

Interdisciplinarity as a theoretical practice

A interdisciplinaridade como prática teórica

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DOI: 10.1590/0103-11042022E6031

NÍSIA TRINDADE LIMA, IN THE ARTICLE ‘PANDEMIC AND INTERDISCIPLINARITY: challenges for collective health’¹, invites the reader to an interdisciplinary exercise, arguing that Covid-19 pandemic is a totally new phenomenon, with tendencies that imply inflections and changes in a direction that is not defined yet. The author addresses theoretical and methodological issues, presenting an agenda of themes for research, action and interventions in the field of sanitary policies. She proposes the valorization of knowledge diversity, in a scientific agenda directed to “present issues and those of a future with an even greater degree of uncertainties”¹⁽²¹⁾.

Lima adopts the dialogic interdisciplinary perspective more directed to “the proposition of problems and the search of answers” than to a process “oriented by perfectly defined epistemologies and methodologies”¹⁽¹¹⁾. The author emphasizes the practice of interdisciplinary dialogue, recognizing, however, that in the field of collective health this dialogue has been more postulated than actually carried out, because the efforts tend to “hierarchize knowledge”, at times diminishing “the importance of social sciences”¹⁽¹³⁾. Finally, the author calls on collective health to provide the definition of an “agenda of theoretical and practical issues necessary to face the current transformations”¹⁽²¹⁾.

The practical effort of the interdisciplinary dialogue about the concrete issues is an essential exercise. However, getting close to epistemologies and methodologies of the different sciences might also be inevitable.

Japiassu² systematizes the three epistemological axes of modern science: rigorous science, biology, and culture and history. The first institutes the mechanistic mathematical model concerned with establishing precise scales and constant relations, having been the axis that established the scientificity model, especially inspired by physics, depriving what became human sciences of their subject and object. The second, biology, affirmed the “irreducibility of life”²⁽¹⁰⁰⁾ as human presupposition under the theme of evolution, by establishing a “philosophy of nature putting into action the dynamism of life, immanent to matter”²⁽¹⁰⁰⁾. Thus, “all history was converted into natural history”²⁽¹⁰¹⁾, in a certain sense; human order became explained by a certain rationality of the sense of life. The third, culture and history, was permeated by the idea of progress of an humanity that “does not constitute a natural species, but a historical idea, a vocation for civilization”²⁽¹⁰²⁾; a historicism that systematizes and conditions all human becoming to civilization and progress, and disconnects all social being from nature, “the human being, organic in its structure, is cultural in its development”²⁽¹⁰³⁾. Therefore, in Japiassu’s terms, the matrix of modern sciences imposed to the ‘humans’ and the natural world a specific rationality, which deprived them from part of themselves and separated them from the natural world.

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Many of the sanitary problems of today express, in some degree, some of the fractures of, and among, these epistemological axes.

Collective health, an “interdisciplinary undertaking”⁽¹²⁾ since its origin, according to the author, assumed important theoretical-epistemological challenges. It did not, however, escape the modern epistemological heritage – considering that all science is inscribed in a given social-historical context – leaving fractures to be now revisited.

The field conducted a consistent criticism of the mechanistic and biologicistic dimensions of modern science, taking as reference the processes in health-disease and the individual and collective human bodies. It problematized the idea of body-machine, the focus on the normality established by the biomedical framework, and the environment naturalization of the ecological model of disease³⁻⁶. It did not problematize, though, the theme of evolution, which is central regarding the biology axis. The criticism, in this axis, fell over the understanding that life, death, pain, growth, deterioration, etc., do not pertain only to a biological spontaneity, but also to a social one. Unprecedented epistemic leap⁷. However, the biological dimension per se was not problematized, remaining as if it were essentialist, determined, universal, devoid of historical narrative^{7,8}. A fracture was thus established in the criticism of biology. Bodies and processes in health-disease were taken as socially determined⁹, maintaining a biology of bodies and processes in health-disease biologically naturalized, as immanent matter. Evolution was not problematized, neither biology as science, which remained protected within the field. When the author appeals to the reflection on the biological-social relation, she positions the sanitary crisis precisely on this fracture, that of the necessary historicizing of the biological, of the natural world, of biology.

