Social Theory & Health
https://doi.org/10.1057/s41285-023-00195-x

ORIGINAL ARTICLE

Postcolonial riskscapes: risk, trust, and the community-based response to Ebola virus disease in Liberia

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Accepted: 2 August 2023

Abstract

The initial outbreak response to the 2014–2016 Ebola Virus Disease (EVD) in West Africa was met with resistance in Liberia. In part, this was because responders failed to account for how the country's colonial history and sociocultural circumstances influenced attitudes and perceptions of the population. We argue that understanding the relationship between the broader structural influences and the subjective aspects–the lived experience of people in the region–is crucial to developing more effective outbreak measures. In this light, we adopt and refine the concept of "riskscape" to highlight how the resistance to response teams shifted as the EVD outbreak unfolded. To illustrate our argument, we consider how the particular historical, cultural, and political forces constituted a "postcolonial riskscape", influencing evolving perceptions of risk and trust in the context of the outbreak response in the West Point informal settlement located in Liberia's capital, Monrovia. As part of that discussion, we demonstrate how the adoption of a bottom-up community-based strategy by response officials, stimulated changes in the riskscape that helped pave the way for the adoption of an improved response strategy that resulted in a relatively swift decrease in EVD prevalence.

Keywords Ebola virus disease · Riskscape · Risk perception · Trust · Theory · Community engagement

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Published online: 05 September 2023

Introduction

In this paper we argue that the "riskscape" perspective can enhance our understanding of a disease outbreak and its resolution. To do so, we employ this framework to analyze the 2014–2016 West African Ebola Virus Disease (EVD) epidemic in the informal settlement of West Point, located in the Liberian capital of Monrovia. As we shall see, for a variety of reasons the emergency response orchestrated by local and national institutions and NGOs at this site was initially ineffective in curbing disease spread. Reasons proffered by the international community for the inadequate response focused on several factors, such as inadequate healthcare systems and resources, widespread mobility by residents, and ignorance and myth surrounding the risk of Ebola (Wilkinson and Leach 2015). The spread of misinformation, and the distrust of authorities and expert (colonial) knowledge further hindered the disease response (Vinck et al. 2019). However, as we highlight in detail in this paper, such accounts paid little attention to the region's postcolonial context, extractive and predatory accumulation of resources, and power structures (Richardson et al. 2019)—what we refer to as the *postcolonial EVD riskscape*.

EVD is a viral hemorrhagic fever that spreads through contact with bodily fluids via mucous membranes or skin. Infected persons devolve successively from a "dry" stage (e.g., fever, aches, pains, fatigue) to a "wet" stage (e.g., diarrhea and vomiting) where the infected are the most contagious, even after death—hence the higher risk of transmissibility during funeral rites in which the deceased may be physically embraced and ritual ablution of the body for religious reasons may take place (WHO 2015). Previous EVD outbreaks were largely limited to rural and remote villages in West and Central Africa which helped contain the spread. Notably, the West African epidemic, affecting Guinea, Liberia and Sierra Leone, involved EVD spread to densely-populated urban centers in these countries, thus ultimately contributing to the loss of over 11,000 lives—making it the largest EVD epidemic in recorded history.

To illustrate the theoretical and empirical utility of the riskscape perspective in analyzing the spread and response to epidemic disease, we focus on how the postcolonial context influenced the ability of members of the West Point community to perceive, assess and manage the risk of EVD. By adopting a postcolonial riskscape orientation, we provide insight into how an initially failed effort to control the spread of EVD was eventually transformed into a successful response. We begin by first introducing the riskscape concept before drawing attention to the broader historical background that informs the West African EVD riskscape. We then move to a brief discussion of risk perception, risk communication, and social trust—three salient dimensions of any riskscape—that will help contextualize the relationship between official and non-official (community) responders to EVD. Finally, we succinctly draw upon focus group data to illustrate how a successful "community-based initiative" reoriented West Pointers' risk perception and communication, and trust in outbreak responders in ways that empowered actions like active case identification and contact tracing, thereby enabling effective outbreak response measures to gain traction within the informal settlement.

