

On social determination and social overdetermination: The epilogue to a heated debate?

Sobre determinação social e sobredeterminação social: o epílogo de um debate-embate?

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ABSTRACT In a recent publication in *Cadernos de Saúde Pública* (2021), Maria Cecília Minayo critically examines the concept of social determination in Collective Health. The author suggests a disconnect between epidemiology and the social sciences, arguing that the term carries a deterministic bias that is insufficient to account for the complexity of the health–disease process. Through a theoretical review and discourse analysis, this study challenges these claims. It argues that contemporary epidemiology already incorporates biological, socioeconomic, and political determinants at its core. Grounded in multilevel causality, it demonstrates how the field investigates interactions between biological and social experiences at the level of the ‘causes of causes’. The text highlights intersectionality as an approach that examines how gender, race, and class are mutually constituted and interconnected. These dimensions do not operate in isolation or as merely additive factors, but rather intertwine to produce simultaneous systems of privilege and oppression, offering a more compelling explanation for health disparities than traditional demographic interpretations. It concludes that intersectional analysis and multilevel causality provide further evidence of social (over)determination.

KEYWORDS Social determinants of health. Intersectional framework. Socioeconomic factors.

RESUMO Em recente publicação nos *Cadernos de Saúde Pública* (2021), Maria Cecília Minayo problematiza o conceito de determinação social na Saúde Coletiva. A autora sugere um descolamento entre a Epidemiologia e as Ciências Sociais, alegando que o termo carrega um viés determinista insuficiente para a complexidade do processo saúde-doença. Mediante revisão teórica e análise de discurso, este artigo contrapõe tais afirmações. Argumenta-se que a epidemiologia moderna já integra determinantes biológicos, socioeconômicos e políticos em sua base. Pautando-se na causalidade multinível, demonstra-se como a disciplina investiga a interação entre experiências biológicas e sociais nas ‘causas das causas’. O texto destaca a interseccionalidade, abordagem que examina como gênero, raça e classe são mutuamente constituídos e interconectados. Tais dimensões não operam de forma isolada ou somada, mas se entrelaçam em sistemas simultâneos de privilégio e opressão, explicando disparidades de saúde de forma mais convincente que interpretações demográficas tradicionais. Conclui-se que o enquadramento interseccional e a causalidade multinível constituem prova adicional da (sobre)determinação social.

PALAVRAS-CHAVE Determinantes sociais de saúde. Enquadramento interseccional. Fatores socioeconômicos.

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Introduction

Recently, I became aware of a timely and highly relevant debate on social determination and social overdetermination published in a public health journal¹⁻⁴. In her paper, ‘Social Determination, No! Why?’, Minayo¹⁽²⁾ opens with the following assertion:

Many concepts inherited from the modern era—shaped by the paradigm of the Industrial Revolution—need to be revisited and critically examined at the interface between the social sciences and health. In this article, I focus on questioning just one widely used concept in the field: social determination.

What follows is a strongly critical engagement with the concept of social determination. Given the breadth of the category, this critique may be read as a troubling attempt to call into question—or even undermine—a well-established body of evidence on social determination and social overdetermination in health, disease, and health-related events and care processes. It is only in her second contribution that the author adopts a less confrontational tone, explicitly framing the discussion as a dialogue⁴.

Initial debate on Minayo’s critique

We see Minayo’s two texts—especially the first—as a necessary theoretical provocation^{1,4}. It opens an important debate that needs to be taken further and examined in greater depth, drawing on multiple theoretical perspectives and empirical evidence. However, the arguments advanced by Minayo are difficult to sustain in light of the evidence discussed below, as well as the strong critiques already articulated by Almeida-Filho², Jaime Breilh³ e Aurea Ianni⁵.

Elis Borde⁶ has recently rekindled the debate by advancing new critiques. Borde

argues that the controversy sparked by Minayo “should be understood as a struggle over narratives and as an expression of what has been discussed as the colonality of knowledge”⁶⁽²²⁾. The author goes on to explain that:

[...] beyond the legacy of profound social inequalities and injustices produced by colonialism and imperialism, there is also an epistemological legacy of Eurocentrism that has denied epistemic diversity across the world and imposed monocultures of knowledge⁶⁽³⁰⁾.

In the final section of this article, we will return to this perspective and offer a discourse analysis of Minayo’s work.

Issues not yet addressed or discussed

In the following paragraphs, we introduce additional aspects that have not yet been addressed in the debate, including Minayo’s lack of an Althusserian perspective, issues related to epidemiological models, the absence of any engagement with multilevel causality and intersectionality, and the previously mentioned brief reflection on the author’s discourse.