Also, collective health did not problematize the axis of culture and history, in Japiassu's terms, that the axis performed the elegy of humans as expression of civilization,

development and progress, separating them from the natural world. Precisely on this fracture, another challenge is mentioned by the author, the “simplified vision”⁽¹⁴⁾ of epidemiological transition that immediately replaces the themes of evolution and progress, articulating the axes of biology, and culture and history. Some of the literature on the crisis of the contemporary world has been discussing the frameworks of modernity regarding the destructive dimension of industrial and post-industrial capitalism (info-communicational), as well as the destructive dimension of progress. Nisbet¹⁰, discussing the “triumph of progress”, shows how the idea had been articulated to that of evolution – biological and social – and development, reaching in the late nineteenth century an “intimate affinity between faith in progress and faith in what today we would call economic growth”¹⁰⁽¹⁸⁶⁾. According to the author, this issue is translated into the Covid-19 pandemic, simultaneously traversed by the relationship of human kind appropriation of nature in a context of social progress, intense urbanization of populations, and globalization.

It has been difficult to establish the boundaries between what in the present time characterizes a phenomenon as “entirely new”⁽¹⁷⁾ – the author's expression – and another, new, unknown. About the pandemic, the author states that “it is obviously not a new phenomenon”⁽¹⁴⁾. |The paradox is not a fallacy, but real. It reflects exposed fractures and constitutes clues that claim “the need of new approaches”⁽¹⁰⁾, says the author. This is the dialectics of modernization, which sheds light to the “contradictory forces”⁽³⁴⁾ and contributes to the advance of knowledge.

On the sustainable development agenda, specifically regarding human and non-human animals, the author mentions the pattern of infection-non infection of the SARS-CoV-2 virus, which indicates another fracture of the axis of culture and history, one that separated civilization from the natural world; i.e., subjugated the natural world to the intents of

civilization and progress. Keith Thomas¹², in a great work about the predominance of humans over the natural world, about the forms of subjection, and constitution, to the conservation of frontiers between the different – humans and non-humans, humans and the natural world – describes the scaled classifications that constructed a universal law about human preponderance. This capacitated scientists to advocate “that consciousness can be explained mechanically”¹²⁽³⁹⁾, which produced the effect of degrading not only the vegetal world but also animals and “inferior human beings”; a theme thoroughly problematized by the theories of gender, de-colonial and post-colonial. “Nature, once it is known, will be dominated, managed and utilized at the service of human life”, wrote J. Cockburn in 1696, cited by Thomas¹²⁽³²⁾. In this sense, civility, religion and erudite education raises the humans above nature, ensuring the dominance of the human species, namely European.

The fact that a virus originally not infecting humans has become a historical protagonist, like SARS-CoV-2, rekindles the attention to numerous resources of the natural world. Lewontin¹³ reminds us that organisms change their physical nature in close relation to the external world, the environment, at the same time that the environmental change is induced by the vital activity of organisms, and that this process occurs in the production and destruction of conditions for existence of organisms and environments. The complexity of the biological is immense. Thus, it is possible to agree with Mayr⁸, that biology as science should be understood as “comprehension of the population’s thinking, probability, chance, pluralism, emergency, and historical narratives”^{8(xiii)}, which challenges the epistemological axis of culture and history.

How to understand a scientific agenda for concrete and complex problems recognizing the future of uncertainties, since the epistemological axes turn around a scientificity of constant relations, irreducible essentiality of immanent matter, certainty of evolution and

progress under the elegy of humans? These axes implied certainties – on the positive directivity in relation to the future, as well as on the human potency to solve any adversity, every challenge posed to humanity. The presuppositions of the ‘epidemiologic transition’ and the ‘eradication’ of diseases express this set of ideas.

The challenge remains. What type of epistemology or epistemologies are appropriate for sciences in a context of uncertainties? What theories and practices are necessary in a context of self-produced uncertainties?

Coole & Frost¹⁴ suggest ‘new materialisms’. When they problematize materialism, it is not only in relation to biological and social, but also to social-social.

History emerges here as the continuous transformation of maintenance forms by new ones, of undecipherable and not anticipated events, with a corollary of lessons that the aleatory intervention is perhaps more efficient than the patient understanding of trajectories and work over the continuities that the inner logic of development can endure¹⁴⁽³⁵⁾.

