Anthropology Book Forum
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Janelle Lamoreaux, 2023, *Infertile Environments: Epigenetic Toxicology and the Reproductive Health of Chinese Men,* Durham: Duke University Press, 160 pp., ISBN: 978-1-4780-1933-6

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Infertile Environment's investigation of the ways in which male reproductive health in contemporary China is problematized could be seen as an exemplary response to the call by Marcia C. Inhorn for more "masculine quests" (2020, 4), where further inquiry is desirable into the global decline of male fertility, counterintuitively at some distance from women, who remain the most biomedically problematized centre for monitoring and treatment. From Chapters One to Five, all titled after "the xxx environment", Janelle Lamoreaux weaves her fieldwork into a multiplicity of environments that are partially connected through the epigenetic toxicology conducted by Chinese scientists in Nanjing. This suggests one of the most prominent features of the book: the author moves against the oft-voiced critique by social scientists that laboratory science is "reductive" and "oversimplifying". Instead, Lamoreaux demonstrates how contexts and environments proliferate and come into being, from the laboratory in Nanjing to China more broadly and beyond. This analytical thread runs throughout the book and is particularly elaborated in Chapter Five.

In the first chapter, "The National Environment", the author provides context on the methodology of epigenetic research involving the tracing of biomarkers of endocrine-disrupting chemicals (EDC). Margaret Lock's concept of "local biologies" is invoked to explain the excessive environmental toxins to which Chinese populations are exposed, within popular critiques in which industrial capitalism and inefficient government regulation are singled out. In this sense, the book confirms Ayo Wahlberg's argument that "Aggregated sperm quality deterioration acts as a kind of metaphor for the degradation that China's rapid transformation into an industrialized nation is held responsible for..." (2018, 21). This discourse, which downplays individual responsibility and connects reproductive health to a national politico-economic context, stands in contrast to Euro-American toxicological discourse emphasizing individual susceptibility and remedial action. This contrast appears again in the next chapter on "environmental hormones", where Western narratives frame concern largely around "sex panic" – anxieties over sexual purity – while in China the issue is framed more as a scandal surrounding food safety and the need for improved regulation.

This analytical thread appears again in Chapter Four, "The Maternal Environment". Here the author draws on Marilyn Strathern's notion of the "dividual" to foreground how epigenetic thinking, which situates bodies in relation to environments, can move beyond the responsibilization of individuals, especially mothers. The "concentric" kinship networks famously conceptualized by Chinese sociologist Fei Xiaotong are also brought forward to explain the fundamentally relational notion of personhood in Chinese society, which to some extent shapes both professional and popular discourses surrounding epigenetic research in China.

This comparative approach foregrounding cultural specificity constitutes a unique strength of the book within the social science literature on how infertility is studied in laboratories and, more broadly, circulated in media narratives and understood in society. Moreover, the author does not rest content with comparison alone. She goes further by advocating for the analytic power of alternative systems of knowledge, and potentially alternative cosmologies, to articulate different scales of responsibilization that counter the self-responsibilizing individual biology assumed to require constant protection from external threats. The "organizing principles of everyday Chinese life" (Lamoreaux 2023, 67), together with the tenets of traditional Chinese medicine, therefore harbor inspiration for conceiving human–environment relationships differently from the ways they are conceived within Western biomedical research and its broader repercussions. Particularly powerful examples include the recurring explicit or implicit invocation of Judith Farquhar, who reveals that within Chinese ontology the body is an ongoing practice rather than a finished object, existing in perpetual entanglement with what exceeds the skin. On this basis, and transposed into the context of epigenetic toxicology, the author writes compellingly that: "Biology in China today is thus just as permeable as it ever was, and the environment is just as imbued with human activity as it always has been... It is, then, environments that are newly polluted" (2023, 32). At this point, Lamoreaux could hardly make clearer why biomedicine, and perhaps science more broadly, may benefit from at least inflections drawn from non-Western ontologies, in order to move away from historically complex problematics tenaciously intertwined with the workings of capitalism and liberal democracy, exemplified in the book by the embedding of individualism within epigenetic toxicology research and public discourses on reproductive health. Another example is the analytical "oneness" between human and environment (2023, 33, 68) in traditional Chinese thought, which the author repeatedly highlights. It would not be too exaggerated to regard this philosophical line as presciently telling concerns about genotoxicity. It may also prove fruitful to draw upon it in order to enrich imaginaries of alternative kinship and multispecies futures.

On another note, in Chapter Three, "The Dietary Environment", the author shows how Asian diets, especially "soy", operate as vehicles for racialized metabolism, refracted in the ways Asian and Chinese sperm quality is investigated both by Western biologists and by self-racializing Chinese toxicologists. This dimension of racialization, together with phytoestrogens - the "natural endocrine-disrupting chemicals" contained in soy - are important themes to discuss. Nevertheless, this chapter appears somewhat discontinuous from the others, and there seems to be room for further coordination. For example, it is somewhat surprising that the quality of "natural" EDCs is not more extensively discussed in relation to the ambivalence of the "environment" as an object of research, nor in connection with Chinese ontological understandings of food as epitomizing the porous interface in human–environment interaction.

In short, this excellent ethnography by Janelle Lamoreaux contributes to the literature on reproductive science and governance by offering a rarely encountered view into epigenetic research on gendered reproductive ability, with an even rarer geographical focus on China. In doing so, it fills important gaps and calls for further research in this field. The book will appeal to a wide readership: those interested in contemporary China, science and technology studies, reproductive politics, toxicology, and environmental studies will all find it informative and appreciate its timely contribution.

Author bio

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