Minayo, an avid reader of Althusser—whose work she claims to have read “almost in its entirety”⁴—may have drawn inspiration from his somewhat excessive self-criticism. In *The Future Lasts Forever: A Memoir*, Althusser recalls that, after publishing *Pour Marx* and *Lire le Capital*, he came to reject his own writings, even going so far as to claim that he had been left

[...] obsessed by the terrifying thought that my writings would expose me to the public for what I truly was—a charlatan and nothing more, a philosopher who knew almost nothing about the history of philosophy or about Marx⁷⁽¹⁴⁸⁾.

And continues at the bottom of the following page:

When my books were released in October, I had such an intense panic attack that I spoke only of destroying them (but how?), and then, ultimately, of destroying myself—the radical, definitive solution⁷⁽¹⁴⁹⁾.

Collective Health is, as Minayo stated, ‘at the intersection of the social sciences and health’¹. To demonstrate the multiple limitations of Minayo’s text, in addition to those already identified above^{2,3,5,6}, we may turn to two distinct fields of knowledge: health—particularly epidemiology—and the social sciences. The first unaddressed inaccuracy in Minayo’s argument is the separation she establishes between epidemiology, including Latin American epidemiology, and the field of social sciences and health. If not, let us consider the following... Defining epidemiology is in itself a major challenge, one that would merit a dedicated text. Frérot et al.⁸ identified as many as 102 definitions of epidemiology in the literature, produced between 1978 and 2017. The opening sentence of their article clearly points to the intersection between health and the social sciences: “epidemiology is a relatively recent discipline that has evolved alongside societal changes and the emergence of new diseases”⁸⁽²⁾. Among the earliest definitions presented in the text is that of Barker DJP et al. (1979): “epidemiology, the study of the distribution and determinants of disease in human populations, has always been an integral part of medical practice”⁸⁽⁵⁾. In the same paper, Frérot et al.⁸⁽⁶⁾ also cite Gerstman’s broader definition from 2003:

[...] modern definitions of epidemiology encompass the distribution of health-related events in populations (statistical), the determinants of health and disease (physiological, environmental, and behavioral), and the control of health problems (biological, social, economic, political, administrative, and legal).

Finally, Juan Samaja defines epidemiology as the ‘science of the health of the social

being’⁹. It is therefore difficult to sustain Minayo’s claim of a separation between epidemiology, health, and the social sciences.

Naomar Almeida-Filho²⁽¹⁾ aptly notes that “Minayo deliberately conflates the philosophical principle of determinism, the category of determination, and the notion of determinant. This constitutes a blatant case of the ‘presupposition fallacy’”. The conceptual foundations of overdetermination are also presented and discussed².

Causal models: Social Determinants of Health (distal causes) vs. Social Determination of Health

There remain, however, other fundamental aspects that have not yet been addressed or discussed, such as the models underlying the notion of determinants. The theoretical grounding of social determinants in epidemiology has been supported by extensive evidence, most notably the work of Michael Marmot¹⁰. It is important to recall that the dominant epidemiological model at the time the concept of determinants was developed was the risk factor approach. Susser & Susser¹¹ also describe this model as ‘black-box epidemiology’. This was the hegemonic paradigm in the second half of the twentieth century, so called because exposure was linked directly to outcomes without consideration of intervening factors or underlying pathogenesis¹¹. This framework, of course, shaped both analytical strategies and preventive approaches¹¹, which focused on controlling risk factors by modifying lifestyle (diet, exercise, etc.), the agent (weapons, food, etc.), or the environment (pollution, passive smoking, etc.)¹¹.

Susser & Susser¹¹ argue for the need for models that incorporate systems operating at different levels, and they refer to this new paradigm as ‘Chinese-box epidemiology’ or eco-epidemiology. The authors build on

the classical epidemiological triad of agent, host, and environment¹¹. They convincingly argue that the human environment comprises systems at multiple levels, which interact with one another¹¹. In other words, these systems are interactive¹¹. The authors conceptualize societies as systems of persistent, ordered, and complex relations¹¹. “Persistence”, or stability, “coexists, however, with the capacity for change”¹¹⁽⁶⁷⁵⁾. And they continue:

[...] since the elements within a system are interconnected in some way, changes and activities in one sector affect other sectors; systems are also interconnected with one another; they do not exist in isolation¹¹⁽⁶⁷⁵⁾.

The so-called Chinese boxes are like a nest of magic boxes, each containing a succession of smaller boxes. And they add:

[...] thus, within localized structures, at successive levels of organization, each encompassing the next and simpler level, all remain closely interconnected¹¹⁽⁶⁷⁵⁾.

