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One Health of Peripheries: biopolitics, social *determination* and field of praxis

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Abstract

Amid the urgency to solve countless and severe health problems, asking what is health or who can and must have it may seem like a waste of time. However, some responses reveal prevailing practices that divert attention from fundamental problems, thus maintaining privileges and deepening health inequities. One Health of Peripheries arises from these questions and takes form in three interdependent dimensions. The first refers to processes, states, resources, capabilities, and attributes of peripheral multispecies collectives and the environments they comprise. The second problematizes marginalizing apparatuses that define health and who can and should have it. The third encompasses practices in more-than-human social spaces and symbolic structures in which, and through which, One Health is experienced, understood, and transformed. The qualification of health as "one" does not refer to the lack of plurality, nor to the simple aggregation of health fragments (human + animal + environmental), but to the complexity of health in a field with peripheral places, ensuing from margins to privilege those who are inside and legitimize the exploitation of those who are outside. Symbolic margins distribute individuals into categories of species, race, ethnicity, gender, social class, and capability, among others, whereas geographic margins are visible in different territorial tessellations. The synergism and antagonism among margins create degrees of privilege and vulnerability that materialize epidemiologic profiles. Social *determination,* a key concept in the (Latin American) collective health movement, underlies such profiles. However, this movement overlooks the more-than-human dimension of social determination; that is to say, One Health of Peripheries is a blind spot of collective health. The cartography of One Health of Peripheries has unique needs regarding participation, research, and inclusive policies for the decolonial promotion of healthy lifelihoods.

Keywords: One Health of Peripheries, One Health, Collective Health, Critical Epidemiology, Social Determinants of Health, Health Inequities, More-than-human Biopolitics, Critical Animal Studies.

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Introduction

What is health, who can be healthy, and what are the most pressing health issues? I will argue that prevailing answers so far have been biased by struggle, cooperation, and imposition to shape and legitimize hierarchies according to the interest of the most privileged hierarchical positions.

Conceptual frameworks about the social *determination* of health (1,2) and the social determinants of health (3) consider social hierarchies, giving us insights and tools to oppose specific health inequities. However, one of my claims in this manuscript is that at the same time, these frameworks ignore and reproduce marginalizing apparatuses that materialize health inequities.

These apparatuses establish margins and create symbolic and geographic peripheries. Subaltern countries, indigenous territories, favelas. Gender, race, ethnicity, class, species, capability.

Marginalizing apparatuses legitimize the idea that some historically excluded (peripheral) individuals are simply less valuable by their kind; their exploitation is justified because they lack the supposed essence that dominant groups have.

The (Latin American) collective health field (4) excludes nonhuman animals (hereafter animals). At most, it includes them due to their instrumental value to prevent and control specific human health problems. Animals do not figure as health bearers or in any other explicit form in its conceptual frameworks about the social determination of health. Although such exclusion is common to different health perspectives, I will focus my critic on the collective health field because it is one of the main influences on One Health of Peripheries.

Is the exclusion of animals from the field of collective health justified? I will conclude that it is not. The bourdieusian's approach that supports this field (4) and critical analysis of social hierarchies (5) also shows, together with other perspectives, the more-than-human dimension of social entanglements (6–9). Moreover, concerns with health inequities can be better addressed considering theories of multispecies justice (10), while labor perspectives of health [see Almeida-Filho's discussion about Laurell's works (11)] could be updated by more-than-human labor theories (12).

Health is not exclusively human, as demonstrated by the overwhelming One Health scientific evidence about the human-animal-environment interface (13). One Health is supported by intersectoral and international initiatives due to its pertinence to address pandemics, bioterrorism, food-borne diseases, and significant health problems expected to worsen, such as antimicrobial resistance (13,14). However, One Health approaches often restrict their focus to biological aspects of transmissible diseases.

The biologism in One Health has remarkable exceptions (15–20). Here I propose another one: One Health of Peripheries. I rethink One Health from the perspective of Latin American collective health and more-than-human biopolitics.