The riskscape perspective

Earlier studies that adopted the riskscape perspective made efforts to situate environmental risks in social, political, and economic contexts (Morello-Frosch and Shenassa 2006; see also Mair et al. 2011; Gee and Skovdal 2017). Here, a particular emphasis was given to how risk from specific geographical and/or environmental hazards were unequally distributed across demographic lines (Jenerette et al. 2011). More recently, Müller-Mahn and Everts (2013) build upon Arjun Appadurai's (1996, pp. 33, 41) five "-scapes" model (e.g., financescape, ethnoscape, technoscape, mediascape, and ideoscape) to offer a newer era in riskscapes studies (see also Neisser 2014; Sutherland et al. 2012). In this newer iteration, two aspects of Appadurai's work are foregrounded. First, like a landscape that can be conceived from multiple vantage points, riskscapes are plural and depend on viewpoints taken and the particular risks selected out for attention. Secondly, while risk is often felt at the level of the individual, in contrast riskscapes are constructed, understood, and resolved in a collective fashion (Müller-Mahn and Everts 2013: pp. 24–26), making them shared—though not necessarily uncontested—social constructions. Everts et al. (2018) argue that in analyzing riskscapes, "social practices," or the "doings and sayings" (Schatzki 2002) that make up social and material relations, must remain as the basic elements of the research focus. Similarly, Neisser (2014) adopts an Actor Network Approach to argue that riskscapes should not be conceived of in static or purely materialistic terms, but as an "assemblage" of "material, social and discursive entities and processes" (p. 103).

Riskscapes were originally defined as "landscapes of multi-layered and interacting risks that represent both the materiality of real risks, and the perceptions, knowledge and imaginations of the people who live in that landscape and continuously shape and reshape its contours through their daily activities" (Müller-Mahn 2013, p. xviii). In the more recent riskscape literature, calls have been made for increased attention to power relations (Müller-Mahn and Everts 2018; Bohle 2018). With consideration to epidemic disease outbreaks in the Global South, and in light of the fact that little commitment has been made to explore the effects of colonialism as temporal–spatial, political–economic practices that produce overlapping sets of risks, it is this particular emphasis on power that we would like to explore further. To date, no scholarship has considered the connection between the history of colonialism, political–economic relations, and riskscape (c.f., Yumagulova 2020).

In this paper, we develop a new perspective—the *postcolonial riskscape*, which, like its predecessor, has material, socio-discursive, spatio-temporal, and power dimensions, and which foregrounds risk as perceived, envisioned, and reconciled plurally by distinct groups. As we show below, the riskscape perspective is uniquely situated to explore how (post)colonial relations impact risk. Research suggests, for example, that postcolonial histories can impact upon a geopolitical region long after its official end and can therefore impinge upon risk of epidemic disease outbreaks and their responses (Ali and Rose 2022). In the postcolonial

riskscape, each of the dimensions of the riskscape—temporal–spatial, political–economic, material and discursive—can be analyzed through the lens of the Liberian postcolonial history. In addition, our analysis of the EVD postcolonial riskscape puts additional emphasis on the fact that risk perception, communication, and management, as well as trust, are also context-dependent, and notably, can *shift*. In this, we take our cue from Gebreyes and Theodory (2018) by paying attention to the competing definitions of riskscapes between experts and the communities. In our case, we use this framework to understand differences in the attitudes and perceptions of risk by public health responders as distinct from local communities—differences that entail "consequences for the choice of risk management practices" (Gebreyes and Theodory 2018, p. 145). It is this important point that brings to the forefront the notion of risk being comprised of "social practices"—that "risk situations are in principle open for change and that change can be initiated in very diverse ways" (Müller-Mahn et al. 2018, p. 209). In this sense, we will highlight how West Pointers conception of risk evolved to incorporate experts' (i.e., international and local epidemic response teams) conception of risk via a community-based initiative, the social practices of which ultimately brought a new understanding of risk and simultaneously an effective response.

While we focus specifically on the Liberian EVD riskscape in this paper, our broader argument is relevant to analyses of epidemic disease outbreaks more generally. As such, we highlight the point that, if foreign outbreak responders and NGOs are not aware of the way local histories inform the riskscape of the community they are supporting, then the response will not be effective—as was the case during the early stages of the West African EVD epidemic when suspicion and distrust of official responders reigned (Leach 2015a, 2015b).

The (post)colonial dimensions of the Ebola riskscape in Liberia

In this section we anchor the Liberian experience with EVD to its foundations in the colonial, and subsequent political-economic, history of the country. Our point is to illustrate how the postcolonial riskscape—power and structural developments, space and time, and localized knowledge of, and experience with, these histories—informed the distrust Liberians initially felt towards EVD discourse. In the next section we highlight how risk perception, communication, and management, as well as trust, are also dependent upon the postcolonial riskscape.

