Towards a social determination of health framework for understanding climate disruption and health-disease processes

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ABSTRACT
We compare the social determinants of health (SDOH) and the social determination of health (SDET) from the school of Latin American Social Medicine/Collective Health. Whereas SDET acknowledges how capitalist rule continues to shape global structures and public health concerns, SDOH proffers neoliberal solutions that obscure much of the violence and dispossession that influence contemporary migration and health-disease experiences. Working in simultaneous ethnographic teams, the researchers here interviewed Honduran migrants in their respective sites of Honduras, Mexico, and the United States. These interlocutors connected their experiences of disaster and health-disease to lack of economic resources and political corruption. Accordingly, we provide an elucidation of the liberal and dehumanizing foundations of SDOH by relying on theorizations from Africana philosophy and argue that the social determination of health model better captures the intersecting historical inequalities that structure relationships between climate, health-disease, and violence.

KEYWORDS
multi-sited ethnography, health-disease, climate change, migration, justice

Introduction

Astrid's living room is cramped and dark. A half-broken fan whirrs in the corner; the tiny sofa is worn, the cushions collapsing under her body as she talks. She counts herself lucky to be in this space; her house, her real house, sits on the other side of the Sula Valley, still full of mold and mud and memories and what is left of the belongings that she had accumulated over the years. Astrid fled her home when back-to-back hurricanes hit Honduras in the fall of 2020; her neighborhood was one of the many that turned into lakes as the water rose.

Co-author Amelia Frank-Vitale interviewed Astrid in May of 2022 to understand how she managed in the aftermath of these hurricanes. She talked about being displaced, about the lack of warning or preparation from the government, about staying in schools turned into makeshift shelters, and about eventually being offered a place to stay by a relative living in the United States, who had this small house in Choloma, Honduras that she could use. But Astrid's reticence to return to the house she owns - and owning a home is no small feat in San Pedro Sula - isn't just because of the damage the storms wrought.

Astrid now lives alone, but when the waters were rising in 2020 and she was making the decision to abandon the home that she had worked her whole life to buy, Astrid had a whole family. She and her partner, Melinda, had been together for years. They each had a child from previous relationships, both teenagers now.

In the wake of hurricanes Eta and Iota, as they bounced around from shelter to shelter, Melinda started to suffer from asthma. Melinda's lungs were already susceptible. Years before, the two women had decided to leave Honduras and migrate to the United States. Being a lesbian in Honduras entails dealing with multiple layers of violence and discrimination (Ghoshal 2020;

Menjívar and Walsh 2017). Most, though not all, of Astrid's family was supportive of their relationship, but Melinda's family refused to accept that they were anything other than friends.

They made it to the US-Mexico border, where they were separated and Astrid was quickly deported from the United States. Melinda was held in detention for months, trying to pursue an asylum claim, when she contracted tuberculosis. She, too, was then deported, but before the course of treatment was completed. When Melinda was returned to Honduras, the medicines she needed were simply too expensive.

At the end of December 2020, Melinda started to feel ill again. Over the course of a few days, her breathing declined. After a few more days, she was in such bad shape that her family took her to the public hospital, Catarino Rivas. This was an act of desperation. Often called "Matarino" Rivas (a play on the Spanish word *matar,* to kill), Catarino Rivas has a reputation for being ill-equipped, understaffed, and unlikely to help anyone who is dying. There are not enough gurneys in the hospital. Because new patients will not be admitted until a gurney becomes available, sick people will often go to the morgue to move bodies off gurneys themselves, in a macabre bid to get admitted and receive care.

When Melinda was taken to Catarino Rivas in the middle of the COVID-19 pandemic, it was a last resort. Astrid couldn't visit her due to COVID resrictions, and for some reason patients were not allowed to have their cell phones with them. A friendly nurse facilitated intermittent communication between them, but Melinda, like so many, never made it out of the hospital.

Melinda died from COVID. But what killed her?

As ethnographers working in Honduras, Mexico, and the United States, we start this article with Astrid and Melinda's story to bring attention to how climate change and health-

disease intertwine (Baer and Singer 2009; Singer 2021). We see climate change and health-disease as two areas of emerging study that require critical examination of how existing legal and conceptual frameworks might obscure complex relationships between rapid- and slow-onset climatic disruptions, interpersonal and structural forms of violence, and acute- versus slow-onset health-disease processes. In Honduras, climate change and health-disease demanded attention, as hurricanes Eta and Iota battered the country within two weeks of each other during the COVID-19 pandemic in late 2020. These back-to-back hurricanes are notable not only because of their devastating impacts as discrete "rapid-onset" climatic disruptions, but also because they represent a form of "slow-onset" climatic disruption. Both storm intensity and frequency are likely to increase in the coming years (Reyer 2017), and the intertwining of rapid- and slow-onset climate events complicates legal regimes throughout Central America, Mexico, and the United States that grant humanitarian aid and legal recognition in the wake of discrete disaster events or incidents of political persecution and interpersonal violence.

