

Latin American Critical Epidemiology: The Roots and Landmarks of a Scientific Tradition



Critical Epidemiology and the People's Health

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Chapter:

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The scientific traditions present in the field of epidemiology have varied at different times and places according to their theoretical-methodological fundamentals, their symbolic elements, and their social commitments/values. In order to understand a scientific tradition, one must identify its central characterizing paradigm.¹ Researchers, teachers, specialists, and intellectuals are commonly grouped around paradigms that define their views, priorities, and practical strategies.

In previous work, I have discussed an innovative view of Kuhn's (1962) theory in order to demonstrate, from a broader sociological perspective, the important role that paradigms played in the different traditions and "schools" of epidemiology and, above all, to explain why the history of our discipline shows periodic interpretative and political clashes (Figure 1.1; Breilh, 2003a).

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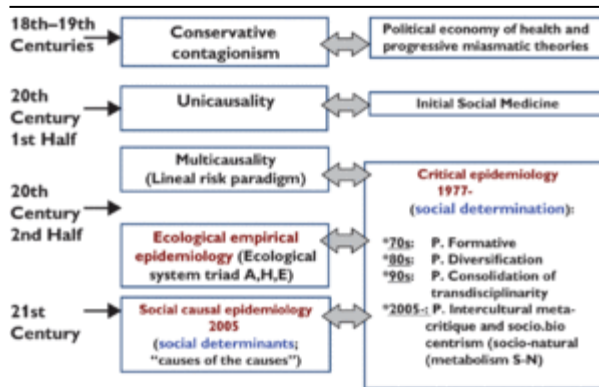


Figure 1.1
Epidemiological paradigm clash in Latin American history.

Adapted from Breilh, J. (2003). *Epidemiología crítica ciencia emancipadora e interculturalidad*. Buenos Aires, Argentina: Lugar Editorial. This 7th edition comes from an initial thesis dissertation of 1977-Autonomous University of Xochimilco that circulated as such and then in 1979 the first edition was published in Quito, Ecuador by Universidad Central.

Opposing perspectives and methodological differences arise in all periods, representing the interests and views of scholars and decision-makers that adhere to different philosophical and practical postures, which are encompassed by opposing logics related to the origin and management of health problems. Epidemiology is no exception to the historically contested development of academic work. Some key historical controversies can be highlighted: the clash of conservative *contagionism* with the more progressive *political economy* and miasmatic doctrines in the 19th century; the confrontation between unicausal explanations and the foundational groundbreaking works of social medicine in the first half of the 20th century; and, in later times, the opposition of both the functionalist linear multicausal and the ecological empirical epidemiology paradigms—together with their operational arm, the risk paradigm—with different versions of critical epidemiology from the second half of the 20th century to the present day (Almeida, 2000; Breilh, 2003a, 2015a; Tesh, 1988).

What is relevant at this point is to understand that epidemiology has moved through time under specific conditions and pressures that have contributed to its conceptual and practical shape. This occurs because scientific knowledge is socially determined. Contextual power relations intervene through economic, institutional, and cultural mediations that condition the material-financial, symbolic, and ideological settings of research. But they also determine the modes of living and social relations of researchers. Their vocations, values, preferences, technical appeals, and resources, as well as the dynamics of their concrete acts of creation, are socially shaped. With time, this process of socially determined

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activities is embodied in concrete interpretative models and research designs.

As public health's so-called diagnostic arm, epidemiology operates under great social pressure. The different interpretations of social development, assessments of well-being, and conceptions of health confront scientists and decision-makers situated on opposite ends of the political spectrum. Epidemiological statements and indicators are assumed to be valuable measurements of the population's health and well-being. Those statements explicitly and implicitly provide an image of the effectiveness of the institutional and economic entities responsible for producing a variety of health actions, of their public policies, and of individual decision-makers in governing positions.

Emblematic Representatives of the Latin American Critical Health Science Tradition



The construction of contemporary Latin American critical conceptions about epidemiology can be viewed from different perspectives and emphases. In this section, we discuss characterizing events and names from the American South in order to profile basic contributions and origins. We also briefly note the fundamental influence of personalities from the North that are clearly linked to the development of our critical ideas.

