



## Imagining the Ordinary in Participatory Climate Adaptation

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### ABSTRACT

This article examines the ways Red Cross training in vulnerability capacity assessment (VCA) structures people's understandings of the ordinary. This examination is situated within the context of Georgetown, Guyana, after disastrous flooding in 2005 led the Red Cross to deploy VCAs as a method for participatory climate adaptation. The article focuses on the circulation of narratives about the ordinary, which are used by VCA trainees to cultivate ethical responses to flood hazards and the use of water management equipment. It is argued that participatory climate adaptation can be understood as not simply a mode of governance, but rather as a model for reimagining the ordinary. While other scholarship on participatory climate adaptation addresses how daily life is informed by the political and ideological dynamics of such projects, this article focuses on the ordinary from the view of "mobile" climate adaptation technologies. From this perspective, VCA trainees take action but often times rely on sheer intuition to create knowledge practices in an attempt to navigate crisis in the everyday. In turn, they learn that while the VCA may nourish alternative forms of expertise, it is no easy or fool-proof solution for climate adaptation.

### 1. Introduction

In 2009 I met with Margaret at her home in Sophia, a former squatter town on the fringe of Guyana's capital city, Georgetown.<sup>1</sup> "I have to get some glasses," she explained while walking to a kitchen cabinet. She collected the glasses and then made her way to the stove to boil water to clean them. I sat a few feet away next to a window staring at a plastic vat in her backyard. Placed on a wooden platform, it appeared to levitate above surrounding weeds and a kitchen garden. Connected to it were two drain pipes that ran from the house's roof to channel rainwater. "How often do you go to the vat for water?" I asked. "It depends: whose coming over, when it rains, what I'm cooking. . . ."

Margaret worries about flood waters damaging the vat's platform. The vat has to be monitored at odd moments in the course of the day, week, month, and year, especially during the wet season. She is vigilant, just like other Sophia residents. Even Red Cross staff visited

after a disastrous flood in 2005 and warned of more if not worse flooding due to climate change. She grew accustomed to these warnings, with Red Cross staff holding training workshops about water safety and plastering signs throughout Sophia that read "Evacuation Route." "I use it [the vat] only if the sky isn't too gray or the rain too heavy," she noted as she poured soda into our glasses. If the sky was gray and the rain heavy, she disinfected water with bleach and filtered it with a rag. Intuition is both a necessity and pleasure in itself. It spreads fast, even without the help of expert clarification.

Margaret's vat informs her everyday routine and commitments to the Guyana Red Cross. Vats along with rags and bleach used to filter water are ordinary things, insofar as they can be found in most Guyanese households. Margaret is dependent on them and so realizes that climate-related flooding is not a disruption but rather is embedded in and informs everyday activities. In this article, I examine the ways Red Cross training shapes people's understandings of the ordinary. For Margaret, the ordinary is experienced through talk, rumors, claims, and discourses about climate adaptation. But as she suggests, even though the Guyana Red Cross has provided warnings to Sophia residents about intense flooding, she still lives in uncertainty about how her life will be impacted by it.

<sup>1</sup>I refer to many of my informants by pseudonyms to protect their privacy.

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Between December 2004 and February 2005, multiple storms resulted in over 60 inches of rain along Guyana's Atlantic coastal plain (Blommestein et al. 2005). The storms were unprecedented compared to engineers' records that estimated seven inches as the average monthly rainfall. The storms resulted in extensive flooding across the coastal geopolitical regions 3, 4, and 5 where 62% of the nation's population resides (roughly 520,000 people). Timing the release of water from the coast's main dam, called the East Demerara Water Conservancy (EDWC), into canals was crucial. If water was released when the tide was high, Georgetown would have been inundated with water from not only the EDWC but also the sea. Engineers devised a plan that allowed them to release water into a nearby river. While this strategy saved Georgetown in this instance, it further exacerbated flooding in rural communities.

After the 2005 disaster, engineers worked with World Bank consultants to create flood models. Scenarios were bleak, whether from a rising tide or abnormal rainfall events; the EDWC was in need of a major overhaul in design to withstand future flooding (Kirby et al. Ognik 2006). The flood models offered more than a prognosis of climate change's impacts on Guyanese coastal drainage. They convinced the state that its "top down" approach to flood control was limited, if not piecemeal. In turn, a number of different state agencies requested that local nongovernmental agencies (NGOs) help establish community-based or participatory climate adaptation programs. The Red Cross took the lead with one of four pilot programs in Sophia. Between 2009 and 2010, Red Cross workers trained Sophia residents in vulnerability capacity assessment (VCA). Conceived of in the early 1990s to educate densely populated urban communities about environmental risks, the VCA is the core methodology of the International Red Cross Federation's volunteer network. Its primary activity includes people participating in focus groups and household surveys about vulnerability in the places they live. A mix of preparedness, relief, and coping strategies, Sophia's VCA centered on teaching residents how to use household water management equipment, or vats, septic tanks, and water filtration kits.