At the outset, it is important to underscore the *political–economic* dimensions of the postcolonial riskscape in Liberia, situated as it is in broader historical developments in West Africa. While Liberia and Ethiopia are frequently cited as the only two African countries that were not formally colonized, in the case of the former, this might be true in theory but not in practice (Howard 2017, p. 25). Liberia was founded in the early 1820s by freed American slaves, referred to as Americo-Liberians, who understood themselves as superior to the indigenous Africans and thus dominated politically (Brown 1941). Over time, the Americo-Liberian settlers pursued a mission of "civilizing and Christianizing" the indigenous population (Liebenow 1969, 1987; Wreh 1976; Beyan 1991; Sawyer 1992; Kieh 2008, 2012). Soon, a

rather unique form of settler colonialism ensued alongside ethnocentrism, political domination, and displacement (Sawyer 1992; Kieh 2008, 2012). Consolidating their political and economic power in the government capital of Monrovia, the repatriated Africans privileged their descendants in every sphere (Sawyer 1992; Kieh 2008, 2012, 2017), and "remained ensconced in the country's political economy until the 1980 military coup" (Kieh 2017, p. 89). The result was the institutionalization of resentment and suspicion between ethnic groups, further perpetuating a program of internal colonization of the hinterland that parallels many colonized resource extraction-based economics typically associated with the Global South.

Corruption and nepotism, coupled with the harsh consequences of structural adjustment plans via the World Bank and International Monetary Fund in the 1980s, had numerous and far-reaching effects, most notably, the constant depletion of the public treasury (Abdullah and Rashid 2017, p. 5). Historical developments over time established a cadre of large multinational (and American) companies in the country. Working in conjunction with state elites, predatory capitalist accumulation in resource extraction (e.g., rubber, iron ore, diamonds and other minerals) and widespread corruption involving various illegal practices for private enrichment (e.g., receiving bribes, extortion, theft of public funds, and procurement fraud) became public knowledge (Kieh 2017, p. 90). According to Kieh (2017), local comprador elites viewed subalterns as marginal and insignificant, hence building physical infrastructure, health facilitates, and training health personnel were not prioritized by the state (see Farmer 2020). Such developments furthered the distrust already established between Americo-Liberians and indigenous locals, and an accompanying increase in tribalism (Howard 2017, p. 25). Simply put, "the state and its government had no interest in serving the interest of Liberian people" (Kieh 2017, p. 89). Consequently, it is not surprising to learn that in 2013, Liberia was ranked the most corrupt country in the world by Transparency International (Kieh 2017, p. 99). The combination of these structural machinations, alongside political instability, civil violence, and distrust of the government, triggered two civil wars in Liberia (1989–1996 and 1999–2003). The result was numerous predatory and military regimes, ethnic violence, and large populations displaced. Many of those displaced moved to informal settlements like West Point, Monrovia (discussed below). Dictatorship, unbridled corruption, and military coups followed over the decades along with youth disengagement, rebellion, a lack of public participation (Howard 2017), and no economic "safety net" (Kieh 2017, p. 90).

One consequence of Liberia's distinctive postcolonial condition is the rapid urbanization and the building of informal settlements that took place, which in turn informed the *spatial* aspects of the EVD riskscape. Like many countries in Africa, in Liberia, indigenous peoples' needs and humanity were disregarded as cities were built according to the desires of the colonizers (Njoh 2010). Disallowed from the established infrastructure, housing, social welfare services, and adequate healthcare facilities, the subaltern were often confined or restricted to settling in underserviced parts of the city. Wilkinson et al. (2020) write that informal settlements—often referred to as "slums," though not used by locals in a derogatory sense—are typically characterized by: "a lack of formal recognition on the part of local government of the settlement and its residents; the absence

of secure tenure for residents; inadequacies in provision for infrastructure and services; overcrowded and substandard dwellings; and location on land less that suitable for occupation" (Wilkinson et al. 2020: Footnote 4). For several reasons, such settlements are vulnerable to increased infectious disease transmission. Some examples include: epidemiological vulnerability (e.g., health conditions, comorbidities), transmission vulnerability (e.g., population and housing density, frequent mobility between urban and rural settings, lack of water and sanitation), health system vulnerability (e.g., shortage of availability/intensive care capability), direct vulnerability to control measures (e.g., interference with mobility for work, livelihood, and food, and disruption of local economy), and systemic vulnerability (e.g., overlapping risks and issues, such as acute and chronic health concerns, social concerns like violence and persecution, natural factors like floods and heat, and infrastructural problems like fires, building collapse, etc.) (Wilkinson et al. 2020, pp. 505–511).