The social medicine/collective health movement's construction of a renewed perspective of the health sciences drew its lever knowledge and inspiring practices from three fundamental sources, allowing for a cumulative process that was rebuilt in the early 20th century and has grown continuously to the present day: (1) the enlightening academic health studies centered on the transformation of functionalist public health paradigms; (2) the powerful contributions of feminism and gender-related health; and (3) more recently, the influence of the philosophical and cultural critique of the indigenous people's movement.

The *Latin American critical social medicine tradition* can be traced back to colonial times. The 16th-century colonial system fractured the communitarian spirit of the indigenous societies. A complex class and cast system of inequitable colonial relations replaced the indigenous people's notion of a communal, social organization based on solidarity. The colonial state organized blood and fire governance and imposed, by means of inquisitorial force, the marginalization of peasants and urban poor. The colonial regime institutionalized not only social exclusion but also white supremacist unicultural thinking, racism, and sexism (ethnic and gender epistemicide). In that context, not only was the pre-colonial egalitarian ethos broken but also the harmonious conception and management of Nature of our native societies was shattered.

In colonial society, the violent expropriation of gold and land and the feudal exploitation of the labor force in agricultural fiefs and mines

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formed the basis of society. However, the golden rule was not only greed and the concentration of material goods but also political and cultural subordination. Cultural unilateral dominance and *epistemicide*² resulted in a loss of many forms of sophisticated native knowledge, including the health knowledge of the time.

As has been the case in many repressive societal periods, emancipatory thought flourished in the colonial era. The need for emancipating ideas explains the libertarian nature of the works of Eugenio Espejo, a physician, writer, and journalist who was an outstanding and inspiring figure during the period preceding the anti-colonial struggle. It also accounts for his virtuous, pioneering concepts on social determination of health. Together with his sister Manuela—another enlightened combatant—and José Mejía Lequerica, a notable reformer, Espejo not only inspired the Latin American libertarian struggle of the 18th century but also provided groundbreaking contributions, both as a writer and as a medical scientist, that headed the construction of a new paradigm for various fields of knowledge, including epidemiology (Breilh, 2001, 2016).

The importance of Espejo transcends the national scientific and epistemological spectrum. In some of my previous publications, I insisted on the need to revisit Espejo's multifaceted contributions to the history of the health sciences. For many years, his biographers have been trapped in a reductionist biomedical appraisal of his work. But in order to understand his essential contributions to epidemiology, it is necessary to go beyond his clinical-therapeutic endeavors and capture his original contributions that help explain health as a socially determined phenomenon. To oppose the theocratic foundations of scholastic medicine, the founder of Ecuadorian critical epidemiology was obliged to work within the paradigm of Enlightened humanism. It was his thirst for justice that impelled Espejo to build a multidimensional critique of colonial society and its economic, social, cultural, and political foundations. One can only grasp the essence of his comprehensive critical revolutionary ideas by locating them within an integral emancipatory project. In doing so, the articulation of his conceptions of health as part of a coherent anti-colonial system of thought can be clearly seen.

For the purpose of the current analysis, we highlight Espejo's groundbreaking *Reflections on a Safe Method to Protect the People from Smallpox* (1994), in which he lays out his socio-epidemiological argument relating smallpox to health inequity and criticizing a dominant bureaucracy. The radical, pioneering ideas contained in Espejo's essay were originally written in Spanish and published in Madrid, but they soon crossed the colonial frontiers of the Royal Audiencia of Quito, and his innovative arguments were expeditiously translated to Italian (1789) and German (1795), as explained by the medical historian Nuñez (2018).

Thus, in his *Reflections* (1785/1994), rather than a replica on the treatment and specific measures of prevention of smallpox, Espejo offers to the history of science a consistent evaluation of the prevailing

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European ideas of his time, inserting the explanation of the disease and its transmission into the logic of social determination of malady. He assumed the “anti-contagionist” thesis from a visionary perspective—a position that was only defined as revolutionary in Europe a century later. To do so, he questioned the method of Spanish specialist Don Francisco Gil, whose explanation relied on supposedly “external” or foreign contagions that would introduce the disease from the outside. On the contrary, Espejo proclaimed that the “internal” ways of living of colonial society were to be blamed. He stated,

The landowner is making his fortune at the cost of the misery and hunger of the public and the indolence of the usurers, of the merchants, and the cruel greed of the producers who hide wheat to sell it at a higher price, setting then his wealth in the hunger and agony of the poor. (p. 77)