The authors further explain:

At each level, a relatively bounded structure—such as a nation, a society, or a community—can be characterized by legal relationships that are located within that structure and can be identified. [...] At a given level within the hierarchy of scale and complexity, these legal relationships are generalizable, but only insofar as they apply to other similar structures, whether societies, cities, local communities, or individuals¹¹⁽⁶⁷⁵⁾.

With the incorporation of this multilevel causal model, epidemiology begins to examine the pathways through which biological and social experiences produce health, disease, and other health-related outcomes¹². This new paradigm equips twenty-first-century epidemiologists to assess the impact of biological and social changes on these outcomes¹². Eco-epidemiology thus incorporates the imprint

of historical time and the dynamic relationship between macro-level causes (e.g., social changes) and micro-level causes (e.g., genetic mutations)¹². In this paradigm, the epidemiologist’s task is to identify causes operating at multiple levels, and especially the causes of causes. These are also referred to as distal causes. The notion of distal causes will be revisited later in the text.

It is essential here to highlight the contributions of Latin American epidemiology. Pedro Luis Castellanos offers key structural elements for the concept of (over)determination of health¹³. He argues that health phenomena do not occur in a vacuum, but within multiple spaces of determination and conditioning that are recursive and inclusive¹³. The singular space would correspond to lifestyles and refers to variations among individuals or groups defined by individual attributes (age, sex, risk factors). It is the level at which pathology manifests in bodies and where individual behaviors are located¹³. Castellanos, however, identifies another space: the private one, that of living conditions¹³. This space encompasses variations between social groups within the same society. The explanation here lies in processes of social reproduction and in how each group is positioned within the production and consumption of goods and services¹³. A third space is also identified, the general space or mode of life, corresponding to society as a whole, including economic models, political processes, and historical transformations¹³. This level determines the basic features of the healthcare system model and health policies. The author frames his arguments within a multilevel causal model and the concept of social overdetermination. The underlying logic is that higher-level spaces exert determination over lower ones—not in a mechanical sense, but by delimiting the ‘space of possible variation’ of what may occur at lower levels¹³. Minayo, by contrast, focuses on self-determination: the singular level associated with subjectivity, where individuals experience health problems as an ‘interruption of the expected discourse

of life'¹. For Minayo, the emphasis lies on the individual's capacity to make sense of their experience¹.

Latin American epidemiology offers a distinct and more elaborate perspective. Castellanos contrasts a model in which processes at the singular level are understood as expressions of broader biological and social processes¹³. The individual's self-determination (their 'lifestyle') is subsumed under their 'way of life' (collective), which is determined by the economic and political structure (the general space—the structural level)¹³. Castellanos is joined by Breilh¹⁴ and Samaja⁹, whose central ideas emphasize the relationship in which a more complex level of reality (such as society or a social group) imposes its conditions on a less complex level (such as an individual or a biological process).

Samaja adopts the term 'totalization'—originally introduced by Sartre—to enrich the classical notion of totality. Whereas a 'totality' can be mistaken for a simple collection of parts or a static unity, totalization emphasizes a productive, reproductive, and transformative process¹⁵. It is not something 'already given', but rather a goal to be achieved through human action (praxis), which creates community and the universe. In this dialectical perspective, all things form a unity in which totalization (the whole) explains the parts, rather than the parts simply adding up to produce the whole¹⁵. Thus, Samaja proposes redefining epidemiology as the study of human beings in their incessant process of totalization, aimed at the realization of their social and free being¹⁵. The author uses the concept of totalization to emphasize that static or fragmented views of health should be avoided. Each new level of social integration (e.g., the state) suppresses the absolute autonomy of the previous level (e.g., the tribe), while preserving its basis and overcoming it by integrating it into a more complex structure. Mediation is the category used by Samaja to connect the singular (individual), particular (social groups), and general (society) dimensions