As discussed in the above, another important outcome of the postcolonial condition with respect to *power relations* in the EVD riskscape is public distrust in the state. As we will see below, in light of this postcolonial history it is not surprising to learn that the crisis of legitimacy faced by the Liberian state adversely effected the EVD response. Not only was the Sirleaf Administration—the regime in control during the epidemic—distrusted (Kieh 2017, p. 101), but so was the public health system (Blair et al. 2017), dilapidated as it was. Instead, advice by health officials and the government were disbelieved or assumed to be a scheme put forth to elicit financial assistance from the international community. Even as patients' lay dying of EVD, directives for the sick to visit Ebola Treatment Units (ETUs) were ignored or were suspected to be run by foreign interests affiliated with government employees. During the initial response phases, because relatives of EVD patients were not allowed to visit or see their loved ones, people's suspicions and distrust grew, as family and friends entering ETUs were sometimes never to be seen again (Ali et al. 2021). Some even believed that people were being purposefully infected with the disease to make it appear that a non-existent threat did exist. Indeed, such doubts and the associated risk perceptions are noted by Leach:

> [West Africans] have a history of reason to believe that their best interests are not at the heart of external teams… look a bit harder at the political-economic history of this region and there are logics to those understandings. (Leach 2015a)

Additionally, the role of governmental profiteering and neglect of informal settlements by ruling elites has also contributed to widespread mistrust, as investments on roads and infrastructure were made on the basis of state-private foreign interests and companies, to service for example concession areas devoted to resource extraction, to the neglect of the services required by informal settlements (Leach 2015a). It is for these reasons we call attention to risk perception, risk communication, and social trust as additional dimensions of the EVD riskscape in the next section.

Risk perception, risk communication, and social trust as additional dimensions of the EVD riskscape

One of the predominant themes surrounding the initial failure to respond effectively to the EVD outbreak was how the history of public distrust of the government, and specifically in the EVD context distrust of "expert" framings of risk, led to significant problems with *risk perception* and *risk communication* in the community. The social amplification of risk framework (SARF) offers an approach to risk perception and communication, arguing that social processes are understood as the foundation upon which risk-related phenomena become known, communicated, assessed, and intensified or attenuated (Kasperson et al. 1988). The idea is that "risk events" are deemed worthy of attention or fear—and are communicated as such—based on their situatedness in a dynamic social location. Risk, in this framework, comes to be known and transmitted—and ultimately responded to—via community interaction and the subsequent signs, symbols, and images disseminated to the public (Pidgeon and Henwood 2010). With regard to the EVD outbreak specifically, Gee and Skovdal (2017) have used the riskscape framework from the point of view of international healthcare workers to consider how "spatial localities"—the social production of a place—inform risk perception. We build upon this work by offering a different vantage point—one from the side of victims of the EVD, and with particular reference to how the history of colonialism shapes trust and attenuates, or amplifies risk perception (Kasperson et al. 1988) and impacts upon the overall postcolonial riskscape of West Africa.

A third additional dimension of the EVD riskscape is *social trust*. Like research on riskscapes and risk perception, outlooks on trust as a correlate of risk perception vary across studies (Earle et al. 2010). Generally, risk perception and action are both socially and culturally mediated and highly dependent upon whether sources of risk information/communication are reliable and respected, or not (Slovic 1993; Boholm 1998; Siegrist et al. 2010; Sjöberg 2012). Hence, in the context of a public lacking the necessary knowledge to make informed decisions about the "objective" circumstances of hazards, trust is a vital mediator between risk perception and risk management (Visschers and Siegrist 2008; see also Siegrist and Cvetkovich 2000). Important in the context of EVD, the influential work by Löfstedt's (2005) provides several examples of risk management in post-trust societies, an important referent to our work on epidemic disease and distrust in postcolonial societies. When trust is low, risk communication typically becomes an even more important part of obtaining community buy-in. Löfstedt's work thus outlines various tools for understanding and affecting public confidence in risk managers, such as testing for trust, consulting and involving the public in risk and policy deliberation (e.g., citizen panels), and studying the amount of public participation an area has. While Löfstedt's case studies are based in Western contexts, as we will show below, his thesis that risk management can be especially difficult in societies with low trust, and that consultation and involvement are necessary, is central to our argument and our building upon the riskscape perspective in particular. That is, involving the community and

receiving buy-in is especially important in epidemic conditions where distrust of authorities and disbelief in the legitimacy of political institutions are widespread.