Espejo was a pioneer of a critical scientific tradition of health and wellness. While revealing the limits of 18th-century knowledge, his works constitute a foundational milestone of renewed thought in the health sciences and most likely in the sciences in general. His brilliant comprehensive criticism of colonial society has been defined as a cornerstone for restating the origins of libertarian Latin American philosophy (Roig, 2013). Espejo created an epistemological democratizing umbrella of emancipatory scientific ideas on health and society that, in the case of Ecuadorian medicine, was reclaimed 150 years later when the social medicine thinkers confronted the country’s oligarchic and class-based society during the so-called Julian Revolution period of the early 20th century. A turning point towards social and health and cultural rights were two scientists Isidro Ayora—medical doctor and reformist that lead the State’s transformation as president—and Luís Telmo Paz y Miño—military leader, geographer, demographer, linguist and writer-, played key political roles in this transformative period.

The pillars of modern so-called Western social medicine that influenced the development of public health and epidemiology are found in innovative contributions from both the North and the South during the 19th century and the first half of the 20th century. In effect, this powerful European tradition dates back to revolutionary works of 19th-century thinkers. One outstanding representative is Rudolf Virchow (Germany), with his emblematic and inspiring call for action, inscribed in his report of a typhus epidemic, in which he clearly stated that “preserving health and preventing disease requires ‘full and unlimited democracy’ and radical measures rather than ‘mere palliatives’ ” (Espejo, 1930; Virchow, 1848). Henry Sigerist (France) expanded the horizon of critical health sciences with his potent *Civilization and Disease* (1945), which made an outspoken pioneering contribution to the broadening of health science by incorporating the role of economics, culture, philosophy, the arts, and an interdisciplinary approach to the understanding of health. George Rosen’s *History of Public Health* (1958) made crucial contributions to the

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progressive understanding of the origins, historical transformations, and socially determined conditions of public health. These authors' works inspired the many workshops on the critique of functionalist public health that have been held in Latin America since the 1970s.

In the mid-20th century, the work of Salvador Allende (1939) shone in South America. Allende's report, "On the Chilean Socio-medical Reality," recognized the relationship between political economy, disease, and suffering by focusing its "causal" gaze on the role of empire, underdevelopment, and the need for structural change in the life of the proletarian classes as the fundamental solution to health inequality (Waitzkin, 2011). That is, this second source of critical epidemiology did not derive solely from the works of 19th-century Europeans but, rather, had other pivotal proponents in Latin America whose contributions, often silenced by official history, must be rescued.

In effect, as a result of the turbulence and social awareness of the early decades of the past century, there was a consolidation of revolutionary social ideas that penetrated thought about health and health inequalities. This consolidation favored the emergence of other figures dedicated to critical thinking about epidemiology, such as Ricardo Paredes (1938), who, as a physician, rigorously studied the social, workplace, and health conditions of the workers of a mining company. Paredes later published a remarkable and pioneering epidemiological essay on the determination of health in early multinational mega-mining. The essay, supported by robust sociological thought and statistical evidence, provided a profound analysis of the destruction of health and the environment in Ecuador (Paredes, 1938). The works of Ramón Carrillo (1951) are also fundamental to the consolidation of this perspective. These include the *Synthetic Public Health Plan for Argentina*, in which Carrillo situates epidemiological thought as central to the search for equity and the creation of a profound vision of disease prevention.

The previously mentioned works, as Howard Waitzkin argues in his magnificent critique of medicine and public health in *Medicine and Public Health at the End of Empire* (2011), created a new perspective of social medicine and documented the impact of early capitalism.

Development of the Contemporary Latin American Social Medicine (Collective Health) Movement: 1975-2019



Cardinal Concepts: Collective Health

In order to fully understand the historical development of social medicine/collective health from a critical epistemological perspective, it is necessary to interweave the sequence of social transformations with the important academic changes that occurred during different periods. Because concepts are essential for the understanding of academic

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advance, we preface this section with a clarifying summary of key categories.

The concept *collective health* was coined in Latin America in 1979 and linked to the sanitary reform movement in Brazil (Nunes, 1996). Retaking ideas expressed in multiple congresses and seminars, this concept was proposed in order to overcome the dominant biomedical and conventional public health paradigms. The need was to create an explicit conceptual and practical differentiation between collective health and two other related notions: individual health and public health (Figure 1.2).