These interests are in dialogue with the recent rise of the "climate refugee" as a touchstone figure across a variety of governmental, institutional, and organizational contexts. In 2020, advocates celebrated the Human Rights Court ruling in the case of Ioane Teitiota, which sought to apply the principle of *non-refoulement* to individuals fleeing rising sea levels in Kiribati, Teitiota's home island. *Non-refoulement* is the international legal principle that disallows a nation-state from deporting asylum seekers who face "persecution or danger to life or freedom" in their home countries (Behrman and Kent 2020: 14). The Teitiota ruling points to a potential expansion of international protection frameworks to include people fleeing slow-onset climatic disruptions.

Despite the hopefulness in the ruling, we remain concerned about the potential for the figure of the "climate refugee" to replace the (colonial) humanitarian subject without transforming underlying biopolitical logics that have characterized regimes of humanitarian assistance and foreign aid (Stevenson 2014). Both humanitarian assistance and foreign aid entail addressing the consequences of structural violence while leaving unquestioned capitalist structures that cause precarity and displacement (Baer and Singer 2009). We saw this play out in response to rapid-onset disasters like Hurricane Mitch in 1998, when a relatively small number of Hondurans were granted Temporary Protected Status (TPS), a framework rooted in the assumption of eventual return, in the US, and where post-hurricane recovery efforts focused on neoliberal capitalist (re)development that enriched some while exacerbating precarity for most, similar to what was documented during post-Hurricane Katrina reconstruction efforts in the Gulf South region of the US (Adams 2013).

Hurricane Mitch's devastating effects in 1998 were front of mind for Indra, a Honduran woman who in 2007 joined the undocumented labor force rebuilding New Orleans in the wake of Hurricane Katrina. Talking with co-author Deniz Daser, she recounted the horrors of seeing whole houses and families washed away and having to carry water up and down 150 steps every day for years after Mitch. But it wasn't *just* Mitch that shaped her migration. A serious infection led to several operations in Honduras, one of which went wrong due to lack of resources. Meanwhile, she watched houses in her neighborhood get rebuilt with funds from relatives working in the US. She decided that her economic future and physical health depended on leaving. Recounting her journey northward, she explained, "You finally make it to the border. And THEN the suffering begins."

While Indra had "made it," life in the US brought other forms of suffering: wage theft, work injuries, constant concern about law enforcement, the stressors of distant family, and the expenses of being undocumented. "We pay a price," she explained, "We are far from our family. We cannot get medical insurance. We can't have licenses. We can't have any benefits." Additionally, due to complications arising from her operations in Honduras, she learned in New Orleans that she could no longer have children, a devastating blow to someone who frequently discussed her wish to be a mother. Still, Indra retained a desire to do more than simply suffer less. She also wanted to have a good life, one without constant wear and tear on her body and with some comfort and stability, in harmony with her surroundings. To some degree, she has achieved that. Yet as she enters middle age, her ongoing undocumented status raises questions about any possibility for retirement, her ability to visit aging parents in Honduras, and the chronic health effects not only of inadequate health care in Honduras but also the backbreaking and chemically-laden work of cleaning up after Katrina, itself a rapid-onset climatic disaster.

As we found through our fieldwork, Hondurans like Indra conceptualized well-being as dependent upon an intertwined understanding of climate, health-disease, and freedom from violence and exploitation. We take these emergent mobility regimes as a starting point for asking how people in Honduras and across its diaspora think about the relationship between climate change, migration, and health-disease. Within this conversation we understand well-being as the conditions that make it possible to access the material, social, and political resources necessary to lead health-full lives (Abadía-Barrero and Martínez-Parra 2017; Breilh 2021; Singer and Baer 1995). This includes accounting for systematic practices of exclusion based on dehumanization (Gordon 2004). We join a longstanding conversation that constructs health-disease as more than

either biological or individual by addressing the historically constituted social and political economic contexts in which lives are lived (Breilh 1994; Singer and Baer 1995). We adopt a critical political economic perspective, understanding that health-disease processes are significantly shaped by differential and historically-mediated distributions of power, and that approaches to understanding health-disease inequalities tend to deconstruct social reality for heuristic ease (e.g., climate change, health-disease, violence) but then fail to reassemble these pragmatic separations into a single whole (Singer 1990).[1]