In a neighborhood of roughly 36,000 people, five male and fifteen female adults regularly participated in Sophia's VCA training for a year. They volunteered to participate as VCA trainees after the Red Cross staff contacted the head of Sophia's community center. Already members of a community awareness group, the VCA trainees described themselves not only as "community advocates" but also as familiar with drainage issues that affected Sophia. They had various occupational and class backgrounds. Some were unemployed while others held multiple jobs as electricians, vendors, caretakers, political activists, teachers, and low-level

government employees. This diversity influenced the knowledge exchanged about flooding as well as expectations about the purpose of water management equipment. Training was led by a rotating group of five staff from the Guyana Red Cross, who for the most part had very different daily realities from those of VCA trainees. Their home life, work, and leisure were shaped by Georgetown's middle class environs, although some did have experience as first responders in 2005. The VCA thus intended to chart a knowledge network beyond a preoccupation with disaster and its root causes. In particular, VCA trainees and Red Cross workers worried that repeated episodes of intense flooding could create conditions for exposure to contaminating water in Sophia. The water management equipment, in this respect, was important not only because of its function. It was also a symbolic resource for remapping lived connections between expertise and accountability.

Instead of a focus on disaster, the VCA helps Sophia residents pay attention to how vulnerability manifests and unfolds in everyday life. This emphasis on process rather than event suggests that climate change has become an impasse to achieving or making a good life for one's self. Ongoing crisis and a sense of living with climate insecurity thus take shape not only around infrastructures but also within scenes of a working day, familial duties, and social obligations. Following cultural theorist Lauren Berlant, in this article I track "crisis ordinariness," or the activities, narratives, and technologies people rely on in the everyday to live with systematic crisis while learning to preserve optimism for the future (Berlant 2011, p. 81). Crisis ordinariness is often triggered by traumatic events such as disasters, but it is a condition that also incites uncertainty about the relationship between ways of knowing and intuition. Thus, while Berlant uses the concept to track the distorting effects and the "precarity" (see footnote) that neoliberal capitalism has brought to the everyday in Euro-America, I find it useful for analyzing participatory climate adaptation in two ways (Berlant 2011, 196–198).<sup>2</sup>

<sup>2</sup>Berlant uses the term *precarity* to describe political and economic fragility related to capitalism. In this reading, crisis ordinariness is engendered by globalized zones of capital accumulation and the migration of capital, features of the historical present which I recognize throughout this article. In doing so, Berlant associates precarity with an existential human condition shaped by the "loss of an object/scene of desire" (Berlant 2011, p. 10). However, my use of the term "vulnerability" instead of precarity is an attempt to highlight two related concerns. It is a term that makes clear the fragility of things in the world and the competing histories people use to narrate this fragility. In this respect, I find Berlant's crisis ordinariness a helpful analytic for making visible narratives other than those about capitalism.

First, crisis ordinariness provides a framework to track participatory climate adaptation projects' affective and sensorial impacts on populations across space and time. Second, as a condition marked by broader processes of neoliberalism, an analysis that is sensitive to crisis ordinariness reveals the uneven—and at times contradictory—economic, political, scientific, and social activities that undergird participatory climate adaptation. Specifically, I argue that participatory climate adaptation can be understood as not simply a mode of governance, but as a model for reimagining the ordinary.

I spent 15 months between August 2009 and November 2010 conducting in-depth interviews and observing VCA trainees in Sophia. I participated in Red Cross workshops as well as social gatherings led by organizers' of Sophia's community center. This article is based on 30 interviews conducted during these workshops and training. In its first section, I argue that the VCA creates an epistemic space that refracts debates about crisis ordinariness into the domain of the household. I then examine Guyana's broader sociohistorical context of postcolonial development and the 2005 disaster, to show the shift in narratives about the ordinary related to participatory climate adaptation.

The following two sections offer an analysis of how the VCA's water filtration kit undergirds the production of household vulnerability surveys. It is a document important for what the Red Cross calls ensuring the VCA's "expansion" across communities. I show that despite the stated intent of the survey, it provides only guidelines for how Sophia residents should use water filtration kits. In other words, the survey is a type of document geared toward representing an aspiration for adaptation rather than a description of it in practice. I suggest that this gap between imaginary and practice is generative of broader discussions about crisis ordinariness as an analytic for climate adaptation scholarship, and the residual spaces for politics it can incite in the everyday.

## 2. The ordinariness of vulnerability

This article follows in the lineage of critical anthropological and geographical scholarship that examines vulnerability to environmental risks as a complex historical experience (Hoffman and Oliver-Smith 2002; Bankoff et al. 2013). I contribute to this literature by examining the ordinary—a common-sense assumption about the "constancy of life" (Dumm 1999, p. 1)—as it shapes participatory climate adaptation projects. At the same time, I explore the ethics of such projects, as vulnerability transforms the sociomaterial arrangements of the ordinary.

Guyana is particularly vulnerable to climate change, with 300 000 people, or roughly 30% of the population, residing in the coastal capital city Georgetown. Some areas are between 2 and 6 feet below sea level, bounded by a seawall and an intricate grid of canals that drain rainwater and groundwater into the Atlantic Ocean. With the proximity of the sea, a torrential biannual wet season, and the sodden realities of cascading rivers, flooding is a constant threat. Georgetown's grid dates back to the eighteenth century when the French, Dutch, and later the British settled the area as a colonial trading hub to service nearby sugar plantations. The city's canals were built on an autonomous grid, other than the Lamaha Canal, which engineers designed in the 1830s to connect Georgetown to the EDWC for a potable water supply.