described by Castellanos. Samaja argues that simple causality is not enough; one must move toward the notion of mediation, which implies a 'totality of a representational nature'¹⁵. This is where the biological is 're-signified' by the social¹⁵. Language is 'the community insofar as it is constituted and manifests itself through language' (*la comunidad en tanto hablante*), and law constitutes the 'great middle term' that expresses the links among individuals' actions with one another and with things, transforming biological imperatives into social coexistence. Subjectivity does not reside at a specific stratum, but rather at hierarchical interfaces (the 'boundaries' between levels)¹⁵. It is the function of 'apperception' that allows the parts of a totality to perceive their position and to act within the whole. For Samaja, social integration is organized hierarchically. The relationships among these categories produce a stratified view of reality, in which three types of relations can be identified: (1) constitution (ascending): lower strata (biological/organic) constitute the substrate of higher strata (communal, political, societal); (2) regulation (descending): higher strata mediate and regulate the life of lower strata through hierarchical determination; and (3) situation: the environment ceases to be a merely external setting and becomes a 'situation'—the historical and semiotic bond that intertwines the individual with their historical mediations¹⁵. Samaja¹⁵ further argues that freedom (or self-determination) does not exist as a fact of nature, but rather emerges at the boundaries between the strata of being. It takes the form of the subjective apperception that each member of a totality must possess for communicative action to be possible¹⁵. In this way, Samaja contributes another key element to the debate on social overdetermination by drawing on the concept of totalization, originally proposed by Jean-Paul Sartre. He argues that human beings are engaged in an ongoing process of realizing their social and free being—one that is nonetheless conditioned by the 'material prerequisites of labor' and by 'organic

and inorganic corporeality' (environment, machines, laws)^{9,15}. Jaime Breilh, Pedro Luis Castellanos, and Juan Samaja converge in arguing that the social (over)determination of health is a structural and historical process, rooted in the practices of capitalism—particularly neoliberal capitalism. These issues have also been reflected upon by the Latin American Association of Social Medicine, the Brazilian Center for Health Studies, and the Organizing Committee of the Latin American Workshop on Social Determinants of Health:

The capitalist economy has led to the precarization of work, the loss of labor rights, and the erosion of solidarity ties among workers, and has also driven millions of people into informal employment, child labor, and countless other challenges¹⁶⁽⁴⁹⁶⁾.

It is inherent to capitalist society in its forms of property, power, and division of labor, as well as in how the processes of production and reproduction within capitalism generate profound inequalities in the quality of life among different social classes, genders, and ethnic groups¹⁷⁽⁵⁾.

Intersectionality, the complexity of multilevel causality, and social (over) determination

Social causes are also referred to as 'social determinants of health' in line with the dominant paradigm in the second half of the twentieth century and the work of Michael Marmot at the World Health Organization (WHO). Although this represents an advance, it still embodies a perspective strongly influenced by positivism. For Breilh¹⁴, the WHO model reduces health to 'risk factors' or 'causes of causes', which fragment reality into isolated variables. In other words, the social determination of health extends far beyond isolated,

fragmented determinants. The social (over) determination of health emphasizes the social production of health, disease, and healthcare (structures of social reproduction), in contrast to the mere identification of distal factors¹⁵. The so-called social causes include 'stressful life events, socioeconomic status, and social structures (such as material resources, education, public policies, among others)'¹⁸. The new paradigm of multilevel organization and causality compels us to identify distal causes. Not only does social (over)determination exist, but so does intersectionality. Reading the book 'Gender, Race, Class, and Health: Intersectional Approaches', edited by Amy J. Schulz and Leith Mullings¹⁹, may serve as a starting point for those who are still unfamiliar with this perspective. The book's central definition and underlying premise establish intersectionality as an approach that examines how gender, race, and class are mutually constituted and interconnected¹⁹. It argues that these dimensions of social inequality do not operate independently or as merely additive (as if they were separate layers), but are instead closely intertwined, producing simultaneous systems of privilege and oppression¹⁹.

Published nearly two decades ago, it shows how the 'interweaving of gender, class, and race' (often referred to as triple inequity) shapes the 'health experience and provides a more compelling explanation of health disparities than traditional interpretations based on the demographic categories such as race and ethnicity'¹⁹. The idea is that the intersection of these factors produces 'new identities' and multiple configurations of health, disease, and health-related events and care processes¹⁹. The central point of this discussion is that researchers have traditionally attempted to isolate race and ethnicity—while controlling for gender and class—rather than analyzing the confluence of these factors. The proposed alternative is to explain health outcomes precisely through this convergence, known as the intersectional or intersectoral approach¹⁹, which posits that the overlap of multiple

minority statuses generates a complexity that cannot be understood or explained without recognizing the effects of their intersection¹⁹. In this sense, the analytical task is no longer one of ‘black boxes’, but of ‘Chinese boxes’.

Intersectionality research, operationalized through the combination of multiple social identities, has progressively expanded to include additional dimensions. Accordingly, Potter et al.²⁰ examined the intersections of race, gender, age, and socioeconomic status, and their implications for both the reporting of discrimination and the attribution of experiences to discriminatory practices.