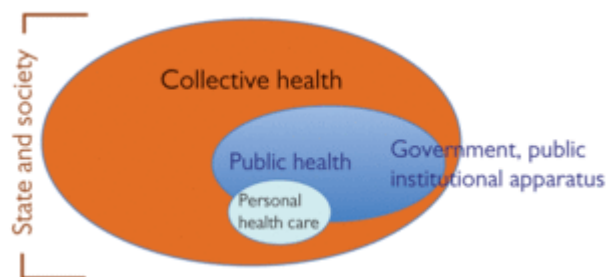


Figure 1.2
Collective, public, and individual health.

Individual health involves personal phenomena that are observed, explained, cared for, or confronted at the level of familiar everyday life. It is aimed at determining individual health patterns, exposures, and vulnerabilities and their relation to daily styles of living with their individual expressions of wellness, illness, and health needs and satisfaction. On the other hand, *public health* pertains to the institutional duties of public services for populations that are covered according to norms and regulations. It constitutes an important sphere of action, but it does not account for many other forms and areas of action that exceed those formal responsibilities covered by official or private-social entities. Collective health involves social community-based phenomena that are produced, observed, and confronted in society. It therefore is concerned with collectively organized action centered on integrated socially based processes, either to prevent their destructive and promote their favorable health aspects or to secure reparation of harm to natural or human life.

In all three domains, health is a polysemic category. First, we need to define health as a multidimensional concrete object, considering its existence not as a theory of being but, rather, related to the direct materiality of tangible life and its cultural expressions (Lukács, 2013). This ontological dimension of health encompasses both concrete healthy, life-supportive, protecting processes and, conversely, concrete unhealthy, harmful, and destructive processes that develop in the general (societal), particular (group), and individual (phenotype, genotype, mind, and spiritual) dimensions. In Chapter 3, we expand on this important matter and the categories needed to understand those dimensions. Second,

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health is a *subjective construction* that springs from strategic needs of distinct groups, formed around their class position, intertwined with gender and ethnic sociocultural relations. The subjective health domain consists of a set of ideas that collective subjects must elaborate through their experience in order to understand and cope with the corresponding consequences of social determination and reproduction. Knowledgeable empowerment and control over science form part of the power relations of society needed to master subjective constructions about health and counter the dominant misinterpretations. In this regard, scientific work in health, as in any other field, carries inherent symbolic components and is thus “a transformed, subordinated, transmuted, and sometimes unrecognizable expression of the power relations of a society” (Bourdieu, 1998, p. 77). In our analysis, those relations involve the imposition of a system of social dominance and of the mistreatment of nature, forming part of a system that materially reproduces unsustainable, inequitable, and unhealthy societies and ecosystem relations, at the same time imposing a conceptual framework that justifies them. Finally, the positive transformation of concrete health conditions and the ideas involved in that transformation occur in a defined *field of action* or praxis. The practical grounds, experiences, and relations that form part of any scientific endeavor constitute the real driving and directional force of a field of discipline. These three interdependent aspects of health merit an integral multidimensional understanding (Figure 1.3).



Figure 1.3
Health as complex polysemic concept.

Breilh, J. (2003). *Epidemiología crítica ciencia emancipadora e interculturalidad* (2nd ed.). Buenos Aires, Argentina: Lugar Editorial; and Breilh, J. (2016). *Espejo adelantado de la ciencia crítica (una “antihistoria” de sus ideas en salud)*. Quito, Ecuador: Universidad Andina Simón Bolívar y Corporación Editora Nacional.

The historic struggle for the development of *collective health* required the confluence of a determined social space, the existence of an active social block of concerned and affected collectivities, and the technical skills to

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apply a socially defined agenda in the struggle for health equity and integral social transformation toward a healthy society.

The Construction of Contemporary Latin American Social Medicine/Collective Health

The interpretative models of science are a product of a complex process of the social determination of knowledge. In different historical periods, epistemic relations are built on the interpretative models that scientists develop, conventional knowledge matrices [paradigms in the Kuhnian sense (Kuhn, 1962)], and the sociopolitical-cultural conditions of broader society. These elements interweave dynamically in determining the transformation of contents, values, social compromises, directions, and practical applications of knowledge (Figure 1.4; Breilh, 2003a).