In what follows, we argue that the political project that informs the social determinants of health (SDOH) both represents a Eurocentric approach to health-disease processes and best explains/characterizes the health[2] interventions, or lack thereof, experienced by our interlocutors within a given context of power relations. In turn, we propose that the social determination of health (SDET) provides a different understanding of health-disease processes that can better serve our interlocutors because it fundamentally requires searching for alternative social arrangements. Establishing the distinction between SDOH and SDET can help us to further question global health as a project (see Benton 2014) by questioning the tenets of one of its most effectively diffused models (SDOH). We build on recent critiques of SDOH by Yates-Doerr (2020) and Chenhall and Senior (2017) but also move past them by adopting a decolonial perspective (Breilh 1994, 2021). Although we consider work by Yates-Doerr (2020) and Yates-Doer et al. (2023) valuable, we also want to mark a separation. We side with Adia Benton (2014) in questioning whether global health can ever align with a decolonial political project. In that respect, we follow from recent argumentation by Ugo Felicia Edu (2023), where Edu provocatively identified the residual colonial and Eurocentric values that texture evaluative

practices in Brazilian public health; we join Edu's (2023) argumentation to what some (Affun-Adegbulu and Adegbulu 2020; Basile and Feo Istúriz 2022) have, in a few words, articulated as the coloniality (see Grosfoguel 2011) of global health—how global health may at times operate to sustain a complex web of interacting structures and institutions that legitimate exploitation/oppression by naturalizing social difference (i.e., dehumanization).

On the Origins of Social Determinants (SDOH) and Social Determination (SDET)

Epidemiologist Michael Marmot (2004) helped develop SDOH during the 1990s, following his involvement with the Whitehall II study, a longitudinal study of British civil servants from 1985 to 1988 meant to evaluate their life outcomes. The study yielded a social gradient in health: life outcomes were determined by individuals' relative standing within a social hierarchy. These outcomes were not mediated by income alone, however, but by a set of unevenly distributed social factors that led to individuals adopting health-damaging practices that could be altered through relative adjustments to conditions of life. Marmot and Richard Wilkinson (Solar and Irwin 2010) then expanded on these ideas, arguing that an individual's ability to act in relation to health-damaging practices was impacted by both proximal (e.g., immediate living conditions) and distal factors (e.g., public policy) distributed along a continuum.

Although SDOH moved discussions on health within international organizations towards acknowledging that the distribution of health problems across the world was patterned and systemic (Arias-Valencia 2017; CSDOH 2008), its proponents claim that "where systematic differences in health are judged to be avoidable by reasonable action, they are…unfair" (CSDOH 2008: ii) and that "the question should no longer be capitalism or not, but what kind of capitalistic

society do we want to have" (Marmot 2014: 224). SDOH reinscribes practices of domination to the extent that, among other factors (Arias-Valencia 2017: 191-192), it naturalizes structuring conditions (capitalist processes) and assumes "reasonable action," on which justice is presupposed, to be self-evident and value neutral—which it is not (see Andreson 1999).

The social determination of health (SDET) was developed during the 1970s, well before Marmot's conceptualization of SDOH in the 1990s, by Ecuadorian epidemiologist Jaime Breilh (2021). Breilh rethought epidemiology's standing as an academically isolated and ideologically neutral practice and provided a frame of analysis that was in conversation with revolutionary social changes taking place across Latin America, academic conversations reevaluating the relationship between scientific practice and social progress, and the actual conditions of life experienced by the poor and marginalized under neo-colonial exploitation. Breilh (1994) developed *critical epidemiology* and with it a model of health-disease as a dialectical, non-linear, and ongoing process determined by life contexts and significantly shaped by the dominant system of economic production that either allowed individuals to make health-full decisions or forced them to adopt health-damaging practices. Breilh (1994, 2013) conceived of health-disease as determined by a wider social context that incorporated both proximal and distal factors yet set both within a nexus of global historical relations of power that impacted, for example, national sovereignty when setting public policy.[3]

Carolina Morales-Borrero et al. (2013: 800) argue that SDET and SDOH share a theoretical and intellectual concern with the social origins of disease. Both approaches relate the unequal distribution of disease and health within society to poverty, work conditions, environmental exposure, and differential investment in social well-being. However, the social determination of

health framework adopts a conflict-driven view of society that continually directs attention to how power operates in the spheres of production and social reproduction to create the unequal social relationships that condition the distribution of resources and, consequently, the health-disease experience (Arias-Valencia 2017; Borde and Hernandez 2019; Breilh 2013; Morales-Borrero et al. 2013; Peñaranda 2015). SDOH, on the other hand, adopts a "functionalist" perspective (Morales et al. 2013), assuming all social systems move toward balanced interactions. SDOH encourages reformist paradigms in health that advocate agent-focused policy changes and resource distributions (Morales et al. 2013) that obscure how capitalist relations of power operate to generate patterned distributions of disease (Navarro 2009).