The national and municipal governments have developed an elaborate, if inconsistent, system for dredging canals. This system is exemplified by the milling crowds and the compulsory work of foremen, which can become cumbersome along Georgetown's narrow and many unpaved roads. Days before a forecasted storm, foremen stall traffic with their excavators and block roadways with mounds of debris. Indeed, the drainage grid has historically constituted security and a space for imagining the everyday (Rodney 1981).

Its function, however, is dependent on much more than dredging. In recent decades, Georgetown has experienced an increase in informal housing (Edwards Wu and Mensah 2005). This expansion is overwhelmingly supported by a remittance economy, with migrants renting multiple units within a building to relatives or close acquaintances (Corbin and Aragon 2014). With only 50 miles of canals to support Georgetown and its surrounding environs such as Sophia, the city is overcrowded and drainage overtaxed by garbage and piecemeal road development. It is a situation that many engineers and planners argue contributed to the city's extensive flooding in 2005. Settlement in Georgetown has therefore been associated with costs for maintaining drainage to reproduce kin relations and less so the speculative logics of real estate capital, as has been argued of other flood-prone global Southern Hemisphere ("global South") cities (Ranganathan 2015). And this fact has not escaped the attention of the Guyana Red Cross.

Through exercises in water management equipment and household vulnerability surveys, the VCA does not simply reflect the biopolitical expectation that the household is where flood hazards should be mitigated. It is also a technique for developing skepticism about the world and its related technological, ecological, and sociopolitical pressures (Cavell 1994). I show that VCA

trainees' decision-making about such activities—including how to create water filtration kits or a flood emergency contact list—prompts an unlearning of their dependence on the drainage grid. The VCA produces forms of expertise that cut across affective, public/private, and epistemic divides.

Scholars in the anthropology of climate change have analyzed this dynamic in other contexts. Their studies illustrate that participatory climate adaptation projects are based on the assumption that “resilience” to climate change is built into livelihood systems (Crate 2011, p. 171; see also Watts 2014, 145–72). National and international governmental aid is coordinated from the bottom up, with an appreciation that communication about climate adaptation has a human and not solely a numerical dimension (Lazrus 2012). To this extent, decisions about, say, water allocation or flood embankment design are negotiations about the competing value of global and local knowledge to survival (Broad and Orlove 2007; Mathur 2015). This emphasis on scale counters a certain sort of teleology, revealing that even if participatory climate adaptation projects seek to curb climatic impacts, vulnerability shapes daily life in unexpected ways (Puri 2015). But while these studies demonstrate that daily life is a source of inspiration for participatory climate adaptation, scholars tend to assume that its knowledge practices are separate from this realm.

In contrast, I show that narratives about daily life, or the ordinary, are an important outcome of participatory climate adaptation projects. In the case of the VCA, trainees not only develop trust in water management technologies to protect them from contaminated flood waters. These technologies help them become hyper-vigilant of corporeal routines, such as walking or bathing, to identify (un)familiar patterns in the surrounding environment. In such instances, clogged canals or broken bridges are things that “pose a set of quandaries” to movement, sensorium, and cognition (Barad 2011, p. 21). VCA exercises, in turn, become key scenarios where trainees develop a collective awareness of vulnerability despite their various personal life histories and situations of privilege. I suggest that participatory climate adaptation projects construct the ordinary as an “intersecting space where many forces and histories circulate” for navigating what is overwhelming (Berlant 2011, p. 21). In other words, participatory climate adaptation is derived from a mobile skill set, or translocal expertise that VCA trainees can apply anywhere in the event a flood displaces them from Sophia.

It is no surprise, then, that VCA trainees interpret the Red Cross as helping them achieve a good life, even if in the present they experience what feel like intractable

flood hazards. Achieving a good life, Lauren Berlant argues, is dependent on how people make the most of an “environment” that repeatedly causes them trouble. She writes, “An environment can absorb how time ordinarily passes, how forgettable most events are, and how people’s ordinary preservations fluctuate in patterns of undramatic attachment and identification” (Berlant 2011, p. 100). Like Berlant, I track why the environment helps people make sense of temporality. I emphasize, however, that for many VCA trainees the environment is not only an index of time but a resource for judging when and how ethics materializes across space. They are not content living with derelict drainage even with continued assistance from the Red Cross. Yet, with every new flood hazard encountered through training, they learn to “live off the grid” and create networks of care that circumvent those of the state.

In this respect, participatory climate adaptation projects work in concert with processes of neoliberal development and engineering sciences that have made drainage an unsustainable reality in Guyana. At the same time, VCA trainees actively recognize the strategic essentialisms and politics on which participatory climate adaptation is often grounded or critiqued. They do not forget those stories about climate change that resist grand narratives of catastrophe (Stengers 2015). As a staunch refusal to separate climate data from other ways of knowing, the VCA amounts to an effort to represent, organize, and manage crisis ordinariness.