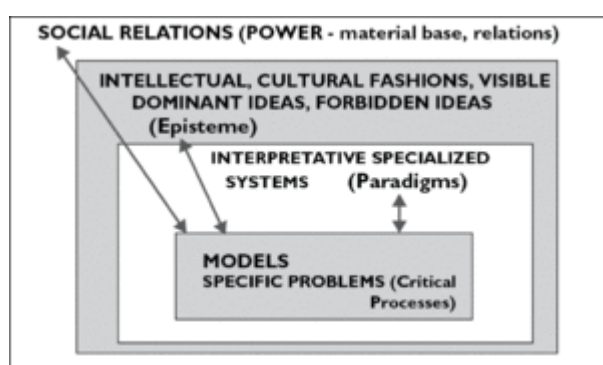


Figure 1.4

Epistemological relations: scientific knowledge, culture, and social (power) relations.

Breilh, J. (2003). *Epidemiología crítica ciencia emancipadora e interculturalidad* (2nd ed.). Buenos Aires, Argentina: Lugar Editorial.

In the Latin American “South,” the extreme political authoritarianism and social inequity of the early 20th century impelled and inspired a culture of critique and resilience within the region, leaving a deep impression on social and health scientists. The growing unfairness of the broader world economy and permanent reproduction of colonialist academic relations also triggered the urge for sovereign, independent academic thinking.

Brief Periodization of the Critical Social Medicine/Collective Health Movement: Scenarios, Study Objects, and Stakeholders

In previous work, we proposed a periodization of Latin American social medicine’s development: its historic settings, cardinal debates, and the stakeholders involved (Breilh, 2010, 2003a, 2016). Motivated by the need to contextualize our analysis of the epistemological framework of

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epidemiological development, we defined consistent relations between periods.

In doing so, important bibliographical studies have been invaluable: the vast contribution of Everardo Duarte Nunes, *Social Sciences and Health in Latin America* (1986); the review of *Debates in Social Medicine* (Franco, Nunes, Breilh, & Laurell, 1991); the brilliant updated periodization of Ana Lucia Casallas (2019); and the formidable compilation and digital library on Latin American social medicine inspired by Howard Waitzkin (University of New Mexico; <https://digitalrepository.unm.edu/lasm>).

The Latin American social medicine movement was founded in 1984 during the Third Latin American Seminar on Social Medicine (Ouro Preto, Brazil). Its founding was a result of a decade-long process that began in the 1970s as a reaction to a prolonged history of regional health inequity. Scholars, researchers, social leaders, and students converged from countries in which powerful nuclei had been built. Conditions were apt and the time was ripe to institutionalize the annual meetings that representative academic and social groups and organizations had been holding since the mid-1970s. The transformation of the historic social scenarios facilitated the appearance of different periods of social medicine.

Combining the historic features, social agendas, disciplinary arrangements, and epistemological ruptures that were present at different moments, four main periods in the development of Latin American social medicine can be recognized: (1) formative, initial ruptures (1970s); (2) diversification—transformative knowledge (object and subject), instrumental progress, and institutionalization (1980s); (3) the consolidation of transdisciplinarity and initial interculturality (1990s); and (4) the consolidation of an intercultural meta-critique³ and social-biocentric models (social-natural metabolism) (Table 1.1).

Table 1.1 Periods of Latin American Social Medicine/Collective Health

Period	Characteristic Features	Agenda
Formative, initial ruptures: 1970s	Industrialism, worker and subproletarian growth Social pact for baseline rights Consolidation of primary export economy, social inequality	Rupture against pharma-biomedical model Initial deconstruction of positivism and empirical methodology Works on class analysis

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		Initial critique of functionalist behaviorist social sciences First social medicine postgraduate programs
Diversification: transformative knowledge (object and subject) instrumental progress and institutionalization: 1980s	Neoliberalism: takeoff of extractivist productivism Aggressive privatization of health and life goods Appearance of nonproletarian social subjects: gender, ethnicity	Struggle against neoliberal anti-state policies and privatization Founding works on gender and ethnicity Gender and ethnocultural components in postgraduate programs
Consolidation of transdisciplinarity and initial interculturality: 1990s	Initial crisis of hegemony of aggressive productivism “Progressive” extractivism, redistributive governance (neoproductivism)	Generalized ethnic, gender, and urban social movements Consolidation of critical interculturality; dialogue of knowledge—academic and popular—and practices in collective health Constituent projects, new constitution, and legal reform Advancements in health system reform (two tracks): Unified health system and expansion of public social insurance Conduction of important universities, high