Methods

The data used for this paper are derived from a larger post hoc qualitative study that investigated the adoption of community-based initiatives during the 2014–2016 EVD outbreaks in Sierra Leone and Liberia (Ali and Rose 2022; Ali et al. 2021). Interviews and focus groups were conducted at 10 different regional sites (5 in each country, but for the analysis presented here we draw upon a 90-min focus group discussion held in the West Point informal settlement in October 2019). Ten focus group participants were recruited through community leaders who helped enlist survivors, caregivers of Ebola cases, family members of deceased cases, and response workers. Consent was voluntary and participants were compensated a small amount for their time. The Human Participants Review Sub-Committee of the Office of Research Ethics at York University, Toronto (Certificate #: e2018-346) as well as the National Research Ethics Board of Liberia (NREB-BSR037-8) and Sierra Leone (ICF #11A) reviewed and approved all research protocols.

The qualitative analysis was guided by reflexive thematic analysis (Braun and Clarke 2019), a method that involves identifying, analyzing, interpreting, and validating patterns of meaning—"themes"—provided by the data. We identified themes pertaining to how members of West Point viewed their experiences both prior to and after the introduction of the community-based intervention, especially in relation to risk perception, risk communication, risk management, and social trust.

The riskscape perspective applied: the case of Ebola in West Point, Liberia

Located on a sandbar peninsula jutting out into the Atlantic Ocean on the northwest side of Monrovia, West Point developed as a somewhat geographically isolated informal settlement community. First settled in the 1940s by fishermen, the population has since expanded, first by those searching for better employment opportunities afforded by living close to Monrovia and then by waves of those displaced by the civil wars (MacDougall 2016). In 1960, for the purposes of governance, West Point was administratively formed into a township. Today, the informal settlement holds 80,000 residents who live in a less than 1.5 km^2 area (Schrieber and Widner 2017). The settlement reflects the class divisions that have defined the social structure for over a century, when Americo-Liberian settlers first dominated various indigenous groups (MacDougall 2016). Many of the latter currently live in West Point and continue to feel the strained relations between themselves and the urban elite.

On August 6, 2014, an EVD case was discovered in West Point. Fearing that there would be rapid spread within the highly dense community that had little to no public infrastructure to support an effective response (e.g., transport, sewage, water and electricity), the government quarantined the entire area (Schreiber and

Widner 2017; Fallah et al. 2016). The imposition of quarantine was accompanied by the unannounced police and military blockade of the only point of entry into the informal settlement. Not being able to travel outside the settlement to attend jobs or attain food, introduced significant hardship. West Pointers began to protest. As tension amplified, some community members became suspicious that nonresidents were making their way under the cover of night to a government-established EVD holding centre where they were being treated—an instance of perceived inequity:

> West Point Resident 8: The government told us at the meeting with community leaders that the holding center was only for West Pointers—to do testing of just West Pointers. If anyone was found to have Ebola, they would be transferred to outside West Point. But people were not to be taken from outside of West Point and brought here. That's where the noise started from.

After anger, resentment, and the ransacking of the center, increasing confrontations between residents and security forces led to a tragic shooting where a young boy was killed by security forces. These developments highlight the animosity and lack of trust directed towards the government and NGO officials during the early stages of the response. Indications of this are illustrated by the focus group excerpts which highlight the tensions present as well as perceived violations of public trust.

> West Point Resident 8: Yeah, the government response was blunt and very wrong. The government intervention was not timely and furthermore, it was like an aggression directed against us as citizens. It was also an abuse of our fundamental rights.

> West Point Resident 1: We can't fight the government, but we did because we were pushed against the wall. The only way the government would pay attention to us was by going there [to the blockaded access point] and engage with them in that kind of way [i.e., through demonstration and protest].

> West Point Resident 8: Now, when they got the information that the place was vandalized, I think government should have worked with the residents of the community […] But instead they decided to come with the harsh response of quarantining the area, blocking the area and with no food coming in, family members were not permitted to come in to visit their family to help, people were not allowed to go out to get food. So, these are the things that cause[d] the riot.