### 3. Ordinary events

The Guyanese state has long been invested in shaping its citizens as modern subjects with the requisite sensibilities for flood control. Most notably, the post-independence state adopted a party doctrine of cooperative socialism in 1974, deeming “self-sufficiency” a necessary factor for the nation’s development. What followed was a state-sponsored campaign called “Feed, Clothe, and House the Nation” that had ambitions to replicate Julius Nyerere’s experiment with cooperatives in Tanzania (Peake 2005). Residents functioned as members of Neighborhood Democratic Councils (NDCs) responsible for maintaining infrastructure (e.g., canals and roads) and reporting their status to state agencies. However, the sense of political possibility opened up by NDCs was tempered by concomitant debt crises and electoral fraud. The 1970s and early 1980s bore witness to the withdrawal of International Monetary Fund (IMF) recognition in 1982 and the channeling of resources away from social services to political party financing (Thomas 1984). In particular, drainage was poorly maintained, as urban

planning became dependent on filling canals to create roads to accommodate nascent public housing. These experiences of neglect led many Georgetown residents to abide by, rather than flout, state-sustained ideologies of self-sufficiency.

Elements of this ideology did not dissipate with Guyana's transition from socialism to a liberal market and democracy in the late 1980s. These reforms were targeted through a structural adjustment policy called the Economic Recovery Program (ERP). Its objectives were twofold: to find external sources to fund development projects and to reschedule unpaid debt to the IMF, World Bank, and other foreign creditors. While the president implemented a variety of tax schemes through the ERP, the program also focused on reducing the number of state agencies. To fill the technical vacuum, IMF-sponsored development projects required that people other than state officials (i.e., grassroots actors) had to play an active role in project implementation (Ifill 2000). Similar to other postsocialist and postcolonial societies, structural adjustment policies in Guyana created fissures between the "complex techniques" citizens devised to survive the everyday and their experiences of "participation" in development projects (Thomas 1984, p. 176).

Mark Pelling, for instance, argues that the Guyanese government and national institutions responsible for coordinating urban flood control and infrastructure rehabilitation

... [held] back from projecting participation as empowerment and [implied] that local residents [had] most to contribute as labor (self-help) and in maintenance (management) of resources, rather than in problem identification and project management roles; and that they [continued] to be beneficiaries of external support rather than equal partners with professional agency staff (Pelling 1998, p. 476).

Additionally, many Georgetown residents could not gain state approval for new canals because funding agencies feared that those projects would overlap with the "responsibilities" of ongoing housing renewal programs (Pelling 1998, p. 478). In turn, households responded individually to flood hazards and on the other, large-scale drainage improvements were dependent on development projects (p. 482). While Pelling argues that these competing flood responses were in tension with Georgetown residents' ideals about empowerment, wet season rainfall counts remained rather predictable. Between 1990 and 2004, there was only one significant flood in Georgetown, and that event was attributed not to rainfall but to a seawall breach (Pelling 1999). Hence, state agencies and the Red Cross were "active in

providing relief aid, but [there was] no established coordinating unit for disaster preparedness" in Georgetown (Pelling 1999, p. 252).<sup>3</sup>

This lack of coordination was most telling during the 2005 disaster. The storms that contributed to the disaster were not associated with the biannual wet season, but rather with weather systems that usually affect the southern part of Guyana. The multiple storms caused record water levels in the EDWC (59 ft. GD), which worsened downstream conditions in the Georgetown section of the Lamaha Canal. Flooding reached four to five feet in the city, with residents stranded in their homes or shelters for a period of one to three weeks. Given that the state was ill prepared to respond to the vulnerabilities of both the EDWC and polity, civic and United Nations organizations provided assistance to affected populations. In real time, these organizations conducted surveys about the household resources affected populations used to cope. Alissa Trotz (Trotz 2010) argues that, as a result, information about the disaster's impacts on households went underrepresented in government reports. Part of the shock of the disaster was that the state, even weeks into the event, could not provide basic information about how flood waters could affect daily routines, such as access to public transportation. In many respects, the disaster created an arena for the consolidation of a public discourse about participation alongside the mobilization of a new social imaginary about the ordinary.

This postdisaster social imaginary posited the ordinary as circumscribed less by the geography of the drainage grid than the "humble" water management equipment that circumvent it. By 2009, the Guyana Red Cross positioned itself as the main architect of this geography, proceeding with a program in participatory climate adaptation that emphasized VCAs. The program built on the report "Background document for the preparedness of climate change," completed by 23 other Red Cross National Societies in Latin America, the Caribbean, Africa, and Asia. The report details the efforts of national societies to use Intergovernmental Panel on Climate Change data to spur greater collaboration between state agencies and local communities. Even "without full scientific analyses on climate

<sup>3</sup> Pelling, like others, has extended this critique of development and flooding to the racial/political divisions between the majority Afro- and Indo-Guyanese populations. An in-depth analysis of race relations in Georgetown (as opposed to a national framework) would be needed to contribute to this debate. However, I would add that an ideal for interracial participation is dependent on various acts of recognition across public/private spaces, and not simply electoral representation.

projections,” Red Cross engagements offer an abiding appeal of immediacy (IFRC 2009, p. 5). “Humanitarianism in a changing climate,” the report argues, is rooted in identifying climatic risks that will affect technologies and resources used for programs such as the VCA (p. 1). As climate change increasingly frames humanitarian sentiment, it provides a ready measure—easily quantified and statistically represented—for negotiating the terms of participation. As Guyana Red Cross workers note in the report, successful climate adaptation is the “expansion of VCA” methods across communities as much as disaster relief (p. 9).