In the introduction to their systematic review of methods used to examine the intersecting effects of sex and social locations on health outcomes, Phillips et al.²¹⁽¹⁾ state:

[...] social circumstances deserve careful consideration and precise characterization in epidemiological research, not only because of their pronounced impact on health, but also because they are often subject to change.

Failing to recognize social (over)determination is also problematic, as it can lead individuals to disengage from struggles for social change. An unexpected finding of the systematic review mentioned above was that few researchers considered intersectionality a possible ‘indicator of health’²¹. If this paper serves as a wake-up call in this regard—and perhaps even as a catalyst for change—it will have fulfilled its purpose.

At the sixth conference of the interdisciplinary dialogue series ‘Philosophical Issues in Psychiatry’, held in May 2023 at the University of Copenhagen, Ross and Kenneth Kendler¹⁸ argued for the precise use of the terms ‘proximal’ and ‘distal causes’, emphasizing that such a distinction is not only possible but essential for adequately capturing how ‘social causes’ influence health, illness, and health-related events. Ross and Kenneth Kendler¹⁸ go beyond criticizing the overemphasis on biological causes at the expense of social ones.

They also challenge accounts that privilege causes located within the human body over more remote environmental determinants, as well as those that favor local physiological explanations over distant evolutionary ones. Adding further complexity to the problem of social determination, Ross and Kendler¹⁸ argue that social factors can assume three distinct causal roles: they may operate not only as distal causes, but also as parallel and proximal causes.

Conclusions

Beyond the fallacies identified by Almeida-Filho², we also draw on the reflections of José Luiz Fiorin. In his excellent book ‘Elementos de Análise do Discurso’ (Elements of Discourse Analysis), Fiorin analyzes the text ‘Apólogo dos dois escudos’ (Parable of the two shields) by José Júlio da Silva Ramos. In the parable, two knights positioned on opposite sides of a shield perceive it differently, one seeing a golden object and the other a silver one:

At a slightly more abstract level, the shield can be understood as any object of knowledge. We thus observe a transition from non-knowledge to knowledge. Indeed, each subject did not know the object until it was examined from a particular standpoint²²⁽¹⁶⁾.

The knowledge each subject has of the same object differs because it is conditioned by the standpoint from which each one approaches, studies, and analyzes it²². Having acquired knowledge from a certain perspective, each subject attributes certainty to their own understanding and regards the other’s as erroneous; that is, each subject considers their own knowledge true and the other’s false:

This leads to a controversy, a confrontation in which each person seeks to impose their own standpoint on the other, attempting to make the other disqualify the knowledge previously acquired and accept the opposing

viewpoint as truth. [...] The dervish, by contrast, having taken the time to observe it from more than one angle, knows that the shield is gold on one side and silver on the other. [...] Upon being informed of the reason for the dispute, the dervish shows that they did not know the object itself, but only one of its aspects, and that therefore the knowledge of both was simultaneously correct and mistaken. [...] He points to the need to adopt more than one perspective (to move to the opposite side) when analyzing an issue. Considering an object from multiple perspectives leads to conciliation, that is, to a proper understanding with others based on the acceptance of their viewpoints. [...] The shift from alignment with a single point of view to alignment with multiple points of view implies the replacement of polemic with agreement, and of confrontation with conciliation²²⁽¹⁶⁾.

Finally, we return to Louis Althusser, a self-critical author who turns his own words against himself to question and deconstruct his theories. In practice, Althusser resembles the *Metamorfose Ambulante* (wandering metamorphosis) sung by Raul Seixas: “*eu prefiro ser essa metamorfose ambulante do que ter aquela velha opinião formada sobre tudo*” (“*I’d rather be a wandering metamorphosis than hold that old, fixed opinion about everything*”). Such re-evaluation is essential for any scientist, especially

when a robust body of evidence points in the opposite direction. The Althusserian attitude of intellectual responsibility would consist in incorporating social (over) determination into one’s concepts and writings. Black boxes and a black-and-white worldview are not adequate models for addressing complex issues such as social (over)determination. On the other hand, intersectionality aligns closely with studies on the social determinants of health, life-course epidemiology, and eco-epidemiology. My primary aim in this text is to offer these insights, much like the dervish in the parable, to foster understanding—including of epidemiological models—and to raise awareness of, and stimulate the need for, further research that incorporates intersectionality and addresses it in a methodologically appropriate way. Second, it seeks to foster the necessary consensus in light of the overwhelming evidence on social (over)determination. This evidence emerges from multiple disciplines, including but not limited to epidemiology, the social sciences, and (collective) health. Social (over)determination, indeed!!

Authorship contributions

Corrêa PCRP (0000-0001-7108-0640)* is responsible for the preparation of the manuscript. ■

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