Beck¹⁵⁽³⁶⁶⁾, recognizing the concept of social vulnerability as fundamental for the understanding of risk society, writes about this concept that “transforms and radicalizes the category ‘class’”¹⁵⁽³⁶⁶⁾, synthesis-concept; and positions the question about uncertainties.

The possible futures of modernity could no longer be seen as *opportunity* to act and contemplate – in a horizon with a sense theoretically and politically still open – as risk futures that would *force to (counter)act preventively*. Together with the ‘clarification’ of ‘excessive future’, enters the stage a renewed and skeptical illustration on the need of a preventive configuration of the future: the future is addressed *negatively and therefrom* its impulse to survive. [Free translation] [Italics and inverted commas by the author]¹⁶⁽³⁰⁸⁾.

These short considerations suggest that we think about different interdisciplinary agendas on/for collective health; also, about an agenda of theoretical-practical (self)transformation in a context of deep contemporary transformations, crises and uncertainties. Moreover, facing such fractures implies, in Nísia Trindade's terms, not to hierarchize knowledge. In the words of Geertz¹⁷⁽⁸⁵⁾, the “capacity of our imagination to learn about

what is before our eyes”, and recognize that the sciences “are constructed through time”; otherwise, they will be fated to “be transformed into a veiled myth”¹⁷⁽¹⁴¹⁾.

Collaborator

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References

1. Lima NT. Pandemia e interdisciplinaridade: desafios para a saúde coletiva. *Saúde debate*. 2022; 46(esp6):9-24.
2. Japiassu H. Nascimento e morte das ciências humanas. Rio de Janeiro: Livraria Francisco Alves Editora; 1978.
3. Mendes Gonçalves RB. Reflexão sobre a Articulação entre a Investigação Epidemiológica e a Prática Médica a propósito das Doenças Crônico-Degenerativas. In: Costa DC, organizadora. *Epidemiologia: Teoria e Objeto*. São Paulo: Editora Hucitec-Abrasco; 1990. p. 39-86.
4. Camargo Jr KR. *Biomedicina, saber & ciência. Uma abordagem crítica*. São Paulo: Editora Hucitec; 2003.
5. Arouca S. O Dilema Preventivista: contribuição para a compreensão e crítica da medicina preventiva. São Paulo: UNESP; Rio de Janeiro: Fiocruz; 2003.
6. Pereira JCM. *Medicina, Saúde e Sociedade*. Ribeirão Preto: Complexo Gráfico Villimpress; 2003.
7. Ianni AMZ. *Mudanças sociais contemporâneas e saúde. Estudo sobre teoria social e saúde pública no Brasil*. São Paulo: Editora Hucitec; 2018.
8. Mayr E. *This is Biology. The Science of Living World*. Cambridge: The Belknap Press of Harvard University Press; 1997.
9. Stotz EN. A Saúde Coletiva como projeto científico: teoria, problemas e valores na crise da modernidade. In: Canesqui AM, organizadora. *Ciências Sociais e Saúde*. São Paulo: Editora Hucitec; 1997. p. 273-284.
10. Nisbet R. *História da Ideia de Progresso*. Brasília, DF: Editora Universidade de Brasília; 1985.
11. Berman M. *Tudo que é sólido desmancha no ar: a aventura da modernidade*. São Paulo: Companhia das Letras; 1986.

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12. Thomas K. O homem e o mundo natural. São Paulo: Companhia das Letras; 1996.
13. Lewontin R. Biology as ideology: the doctrine of DNA. New York: Harper Collins; 1991.
14. Coole D, Frost S. Introducing the new materialisms. In: Coole D, Frost S, editores. New materialisms. Ontology, agency and politics. Durham: Duke University Press; 2010. p. 1-43.
15. Beck U. Anexo: diálogo com Ulrich Beck, Arthur Buena. In: Beck U. Sociedade de Risco. Rumo a uma outra modernidade. São Paulo: Editora 34; 2011. p. 361-376.
16. Beck U. La Sociedad del Riesgo Mundial. En Busca de la Seguridad Perdida. Barcelona: Paidós; 2008.
17. Geertz C. Nova Luz sobre a Antropologia. Rio de Janeiro: Jorge Zahar Editor; 2001. p. 131-142.

Received on 01/24/2022

Approved on 06/22/2022

Conflict of interests: non-existent

Financial support: non-existent