

## Frontiers of Knowledge and Public Health

Everardo Duarte Nunes (<https://orcid.org/0000-0002-2285-7473>)<sup>1</sup>

**Abstract** *This essay briefly addresses a decidedly current theme, namely frontiers and boundaries and how these are featured in the field of public health. Based on nineteen abstracts, the essay highlights key words that exemplify the way the theme is addressed, as well as the question of “different cultures” that permeate the field of public health and the role that the fragmentation of knowledge plays today, especially in the area of the social sciences.*

**Key words** *Frontiers, Cultures, Knowledge, Public health, Social sciences.*

---

<sup>1</sup> Departamento de Saúde Coletiva, Faculdade de Ciências Médicas, Universidade Estadual de Campinas. Cidade Universitária, Barão Geraldo. 13081-887 Campinas SP Brasil. [evernunes@uol.com.br](mailto:evernunes@uol.com.br)

Almost two decades ago, Michèle Lamont and Virág Molnár<sup>1</sup> wrote an article that I consider to be exemplary. In the article, the sociologists provide a detailed study on “frontiers” and “boundaries,” highlighting how these concepts have become key issues in the social sciences. For example, the authors mention the acquisition of knowledge, social and collective identity, commensurability, census categories, cultural capital, cultural belonging, the position of racial and ethnic groups, hegemonic masculinity, immigration, and professional jurisdiction, among others. They describe how, in the 1990s, abundant literature became available, which increased in the new Millennium, not to mention that the classics – Durkheim<sup>2</sup>, Marx<sup>3</sup>, Weber<sup>4</sup> – had already considered frontiers as being a tool for social scientists, as is the case of the Durkheimian definition of “the reign of the sacred as opposed to the profane.” In this thought-provoking review, they point out that, when dealing with “multifaceted development” [...] “greater integration is desirable because it can make it easier to identify theoretically enlightening similarities and differences, the way boundaries are laid out in contexts of group and type, and in accordance with socio-psychological, cultural and structural levels. According to Lamont and Molnár<sup>1</sup>, it is important “to focus on the frontiers themselves” – rather than on a dependent variable or subarea of sociology – so as to produce “new theoretical viewpoints about a range of social procedures that are present in a wide variety of apparently unrelated phenomena.” This process makes it possible to: work on the frontiers, to cross and to change these and, thereby, to territorialize, politicize, reallocate and institutionalize [new] frontiers.

This was the first image, in the sense attributed by Howard Becker<sup>5</sup> (2007) to “representations,” that I constructed when I began this text, of creating objects – before we really begin our research work – both in substantive and scientific terms and the concepts that integrate them.

The second image was that of a lecture and book by C. P. Snow<sup>6</sup> (1905-1980), presented 60 years ago: “*The two cultures and the scientific revolution*. The author wrote: “*Literary intellectuals at one pole – at the other scientists, and as the most representative, the physical scientists. Between the two a gulf of mutual incomprehension [...] hostility and dislike [...] lack of understanding. They have a curious distorted image of each other.*” Snow<sup>6</sup> re-formulated some of his viewpoints in 1961, when revising his ideas following heated debates. He added a third culture: “*still disorganized and lacking leadership, forming a “body of opinion*

[...] *with people from different areas: social history, sociology, demography, political science, economy, government [...] psychology, medicine and the social arts, such as architecture.* The objective is not to discuss the long history of this debate, which has continued to the present time and which, amongst us, received such a fine and scholarly elaboration from Naomar Almeida Filho<sup>7</sup>, intended as a pedagogical project, but which orients the analysis of the material of this thematic issue and the field of *Ciência & Saúde Coletiva*. At a first reading, these articles constitute *stricto sensu* epidemiological studies. Seen through a zoom lens, or with the images that guide my work, these present the possibility of other interpretations.

Bearing in mind that key words are the main search instrument used in research, I made a survey of these seventeen thematic articles. From a qualitative point of view there are 67 key words which, grouped together, form small units that make it easier to check frontiers and to qualify these from the standpoint of a health risk. We found: *ageing* and *the elderly*; *food* and *nutrition*, including: food consumption, eating habits, nutritional status, body mass index, food and nutritional security, *illnesses* and *morbidity assessments*, which indicate serious problems affecting the Brazilian population: obesity (18.9% of the population; overweight reaches 54%), diabetes (8.9%, in 2016, with a higher rate of 9.9% for women and 7.8% for men), tuberculosis (89,569 new notified cases in 2018), prostate cancer (68,220 new notified cases in 2018), depression (5.8% of the population), arterial hypertension (over thirty million), anemia. However, there are also key words that define areas that clearly go beyond the epidemiological field: *social inequality* (rooted in economic inequality, but which also extends to racial, ethnic and gender inequality), and *social inequities* in the area of human rights, religion, sociology and ethics. Thus, these are themes or concepts that go beyond the boundaries of one variable (or more) to become a process. This also applies to other words, such as aging, especially in the case of what is known as “*active ageing*,” which is seen as an epidemiological study, but which has multiple cultural implications, involving gender, different types of assistance, care and services provided by carers. Other words, such as *population*, clearly share complementary fields or the same fundamental elements of epidemiology, as in the case of statistical and demographic studies.

