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**Promising Genomics: Iceland and deCODE Genetics
in a World of Speculation.**

By Michael Fortun. Berkeley: Univ. of California Press,
2008. Pp. 343. \$24.95 (paper).

Promising Genomics is an anthropological exploration of the political fissures, fusions, and confusions that shaped debates at the turn of the millennium about the making of a bioinformatics database representing the population of Iceland. That database—which was to incorporate Icelandic genealogical data (reaching back hundreds of years), medical records (going back to 1915), and genotypic information (under construction)—was, after the passage of a bill in the Icelandic Parliament in March 1998, to be managed and data-mined, for science and profit, by a biotech company named deCODE Genetics, a company headquartered in Iceland and incorporated in the United States (and primarily controlled by non-Icelandic shareholders). DeCODE, the legislation went, would pay a fee to the Icelandic government in return for exclusive rights for 12 years to what came to be known as the Health Sector Database. Often framed as the unprecedented sale of the rights to a nation's gene pool to a private company (given a further twist by deCODE's deal with the Swiss pharmaceutical company Hoffmann-La Roche), the controversial 1998 data-sharing arrangement between deCODE and the Icelandic state invited rafts of scientific, financial, and social speculation, along with cycles of celebration, denunciation, and equivocation from investors, biologists, politicians, and social scientists. Michael Fortun's book, founded on ethnographic research that took him to Iceland, where, as a historian turned anthropologist, he was often asked to comment publicly on biopolitics-in-the-making, comes neither to fortify nor to condemn contemporary conjunctures of industry, science, and statecraft. Rather, Fortun seeks to demonstrate the molten character of "responsibility" in genomics, when the making of genomes and their properties unfolds through such heterogeneous but conjoined practices as scrutinizing nucleotides, keeping an eye on the investment regulations of the Securities and Exchange Commission, and debating questions of privacy/privatization in national legislative bodies. Speculating on genomics—scientifically, financially, politically—requires an analytical and ethical openness rather than a too-sure-of-itself a priori bioethics. It requires, argues Fortun, a special attention to *promises*: how they are made, what they require, and why they almost always generate futures that, in their stipulation, have an uncanny way of folding back into and (re)orienting the present.

Rather than offering a series of "perspectives" on genomic enterprise—a collection of points of view that might map a territory through triangulation—Fortun argues that any analysis of the speculative enterprise of genomics is always in motion. We are not in the territory of settled standpoints, but rather of shifting grounds, surfing on something like the lava landscapes of which Iceland is made,

which terrain Fortun uses as a guiding image throughout the book. Lava and land—fluid and fixed, each transmutable into the other—mark out, says Fortun, two sides of a *chiasmus*, “a couplet of terms that are conventionally taken as distinct or even opposed, but which in fact depend on each other, provoke each other, or contribute to each other” (pp. 13–14). Each chapter in *Promising Genomics* explores a chiasmus—a conjuncture, a contradiction, a coupling—that characterizes genomic endeavor. Fortun marks such chiasma with an X (the Greek *chi*). So, after the first chapter, “LavaXLand,” we find such chapters/chiasma as “CounterfeitXMoney,” which asks “how do you tell a counterfeit genomic company from a real genomic company?” (p. 51), and answers that it is difficult, since speculation is bound up so densely in the financial markets that found genomic business in the first place. “PublicXPrivate” revisits the rivalry in the United States between the private Celera Genomics and the public Human Genome Project to sequence the human genome, showing that each side used tactics, rhetoric, and often data from the other. It can be hard to tell—sometimes even impossible—whether a genomic project is public or private. Fortun’s accounts of the volatile debate in Iceland over who owned or spoke for the national genome make that quite clear. Somewhat closer to the ethno-national specificities of the Iceland case, “SameXDifference” centers on morphing images of Iceland as a site of either genetic homogeneity or a hybridity consequent upon waves of island immigration over the centuries. In the worlds of genomics, there can often be no stable ground to stand upon.

Promising Genomics is serious but also playful. The chapters, for example, are not only to be read as chiasma, but also as *chasms* or fissures and, since there are 23 of them, as recombining *chromosomes*. Play is seriously important in this book because stretching our imagination is necessary if, as Fortun puts it, we are to live “admirably in the territories of genomics” (p. 16). And so we learn about the absurd and touching tale of Keiko the whale, airlifted to his native Icelandic waters in 1998 after enduring captivity (and sometime shipment by UPS) in North American theme parks; Keiko, like the Icelandic genome, was written into a bionational tale of island belonging. Icelandic pop singer Björk makes an appearance in “SameXDifference”; Fortun notes that the cover of her album *Homogenic* depicts her as a hybrid phenotype, far from any blonde and blue-eyed stereotype of Viking Icelanders. The work of Nobel Prize-winning Icelandic novelist Haldor Laxness is a constant touchstone and Fortun uses Laxness’s sometime Beckettian narrative impulses to frame his own ethnographic persona, a persona that is often caught off guard, walking into dynamics he has yet to decode.

A central chiasmus in which Fortun is interested is “DistanceXComplicity”; Fortun argues that there is no way to position oneself “outside” the political and ethical volatility that constitutes the still-unfolding history of genomics. One is always taking sides. Fortun, though possessed of an avowed openness to the

deCODE story, ultimately does arrive at a fairly committed position: deCODE's tactics for winning access to and control over the Icelandic Health Sector Database were coercive and undemocratic. One of the most contentious elements in the deCODE debate was the notion that Icelanders might be considered to have given "presumed consent" to have their health and genetic data entered into the database. Fortun argues that, despite the proliferation of discussions in the Icelandic press about the politics and ethics of the database, nothing like democratic deliberation took place. The speed with which matters unfolded—pressed in part by the purported urgency of breakneck gene sequencing (which Fortun calls "Projecting Speed Genomics")—left nothing like enough time for proper care. In this sense, lava flowed perhaps too quickly, moving (to borrow terms from the vulcanology of another lavaXland, Hawaii) like *pahoehoe* (smooth-moving lava) rather than slower *a'a* (lumpy lava).

Other anthropological accounts of deCODE exist, notably from Paul Rabinow, who employs the work of Michel Foucault to ask if a new form of bio-power might be in the making, one fused with new kinds of bioeconomics, in which the health of populations is staked on the well-being of markets. While interested in kindred topics, Fortun calls Rabinow up for keen criticism, faulting him for glossing over the complexities of the Iceland story, for treating the CEO of deCODE, Kári Stefánsson, somewhat too gingerly, taking Stefánsson at his charismatic word, rather than detailing whether Stefánsson's promises were actually anchored in deeds. Fortun in his own navigation of "DistanceXComplicity" ultimately found himself persuaded by the arguments of an NGO, Mannvernd, the Association of Icelanders for Ethics in Science and Medicine, which was a player in what finally happened with the deCODE deal: in 2003, the Icelandic Supreme Court ruled that granting deCODE exclusive rights to the Health Sector Database was unconstitutional. While deCODE still exists, it is no longer attached in the way it could have been to the ground of a national Icelandic genome. The lava of the gene pool did not turn into solid land for the company. It is again in flux, in motion in the age of speculation.

In the end (middle?), Fortun leaves the reader not with a new bioethics, but with bioXethics. *Bio*, from the Greek, already crosses over into one of the concerns of ethics; the etymology of *bio* tells us that it refers to a "way of living." Which way of living makes sense when the substance of bio (genes, databases, citizen bodies, potentials and promises of future health) comes under ongoing revision is slippery, molten matter.

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