The following sections of the manuscript sketch the emerging field of One Health of Peripheries. A field requiring new practices and policies as well as including other actions already existing but applied elsewhere. Notwithstanding the relevance, my objective here is not to address specific procedures to conduct health practices or concrete recommendations to guide health policies. Moreover, I will discuss the decolonial perspective of One Health of Peripheries in a separate manuscript. That said, the *more-than-human biopolitics* section locates marginalizing apparatuses in a broader biopolitical field. It then outlines the role of one of its tactics (animalization) in the establishment and operation of hierarchies that determine epidemiologic profiles. The *One Health* section rethinks One Health and draws initial cartography of its peripheral regions. The *social determination of health* section briefly compares the concepts of social determination of health and social determinants of health. From this comparison and the previous sections, I extend the idea of triple inequity of health to include other forms of inequities and their

interactions, with particular attention to species-based inequities. The *field of praxis* section is based on Bourdieu's concepts of *habitus* and *field* and Freire's understanding of praxis. In this section, I frame One Health of Peripheries as a blind spot of collective health. Finally, I present some concluding remarks.

More-than-human biopolitics

Biopolitics addresses new forms of power or aspects of power previously unknown, in the context of phenomena as diverse as concentration camps, migratory processes, cognitive capitalism, domestication, sovereignty, the immunitary paradigm of modern politics, the relationship of humans with others animals and with technology, the state of exception, and power/knowledge relationships (21–31). Such diversity brings ambivalence and contradiction as well as negative (marginalizing, excluding, repressing) and positive (affirmative, productive, empowering) perspectives. Biopolitics shows the blurring of the public/private boundary, the politics on life and of life, the administration of populations, the production of profitable and docile bodies, and marginalizing apparatuses underlying hierarchies (24,30,32).

Delimitation is a requirement for exclusion and exploitation within society. Therefore, importance is attributed to those within the limits because they belong, and importance justifies moral consideration, making it acceptable to exploit those on the other side of the margin, on the periphery. The authorities of delimitation (33)—"including philosophical, religious, scientific and legal"—both delimit and authorize margins and legitimize their practices (34). As one can read in Derrida (35), the original marginalization is constitutive of the socialization of "human culture and of politics itself"; it is a marginalization that leaves animals on the periphery and allows their domestication. Such domestication gives rise to disciplinary and violent regimes (34) and to population technologies for the administration of life. It becomes a model of exploitation and establishes the basis of a hierarchy, reserving the apex for the "Western-man" (34).

After legitimizing domestication, animalization (dehumanization) serves to form and reinforce other hierarchical levels. The lacking rationality of mad people animalizes and justifies their confinement and physical restraint (34,36). The enslaved black is an exotic animal or might be, by far, a link between animals and civilized men; the animalization of black women reduces her to a reproductive body susceptible to "violation with impunity" (34). Nowadays, racism and machismo continue to use animalization. In Brazil, for instance, blacks are compared to monkeys, non-heteronormative men to animals (*bicha*), and women to cows. Despite its aporia, animalization of human animals continue to silence the sentience, sociability, and subjectivity of nonhuman animals.

Marginalizing apparatuses such as racism, machismo, classism, capabilism, and speciesism impose health inequities. Their overlap, synergism and antagonism, their so called intersectionality (37,38), give rise to further categories of privilege and vulnerability (middle-class transsexual, companion mouse, white man from the favela, farm animal, stray bitch) associated to epidemiologic profiles that are not properly addressed within current health systems.

One Health

One health traditionally refers to the inextricable relationship between human, animal, and environmental health. It is a concept growing in popularity and application due to the increasing awareness regarding many human diseases with an animal origin and the multiple diseases that remain zoonotic; from AIDS to dengue and COVID-19, from visceral leishmaniasis to tuberculosis and influenza A (39–41). According to the World Organization for Animal Health (OIE), 60% of human infectious diseases are zoonotic, 75% of emerging human infectious diseases originate from other animal species, and 80% of agents with bioterrorist potential are zoonotic (14). Neglected

