

Introduction: Excavating and (re)creating the biosocial; birth cohorts as ethnographic object of inquiry and site of intervention

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Longitudinal birth cohorts are increasingly recognised as important for understanding how biological, social and environmental processes interact over time and contribute to health inequalities. Birth cohorts have also become part of global assemblages of knowledge production, particularly in the field of the Developmental Origins of Health and Disease (DOHaD, Gluckman et al. 2016), and act as important technologies of evidence in a research climate that privileges large-scale, quantitative analysis easily translated across contexts. Whilst large-scale national and international population-level biobanking initiatives have been the subject of attention in social science and bioethics, longitudinal birth cohort studies have not, so far, been examined in the same way. This is despite their increasing relevance to the infrastructure and aims of an expanding terrain of 'biosocial research' that aims to test and make evident how social experiences shape biology in ways that can influence individual and intergenerational health (Blane et al. 2013).

Over recent years, large-scale efforts have been made to maintain existing birth cohorts (both national, regional and international consortia studies), establish new birth cohorts, or transform existing research populations in ways that make it possible to follow them longitudinally across time. As questions concerning the embodied consequences of exposure to pollution, stress, toxic waste, malnutrition or violence take centre stage in 'life course' and DOHaD approaches (Lappé et al. 2019), longitudinal birth cohorts are increasingly seen as central for a range of social and biological researchers working in emerging terrains of biosocial science (Wijmenga and Zhemakova 2018). In sum, it would appear that the birth cohort is a new resource and context for global health that demands social science attention, critical engaged reflection and analysis.

In this Somatosphere series, the authors examine and understand the birth cohort as a tool for and 'technology' of biosocial research. The series brings together a community of medical anthropologists and sociologists involved in the newly established Wellcome Trust funded Biosocial Birth Cohort Research Network (BBCR). This community

includes social scientists involved in establishing or working with birth cohorts; scholars whose practice and enquiry is dynamically shaped by birth cohort studies findings; and scholars who are critically examining the biopolitics of birth cohorts in an era of transnational biosocial science. While in some cases, social scientists working in this area are engaged in pursuit of a combination of these aims, it is important to note that many birth cohorts are established with their origin and scope shaped by cross-disciplinary scientific communities and agendas. By attending to how longitudinal birth cohort studies are both excavating and recreating what biosocial science is, this series brings important methodological and theoretical questions to the fore, contributing to and enlivening the evolving discussion of the 'biosocial turn' (Meloni et al. 2016).

This series of 'cohort case studies' includes those working on or with birth cohorts in Mexico, China, South Africa, Canada, Brazil, Bangladesh, and the UK. Each contribution in the series offers a cohort case study that engages with how ethnographic methods are innovatively positioned to both contribute to and understand biosocial knowledge production. For example, how might ethnographically 'thick' accounts of 'time', including transitional moments in the life course such as adolescence or pregnancy, help to illuminate biosocial dynamics? How might ethnographic attention to 'place,' including homes and neighbourhoods, or 'social practices,' including eating, caring and working, illustrate the structural factors that shape health outcomes in the context of birth cohort studies? How should anthropological and sociological research take up the challenge of examining birth cohort studies? How can long-standing expertise examining the ways race/ethnicity, sex/gender, class and other population-level categorizations, be used to shape biosocial research in birth cohort studies? What are the methodological challenges and opportunities at stake?

Each contribution also attends to the important conceptual implications of the increasing relevance of longitudinal cohort studies to epidemiological models of chronic disease, mental health and public health intervention. With longitudinal cohort and 'life course' studies enfolding two or more generations, how might the anthropology of kinship, with its rich history of thinking through nature, culture and inheritance, be brought to contemporary concerns about how biosocial transmission occurs, and to what effects? At the same time, renewed attention to environmental exposures, including pollution and toxicity, raises new question about what forms of 'chemical kinship' might also be at stake in the specific temporal lens of longitudinal cohort studies. In sum, what kind of making and unmaking of kin, in terms of intergenerational connection or inheritance, is at stake, reproduced or challenged in the context of longitudinal cohort studies?

This special issue of Somatosphere will include contributions from leading social scientists currently working with or on birth cohorts in the global north and south. Over the next year the series will illuminate how social scientists are currently engaging with longitudinal birth cohorts as terrains of ethnographic inquiry reflecting on the opportunities and challenges of developing novel theoretical and methodological paradigms that can both account for and intervene in biosocial research.

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