Methods

We approached the relationship between climate change, health-disease, and migration as cross-national and holistic social processes that require a simultaneous and multi-sited approach (Dick and Arnold 2017: 400; Frank-Vitale 2020; Marcus 1995). We conducted simultaneous qualitative fieldwork in the spring and summer of 2022 among communities affected by hurricanes, land conflict, and the COVID-19 pandemic in the Sula and Aguán valleys of Honduras (Frank/Vitale); with migrants at a humanitarian shelter in Central Mexico (Díaz de León and Doering-White); and in New Orleans, among both recently arrived migrants and those who arrived from 2005 on to work in post-Hurricane Katrina rebuilding (Daser). Throughout the text, we discuss our respective field sites and insert excerpts from our field notes and interviews. Hasemann Lara contributed the theoretical framing for the paper based on their own field research in Honduras. While we all have deep ties and extensive histories of conducting research

in each of these sites (Daser 2021; Díaz de León 2023; Doering-White et al. 2024; Doering-White and Díaz de León 2023; Frank-Vitale 2020; Hasemann Lara 2023), data collection for this study consisted of 40 interviews in Central Mexico, 15 interviews in the Sula Valley, 5 interviews in the Aguán Valley, and 15 interviews in New Orleans. At each site, we combined semi-structured interviews with participant observation. When participants agreed, we audio recorded our interviews, which were then transcribed and coded.

While our data collection was grounded in a shared research question, our interview instruments were not coordinated with each other, which allowed each researcher to conduct qualitative research that was responsive to their contexts. This approach departs from the tendency for migration research to involve fieldwork with a single site or research conducted in multiple sites visited successively. Rather, we chose to conduct simultaneous research across different locations to capture the multiplicity of migration dynamics and their structural causes instead of tracing the trajectory of individual migrants through a particular location, or from home to desired settlement.

We also rely on juxtaposition (Hooker 2017) to develop our argument. We use juxtaposition to place social determinants of health (SDOH) and social determination of health (SDET) alongside one another, since they lie within a shared historical timeframe, and, arguably, share a similar goal (i.e., improving lives). One of these approaches (SDOH), however, is more widely adopted. In line with juxtaposition, we do not pretend either is monolithic or self-contained. They do, however, have distinct origins, are informed by distinct philosophies, and later introduce those differences within the contexts they are applied. Both perpetuate different understandings of the health-disease experience and in the process justify/perpetuate different

understandings of the structures and institutions that impact our everyday lives. Specifically, we juxtapose SDOH and SDET by addressing their respective approaches to *justice*. We focus on justice because: 1) justice was recently identified as a concept in need of further refinement and deliberation within Global Health (Walker, Rivkin-Fish, and Buchbinder 2016); 2) justice varies in practice according to ideological commitments (Gordon 2021); 3) and because the conceptualization of justice embedded in SDOH rests on a liberal framework (Arias-Valencia 2017) that is permissive of dehumanizing modes of governance that privilege individual rights over collective restructuring of access to social goods (Gordon 2007, 2021: 3). By juxtaposing SDOH and SDET in relation to justice, we aim to tease apart their distinctions and to gain clarity on the different political projects that animate both. Second, and most importantly, we set SDOH and SDET in conversation with the lived-experience of our interlocutors to try and understand what SDET offers us as an approach beyond SDOH. We not so much argue against SDOH as demonstrate how SDET differs in ways that allow us to participate in a different political project.

Between Social Determinants of Health (SDOH) and Social Determination of Health (SDET)

Drawing from the way interlocutors like Indra discussed their own conceptions of health-disease, we problematize the SDOH but also the depoliticized approach to defining health promulgated by the World Health Organization (WHO) on which it relies,. The WHO defines health as a state of complete physical, mental, and social well-being (Breilh 2021). This definition, however, does not address how the dominant socioeconomic and political global system depends upon the re/production of inequalities (Bear 2020), which are reflected in

differential health-disease outcomes (Navarro 2009). Using migration, health-disease, and climate change as a prism, we bring attention to how SDOH disaggregates and then fails to reconstitute social reality, leading to the misconception that migration, health-disease, or climate change can be understood and addressed separately.

Our analysis builds on work that calls attention to the ways that SDOH takes for granted liberal political ideals that have been central to capitalist development processes (Arias-Valencia 2017; Peñaranda 2015). We view liberalism as a moral philosophy and an ideology that produces capitalism-friendly subjectivities by focusing on the individual as the central point of existence (Gordon 2021: 16-17, 63-64). This focus on the individual has at least two outcomes: it obscures structural and institutional processes, and it reduces justice to a matter of redress for harm to passive individuals (i.e., victims). To be recognized as a victim, however, one first needs to be recognized as a valued subject. In relation to health-disease, this means that forms of care informed by liberal norms are both limited (by failing to adequately identify root causes) and ineffective for undesirable (excluded/dehumanized) groups within the body politic (by providing interventions that only realistically serve valued/privileged/desired population segments) (see Edu 2023). For example, in 2010 the Honduran government approved a constitutionally binding 28-year state plan (La Gaceta 2010) that declared: 1) that poverty was "relatively inalterable" (44); 2) that there were "remote possibilities of altering the…structural…factors that generate health-disease problems" (45); 3) that the public health system could not be expected to provide attention for the growing numbers of impoverished Hondurans (or to remain active for much longer) (45); 4) and that the only reasonable course of action for averting a number of potential social-political catastrophes, among them public health, was to reduce the role of public

governance (20), increase the role of private service providers (22), and instill in the population a sense of "co-responsibility" over their immediate life contexts, ideally managed through the family unit (20-21). Liberal ideologies veer away from addressing political problems (Gordon 2021: 16-17) by reducing societal issues to individual concerns (Gordon 2021: 64). Under this measure, justice becomes a matter of preserving an established order. How justice is understood matters because it is used to establish and legitimize acceptable minimums for intervention (Ruger 2016), while carefully concealing how the *acceptability* of minimums is founded on ideas of differential human worth inherited through centuries of colonialism (Wynter 2003).