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		government positions
Consolidation of an intercultural meta-critique and social-biocentrism (social-natural metabolism): 2017-	Global acceleration of capital accumulation (New information and communication technologies fourth industrial revolution —convergence, dispossession, and shock); postwork; cyber determination; artificial intelligence algorithms governance Irruption of global multiple environmental crisis and extreme climate warming; Global social protest	Demand for new civilization: 4 “S’s” and Sumak Kawsay (struggle against extractivism) Religious fundamentalist entrepreneurial offensive against a new civilization Pluricultural democracy Reframing regional integration Reframing constitutional and health rights in the face of social determination of health Transdisciplinary, intercultural emancipatory knowledge Methodological theoretical construction of social metacriticism

Breilh, J. (2003a). *Epidemiología crítica ciencia emancipadora e interculturalidad*. Buenos Aires, Argentina: Lugar Editorial; and Breilh, J. (2013). Ciencia crítica por la vida en tiempos de una sociedad de la muerte. *Divulgação em Saúde Para Debate: Centro Brasileiro de Estudos de Saúde*, 49, 10-14.

The formative period (1970s) entailed significant initial ruptures with the biomedical and conventional public health paradigms. These took place in the context of industrialism and the formal recognition of economic and social rights. In those years, social demands were basically constructed around the historical agreement or social pact between companies and formal workers. Nevertheless, during the same time period, the rise of subsalaried hiring changed labor relations in the countryside. Peripheral social formations in the South constituted scenarios of imperfect dependent capitalist development. The social agenda highlighted the demands of the working class and subsalaried workers in the countryside,

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who ceased to be a reserve army and became an irregular mass of subsalaried workers. The social demands of the period were correspondingly focused on the responsibility of the state to provide access to rights and to democratize public services such as health and education. Social medicine had to break the mold of closed-door, curative medical care settings sustained by the emerging pharmaceutical and health care industries of the South. Mainstream medicine was impermeable to the social reality that generated the problems that arose in offices and hospitals. It was essential to break the biomedical paradigm, overcoming the idea of “health as an absence of disease,” or even the supposedly broader World Health Organization (WHO) definition that conceptualizes health as the “complete physical, mental and social well-being, and not just the absence of disease.”⁴ These conceptualizations have not allowed health to be understood as a complex, multidimensional process but, rather, just as individual or psycho-perceptual and reduced to the narrow limits of disorders and perception of the degree of individual well-being. The incongruity of the pharmacobiomedical paradigm had to be investigated and denounced. At that time, this critique confronted a generalized uncontested biomedical dominance. It was a visionary outlook that declared a crucial counteractive movement. Today, it has been reaffirmed not only in the magnificent research of social medicine specialists such as Waitzkin and many others but also in the recent coherent analyses of “insiders” who meticulously uncover the flaws of mainstream medical research. This critique is based on a penetrating inventory of what two distinguished Royal Society (United Kingdom) scientists have described as the “biomedical bubble” (Jones & Wilsdon, 2018). Due to its biased priorities, lack of diversity, and systematic waste of financial resources, the model has been described as an overvalued waste. Underlying its historically earned prestige, they explain how it has become a speculative fraud that overestimates the effect of certain drugs and rules out investment in and academic concern about the real health problems of society. At the same time, corporate influence also puts pressure on public health entities, their scope of concern, and their mandate.

In this formative phase, many of us in progressive universities and research centers began to work on the broader health-related contradictions of society. We applied the potent critical arsenal of critical realism, political economy, and the serious contributions of ecology, sociology, and biology. In those initial, still immature academic endeavors, some groundbreaking conceptual and methodological arguments were profiled. We turned them into the publications of those who later formed the Latin American Latin American Social Medicine Association. At that time, some important research dealt with the relationship between productive forms, social class, and health; the productive system and working conditions as fundamental categories to reveal the intimate link between the social and the biological; and the first theoretical

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approximations regarding the cardinal problems of the state—health practice and education.