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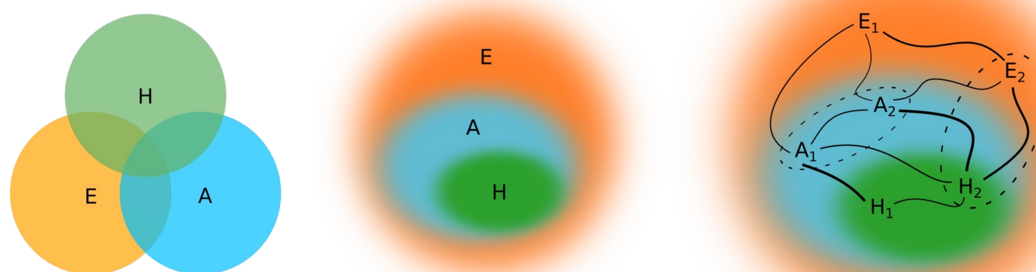
tropical diseases are mostly zoonotic or vector-borne (42) and affect more than a billion people (43) as well as a high number of animals. Neglected tropical diseases are a priority recognized by the World Health Organization (WHO) Assembly 66.12 of 2013, which recommended One Health approaches to their member States (44) to tackle its uncontrolled spread. In the face of growing global concern about emerging and re-emerging zoonoses and antimicrobial resistance due to indiscriminate overuse of antibiotics in human populations and other species, One Health catalyzed the tripartite union between the WHO, the OIE, and FAO (13).

One Health is often represented as three partially intersected sets (human, animal, environment). Thus, although humans and animals are *within* the environment, part of the human and animal sets is outside the environment. Furthermore, the partial intersection between the human and animal domains is incongruent with evolutionary theory since humans are animals. Of course, representations can emphasize different issues; however, there is no need to leave part of the sets out of the intersection. Subsumption serves to represent the relationships and is in line with the inclusiveness required to promote One Health of Peripheries.

One Health of Peripheries, does not dogmatically cut animal taxonomy to leave the human species on one side, and a wide variety of species on the other side (Figure 1). Instead, there are multispecies collectives whose species-specific constitution depends on the health phenomenon in question; the division of animal taxonomy into "human" and "animal" is understood as a tool that may have didactic and strategic values and serve as semantic abbreviation; however, the uncritical use of this tool conflates the division with a constant of "nature" and hides its biopolitical consequences.

Morover, the environment is not understood as an external domain related or partially intersected by the human and animal domains. It is composed of multispecies collectives *and* other agents, in the sense actor-network theory gives to agency (7); the environment is a set of relations and agents located by them; entanglements; agents that even as "individuals" reveal internal environments of microbiota, that is to say, agents within agents. It is an environment without the dual ontology separating "human society" and "nature" (7,9,45,46).

Figure 1. Comparison between the conventional (left) and the proposed (simplified at the middle) schemes of One Health.



The conventional scheme partially intersect human, animal, and environmental health. In the proposed scheme of One Health, there is subsumption (*One* Health, inclusiveness, internal environments with blurred boundaries), differentiated relations (edges of different thickness), and plurality (indexed elements). a: nonhuman animal (species/collectivity/individual/intraindividual); h: human-animal (collectivity/individual/intraindividual); and e: vegetables, other living beings, inanimate agents (species/collection/individual/intraindividual). Dashed boundaries show that there are many configurations for multispecies collectives.

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An initial, non-exhaustive cartography of One Health of Peripheries includes neglected diseases, domestic violence, geographic peripheries, homelessness, and agribusiness externalities. Having contextualized the neglected diseases above, I turn now to other regions of such cartography.

Domestic violence

Violence is a cause of morbidity and mortality, and among the approaches to address its complexity, it is the prevention of violence against animals. Conviviality with companion animals is growing, and in some countries, there are more dogs and cats than children in households (47,48). In multispecies homes, animals enter into family dynamics and can be victims of domestic violence. The violence against them is related to the violence against children and women (49–53). In addition to victims, animals are instruments of coercion used by perpetrators to cause more suffering and control their human victims (54–58).

Domestic violence does not stem exclusively from individual psychological factors. Lifestyles, conditioned by processes of social reproduction, favor or protect against domestic violence, depending on their configuration. Therefore, it is important to consider the relationship between social vulnerability, interpersonal violence, and violence against companion animals (59–63).

The investigation of violence against animals helps to detect domestic violence cases involving several victims and broadens the understanding of the perpetrators' psychological profile (52). Furthermore, animals can promote collective care and self-care to counter violence (64,65). However, the effective prevention of domestic violence must address social vulnerability and its social determination, in the broad sense, without being restricted to economic poverty and exploring underlying marginalizing apparatuses. Domestic violence in One Health of Peripheries is socially determined, affects humans and animals, and has institutionalized dimensions.