In addition to the quarantine, the populace of West Point also had to contend with the arrival of hordes of foreign and international humanitarian workers who also tended to operate in a top-down, oppressive manner. The tactic that unfolded is what Farmer (2020) calls the "control-over-care paradigm," a dehumanizing and rigid mechanism of power that can be traced back to colonial era medicine. Its containment logic merged neatly with the most repressive aspects of the quarantine and was

quickly met with resistance. The result was a double dose of class-based spatialization with securitized boundaries (see Richardson et al. 2017a, b), with Ebola Treatment Units (ETUs) surrounded by high walls and barbed wire (Richards 2016, p. 133), and doctors and public health workers often acting as "border guards" on the scene (Benton 2017, p. 3). Thus, with the quarantine in place, a securitized, control-over-care paradigm ascendant, and West Pointers' overwhelming distrust of government, healthcare workers, and international and humanitarian response teams, conspiracies began to circulate about the true risk factors and the possible subversive motivations (i.e., financial) of the "vast machinery of disease containment" (Farmer 2020, p. 18). There was a time when little hope remained, and fear and aggression were elevated. In this situation, it can be proffered that West Pointers' risk perception was more focused on governmental overreach and deceit than EVD.

This riskscape began to change, however, with the introduction of the "Community-Based Initiative" (CBI). Spearheaded by Dr. Mosoka Fallah—the EVD Response Lead in Monterrado County (where Monrovia is located)—the CBI model is based on the idea of enlisting trusted members of the local community (e.g., traditional and religious leaders, teachers, medical students) to take on active roles in the response (e.g., searching for and recording cases and contacts) (Schreiber and Widner 2017; Fallah et al. 2016). As well, the CBI initiated a surveillance network and paid attention to other necessities that were previously neglected under quarantine measures and governmental instruction, such as providing food, water, handwashing stations, and other provisions throughout the informal settlement. With the introduction of the CBI, the EVD outbreak response measures shifted dramatically as distrust of government response officials was redirected towards trust in community members (Ali et al. 2022). As well, the previous denial of EVD as real, or as a threat, also began to change after the introduction of the CBI.

Markedly, with trust now forged, risk communication, perception, and management amongst West Pointers evolved in lockstep—a point revealed in our focus group discussions. It is interesting to note how the initial denial of EVD was informed by previously entrenched views—due, for example, to an almost intractable distrust of government claims. In the face of the intervention of the CBI, as well as direct and vivid experiences of seeing loved ones succumb to the terrible disease, the perception of risk surrounding EVD shifted:

> West Point Resident 9: My concern was that we did not believe that Ebola was really true. I only believed that when Ebola entered my household and took seven lives. The second thing that helped to change my mind that Ebola was real was the arrival and engagement of CBI. There was no outside support for West Point until Dr. Fallah and his team organized our community health team and mobilized our efforts.

> West Point Resident 6: During the time of the [government-imposed] quarantine, I never believed that Ebola was real. This changed when I became a member of the CBI team as an active case finder. When I got to the field searching for those infected, I saw people screaming, people

> dying and you know, that was when I started to believe that there is a disease they [the government] called Ebola, yeah.

A key issue in the focus groups concerned the level of trust invested in the information received during the outbreak. During the earlier stages of the response, for example, it was clear that information from official government responders was distrusted. However, with the implementation of the CBI, information—delivered directly via trained community members—was deemed much more reliable by the community at large.

> West Point Resident 6: Yes, the trust came about because of information. Later, when I became an active case-finder through CBI, I was able to convey information from the ETU to the families and relatives of those in the ETU. It was through the sharing of information with the affected families that brought that trust. Affected families started to trust us as active case-finders because we were right there in the community. We were therefore able to build trust.

> West Point Resident 1: The governments did not come during the earlier times to talk to our religious (Islamic) leaders and you know, our tribal groups. We Muslims did not receive the proper advice. As a result of a lack of trust in the knowledge, we continued to go to the mosque and stood side by side for prayer. With CBI we were able to carry the proper awareness within ours and other mosques. Even in the mosque people started practicing distancing when praying once the proper message came from CBI.

The CBI strategy, introduced in West Point in mid-September, became successful almost immediately. Within 24 h, members of the CBI response team had identified and arranged for transport of over 40 suspected Ebola cases to ETUs (Fallah et al. 2016). They had also uncovered 34 suspected Ebola deaths and many secret burials that had taken place. These burials were occurring surreptitiously because government and NGO officials were known to be disrespectful of religious and cultural funeral practices (Fallah et al. 2016). Further, skepticism of government and NGO officials also meant that suspected EVD cases were not reported to them, thus rendering active case identification and contact tracing ineffectual. With the introduction of CBI, no new EVD cases were recorded in West Point by November 2017 and despite its high density, poverty, and social isolation, West Point was the first community in Liberia to be free of EVD (ibid). Owing to its early proven success in identifying cases and contacts, the CBI approach was rolled out in other hard-hit communities throughout the country in the following month. It was clear that the adoption of the CBI approach played a key role in reversing Liberia's steep epidemic trajectory, especially in comparison to other EVD-effected countries such as Sierra Leone and Guinea where the reversal occurred several weeks thereafter (ibid).