Many debates about the distinct nature of the “two cultures” – of epidemiology and the social sciences – have developed throughout the history

of public health, even involving the dissemination of the diffuse collective concept and its meanings. Twenty years ago, in a leading article published in the *Informe Epidemiológico do SUS*, Minayo<sup>8</sup> warned that, in order to understand “a human being in all its multiple dimensions,” showing that epidemiology is not enough, since it “puts the role of social sciences and human sciences within brackets. In other words, making it possible for the social and the subjectivity aspects to be thought of as specific theories, thereby subsuming epidemiological analyses, either from a molecular, clinical or a populational point of view.” Without a doubt, the paths of “understanding” have broadened over recent decades – how to understand (*verstehen*) and not only explain (*erklären*) events such as suicide and violence without the conceptual instruments of social sciences? An argument is not being made that a certain discipline has epistemic dominance. However, it is necessary, at the same time, to appreciate and to differentiate. The contribution towards public health made by epistemologists, philosophers and social scientists is widely recognized: Bachelard (1894-1962) with his concept of an “epistemological rupture” (common sense and the sciences); Canguilhem (1904-1995) who, in Elizabeth Roudinesco’s<sup>9</sup> expressive synthesis, “originally brought together a philosophy of the concept and a philosophy of engagement”; Foucault (1926-1984) and the threshold of discursive formation (positivity, epistemologization, scientific theory, formalization); Giddens (1938) who enriched social theory by developing or re-thinking concepts such as: structuring, modernity, subjectivity and reflexivity; Minayo et al.<sup>10</sup> – to mention only one of her works – the triangulation of methods (quali-quantitative relationships, the context of relationships, the diversity of informants and techniques). This is just a short overview of some of these works. Many others form the theoretical body of work upon which researchers in the area of public health seek to better understand the processes of health, illness and care. I have emphasized the quotes inserted above because they open up the possibility of a line of thought that goes beyond pre-established frontiers.

However, we cannot overlook the fact that, when we cross frontiers we are faced with the fragmentation of knowledge. Although Williams<sup>11</sup> has observed that “fragmentation is a concept that has been mentioned, but rarely defined in sociology,” Swanson<sup>12</sup> points out that this issue has been debated for four decades. According to him, “the disparity that exists between the total amount of recorded information – as far as it can

be measured – and the limited human capacity to assimilate it, is not only enormous today, but continues to grow incessantly,” and the author asks himself: if it is possible to “push forward frontiers, even if one dedicates one’s whole life to doing so”? He adds that, “in response to the information explosion, specialties are created spontaneously, they then grow too much and divide into sub-specialties without a declaration of independence.” As a result, “an unintentional outcome is the fragmentation of knowledge caused by inadequate communication between specialties,” which is rapidly increasing. However, he also argues that there is “a possibility that information related to one specialty can be of value in another even though no-one may perceive this fact.”

I believe these observations are pertinent, because they effectively illustrate the way in which knowledge is becoming institutionalized today. Some examples illustrate this point: during the Twelfth Brazilian Congress on Public Health (2018), 4,491 works were presented in 32 core thematic fields; ANPOCS (National Association of Post-Graduate Studies & Research in Social Sciences) (2018), 35 working groups, 45 symposiums of post-graduate research; 19th Brazilian Congress of Sociology (2019), 42 working groups. This diversity is the same in other fields of knowledge and is present in the most important sociological associations, such as the International Sociological Association (57 research committees); the British Sociological Association (40 study groups); the American Sociological Association (52 sections).

The themes addressed here have a greater degree of complexity than the limited space that this short text allows, but they help stimulate debate, especially as they are directed towards the field of health, which has sought to broaden frontiers through its research and dissemination. This can be seen in the content of the publications they produce, which seek to integrate the borderline areas between the sciences, the humanities and the arts. *Revista Ciência & Saúde Coletiva* has opened up thematic spaces of the most diverse nature and, as Asnake<sup>13</sup> noted, when highlighting the importance of public health publications, “frontiers do not limit the impact of public health,” which may be minimized by “sharing the evidence by means of scientific publications.” The sociologists<sup>1</sup> cited at the beginning of this article stress the fact that special attention should be given not only to social frontiers, but also to symbolic frontiers and the interaction between them, thereby opening up areas of study

on the mechanisms that produce differences and hybridism. There are still many avenues that need to be explored.

## References

1. Lamont M, Molnár V. The study of boundaries in the social sciences. *Annu Rev Sociol* 2002; 28:167-195.
2. Durkheim E. *As formas elementares da vida religiosa*. São Paulo: Martins Fontes; 2003.
3. Marx K. *Contribuição à crítica da economia política*. São Paulo: Expressão Popular; 2008.
4. Weber M. *A ética protestante e o "espírito" do capitalismo*. São Paulo: Companhia das Letras; 2004.
5. Becker HS. *Segredos e truques da pesquisa*. Rio de Janeiro: Jorge Zahar Ed.; 2007.
6. Snow CP. *As duas culturas e uma segunda leitura*. São Paulo: Editora da Universidade de São Paulo; 1995.
7. Almeida Filho N. As três culturas na universidade nova. *PontodeAcesso* 2007; 1(1):5-15.
8. Minayo MCS. O diálogo necessário entre a epidemiologia e as ciências sociais e humanas na promoção da saúde. *Inf. Epidemiol. Sus* 2000; 9(4):227-228.
9. Roudinesco E. *Filósofos na tormenta*. Rio de Janeiro: Zahar; 2007.
10. Minayo MCS, Assis SG, Souza ER, organizadoras. *Avaliação por triangulação de métodos: abordagem de programas sociais*. Rio de Janeiro: Editora Fiocruz; 2005.
11. Williams ES. *The end of society? Defining and tracing the development of fragmentation through the modern and into the post-modern era* [tese]. Washington: The Catholic University of America; 2010.
12. Swanson DR. ASIST Award of merit acceptance speech: On the Fragmentation of Knowledge, the Connection Explosion, and Assembling Other People's Ideas. *JASIST* 2005; 27(3):12-14.
13. Asnake M. A importância da publicação científica para o desenvolvimento da saúde pública. *Cien Saude Colet* 2015; 20(7):1972.

---

Article submitted 10/06/2019

Approved 16/07/2019

Final version submitted 18/07/2019