The 2005 disaster made evident that the relation between climate-related flooding and vulnerability are not mapped neatly onto divisions between public and private. Both domains, so it appeared, needed to adapt to climate change. The intensity of the storm eroded people’s confidence in the EDWC at the same time that conceptions of self-sufficiency become yardsticks for judging survival, and not simply the viability of NDCs. This process of judgment is in stark contrast to the observations scholars have made of other climate-related disasters, such as Hurricane Katrina. They argue that the failure of infrastructure disrupts normalized understandings of public/private responsibility for goods and services (Somers 2008). This focus on political transaction, however, reinforces the idea that participatory climate adaptation will have obvious civic outcomes and a design that can *supersede* the environment at hand. Instead, I emphasize that participatory climate adaptation requires a politics beyond rights claims, shifting to one that reaffirms the pragmatics of everyday survival. The VCA is thus a tacit reminder of the threat climate change poses to Guyana and that discourses about participation shape a broader experience of crisis ordinariness.

For this reason I caution against viewing participatory climate adaptation as a mere ideological effect of neoliberal development. Analyses that appeal to this teleology assign historical finality where many climate vulnerable populations seek to assert practical solutions for living with hazards (Chakrabarty 2012). Indeed, discovering practical solutions to hazards is not only a preoccupation of those living in postdisaster or marginalized global South contexts. Bruce Braun describes parallel sensibilities in England where climate adaptation involves a “profanation” of technologies, such as fuel gauges and electric cars, to “modulate natural processes” in the everyday (Braun 2014, p. 60). But technologically bounded representations of the ordinary are not the only possible register through which participatory climate adaptation is made legible. I use the remainder of this article to further detail participatory

climate adaptation as it is directed toward various activities for maintaining crisis ordinariness.

#### 4. World making

Sophia was founded by squatters during Guyana’s transition out of socialism in the late 1980s. The settlement is located on mostly swampland and abandoned plantations, with pockets of land suitable for rice cultivation. It has since thrived, attracting rural migrants from all over the country who have successfully integrated small-scale farming (e.g., mostly leafy greens and sheep and cattle herding) on vacant lands. Unlike other working poor neighborhoods in Georgetown, access to cultivatable land has contributed to Sophia’s racial and ethnic diversity. With over 7000 households, it has a majority Black (60%) population but with a significant number of people identifying as East Indian (15%), Mixed Race (12%), Amerindian (10%), and Other (3%) (Marks 2014, p. 5). Since the early 2000s, state agencies have surveyed land and formalized the process for leasehold registration. Public services including garbage collection and canal dredging remain inconsistent, while many areas are drained by makeshift trenches that residents have planned and dug. To this extent, vulnerability in Sophia is contoured by poverty and insecure land tenure but the flood dynamics parallel those of greater Georgetown.<sup>4</sup>

One afternoon in 2009 I sat with Steven on the balcony of the community center in Sophia looking at photographs. They were black and white and printed on typing paper. The reflected glare of the sun blurred the images of murky trench water and debris. One by one, he pulled photographs from his manila folder exclaiming, “I just didn’t have enough film to catch everything.” A few weeks prior, he rode through B Field looking for eroded canal embankments. His pictures resembled the aerial photographs of compromised flood infrastructures taken by engineers during the 2005 disaster. Late to the scene, Steven and the engineers were witnesses who did not know when the disturbance began or would end. Steven boasted about how meticulous he was, but admitted that his photographs only depicted

<sup>4</sup> While Sophia is not represented in the national and municipal government as an NDC, for practical purposes it is treated as a “neighborhood” of Georgetown even though residents pay taxes and abide by city ordinances for land development. A number of municipal maps, for instance, include Sophia. Since the early 2000s, a number of Sophia residents have lobbied the national government to grant it NDC status. Sophia offers a dramatic case of the lived contradictions of political representation, self-determination, and climate adaptation.

part of the story. He reminded me, “I didn’t get into people’s yards. I don’t know what they do [to stop floods].” Steven surmised that Sophia residents’ yards, and by extension their homes, are much more complex sites for a range of intimacies with flooding and its containment.

These intimacies were often the topic of discussion at VCA training. At the community center, Red Cross workers focused a number of meetings on teaching VCA trainees how to assemble and use do-it-yourself water filtration kits. Filled with things that are found in most Georgetown households, the water filtration kits include towels, chlorine bleach, and bottles. VCA trainees have to be careful not to contaminate the bottles and towels when collecting water from across vats, wells, buckets, and faucets to boil. Likewise, VCA trainees have to be vigilant even after initial collection of water and monitor their bodies for exposure to dysentery, cholera, or leptospirosis, a zoonosis transmitted through water or soil contaminated by animal urine. Puddles in yards increase the possibility of exposure even after floods. Red Cross workers suggested not only that each household in Sophia should have a water filtration kit, but also that VCA trainees should agree to hold periodic tutorials at the community center. As part of a routinized procedure, the water filtration kits provide guidelines for how to respond to health risks whatever the conditions of a particular household (Redfield 2013).