Discussion

Challenges in outbreak response were faced during the initial stages of the 2014–2016 EVD epidemic in Liberia generally, and West Point in particular, because affected communities were not in a position to trust local officials and thus implement their advised safety and prevention measures. This was an outcome of the postcolonial riskscape as indicated by the way the initial outbreak response unfolded. Both the quarantine applied by the government, and the arrival of international responders, were met with resistance by the local populace, highlighting the history of distrust of local politicians and (white) foreigners, the extraction economy, poverty, rapid urbanization, and enhanced need for mobility—all of which we have tied to the colonial history of the region. The implementation of the CBI was based upon a strategy of directly including community members in active participation in different phases of the EVD response (e.g., response training, contact tracing, surveillance, case identification, increasing community risk perception, implementing hygiene, isolation, and quarantine measures), thus addressing the issue of social distrust. In the end, by involving the community, risk perception, communication, and management, and trust of the international and local government responders, was shifted, enabling an effective response to take place.

In this study, we have endeavored to illustrate how the postcolonial condition of Liberia, and its resultant impact on the urban informal settlement of West Point, impacted both the outbreak and the response to EVD. This research follows in a long line of global health scholarship outlining the ways disasters and their consequences are rarely if ever the sole products of (bio)physical events, but are intimately wrapped into social, historical, and political occurrences (Tierney 2014). In continuing this line of scholarship, we have used the riskscape perspective, in its most recent iteration, to "link the material dimension of potential physical threats, the discursive dimension of how people perceive, communicate and envision risks, and the dimension of agency, i.e., how people produce risks and manage to live with them" (Müller-Mahn and Everts 2018, p. 197). We have re-envisioned this perspective to explain the West Point context and experience as a *postcolonial riskscape*. The usefulness of this perspective is clear in that, from a social practice perspective, for West Pointers the risk of EVD was never solely based on the "objective" risks associated with the virus itself, but was situated within the broader riskscape environment—located as it is in the region's colonial history. If citizens "carry the history of place and their narratives with them, and… these in turn shape notions of risk and 'riskscapes' ", as Sutherland et al. (2012, p. 48) have written and as we have shown, the above sections have elucidated the importance of understanding how postcolonial relations—urbanization, poverty, political–economy, trust and vulnerability—not only influence the transmissibility of a virus outbreak, but are significant aspects of risk assessment, communication, and management in epidemic disease outbreaks. Applying the *postcolonial riskscape* perspective, therefore, to an epidemic disease outbreak shows the ineffectiveness of reducing risk of a disease to its "objective" qualities—that is, solely the ability of the virus to infect devoid of a consideration of socio-historical conditions. Rather, numerous social, political,

and geographical factors weighed into the overarching riskscape environment with which West Pointers were situated.

With regard to the spatial, temporal, and power dynamics of risk, in West Point the history of colonialism has led to increased urbanization and the emergence of particular forms of human networks and patterns of mobility, each of which puts citizens in a higher susceptibility to risk. Treffers et al. (2021, p. 7) highlight the spatial-colonial aspects of the EVD outbreaks in West Africa and argue that Ebola is intimately situated in regional political ecologies and extended urbanization in three ways: "(1) deforestation and extractive industry as drivers of zoonoses; (2) intensified cross-border mobilities based on the search for food and work; (3) and the rapid growth of informal settlements in peripheral urban spaces." Like Treffers et al., we situate viral transmission, and the failure of outbreak response, in the inherent features of colonialism and its reproduction in future settings. In this sense, the postcolonial riskscape, in increasing West Africans' susceptibility to the disease, is tied directly to the effects of the colonial history, enabling subsequent relations of geography, temporality, and power relations that cannot be severed from each other, and all of which contribute to the larger, objective *and* subjective aspects of risk that we can call the EVD riskscape.