Geographic peripheries

Geographic peripheries are heterogeneous, encompassing countries, areas circumscribed within countries, and cross-border regions such as rural areas, indigenous territories, and favelas. Taking the last as an example, we can see how geographic marginalization also circumscribes epidemiologic profiles. *Favela* is a term with pejorative connotations, unsolved by euphemisms. It refers more directly to the geographically delimited precariousness ensuing from the historical exploitation and concentration of wealth. Simultaneously, its polysemy point to the constant meaning-making and remaking from within; to the place from which resistance, creativity, and sensitivity produce other epistemologies and livelihoods. The favelas challenge conventional census methods and thus receive differentiated treatment, starting from their identification. For instance, the Brazilian Institute of Geography and Statistics (IBGE) defines favelas as places with at least 51 housing units irregularly occupied, under urban irregularities, or lacking essential public services (66). It calls them subnormal agglomerates. Census definitions, although limited, give an idea of quantity. There were 6329 favelas in which 6% of the Brazilian population lived in 2010. The State of São Paulo had the highest concentration of households in favelas (23.2%), including approximately 11% of its metropolitan population (66). Thus, health problems affecting favelas compromise millions of individuals in the country. Globally, projections suggest that in 2030 the human population will be 8.1 billion, 5 billion (61.7%) will live in urban areas, and 2 billion (24.7%) will live in favelas (67).

The neglect of favelas continues worldwide. The health in favelas is different from the urban health and health in poverty because not all people living in favelas are poor, and not all poor

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people in cities live in them (68). The favelas' contextual effects on health are mediated by imposed risks and the lack of resources (money, time, infrastructure, knowledge), establishing a vicious circle of vulnerability due to the increased burden of diseases that compromises the individuals' opportunities for economic and social inclusion.

The favelas' contextual effects impinge on multispecies collectives, and this is even more neglected. Animals are exposed and vulnerable to pollution, humidity, darkness, insufficient ventilation, malnutrition, and high population densities. There is a need to promote animal health for the sake of the animals but also for the sake of humans living with them. The life cycle of animals is shorter than in humans. Its monitoring contributes to the early detection of chronic diseases and other health problems resulting from exposure to unhealthy environments (69,70). As favelas' boundaries are not hermetic and do not entirely restrict their contextual effects, improving their health reflects outside them. Favelas are peripheral but not isolated. Turning favelas into healthy places reduce infectious diseases, the need to use antibiotics, and thus antimicrobial resistance, one of the top ten global health problems according to the WHO. But as with any periphery, that turn requires structural changes, the dismantling of the underlying marginalizing apparatuses.

Homelessness

"Homelessness" usually refers to the condition of humans without a permanent residence, a dynamic situation that can vary from one day to a lifetime, depending on the availability of social and economic resources to have access to such permanent residence.

Homelessness is a structural problem of social organization around private property. However, it also results from other processes, such as the abandonment of homes to escape domestic violence or home dynamics incompatible with drug abuse, psychiatric illnesses, and other conditions.

In addition to humans, companion animals can turn homeless due to abandonment or because they got lost. They may be born homeless, remaining as such for the rest of their lives or until rescue.

Dogs and cats are still properties, and therefore their homelessness also represents a private property problem. On the one hand, the legal consequences of abandoning an animal property might not be sufficiently persuasive. On the other hand, the property status might reduce and even eliminate the moral responsibility regarding animal abandonment.

Although the processes that lead humans and companion animals to homelessness are different, some effects are similar regardless of the species. Homeless individuals suffer abuse. Adversities (climatic, nutritional, emotional) cause suffering and compromise the immune system, thus adding to the lack of hygiene that predisposes to infectious diseases, worsened by the lack of access to health services.

In their marginalized condition, homeless humans and dogs find each other and create emotional bonds (71,72). Humans even prioritize dogs when sharing available food (73), and may prefer to remain on the streets than stay overnight in places that do not accept their canine companions (74). Citing Sakelaropoulos et al. (75), Taylor describes the humans' emotional bonds with cats and even rats (72). The latter and other synanthropic species live on public spaces and pose specific challenges that increase the health complexity of multispecies collectives living in the streets.

Direct actions on homeless multispecies collectives could involve networks of shelters and adoption programs for humans (mainly children in the case of adoption) and companion animals, as well as contraceptive and "humanitarian" elimination programs for synanthropic populations. These actions complement but do not replace integrated approaches of health promotion and disease risk prevention.

