with political implications ingrained in its history. Without the colonial history of agricultural production, the continued development debates in Guyana would likely not be necessary. The infrastructure is therefore a technology not just of agriculture, but of the human trafficking that existed with the creation of this space as an agricultural region. Its politics take many forms and many meanings, ranging from histories of colonial extraction, slavery, indentureship, and the violence of these systems, to the racial politics of decolonization, a racially bifurcated political system, and the politics of global capitalism and the promises and problems that come with it.

Is it possible to relocate the impetus of D&I development toward an understanding of D&I (and water, sugar, rice, and rain) as a relational aspect that, on
its own, has a need to survive? Implicit in the nature of the question is an important way of reimagining development. Jane Bennett (2010) suggests that scholars “take seriously […] the capacity of things – edibles, commodities, storms, metals – not only to impede or block the will and designs of humans but also to act as quasi agents or forces with trajectories, propensities, and tendencies of there own,” (p. viii). If this is done, what changes about the development project in Guyana or globally? If the inanimate world is understood to have agency, then the only way to proceed with development is to understand its “trajectories, propensities, and tendencies” and take an active role in alleviating people from the risk caused by them. In order for development to be sustainable, it must be led by the individuals who have lifetimes and generations of experience with the attitudes and understandings of what is necessary to make life possible and viable; take seriously the knowledges gleened from a lifetime of struggle with and against these new vital-yet-material aspects of everyday life.

The goal is not to foreclose on the possibility of functional and sustainable development within the existing system nor to place the prospects for a more humanistic development into the future, but rather to cast new light on the combined limitations of the state and the market to the functioning of development. Additionally, repetition does not always have negative effects. As anthropologist Jean Rahier (2013) suggests, “what is repeated is always a previous temporality, which was itself already a repetition. And it is because they represent preceding periods that repetitions incarnate creativity, at the very same time that they give some illusion of return, of recurrence. But one should not be mistaken. A manifestation never has the same value twice” (p.96).
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