Marmot (2004, 2005, 2014) acknowledges the ethical grounding of SDOH is influenced by Amartya Sen's (2000) work on capabilities. Sen's capabilities approach proposes that individuals should be provided with the opportunities to pursue what they consider necessary to lead a life they find valuable (Sen 2015). In Sen's estimation, capitalist free market economies, if directed well, can properly and equitably redistribute wealth through public-private schemes (2000) and, more gradually, through social policy (2015). Following Gordon (2021: 53), we understand "capabilities" as another word for power, seeing inequalities in capabilities as the product of inequalities in social hierarchies. Increasing capabilities without addressing the factors that lead to the concentration of capabilities (power) arguably ignores how a capitalist world system depends on the concentration of power (Sanín-Restrepo and Méndez-Hincapié 2015). Like Sen, Marmot (2014) sees capitalism as an inevitable reality and argues that eliminating inequalities in health requires adopting the right type of capitalist economy where, presumably, capabilities will be adequately distributed. Marmot's approach is a kind of "market-justice" one (Reid-Henry 2016), which assumes that some inequality is inevitable and that greater equality can be achieved

progressively through targeted efforts orchestrated by private enterprises.[4] This approach "enables global health to present itself as concerned with the problem of global health inequality without committing itself" to altering structural conditions (Reid-Henry 2016: 723).

In doing so, SDOH tends to overlook capitalism as a mechanism and ideology for accumulation via dispossession that emerged with and from European colonial expansion in the Americas (Grosfoguel 2011).[5] European (and later US) colonial expansion in the Americas over four centuries left residual and persistent effects that continue to shape relationships between former colonial powers and former colonies (Grosfoguel 2011). Following Anibal Quijano, Ramón Grosfoguel (2011: 11-15) calls this the "colonial power matrix," or the complex web of interacting structures and institutions which establish and sustain hierarchies that naturalize exploitation/oppression and legitimate "colonial forms of domination after the end of colonial administrations" (Grosfoguel 2011: 14). The racist, sexist, misogynist, classist, religious and patriarchal norms that facilitated the consolidation of colonialism and capitalism still structure everyday conditions of life without needing to directly reaffirm that control over life.[6] Ultimately, our understanding of capitalism in regards to health-disease processes draws from Gargi Bhattacharyya's (2018) rethinking of "racial capitalism" which argues that 1) dehumanization is an inevitable result of capitalist development processes; and that 2) dehumanization is patent in the denied capacity of some groups to manage or access forms of care that enable desirable lifeways. To that effect, any conversation on health-disease that takes capitalist relations as a fixed starting point may also assume the fixity and inevitability of unequal health outcomes.

In the context of conducting simultaneous fieldwork across three sites (Honduras, Mexico, and the United States), our interlocutors' responses consistently pointed to the ways that

climate change and health-disease are inextricably bound up in overlapping processes of violent dispossession that surpass liberal political understandings of atomized individuals and politically isolated geographical locales. We foreground our interlocutors' words and experiences to argue that there exist a multiplicity of relationships between climate change, health-disease, and migration, borne from sharing an underlying root cause.

On Liberal Political Theory and Justice

María, a 33-year-old Honduran woman from Concepción, Copán, was traveling with her two young children when she was interviewed by Díaz de León and Doering-White at a migrant shelter in Central Mexico. She left Honduras because, "Eta took away my house and close to us, in front of our house, they killed my cousin. A young man who was on drugs killed him. He was my sister's [brother-in-law]. And it is still very upsetting, we saw when he was killed, even the children were scared." In her retelling, she made the verbal jump from Eta, a sudden-onset climate disaster, to the overt interpersonal violence she and her family experienced. Eta also destroyed the coffee crops, she added, so that she couldn't work cutting coffee anymore, thus taking away her livelihood. The government did not help them rebuild after the hurricane.