With regard to distrust, risk communication, and risk management, recent studies have highlighted the lacunae in political–economic approaches to sociocultural and trust frameworks of risk perception. The history of Western colonialism, slavery, violence, and corruption in the region (Azétsop et al. 2020), and the subsequent distrust of state institutions and Western NGOs (Leach 2015a), has taken its toll on community cohesion, national unity, and public health, creating ideal conditions for the spread of EVD (Tenkorang 2018). Additionally, the role of governmental profiteering and neglect of informal settlements by ruling elites has also contributed to widespread mistrust, as investments in roads and infrastructure were made on the basis of state-private foreign interests and companies, to service, for example, concession areas devoted to resource extraction, to the neglect of the services required by informal settlements (Leach 2015b). Each of these situations in itself contributed to the postcolonial riskscape that impinged upon the amount of (dis)trust, risk communication, and risk management available to West Pointers. In addition to the official responders' misunderstanding of the West Point context, we have shown how government and humanitarian response teams' (i.e., "expert") interpretations of scientific and material forms of risk adopt a primarily realist (biomedical) approach which ignores several important dimensions of the EVD riskscape. In this sense, Müller-Mahn and Everts (2018) rightfully argue that too often "[r]isk is… seen as a systemic and technical issue, which is best understood and discussed by experts alone. The relevance of routines and everyday practices are rarely considered" (p. 209). As Wilkinson et al. (2017) and Wilkinson and Fairhead (2017) describe, and as our West Point example has shown, if during an outbreak the goal is to save lives, top-down, one-size-fits-all tactics of administering aid, without any understanding of the region's historical background, is ripe for failure, and perhaps represents another, more insidious form of structural violence (Richardson et al. 2019). This lack of knowledge was revealed most saliently in the harsh quarantine imposed on West

Pointers, who understood this action not in terms of public health objectives, but in terms of a subversive political attack from those outside the community (Pellecchia 2017). Research has shown that whether through direct or indirect forms of colonial rule, West Africans at best feel "ambivalent" towards politicians or Westerners because of their perceived role in the extractive and exploitive industries abusing their resources (Wilkinson and Fairhead 2017, p. 16). In each of the three Mano River Union nations, a belief exists that politicians do not serve the interests of their constituents but are rather more concerned with their own personal gain (Wilkinson and Leach 2015, p. 143). Because of histories and practices such as these, there is a prevalent logic of skepticism and suspicion when it comes to white people and foreigners generally, as well as local elites who are perceived to work under the auspices of such outsiders (Ferme 2001; Shaw 2002).

In summary, from the riskscape perspective, if conceptions of risk are not synonymous with and communicated between relevant actors—e.g., foreign-NGO and local government emergency aid workers and the community—the potential for distrust and ineffective response measures increases during emergency scenarios. Because of this, we have argued that stronger rapport and trust between citizens and official responders is crucial, a heuristic Ali (2002) describes as the need for "enhanced expert-lay collaborations and the incorporation of local knowledge." By "local knowledge" it is important to keep in mind that this understanding of knowledge must be understood in terms of the broader political–economic and sociocultural context, or what we have denoted as the postcolonial riskscape perspective. Understanding the situation from such a vantage point is necessary, and the emphasis on plurality provided by the riskscape orientation calls attention to competing parties' definition of risk. For instance, without adopting such a viewpoint it would be difficult to understand why during the early stages of the outbreak the informal settlers in West Point viewed the EVD as a fabrication of the government with no basis. As such, in this paper we have updated and applied the riskscape perspective to address some of the epidemiological limitations of global health noted by Richardson et al. (2019), and to heed Richards's (2016) call for a "people's science."

Conclusion

In this article we have focused on two objectives: to illustrate the theoretical and empirical utility of the riskscape perspective to explain epidemic disease outbreaks and responses, and to apply it to the West African EVD epidemic with emphasis on the postcolonial contexts informing people's riskscape. In this, we have demonstrated how the adoption of a *postcolonial riskscape* perspective elucidates how a failed effort to control the spread of epidemic disease could eventually be converted into a positive outcome. The utility of the riskscape framework lies in the broadening of risk conceptions from the purely biophysical to temporal–spatial phenomena associated with disease transmission and response. In our iteration, we have emphasized the historical and power (i.e., colonial) dynamics

of the postcolonial riskscape of the EVD in West Point, Liberia, an informal settlement situated in a geographical and political context uniquely situated to rapid disease transmission (e.g., urbanization, poverty and mobility amongst citizens, a dilapidated healthcare system, widespread distrust in local government and international corporations and entities). With the adoption of a community-based initiative (CBI), we have shown how distrust and risk perception and communication transformed an initially ineffective response into one that ultimately saved lives.

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