

PERMEABLE BODIES: AN ANTHROPOLOGICAL STUDY OF ENVIRONMENTAL PUBLIC HEALTH RESEARCH IN THE ERA OF “PERSONALIZATION” IN SWITZERLAND

Dre Nolwenn Bühler sub-project in SNSF Sinergia “Development of Personalized Health in Switzerland: Social Sciences Perspectives” (DoPHIS) (FNS N°CRSII5_180350), coordinated by Prof. Francesco Panese, IHM-CHUV/UNIL (2019-2022)

This project explores the production of knowledge and the reconfigurations at stake in public health research when it moves towards “personalized health”. The term “personalized health” (PH) refers to the transformations of biomedicine spurred by advances in the field of genomics and in information and communication technologies. PH bets on the collection, analysis and integration of different types of data (especially clinical, self-tracked, health-related, and genomic) to target better preventive and therapeutic interventions according to “personal” – usually molecular - characteristics. In recent years, different Swiss initiatives have brought to the fore the need for infrastructure able to support the management of biological samples and health-related data. These are necessary to implement data-driven medicine and constitute an additional step in the biomedicalization of health. Broadening a genomic-centered understanding of PH, its proponents argue that these initiatives should not only contribute to improve the targeting of treatments at the individual level, but should benefit the health of the population as a whole (Meier-Abt and Egli 2016). In contrast, critical voices are concerned that these costly high-tech innovations might not benefit the population and might even increase inequalities of access to the healthcare system (Cornuz et al. 2016) and “loose” the person (Stiefel et al. 2017) in a context of increasing costs, ageing population, and expansion of chronic and non-communicable diseases. Beyond bioethical issues of data protection, return of research results, or consent, these developments raise thus specific challenges for public health research and policy. So-called Precision Public Health (PPH) opens up the prospect of improving knowledge, not only, of the genetic determinants of health and disease, but also of the environmental – or non-genetic – ones, and of the complexity of their mutual interactions. Research on the exposome, including chemical exposures, but also broader lifestyle and socio-economic factors, provides an example of such research (Wild 2005). Biomonitoring opens also up the prospect of renewing and extending understanding of environmental and chemical exposure in a “personalized” way (Weiss et al. 2005; Dennis et al. 2017). Promoters of PPH approaches argue that it might serve public health strategies through a better targeting of prevention measures according to characteristics proper to a specific milieu, to a set of lifestyle activities, or to the biomarkers identified in a subgroup of the population. However, critiques draw the attention on the risks of promoting reductionist and individualist understandings of the environment, failing to address the social and structural determinants of health (Senier et al. 2017). This kind of PPH approach might even result in stigmatizing some groups of the population (Murphy 2008). Moreover, the important “clinical labor” (Mitchell and Waldby 2010) required from research participants, as they are asked to provide biological samples, but also spend a significative amount of time to respond to questionnaires and/or undergo health examinations, might above all serve private interests, instead of benefiting the common good, which puts the notion of solidarity at the core of the debates (Prainsack 2018). Epidemiological research focusing on the impact of environment on health in a data-driven and exposomic perspective provides a relevant site to explore these tensions.

This project consists of an ethnographic investigation of a new public health setting which consists of:

- Implementing a nation-wide population cohort (representative sample of Swiss adults between 20 and 69 years old) and related infrastructure
- Biomonitoring the Swiss population
- Producing new scientific knowledge on the exposome
- Developing evidence based public health strategies.

In a Foucauldian perspective, this setting can be understood as an assemblage of heterogeneous elements including techniques, laboratories, biobanks, data infrastructures, discourses, institutions, regulatory decisions, laws, scientific statements, moral and political issues, as well as the population of cohort participants (Foucault 1994: 299). Aiming at accounting for “personalized health” as it is made in practices, this anthropological study focuses on the work required to assemble these different elements in order for scientific knowledge to be produced and public health strategies to be developed. Focusing on the preparation, implementation and realization of the pilot phase of the cohort study, the in-depth exploration and empirically grounded approach will contribute to a better understanding of the technical, epistemological and political reconfigurations at stake in PPH when it aims to produce translational scientific knowledge on the impact of environment on health.