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Regardless of their species, the homeless are members of the living cities conceptualized in critical geography (76). One Health in the urban context turns out to be the health of these living cities, and their improvement demands special considerations about homelessness. First, promoting lifestyles as opposed to the conditions that lead humans and companion animals to homelessness. Second, urban planning to promote biodiversity; planning for the so-called recombinant ecosystems, for the so-called green cities (76,77).

Agribusiness externalities

Ending hunger is one of the United Nations' Sustainable Development Goals (78). Agribusiness has responded to such a goal by intensifying production, reducing food prices, generating jobs, and contributing to Gross Domestic Product (GDP). However, qualifying that response requires taking externalities into account. Although some of these are gaining visibility, others remain peripheral.

The Intergovernmental Panel on Climate Change (IPCC) concluded, with a high level of confidence, that "climate change is expected to lead to increases in ill-health in many regions and especially in developing countries with low income, as compared to a baseline without climate change" (79). Greenhouse gases (GHG) are the leading cause of climate change (80), and farm animals are the largest source in agriculture (81). Furthermore, single-crop farming is another source of GHG itself. Its expansion often leads to more emissions due to the intensification of farm animal production to compensate for the loss of pastures (82).

The expansion of agricultural frontiers reduces biodiversity and increases the risk of many zoonoses occurrence (83). However, zoonoses control proposals are typically biomedical or focused on proximate risk factors. They hardly question the food production systems' *status quo*, thus losing the opportunity to find more favorable scenarios in terms of zoonoses, preservation of biodiversity, and other externalities.

Water consumption and pollution are other externalities of agribusiness. In Brazil, for example, it is estimated that land irrigation consumes 72% of the country's water supply (84), and feeding farm animals consume 79% of the cultivated protein (85). Simultaneously, the water network did not serve 33.2 million people in 2018 (86). In animal production systems, sources of water pollution include pharmaceutical residues (including antibiotics), heavy metals, chemicals, excrement, and pathogens; as for crops, in addition to heavy metals and chemicals, pesticides with carcinogenic potential are of particular concern (87).

Agribusiness creates jobs and contributes to GDP. However, it matters what kind of jobs, in a context of employees with little bargaining power against growing oligopolies (88,89). For instance, in subaltern countries, subsidies persuade smallholders to submit themselves to exploitation by transnational corporations at the expense of agrarian reforms to promote diversified agriculture equitably (88,89). Meanwhile, in rich countries, unhealthy conditions in intensive production systems difficult the recruit domestic workers, which has been circumvented by hiring immigrants, including those who are not authorized to work. (90,91).

Unhealthy work can occur for several reasons. In the production of fruits and vegetables, pesticides are potential carcinogens (87,92,93). In intensive animal production systems, toxic gases, vapors, and particles pollute the air and cause respiratory diseases (94–96). Farm environments and slaughterhouses can predispose to physical trauma, depression, and drug use (91,97). Stressful and overpopulated environments also predispose to animal diseases, and their treatment with antibiotics results in antimicrobial resistance affecting human workers and their families (98–101). In

slaughterhouses, the mass killing of animals is a violent job that can affect the employees' mental health and has been causally linked to increased crime rates in communities neighboring such slaughterhouses (102).

The externalities on farm animal wellness been explored elsewhere (89,103). Here I want to emphasize that despite recent theoretical advances on multispecies justice and labor issues involving animals (10,12), forcing animals to produce continues without considering labor rights for them. Farm animals are subjected to a commodification strategy that transforms the violence perpetrated on sentient beings into procedures to increase production efficiency.

While happy farm animals appear in bucolic images (in children's books and meat packages) and Ag-gag laws prevent the investigation and disclosure of animal abuse (104,105), the real farm animals are pushed to their physiological limit, constantly expanded by genetic, medical, and pharmacological technologies. Billions of these animals are slaughtered, requiring hasty procedures that challenge labor safety and animal suffering mitigation. Moreover, cruelty procedures continue in use: male chicks shredded alive when the objective is egg production; sows housed in cells that prevent them from turning their bodies; small cages that do not allow birds to extend their wings; prematurely broken mother-offspring bonds; routine amputation and without anesthesia of beaks, teeth, horns, and tails to increase confinement density and avoid cannibalism ensuing from the stressing environment.