The historic meetings of Cuenca I (Ecuador, 1972) and Cuenca II (Ecuador, 1974), organized under the guidance of Juan Cesar García (a notable thinker of social medicine in those years), our founding group elaborated the first formal critique of the positivist conception of public health and the class-based organization of the state and health governance. New categories were embraced in the proposal for a new pathway for the movement's development. It was a time of multiple ruptures with the empirical constructions of the old public health paradigm: the positivist, lineal, causal paradigm that constrained epidemiology; the incidence of functionalism and naive sociology in the interpretation of the state and health practices; and the critique of behavioral epistemology that permeated health education and epistemological studies.

It was within that historic epistemological framework that the principal founding works of a different epidemiology appeared. It required an audacious approach to break the conventional dependence on the rigid mold of what Naomar de Almeida-Filho (2000) sharply described as a "timid science" that had passively adopted the empiricist linear canons of causal thinking. We began working on the social determination of health, embedding its explanation in the analysis of production, work, and the conditions of the urban and rural working classes. This was the case for Cristina Laurell's "Sociological Analysis of Morbidity of Two Mexican Peoples" (1976); Cecilia Donnangelo's *Health and Society* (1976); Ana Tambellini's *Work and Disease* (1978); José Carlos Escudero's "Malnutrition in Latin America" (1976); Eduardo Menéndez and his critical anthropological analysis of the surreptitious social cultural determination of the health conceptions and beliefs of communities (1981); and my own work that presented for the first time a clear systematization of the theoretical and methodological proposal for the category of the "social determination of health"—work based on a systematic critique of causal positivism and empirical environmentalism from the perspective of critical realism and political economy (Breilh, 1977).

Those were the first steps in overcoming causal empiricism and the absence of categories with which to analyze the structural basis of the social determination of health and the social contrasts of phenomena in a profoundly unequal society. Parallel efforts were also advancing in the struggle to defeat idealism and functionalist arguments on the state and health policies and behavioral notions on education; overriding contributions were made by such thinkers as Juan Cesar García (1979), an intellectual leader of the movement. It was also the beginning of a critique of the ahistorical conceptions of preventive practice, in which Sergio Arouca—another outstanding inspiratory of our movement—played a fundamental role (Arouca, 1975).

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Two postgraduate programs emerged very early in the process: the master's studies program in social medicine at the Autonomous Metropolitan University of Xochimilco in Mexico (1975) and the State University of Rio de Janeiro in Brazil (1976). In addition, the formation of pioneering critical research centers, such as the Center for Health Research and Advisory in Ecuador, was the historical result of this process of debate and conceptual progress. One outstanding step forward in the institutionalization of social medicine was the creation in September 1979 of the Brazilian Association of Postgraduates in Collective Health. Its founders had the resources and political power to put into practice the richness of their national debate and the new Latin American ideas about health. One of its conceptual actions was the formal proposition of collective health as a category for our academic and social identity. This was possible after subjecting to critical scrutiny other terms such as "public health" and "social medicine," thus clarifying the object of transformation that we had fashioned.

In the 1980s, the movement began its second period of diversification: new ways of defining our study objects and subjects, of transforming our academic syllabus, and of reframing our methodology and redesigning our instruments. The intention of all these efforts was the consolidation of the institutional presence of new paradigms. It seems paradoxical to have put such progressive academic transformations into motion precisely when our societies were passing through a decade of aggressive restructuring and adjustment of the productive system, severe legal deregulation, and the demolition of rights and cultural neoconservatism. The strategic avant-garde of the neoliberal project was composed of company representatives and obsequious public servants who pressed to dissolve the role of the state and decentralize its governance. A permanent campaign was implemented with the aim of dismantling social awareness of the collective right to public goods and services. Entrepreneurial lobbying aimed to discredit public solutions as inefficient and expensive and to position the private economy and the market as the perfect sources of health development and social distribution. The result for the working and middle classes was the privatization of public services and social security. Of course, in order to protect the model's hegemony, there was a need to offer low-quality private insurance programs. The so-called universal security system was publicized, with extreme cynicism, as the solution to all the health needs of the poor.

The third and fourth periods of our movement are associated with the challenges of transdisciplinarity (third period in the 1990s) and intercultural meta-critique (fourth period in the new millennium). The paradigm clash of the two previous periods generated new challenges. We not only had to rethink the objects of social medicine but also had to pay more attention to the social subjects of health—both as stakeholders for action and as the subjects of research. This was an opportunity to diversify the study of the social subjects of knowledge. That is, whereas in the formative period of the 1970s, the emphasis was placed on the

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emancipatory construction of health as an object, circumstances now moved us toward a reworking of health as a subject of praxis. New horizons came into view, and valuable books and articles on gender and ethnicity in health appeared, proposing new methodological instruments to incorporate these into the branches of epidemiology, state theory, knowledge, and communication.