María's story highlights the difficulty in approaching geographically expansive and regionally interconnected problems through the limiting and homogenizing lens of liberal political thought (Gordon 2007, 2021). According to Gordon, liberal philosophical approaches begin from the assumption that achieving justice is a matter of constructing better ways of regulating life to maintain the stability of an order assumed to be almost perfect (Gordon 2021), rather than creating the conditions necessary to "shift the conditions of rule" (Gordon 2007: 7). Liberal political views

on justice start by constructing a universal subject, which is typically an idealized reflection of privileged groups in society who already have their interests and lives significantly protected under the dominant scheme (Gordon 2007). Second, liberal political views on justice fail to consider that access to meaningful participation in racist societies is conditioned by whether one's humanity is acknowledged by a dominant Other (Gordon 2007). Third, liberal political views on justice privilege individual rights over collective restructuring of access to social goods (Gordon 2021: 44-45). All these factors limit liberal political conceptions of justice to conceiving of social change in terms of, for example, "what kind of capitalistic society do we want to have?" (Marmot 2014: 248), which could also be reformulated as: "what forms of injury are permissible, and to whom, to maintain the system?" This approach reduces governmental response to controlling harms, responding to injury, and dealing with victims (Gordon 2021: 16-17, 63-64) to safeguard the integrity of the system itself (Gordon 2021: 42; see also Anderson 1999). It is precisely at this point of governmental and institutional response that our intervention argues for a more critical approach to justice than that found in the SDOH.

The above requires recognizing, for example, how Maria has been impacted by the underlying imperial dynamics surrounding coffee cultivation in the region (Tucker 2008). From the early nineteenth century on, US-led interventions into countries like Honduras ensured the development of US capitalism, militarism, and the extraction of coffee, bananas, and other commodities (Sluyter et al. 2015). Twentieth century firms headquartered in New Orleans, the site of Daser's fieldwork, such as United and Standard Fruit, became deeply involved in the political economy of Honduras and Central America more broadly (Acker 1988; Karnes 1978; Soluri 2005). More recently, neoliberal reforms implemented in the wake of Hurricane Mitch in 1998 and the

2009 coup d'etat against then-president Manuel Zelaya have instituted pro-business policies and encouraged extractivist industries in tourism that have contributed to increased dispossession (Daser and Fouts 2021: 118). Across the northern coast of Honduras, including in the Sula and Aguan Valleys, agricultural communities have been losing land to palm oil plantations, which require little labor, consume immense amounts of water, and require extensive chemical inputs that quickly destroy the land quality after a few years while exposing workers and people living in nearby communities to harmful fertilizers and pesticides (Holland 2014; Palomo Contreras 2022).

María herself clearly draws connections between multiple stressors that affected her and her loved ones' health-disease. Rather than a single, socially determining factor, an array of structural and personal events inform her decision – and her ability – to migrate. She is able to leave while her sister cannot, but both sisters are now left separated, without the familial and social connection and support that proximity might offer. "Escape" as the only potential path towards a violence and disaster-free life is an inherently individualizing solution which responds to an acknowledged harm over addressing structurally rooted conditions that impact a larger social collective.

We lack data that speaks to specific interventions that impacted María's trajectory. That being said, it is instructive to examine interventions proposed by prior studies that take an SDOH lens to improving health in Central America. One study (Aragón et al 2011), for example, proposes targeting "those most in need" and "efficient regulation of hazardous exposures and other dangers" (236) through the implementation of international covenants, such as ILO 187, as a means of addressing broader health inequities experienced by agricultural workers. However, the authors also recognize that "the implementation and reach of protective regulations are deficient in the

face of neoliberal deregulatory tendencies" (Aragón et al. 2011: 23). These proposed interventions speak to how SDOH risks reifying logics of individual deservingness ("help those with a duly justified/recognized need") while separating out determinants ("hazardous exposures"). Doing so fails to fully recognize how causes of violence and illness are mutually constitutive and structured by the underlying colonial historical processes mentioned above. Such interventions place responsibility on individual needs and discrete instances of exposure, while obscuring how ongoing imperialist dispossession of certain regions and certain people for capitalist accumulation underlies the intervention's original target. María's story calls for a historically aware analysis that takes power differentials into account in ways that liberal political thought does not. Liberal political philosophy and other "liberalisms" ignore the history of colonialism and persistent coloniality and their continued structuring effects (Sanín-Restrepo and Méndez-Hincapié 2015), in this case by displacing the historical structural legacy that makes forced migration a reality that both sisters must contend with, regardless of its economic availability to only one of them.

Competing Views on Justice in Health: Dispossession, Capabilities, and Labor

Roque, a Honduran man Díaz de León and Doering-White interviewed during his transit through Mexico, understands the ambiguity of supporting market practices at the expense of long-term local well-being and how, when treated as natural and necessary, market production conceals root causes that affect people differently. In the region where Roque lived, El Paraíso, there used to be a small mountain with trees that held the moist mountain air, "You could feel the *sereno,* the dew in the mornings," Roque explained. Eventually, someone started illegally logging what members of Roque's community considered to be public lands to build more coffee plantations. "I thought

the forest was public," he stated, "but I guess either they bribed or threatened someone." Roque was initially happy about the changes taking place. Logging brought jobs to the community, and later Roque earned money picking coffee on the new plantation. A couple of years later, however, the weather started turning. With fewer moisture-retaining trees, the air became drier and hotter. Coffee rust decimated the plantation, and Roque, like most of his fellow workers, was laid off. Ultimately, Roque found himself unemployed and living in a hotter place with less water for his crops while, as he explained it, "the guys who built the *finca* are doing all right."