Agribusiness produces externalities protected by strategies of governmentality (89). It destroys the environment and uses cruel methods against animals. Simply talking about job creation and GDP contribution does not say anything about the working conditions or the profit distribution. Externalities, including subsidies, outweigh the final prices paid by consumers of agribusiness' commodities and threaten global sustainability.

Social determination of health

There are discussions about health complexity beyond biomedical issues. In Latin America, social medicine (nowadays collective health and critical epidemiology) has developed conceptual frameworks for the social determination of health since the 1970s. After the turn of the century, the WHO has popularized a conceptual framework of the social determinants of health. Despite criticisms from critical epidemiology to the WHO proposal for being in practice more complicit with the *status quo* structuring inequities (1,106,107), both positions point to the need to transcend biologism and individualism in health, but they also reduce the social to the human domain. However, some approaches to One Health show that such reduction is misleading (19,39,108), whereas biopolitics and sociology set background to think a more-than-human social determination of health (6–8,23,109–111).

In the WHO's conceptual framework, structural determinants create health inequities through intermediary determinants (3). The structural determinants refer to the mechanisms by which political, economic, and social contexts generate "hierarchies of power, prestige, and access to resources" (3). The intermediary determinants are material and psychosocial circumstances, behavioral and biological factors, and the health system itself; they are a consequence of individuals' hierarchical positions. They are also the cause of exposures and vulnerabilities leading to health inequities (3).

The concepts of social cohesion and social capital link structural and intermediary determinants while the health state affects individuals' opportunities and thus feedback into the hierarchical structure (3). In short, it is a conceptual framework of causal nature where structural

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determinants have a position of precedence and prominence. The identification and measurement of the hypothetical effect of causal factors inform decision-making to reduce health inequities.

The social determination of health theorized in Latin America is not synthesized in a single reference. However, a common feature of different perspectives is that social determination is a category of critical analysis (1,2,112,113). According to Samaja, social determination is a historical and ongoing process through which social hierarchy levels are "self-produced and reproduced, generating tensions and conflicts that motivate actions of restoration and transformation" (113) [the translation is mine]. A given hierarchical level *reproduces* itself as a whole, regulating its parts (levels subsumed by it) to maintain the whole structure (113). However, the regulation is not absolute, and the relative autonomy of the parts is a source of change that *produces* new wholes (levels subsuming them) (113).

In this dialectic movement between regulation and relative autonomy, healthy and unhealthy forces configure epidemiologic profiles characteristic of the different hierarchical levels and positions within the levels (112). For instance, the family is one of such levels. The relative autonomous lifestyles of family members, as well as the regulations from higher social organization levels (community, political-administrative territorial divisions, contractual associations, and other institutions), determine their epidemiologic profile.

Despite fundamental differences between the two conceptual frameworks, they intersect at two points. First, identifying a structural dimension (socioeconomic and political context in the social determinants; social production and reproduction in the social determination) and the ensuing hierarchy that imposes constraints on individuals according to their hierarchical position. Second, identifying the triple inequity of health determined by class, gender, and race/ethnicity.

One Health of Peripheries also intersects these points. The first from a biopolitical perspective in which the political is neither an external precursor of hierarchies nor an instrument monopolized by the most privileged hierarchical levels. The political is the relationships among individuals, the hierarchical order itself, it is realized and not owned, it is the foucauldian micro-physics of power (114) involving animals. Therefore, One Health of Peripheries participates in the second intersection in its theorizing of multispecies forms of health inequity.

Filed of praxis

Field and *habitus* are bourdieusian concepts incorporated in collective health. From them, we can think about health practices and knowledge as elaborated by subjects conditioned by symbolic structures like language and culture that allow and shape their representations. Therefore, health is for health practitioners what they can know about it, so transforming the conditions that make knowledge possible changes health. In other words, the transformation of symbolic structures is also a health practice and affects health.

Practices are produced, perceived, and appreciated by *habitus*, a system of schemes "constituted in the course of collective history and acquired [and transformed] in the course of individual history" (5,115) [the translation is mine]. Individuals' *habitus* depends on hierarchies, so individual's perceptions, knowledge, and practices reveal their position and shape their relationships with individuals in other hierarchical places.