With the turn of the century, the time came to analyze the limiting theoretical and methodological implications of monocultural science. Later, we comment on the historical factors that exerted pressure to incorporate an intercultural scientific viewpoint.

One central challenge of this fourth period has been to examine health problems from a meta-critical perspective. In addition, this endeavor is suitably congruent with the incorporation of the new *objects-subjects* (gender and ethnocultural rights) that had become vital elements of the vision and agenda of collective health and the health rights struggle.

However, one instrumental component of the problem became evident when research groups began to incorporate the qualitative evidence of social change and cultural diversity. Innovate methodology was needed to integrate both quantitative and qualitative components at different stages of knowledge construction.

Unfortunately, in some epistemic scenarios, the critique of quantitative survey empiricism has lent itself to a resurgence of cultural relativism and its new face of qualitative empiricism. However, from a dialectical perspective, the idea has not been to substitute quantitative with qualitative empiricism. The idea was not to operate with those “quali” and “quanti” expressions as fragmented, tip-of-the-iceberg phenomena but, rather, as expressions of concrete embodiments,⁵ both qualitative and quantitative, that are generated by a concrete critical process and social determining movement (Breilh, 1997, 2003a). We return to this issue in Chapter 3.

Scholars from different Latin American countries, universities, and social institutions have come together over many decades in order to build the social medicine movement and, more recently, collective health. It has been a counteractive intellectual and political tradition based on a renewed interpretation of health and a participative conception of scientific work. Social medicine has successfully become a driving force in the advance of new ideas and action programs in communities and institutions. This work has entailed important contributions, despite being limited by its subaltern position with respect to mainstream, dominant, and much more generously financed approaches to health science.

In the Global North, the historical and vital counterhegemonic traditions of critical public health and social medicine—comparatively stronger in their technical and institutional resources—were, nonetheless, also subordinated to the dominant positivist and functionalist public health

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paradigm. The driving force of mainstream research with its commoditized science is the economic and political incidence of big biomedical corporations with their unbounded governance over health care, research, and teaching organizations. In general, the biased, lineal, empiricist, and biodeterminist conceptions of health research have directed mainstream resources to the basic sciences and applied clinical and surgical domains. The commercialized health care logic set the pace for all main health-related operations of the field.

Under those conditions, the critical epidemiology paradigm was forced to develop as a counteractive movement, confronting the constraints that hamper its powerful contribution. The alternative paradigm is the result of an articulated set of theoretical, epistemological, methodological, and ethical breaks with hegemonic mainstream epidemiology. I refer to the conceptual core of this innovative science as the *social determination of health*.

Both to the South and to the North of the Rio Grande, peoples are denouncing our ailing world and proposing a profound transformation of our societies. As a result, thousands of public health/collective health researchers and activists who have given the best of their lives to unravel the reality of health in the capitalist world are creatively generating ideas and developing mechanisms for the real protection and promotion of life and human wellness. This is a global movement that stands for the subversion of our unhealthy civilization and for the utopia of good living (enlightened rebelliousness for the 21st century).

Notes:

1. The concept *paradigm* was coined by Thomas Kuhn (1962) to define a consistent structure or disciplinary matrix (symbolic generalizations, beliefs, values, models, and network of concepts) through which scientists view their field; also implying the theoretical-methodological beliefs that define problematic options, methods, and commitments.
2. Epistemicide refers to the killing of a knowledge system.
3. Meta-critique, which is discussed in Chapter 3, refers to the convergence of diverse critical epistemologies to explain the dominant system of social reproduction and its civilization.
4. As conceptualized by WHO in a declaration approved during the International Health Conference of 1946, applied on April 7, 1948 (<http://apps.who.int/gb/bd/PDF/bd47/SP/constitucion-sp.pdf>).
5. Here, the notion of *embodiment* is used in the sense of giving a concrete perceptible form or body to a process, as explained in Chapter 2, thus expanding Nancy Krieger's (2005, 2011) important definition of *biological incorporation* to the collective (i.e., socionatural) domain.

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