In Roque's case, the SDOH perspective would suggest addressing the determinants that "mediate the effect of socioeconomic position on health" (Solar and Irwin 2010: 51), such as improving working conditions or providing access to clean water. An example of this logic is an article that outlines a series of projects implemented by Presbyterian aid workers in partnership with Heifer International and an indigenous community in rural Honduras (Reifsneider et al. 2021). The authors describe interventions that correspond to particular determinants of health, including housing, clean water, and education. The assumption is that improving housing, clean water access, and education in turn improves health. This approach deals with immediate issues and individual victims without considering the conflicts that caused the situation: in this case, corruption that leads to dispossession, logging, and increased heat in the region.

Roque was a *campesino*, a peasant. He owned a tiny plot of land that, even at the best of times, did not provide enough produce to support his family. He was forced to sell his body, his labor, in order to earn money. He had rough hands; he would limp after standing for too long. His back hurt constantly and his skin bore signs of significant sun-exposure. Despite all this, he woke up every morning, sometimes seven days a week, to work in what had been a public forest that

had now become a coffee plantation. He had to struggle on land that had been stolen from the community. He was fired as soon as his body was no longer needed. And then he had nothing left, no forest, no job, no one to buy his labor.

He was not critical about the deforestation to build a plantation. He was happy about the jobs it brought. However, being fired contributed to his realization of the huge power differential between himself and the plantation owner: "They just don't care. We are worse [than before]. They fire everyone and wait it out. They don't lose money. They always have food and water. They are safe." After he was fired, Roque tried to change his situation. Like many of our interviewees, he tried to make it work. He looked for another job, ignoring his aches and pains, making plans. Still, eventually, he had to admit that *ganas de trabajar*, desire to work, and a body that could still sell labor, were no longer enough in El Paraíso. He left. His story shows that the capabilities of the more powerful annul any capabilities that Roque has. Those who caused the damage, in this case the coffee plantation owner and the corrupt officials, provide a service to the market and thus are protected. For those who are unprotected, the only alternative is to leave and see if somewhere else they are still useful as a working body.

For individuals like Roque, the multiple effects of climate change, neoliberal land policy, and political corruption create a brew of factors contributing to the ill health he has experienced, and which cannot be addressed through a market-justice approach. In Roque's history, we can see how the inseparable capitalist and individualist moves of the coffee plantation owner produced limited wellbeing for some, for a time. However, the privatized *finca* affected the life conditions of the community, generating dispossession, leaving them poorer and more vulnerable. Respecting the trees would have provided years of cool days, water, and predictable weather for the

community. However, the short-sighted actions of the businessman and some residents – not to mention the role of larger global capitalist relations desiring lumber consumption – resulted in damage to the ecosystem, the economy, and the health of both individuals and the community as a whole.

We see this story repeat over and over again. Sometimes, like in Roque´s case, there is a slow process of dispossession and abuse. For others, like Janette, the shock is much swifter. Díaz de Leónand Doering-White interviewed Janette in a storage room full of donated clothes at the shelter in Mexico. When Díaz de León asked her about her reasons for leaving and how they related to climate change, Janette understood immediately what she meant. She stated how initially she had some problems with some people who were threatening to kill her. Before the issue was resolved, the hurricanes arrived, "I lost my house; I lost my dad; I lost a son. My dad was my only support and I lost him." After that, someone she loved was killed and "I just kept on suffering and I was forced to come [to Mexico] because I have no other options to feed my children." Since leaving her house, she has tried to get to the United States, but she has been unlucky. And she feels she cannot go back home empty-handed. She concludes, "those are the reasons that led me to leave. I left without being ready because I lost my father, I lost a son in the hurricanes, I lost my house, I have nothing…"

Echoing other interviewees, Janette makes connections between the multiple stressors that triggered her need to leave. For her, part of the problem is that the hurricane destroyed the houses, then people had nowhere to live, and then crime increased. They were hungry because the planted corn was lost. And they had to see the dead bodies, buried by the hurricane. "You can never forget that," she told her interviewers, as she started crying. Health, climate, dispossession,

migration; Janette's account reminds us that these conditions are impossible to isolate into atomized factors.

Concluding Discussion: nature-climate change, health-disease, and migration

In this article, we articulated some of the differences we identified between the social determination of health (SDET) and the social determinants of health (SDOH). We focused on this critique because "contexts of power exist before and beyond…intentions."[7] Practitioners of SDOH may have good intentions, but SDOH, much like global health (Adams 2010; Affun-Adegbulu and Adegbulu 2020; Bashford 2004; Benton 2014; Packard 2016; Povinelli 2006; Stevenson 2014), is part of a very long and complex history of power relations maintained by naturalizing dehumanization and concealing the mechanisms through which that dehumanization takes place (Wynter 2003). We propose SDET as an alternative to SDOH because SDET allows us to be in conversation with a set of thinkers that take dehumanization seriously. We do not pretend to have an answer or aspire to heroic gestures, rather we seek to contribute to a long, slow, and uncertain movement towards liberation (Salazar Parreñas 2023).