The field is the social space constituted by hierarchical relationships that condition the *habitus* and gain from this its meaning and value (116). In the filed, cooperation and conflict preserve or transform hierarchies. The most privileged positions have more capital—economic, cultural, social, and symbolic—to shape and legitimize hierarchies according to their interests. These interests are not necessarily conscious because, as part of the *habitus*, they are inculcated in "institutionalized spaces (family, school) by specialized agents who impose arbitrary norms using disciplinary techniques" (5) [the translation is mine].

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Peripheral positions “intervene as a passive, contrasting reference point” (5) [the translation is mine]. Here is again the contrasting position of animals; those who want more capital to fight and legitimize their interests need a “social promotion experienced as an ontological transformation or as a process of civilization, a leap from nature to culture, from animality to humanity” (5) [the translation is mine].

Depending on the *habitus* and the field, one will see, among others, unfitted mads who deserve their misfortunes, or psychiatric patients who can become more productive when receiving treatments provided by the pharmaceutical industry, or unhealthy exploitation regimes by way of progress. One will see pests and reservoirs of infectious agents that threaten public health, or multispecies collectives sharing susceptibilities, in need of comprehensive health policies. Therefore, what enters into the health field and the way it enters is a social process.

Health practice is not neutral and can reinforce inequities. On the contrary, promoting One Health of Peripheries is an explicit commitment to reduce more-than-human inequities. Thus, the field of practice for such promotion is more specific; it is a field of praxis. Here I take praxis from Paulo Freire as reflexive action against oppression, towards liberation (117). Praxis as action informed by knowledge about the pathological effects of marginalization and knowledge built on actions against marginalization.

In the field of collective health, there is extensive reference to “health promotion” and “life preservation” (118), non-anthropocentric perspectives (1), and “diversity of objects and theoretical discourses, without recognizing any hierarchical and evaluative perspective about them” (119) [the translations are mine]. However, any generic reference to life or health is systematically pointed to the human, overlooking that life and health are more-than-human. This is a blind spot of collective health, brought to light by the praxis of One Health of Peripheries.

As a subfield of health, collective health does not need to cover everything that concerns health, and in this sense, it could be limited to the human. However, if collective health is transdisciplinary (120), concerned with the social determination of health (1) and aims at the “production of an expanded knowledge of health” (121) [the translation is mine] it should promote One Health of Peripheries.

Conclusion

One Health of Peripheries is experience, understanding, and transformation to improve the wellness of multispecies collectives subjected by marginalizing apparatuses. It is about breaking the margins for better health.

The emphasis on these apparatuses might have given the impression that biopolitics is inherently bad. However, it is worth noting that positive and negative biopolitical perspectives do not necessarily refer to good and bad consequences, respectively. Promoting One Health of Peripheries, is in a sense, a biopolitical exercise.

The proposed One Health graphic scheme improves logical consistency and at the same time stresses inclusiveness, different relations, and plurality. It also allows for multispecies collectives whose composition depends on the health phenomenon of interest. Whereas guidelines defining One Health gold standards require human, animal, and environmental data (122), One Health of Peripheries is the praxis against the multispecies collectives’ marginalization. It is impossible to exclude humans from a praxis framed in the social determination of health, but that does not mean that data from human subjects is always necessary. Similarly, peripheries imply environments, but they are more than physical spaces subject to measurements. The ecology of knowledge is a more pertinent reference for the decolonial promotion of One Health of Peripheries, and I will explore that in a future manuscript.

The extension of One Health beyond (not the negation of) biomedicine and modern epidemiology, while taking marginalizing apparatuses as a critical category, opens the field to

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health promotion and centralizes the problem of the multiple and more-than-human health inequities. Regarding peripheries, the outlined cartography is by no means exhaustive. Due to space constraints, I omitted relevant aspects of the cartography, even entire peripheries, leaving them for future works.

One Health of Peripheries enriches the understanding of the social determination of health, finds a reference in existing perspectives, and broadens the possibilities to explore the complexity of this determination. It can not continue as a blind spot of collective health. In line with the dialectical movement between the collective and the individual, One Health of Peripheries should encompass the structuring of intersectional and intersectoral policies and the embodiment of healthy lifestyles in everyday experiences.

Conflict of Interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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