What is important here is not that VCA training is tied to ideals about acts of volunteerism. These ideals are shot through with a mix of cynicism and aspiration, sentiments that informed many VCA trainees’ interest in the Red Cross in the first place. Instead, the training reflects an attention to the endurance, as opposed to the destruction, of things in daily life (Stewart 2005). It is a kind of attention that “arises in the effort to know what is happening or to be part of it, [and] the exciting presence of traces, remainders, and excesses” (Stewart 2005, p. 1015). While the water filtration kits provide a routinized procedure, they also cull VCA trainees’ attention to moments of impact between bodies and floods that are far from straightforward or causal.

The water filtration kits, while intended to be very standardized and mobile technology, also depend on how VCA trainees are hailed by others, who might experience flood-related loss, damage, or injury in different ways. VCA trainees struggled to talk about these experiences when they developed household vulnerability surveys. They brainstormed a number of questions for the survey: Does your family have a water filtration kit? How high were the last flood waters in your home? Do you have an evacuation route? They also developed an appendix for the surveys that included a space for

each respondent to list the responsibilities of family members, neighbors, and local state agencies in the event of a flood. As VCA trainees brainstormed, a Red Cross worker interjected to help. He explained: “This is bottom-up. . . . We never know exactly what to expect, but you can come together to help bring out the best in each other.” With a successful track record managing other community-based environmental programs, this Red Cross worker was well rehearsed in making participatory decision-making appear self-evident. He encouraged VCA trainees to share testimonials about floods and their use of water filtration kits. One VCA trainee noted:

We don’t want to have to keep each other company [at meetings]. . . . And I say we deal with this [kit] now and get this over so that when something really big happens again we need everyone to understand that we need to be *sufficient*. I don’t have all the information. . . .this is why we need training. We all need to know where flooding happens. . . .To know that even if we take care of everything, some water will still come in your yard.

This VCA trainee recognizes that he has some understanding about drainage on his property but very little understanding of its dynamics throughout greater Sophia. In these terms, he does not know in advance of a flood how the water filtration kit will help him. He can only guess. His testimonial dramatizes the plural uses of water filtration kits, while creating a metanarrative about the common occurrence of flood hazards in Sophia.

Testimonials, in other words, served multiple purposes for training in water filtration. On the one hand, they facilitated discussion about the kind of material evidence trainees can find and gather in their daily lives to monitor water supplies. On the other, testimonials triggered conversations about the rather open-ended dynamics of caring for things and bodies that climate change demands. As an activity, testimonials remind us that crisis ordinariness depends on people withholding judgment about the future (Berlant 2011, 51–96).

In particular, a number of VCA trainees talked about leptospirosis to emphasize the deep sense of nervousness they have come to attribute to water contamination. While there were just over 40 cases of infection, alongside drowning and dehydration, leptospirosis caused 19 of the 33 disaster-related deaths in 2005. There were no cases reported in Sophia, which means that livestock owners in Sophia who used their bottom flats to herd sheep and cattle had figured out a method of survival.

The tense mix of human and nonhuman bodies registered in exchange. Some passed on health officials’

warnings to not handle livestock carcasses and to keep them as far away from the interior of the house as possible to limit the spread of infection. Others started a relief system, where people volunteered to go to a shelter or a hospital in Georgetown to retrieve drugs (prophylactic drugs such as doxycycline) to pass along to family, neighbors, and friends. VCA trainees admitted, however, that based on their 2005 disaster experience, they had not developed a good sense for infection and often attributed their nausea, headaches, or fever to other diseases. Just about every bodily ailment they have come to associate with leptospirosis. But they discovered that concentrating on how much rain saturates the ground is their best chance at diagnosis.

Another VCA trainee emphasized this point about diagnosis when he suggested that intense flooding challenges reason:

I'm trying to provoke a thought about what to do with different levels of water. Say it's like two feet of water, right away you gotta think of health, the latrine, you know. . . . Say you begin with five or three feet [of water], but again, what's the difference? You have to now move because it's beyond, you know, bearable. But wherever you go, you are still exposed to a health risk. That's the thing; we know that 90% of our septic tanks aren't constructed the way they need for safety. But with the flood it compromises both, the person and the infrastructure. The kits are helpful, to a point I guess. But I still *feel* that with a septic tank I am safer than without. . . .

This VCA trainee has become less confident in drainage and so even more reliant on water filtration kits. He references the three- and five-foot water levels experienced during the 2005 disaster as his new norm for living comfortably with floods. Yet, he also notes that flood hazards related to leptospirosis and “faulty” septic tanks are difficult to discern no matter a flood's water level. As a knowledge practice, testimonials shape the powerful tension between what can be known and what remains unspeakable about the impacts of a changing climate on the ordinary.