To be specific, SDET differs from SDOH in that SDET incorporates how historically conditioned, reigning systems of political-economic organization fundamentally create the conditions that impact health-disease processes. Once we admit that capitalism depends on continual and systematic social differentiation (i.e., dehumanization), identifying capitalism as a root cause takes on pressing ethical dimensions as we begin to conceptualize the extent to which our dominant understandings of guiding principles are suffused with a dehumanizing ethos. For example, justice. Capitalist development privileges some by refusing access to a whole host of

rights, resources and forms of care to others, and to accomplish that patently unbalanced distribution of public goods forces us to re-define our relationships to each other and to the surrounding environment (Bhattacharyya 2018). SDET mobilizes an explicit imperative to recognize not only where care is needed or what forms of care are possible and how, but to continually expose the structures at work towards better forms of organizing life. SDET is both a model to study health-disease processes and an ethical commitment to a way of framing the complex and interwoven processes that condition our shared reality.

As our fieldwork revealed, people know what health looks like for them. In contrast to the implications of the SDOH model, our interlocutors understand health in a holistic way, more akin to decolonial understandings of collectivity and justice. For people leaving Honduras, being healthy means the absence of physical pain like bone-deep aches and lack of fever. Health also includes collective wellbeing, such as *everyone* having enough to eat, having a calming surrounding, and living in a "healthy environment" without gangs.

Roque's body is scarred by the labor and sun of El Paraíso; so much so that Díaz de León and Doering-White could witness the wear. Indra's body, scarred on the inside due to lack of resources in Honduras, is also, now, marked by the hard labor available to the undocumented in New Orleans. Jannette, Astrid, and Maria, and Maria's sister as well, also bear the consequences of the intersections of health, climate, and migration, though perhaps their scars are primarily internal: separated from loved ones, grieving avoidable loss, and subjected to physical violence along with the social violences of displacement and dispossession.

These interwoven stories reflect how social class, sexuality, time of migration, luck, legal status, and multiple other factors shape the possibilities for Hondurans journeying northward and

for those who stay behind. With these stories, we have reflected on how dehumanization is not an "event" (see Miranda 2020: 63), but a structure, imposed/maintained through ideological and institutional mechanisms, that (among other effects) circumscribes the potential of particular lives, coordinates the uneven distribution of adverse health-disease processes, and provides predictable and limited solutions that re-inscribe domains of difference. By capturing these experiences, our methodological approach of simultaneous ethnography highlights the importance of incorporating a wider regional perspective in addressing complex research categories that maintain porous and unstable boundaries. We aim to open a space for those who migrate to relate, both individually and collectively, what being healthful means for them, thus bringing us back to a decolonial and grounded perspective of healthfulness as we move into a new era of increasingly severe climatic events.

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[1] Following Gordon (2021: 21) we understand power as the "ability to make things happen with access to the means of doing so."
[2] We reserve the term "health" when discussing discourse and interventions associated with SDOH.
[3] Critical Medical Anthropology (CMA) (Singer 1990) and LASM/CH are aligned, but not interchangeable. CMA's genealogy looks to Fredrich Engels' anti-capitalist exploration of health-disease processes (Singer 1998); LASM/CH's genealogy incorporates Salvador Allende's anti-imperialist and anti-colonial work on health-disease processes (Waitzkin 1981). We incorporate an anti-colonial, anti-imperial, and anti-capitalist critique by discussing the coloniality of the liberal ideologies that undergird the SDOH framework, signaling how processes of dehumanization are reinscribed within the global

health domain. We join recent calls (Davis and Mulla 2023) for new theorizations for the anthropology of health.

[4] Unlike Arias-Valencia (2017), and to a lesser extent Peñaranda (2015), we do not consider SDOH can be classed as a "social justice" approach to health-disease processes.

[5] We understand dispossession as "a violent process of spatial reconfiguration through which communities' capacities to decide over their livelihoods and forms of life are limited" (Devine and Ojeda 2017: 609). Dispossession goes beyond an event and instead describes sustained practices that result in the loss of autonomy for a community. Dispossession involves not only taking away resources but also socio-environmental relationships and co-opts people's abilities to both reproduce life and have a good life, robbing them of the necessary resources to live the type of collective life they consider adequate, dignified, or health preserving. Responding to dispossession requires paying attention to the uneven distribution of power in society and correcting that imbalance.

[6] This mode of governance is characterized as imperialism (Ribeiro 2023). We follow from Ann Stoler (2013) who identifies "empire" through the slow and deleterious effects on infrastructure that result from the global migration of capital. We extend these effects to incorporate the slow and steady deterioration (even death) of some bodies to attract, maintain or simply justify differential investments across racialized groups (Bhattacharyya 2018).

[7] Cristina Roldão, personal communication. We thank Roldão for a nuanced understanding of the life of power.

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