
CELIA



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FROM CELL TO SOCIETY AND BACK : EPISTEMOLOGICAL AND ETHICAL ASPECTS OF CAUSALITY IN PUBLIC HEALTH NOVEL APPROACHES

Context: Novel types of research and intervention programmes are developing in public health, which are based on interdisciplinary approaches called “from cells to society- and back” (FCSB), that encompass both molecular and epidemiological explorations of the link between the social environment of individuals and their state of health. Whereas the fields of molecular biology and epidemiology have so far corresponded to two distinct types of “biopower”, the FCSB approaches are based on an articulation of this knowledge and of the corresponding forms of intervention. Research following this approach promotes the integration of epigenomics into epidemiology projects and involves the theorization of mixed causal chains including social facts and biological events. These relatively novel type of approaches are increasingly being used and yet, its particular epistemological dimension and ethical aspects have not been studied.

As these innovative FCSB framework develop in public health, accompanied with a mix of anticipations and promises in society, there is a need to reflect on the way causation is framed within the research and intervention practices. This is needed so as to avoid reductionist views of the social realm to be credited, but also to elaborate carefully, within this framework, notions of environment and behaviour that are ultimately connected to individuals’ responsibility for their own health. Furthermore, it is needed in order to be particularly cautious about the implications of such models for vulnerable populations.

Hypothesis and Objectives: Our hypothesis is that, in FCSB approaches, the combination of disciplines, at the molecular and at the social level, has effects on the modelling of interventions in public health, giving particular emphasis to certain stages of development and thus targeting specific vulnerable populations (“fertile women”, pregnant women and children aged under three).

Taking the dynamics of the interaction of knowledge and power seriously, (i) we will study how the specific type of knowledge developed in the FCSB approaches is constructed and determined, (ii) we will then reflect on the new opportunities for intervention on life in the social world that are thus offered through this knowledge and (iii) we will develop case studies with the special aim of theorizing the causality involved within concrete examples and highlight their ethical aspects.

Methods: The approach proposed is trans-disciplinary as it relies on the collaboration between a team specialized in social epidemiology

and particularly in lifecourse epidemiology, embodiment and mediation analysis, the EQUITY group (Embodiment, social inequalities, lifecourse epidemiology, cancer and chronic diseases, interventions, methodology, INSERM) and a philosopher, specialized in philosophy of science and research ethics. The intensive involvement of a philosopher with researchers, in their working environment and over an extended period of time, will allow for the co-production of case studies that will contribute to the reflexion about complex modelling of causality in FCSB.

This research is twofold as it involves qualitative empirical investigation and theoretical research:

- The qualitative empirical investigation (based on interviews and observations) will describe and examine the causal and ethical aspects of mediation analysis.
- The theoretical research will be conducted through case studies that intend to build causal frameworks for phenomena that are linked to multidisciplinary bodies of knowledge.

On the epistemological and ethical side, the approach will be completed by the input of historians of sciences and philosophers of medicine that are members of SPHERE (UMR 7219, CNRS-Université Paris Diderot-Université Paris 1). As a result, the philosopher specialized in philosophy and research ethics realizing the investigation will benefit both from multidisciplinary embeddedness within the EQUITY group and a disciplinary expertise in philosophy and history of sciences within SPHERE.

Perspectives: Based on daily cross-disciplinary encounters and leading to interdisciplinary productions, this project will explore novel ways to associate public health researchers to a philosophical reflection on their work, on both its epistemological dimension and ethical aspects. Its main overall aim is to question developing models of FCSB approach at the epistemological and ethical level and to allow for a deeper understanding of the causal structure of the social variables involved in these types of frameworks so as to develop the necessary cognitive research upstream of the development of public health actions.

This project is based on the view that conceptual, theoretical, philosophical and ethical inputs can intervene at all levels of the scientific process to both improve the scientific process and bring awareness to the responsibilities involved.