Not only do these testimonials address complex experiences of displacement in daily life brought about by structural inequalities and crises. Trainees also detail the ways in which these experiences shape intuition about climate-related flooding. In these testimonials floods are described as a porous mix of affective, epistemological, technological, and bodily processes.

Mark Carey and colleagues have described parallel concerns about glaciology knowledge and climate change. Shaped by a cultural framework embedded in daily life of not only science but humble forms of water management equipment, glaciology knowledge represents

“ice itself as an element of change and . . . as a [thing that is] part of society” (Carey et al. 2016, p. 1). Given the prominent place of glaciers in the global discourse about climate change, Carey suggests that the term “cryoscapes” is one way to describe the relations between people and ice. A similar dynamic is at play for VCA trainees in Guyana, where “floodscapes” mediate ethical decisions about what counts as a water filtration kit and the kinds of knowledge it shapes about the unpredictability of daily life impacted by climate change. The testimonials reinforce the idea that crisis ordinariness cannot be contained through ridged training or for that matter witnessing. At times the reality of this mundane fact can cease to be significant or burst into VCA trainees' lives and demand that it cannot be ignored.

## 5. Accommodating experts

A few weeks into their efforts, VCA trainees completed pilot surveys of households in an area of Sophia known as North Field. Deemed to be on the fringes of Sophia's fertile lands, North Field postdates Sophia's era of informal squatting (c. 1999). More homes are built on surveyed plots but it is located in a catchment near the outfalls of the Atlantic. Despite the lack of census data, it is rumored to be a higher income East Indian and mixed race area, albeit with numerous female-headed households. My interlocutors expressed intrigue about the data they would collect. The mere presence of these households complicated their collective awareness of vulnerability. These households are more economically secure but inhabit a space that is more flood prone than the rest of Sophia. VCA trainees recognized that floods do not care who lives where, but that it was their responsibility to create alliances between vulnerable bodies and spaces.

Data collection for the surveys was not easy. For the survey, Sophia's VCA trainees were joined by staff from other Caribbean Red Cross branches looking to complete their volunteer certification. The irony was not lost on VCA trainees who were instructed by Guyana's Red Cross staff to act as “cultural ambassadors” for the day. It is worth noting that many of the VCA trainees did not view these foreigners as intruders or as an affront to their work, but as needed labor for the tall task of surveying. They surmised that the surveys would tell them something more general about how floods might vary across space. The surveys circulated as a genre that became “delaminated from its location in someone's story or some locale's irreducibly local history” (Berlant 2011, p. 12). This means that the surveys were not merely constituted by speech acts, such as brainstorming exercises and testimonials performed at prior meetings.



Their time surveying North Field was also an embodied practice that created the terms for the surveys' circulation.

Take for instance the ditches, weeds, and fire ant hills, both harbingers and impasses, that surrounded the entryways of many homes. VCA trainees learned how to slow their gait and brush insects off their bodies to avoid being injured by these obstacles. While most North Field residents ventured from their homes to their yards to greet VCA trainees, some shouted their answers from windows, and a few simply did not venture out to meet them on public roads. The obstacles VCA trainees faced dramatized that each survey was differently constructed by entanglements between humans and flood hazards.

Data collection was not limited by the boundary between the home and the public road. It was performed within domestic spaces as well. A woman by the name of Renee spoke in extensive detail about cement blocks she used to protect the house's foundation from flood waters. She insisted that while she felt high above the water, she often relied on her dog's movements and barking to warn her of heavy rainfall. Her children moved furniture away from windows and put plastic tarps over holes of the tin roof when it rained. Renee's vulnerability emerged in continuity with things that crosscut (non)human boundaries of the ordinary (Khan 2014). Her testimonial convinced VCA trainees that Sophia's emergency contact list should include not only phone numbers and home addresses but also the number of pets in households.

In contrast, not all of North Field's residents were committed to an ethos that equated the VCA with testimonials about vulnerability. In one interview, a North Field resident interjected in the middle of questioning to suggest that the VCA only matters if drainage improves. The VCA made him feel proud of Sophia but irritated by how he lives. He dramatized his point by making VCA trainees stand on top of an eroding canal embankment near his yard. Moved by their willingness to indulge him, he insisted that the VCA would only make North Field residents more accepting of floods.

At issue in his reprimand are concerns about the way private lives and flood hazards may often intersect but also are processes that can conjure competing imaginaries about daily life. The survey in North Field thus animates crisis ordinariness in two ways. First, any evidence of a potential flood is made a case for collecting more testimonials to get a richer sample of probable scenarios of vulnerability. Second, Sophia residents use these testimonials to question the VCA trainees' authority and their conventional social identities as "community advocates." Some like Renee claim to rise

above water; others wear their vulnerability like a badge of honor, optimistic that with a bit more effort they can force other people and things to become (more) accountable. But is the VCA a tool to warn North Field residents of the vulnerabilities that might have not caught their attention, or is it intended to mobilize another kind of world?

