

BOOK REVIEW/COMPTE RENDU

Paul Atkinson, Peter Glasner, and Margaret Lock, eds.,
The Handbook of Genetics & Society: Mapping the New Genomic Era. Genetics and Society. New York: Routledge, 2009, 500 pp. \$US 155.00 hardcover (978-0-415-41080-9)

Appearing a decade since the mapping of the human genome, *The Handbook of Genetics & Society* provides a timely survey of contemporary social science research on genomics. In contrast to the narrower focus of other recently published collections on the new genomics, this collection provides a comprehensive survey showing the breadth and diversity of the field. In their incisive introduction the editors argue the need to rethink bio-economies and innovation in the new genomic era. Critical of two assumptions in genomic studies — “novelty everywhere” versus “nothing is new” — they caution social scientists against assuming either extreme and suggest treading an empirically led middle ground. For example, in their critique of the prevalence of novelty claims in the field of genomic studies, they ask how novel Rabinow’s concept of biosociality actually is, and how accurate are its predictions that genomics would lead to revolutionary transformations of natural, cultural, and social relations. The editors also draw on empirical research to challenge the sweeping claims that genetic technologies will lead to wholesale changes in biomedicine. This empirically grounded approach is evident throughout the collection and is one of its strengths along with its inclusion of work that has received less attention in the field.

Bringing together work from multiple disciplines, the book is divided into seven sections, each of which opens with an introduction and can be read on its own. This is particularly useful given the size and broad scope of this collection. With the editors’ emphasis on breadth and their efforts to map the large terrain of social science research in genomics, there is, unsurprisingly, less depth in any one particular area. However, this lack of depth is somewhat addressed by the extensive bibliographies provided by the authors of the various chapters.

Biomedical applications of genomics, which have received a great deal of attention from social scientists, is the topic of Section 1. It begins with Clarke, Shim, Shostak, and Nelson’s chapter on biomedicalization. The authors develop the concept of biomedicalization to account for transformations in our understandings of health, illness, identity, and

“life itself” as the medical gaze expands to include the genomic and molecular levels. In contrast to the older concept of medicalization, as medicine’s “control over” individuals, Clarke et al.’s concept of biomedicalization theorizes a positive transformative power and accounts for the integration of science, medicine, and industry in contemporary biomedicine. The authors explicitly recognize that biomedicalization has not replaced medicalization, but that the two processes function concurrently. This is an important point given the tendency in the field to make claims of wholesale change. An interesting next step might be to consider how the two processes interact with one another in specific empirical sites. Wainwright, Williams, Michael, and Cribb fill a gap in science studies through their research on the translational work between the lab and clinic in stem cell research. In the next two chapters Kerr examines genetic testing in reproduction at the individual level, and Beck and Niewohner examine genetic screening at the population level. As the site of early clinical application of genetic technology, genetic testing in reproduction has been a focus of social science and feminist research. Kerr moves this familiar discussion forward by emphasizing the need for maintaining the specificity of genetic tests in social science discussions and by problematizing the notion of choice. Moving beyond “idealizing choice” versus “restricting choice,” Kerr critiques the rational decision-making model that underlies the notion of individual choice in clinical practice and argues for consideration of how sociological ambivalence might be productive in decision making. Beck and Niewohner’s comparative examination of genetic screening at the population level offers a contrast to Kerr’s work. Comparing genetic screening programs for thalassemia in Cyprus and cystic fibrosis in Germany, they show how this process is locally specific and tied to sociohistorical contexts. Finally, turning from established biomedical applications of genetic technologies to a potential future application, Chadwick explores some of the issues of applying personal genetic information to nutrition. Nutrigenomics blurs the boundary between biomedicine and lifestyle and perhaps is an example of what Clarke et al. refer to as “optimization” in biomedicalization.

Section 2, “Commercialization,” includes chapters on the agbiotech industry in Europe, new bioeconomies and knowledge value chains, and genetic information and insurance. Insurance has long been a concern of critics writing on the new genetics. In their chapter examining international insurance policies, Rothstein and Joly argue that each type of insurance must be assessed separately rather than making broad claims concerning genetic information — the familiar and welcome call for empirical specificity. Also, Martin, Hopkins, Nightingale, and Kraft show in their empirical analysis of pharmaceutical and genomic companies that

genomics has had far less effect on pharmaceutical practices than originally expected, making an important contribution to the argument against genetic exceptionalism.

Section 3 “Representations of genomics,” includes an interesting chapter by Anker on visual images and pictorial practices in genetic science and art. Regulation of the individual and collective bodies is taken up in Section 4. Lynch and McNally’s chapter on forensic DNA databases highlights that, in contrast to biomedicine, DNA use in forensics focuses on noncoding regions of the genome. They introduce the concept of biolegality (that is, new identity categories produced at the intersection of law and biotechnology) and argue against the expansion of forensic DNA databases. Section 5 deals with bioethics while Section 6 considers diversity and justice at the population level. The bioethics section includes a welcome chapter on animal biotechnology — an important issue that is often overlooked in human-centred bioethical debates. Gjerris, Olsson, Lassen, and Sandoe argue that although contemporary animal biotechnology is not that different from older forms of animal breeding, this does not preclude the need for discussion and debate regarding these practices. Finally, the authors in Section 7 examine genomic consortia and the production of new bio-ontological categories, discuss how new genetic technologies disrupt time and space in biomedical practice, and use the concept of genomic platforms to offer an alternative to linear models of innovation.

Overall, this book makes an important contribution to contemporary work on genomics and society. The editors make an effort to include work that reflects the global nature of contemporary genomics by including chapters that examine international privacy policies, international genomic consortia, and population genetics and ethnic identities. However, this collection also demonstrates the need for more work involving countries in the global south. The editors bring together a collection that is useful for both the newcomer to genomics and society as well as those more established in the field.

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