VCA trainees attempted to address this ambiguity, particularly those who desired to put the survey to use beyond Red Cross activities. Some planned to create a flood library and research station at the community center to have information on hand to improve future VCAs. Others intended to use the survey to lobby the Ministry of Agriculture to dredge canals and improve embankments. They debated how to present the survey to state officials. A PowerPoint, they surmised, was a distraction that would make them appear too "well adapted" to climate change. They agreed that an informal presentation was the best way to communicate. The conversation would be directed by no more than ten residents, as to not overwhelm, and remind state officials that Sophia is a "cumbersome place." They desired to take on the persona of accommodating experts, who out of urgency and need could work with state agencies' limited resources. Surviving the everyday requires a light touch, and the ability to assimilate the possibilities and foreclosures flood hazards incite.

Despite these plans, they never made it to the ministry and instead drafted a letter that outlined their grievances. Vulnerability, so it is said, is socially constructed within narratives of identity and place, with varying structures and powers of authorization. The interplay of knowledge, self-presentation, eco-biological processes, and testimonials established through VCAs create a discernible communicative context for ethical commitments to participation. Yet, the VCA does not guarantee redress or even a better life. To say all this, of course, is not to dismiss outright VCAs and the moral economies in which they traffic as antipolitics (Ferguson 2006). It may be this, but it may not only be this.

The VCA demonstrates that participatory climate adaptation does not mark clear distinctions between expert and nonexpert methods for monitoring flood hazards. These distinctions have long been emphasized in biopolitical studies of vulnerability and biosecurity more broadly (Lakoff 2008). Instead, I have suggested that the increased frequency of abnormal rainfall due to climate change has blurred distinctions between expert and nonexpert in Guyana. This blurring creates the conditions for new thoughts, and as I suggest, inform contestations that emerge around relations of accountability.

These relations are quite different from what Bruno Latour calls "matters of concern," or the defense of facts

for the sake of ideological or political gain (Latour 2004). This is because as long as they took initiative, VCA trainees believed that they were adapting and that their injuries due to flooding could be addressed on a case by case basis. VCA training began as a routinized effort to convey flood knowledge and a skill set in water filtration but shifted in the real time of data collection, and unfolded into a scene of adaptation itself. The VCAs are not the result of the technical or political compulsions of a few individuals, nor are they mere expressions of vulnerability that follow historically formalized understandings of neoliberal development or, for that matter, state abandonment. Yet, they are not, for that reason, solely dependent on the local particularities of a hazardous place. VCA trainees understand that climate adaptation entails the constant adjustment of expectations about accountability and survival.

## 6. Conclusions

In this article, I described some of the attitudes and dispositions that VCA trainees hold toward participatory climate adaptation in Guyana. They hold a mix of indifference, fear, hope, and cynicism. VCAs are not a departure from the reduction and despair that so often absorbs genuine energy for humanitarian interventions. Rather, VCAs provide trainees guidelines to first build up the capacity to identify flood hazards, and second to learn to live with them. This sort of ecological realism can be stifling, just as much as it can be a foundation for change beyond pragmatism and insist on a new materialism. Between VCA trainees' testimonials and Steven's photography lies a difference not in textual interpretation or citation but in ethical sensibilities toward participation. An ethnographic focus on scenes of the ordinary helps scholars better explain why and how the circulation of climate change related data, models, and information matters to nontechnological and non-scientific publics. Berlant's analytic "crisis ordinariness" thus offers a means to track the epistemological and ontological demands of climatological expertise, as it transverse various worlds of nature and culture.

The past decade has yielded a wealth of debates about knowledge and vulnerability in the qualitative-oriented literature on participatory climate adaptation (Adger 2003; Pelling 2010). One common theme is that the "politics" of social elites and state actors effects where and how such projects can be implanted, and by extension the forms of expertise they rely on. But the VCA reminds us that politics are not predetermined by social capital alone but rather come into being through complex processes of expertise that are located in material,

historical, geopolitical, economic, and nature/culture contexts (Stengers 2015). For instance, VCAs in Guyana demonstrate that participatory climate adaptation is constitutive of other crises related to Georgetown's housing stock, growing population diaspora, and waste disposal. Hence, the notion that VCAs can inherently represent an effective alternative to the work of ill-resourced states is not a self-evident claim, nor is it necessarily emancipatory. Instead, I have demonstrated that these claims are regimented by how people's experiences of vulnerability contour landscapes, things, places, bodies, and desires in the everyday.

A range of activities (e.g., testimonials and surveys) dramatize the role that participatory decision-making plays in the VCA. These decisions may at first appear to be inconsequential. This is the case if we compare VCAs to geoengineering or conservation easements, practices often deemed by governmental institutions as necessary steps toward recalibrating a planet fractured by climate change. But in its mundane unfolding, participatory decision-making resonates with histories of development and North/South divides in technology and science that unfold against the backdrop of a changing climate. My focus on crisis ordinariness thus enables an analysis of participatory climate adaptation that does not assume its efficaciousness and who or what gets charged up enough to pursue survival.

Ethnography of participatory climate adaptation is not an exercise in representation or a critique of the possible publics that delimit its fields of accountability. Far from a definitive appraisal of vulnerability, politics, or ethics, it illuminates ways of knowing that inform ordinary life. It recognizes the hubris involved in such a task. At the same time, it gestures to the limits of human knowledge, while leaving open the possibility of finding other models of knowing (and living with) climate change.

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