

Biosciences and Biotechnologies as Deep Play and Ethical Plateaus

Living and Working with the New Medical Technologies. Margaret Lock, Alan Young, and Alberto Cambrosio, eds. Cambridge: Cambridge University Press, 2002. 295 pp.

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The ongoing dialogue between medical anthropology and science studies interrogates (1) the use of *ethnography as experimental systems* for understanding how technoscientific infrastructures operate both as (2) modernity's *deep play*, and as (3) *ethical plateaus*, terrains of slippery slopes and shifting grounds for decision making at the crossings of different technosciences. This volume invokes "doubled discourses" and "unstable expertises" (Rayna Rapp, chapter 9, pp. 184–208), "virtual spaces" governed by controversy, courts, media, doctors and patients (Joe Dumit, chapter 10, pp. 209–232), and "two conversations simultaneously in different tones and languages," one of risk, cost containment, and survival times, the other of emotion, faith, morality, fear, and death (Patricia Kaufert, ch. 8, pp. 165–183).

(1) ETHNOGRAPHY AS EXPERIMENTAL SYSTEMS

Having written a historical ethnography of the 1947–63 experimental system in Paul Zamecknik's cancer lab at Massachusetts General Hospital central for clarifying the mechanisms of protein synthesis (representing them as a cascade of steps in a metabolic reaction chain reaction) that created tools for the recombinant DNA and genetic engineering revolutions, Hans-Jörg Rheinberger stresses the creative surprises that experimental systems are designed to create, and the degree to which our biological experimental systems now can write new "material-semiotic" objects (Haraway 1997), assembling instruction-carrying molecules which do not preexist. We are no longer just "understanding life," he says, but "rewriting life."

This is not, as Paul Rabinow argues, merely summarizable by reference to Martin Heidegger's distinction between "The world as picture" and the world as "standing reserves" for mathematized intervention. As Veena Das points out in chapter 12, the "ethnography of social contexts" offers critical challenges to such abstractions and their easy misuse. Rabinow does an injustice by mischaracterizing his colleagues' work as metaposition taking while only his own modestly concerns "emergence of (partially) new objects, sites, and forms" (p. 43). Ethnography as experimental systems of social contexts often produces surprising results not dismissable as such invocations of the profoundly asocio-logical Heidegger claim.

Anthropologists play an important role, along with historians like Rheinberger, Lily Kay, and journalists Barry

Werth and Robert Teitelbaum, in opening molecular biology to institutional and cultural analysis. Rheinberger draws institutional parallels between the human genome project (1985–2002) and the first wave of biotechnology pioneered by Louis Pasteur with its worldwide network of Pasteur Institutes, whose beginnings were vividly reanalyzed by the anthropologist Bruno Latour. Rheinberger's work parallels Rabinow's on the experimental system developed at Cetus Corporation that made polymerase chain reaction a ubiquitous tool in biology. Rabinow drew attention to the differences between the *idea* of PCR (which got Kary Mullis a Nobel), the making of an *experimental system*, and the commercializing of the latter as a reliable tool *kit*. Rheinberger guides us through the creation of an experimental system—a differential generator of surprises, capable of displaying meanings in material spaces of representation (fraction patterns, array counts)—which turned protein synthesis into a tool of the 1970s genetic engineering revolution (identifying restriction enzymes, constructing recombinant plasmids, DNA sequencing, electrophoresis, fluorescent probes, automated sequencing, and PCR amplification). Experimental systems operate in an economy of displacement, or *différence*, where things intended as mere substitutions or additions can reconfigure the whole system. At issue then is a network of actors, instruments, discourses, and "material-semiotic objects," objects that through their materiality change the possibilities for and directions of semiosis. Like Ludwik Fleck, Rheinberger stresses the generativity of these systems producing excess, surplus meanings, and inscriptions of temporality. As Fleck famously asserted, there can be no epistemology without history—a proposition few anthropologists would dispute (a feature of historical and cultural relativity).

The now canonical STS series of accounts of experimental systems—Kay 1993, 2000; Kohler 1994; Latour 1988; Rheinberger 1997; Rabinow 1996; Shapin and Shafer 1985; Teitelman 1991; Werth 1994—is a flowering of Evans-Pritchard and Fleck's 1930s exploration of science and technology as the "deep play" of modernity. The test of an inventive, illuminating or instructive ethnography is how well it opens up such deep play, while remaining accountable to both specialist and generalist audiences. Credibility as always depends on competence in the local languages (scientific, technical, sociological, historical, political, and cultural).

(2) DEEP PLAY AS THE UNDEREXPLORED MEANINGS OF THE ETHNOGRAPHIC PALETTE

AIDS activists' pressure on the FDA (for fast track trials, community-based trials for alternative drugs, compassionate use) exposed to public scrutiny how norms and power relations are incorporated into biomedical technologies. This had an enduring impact—beyond the period of heroic

urgency—even if, as Ilana Löwy argues, after 1988 (when Burroughs-Wellcome confirmed AZT's effectiveness) clinical trials returned to a less pressured, canonical mode. This is a deep play in which the power of patient groups, the political claims of an educated gay community, the imagery of pandemic devastation, and the credit competition for scientific knowledge are all staged for society at large as nonnegotiable, passionately held sensibilities. In such stagings, what were once black boxes of expertise are pried open to become part of civic contestations. Clinical trials, evidence-based medicine, and experimental systems shifted drug discovery from the near fruitless 1960s mass screenings of natural compounds for cancer drugs. Even so, Ilana Löwy reminds, various kinds of trials pose different ethical contestations: Cancer trials (testing on the sickest) differ from other trials; the ethics of placebo trials in Africa are hotly debated; multisited clinical trials are fraught because doctors may bend protocols to get their patients treated, and because later higher dose trials undermine the ability to complete lower-dose trials.

Annemarie Mol explores the gap between pathologists' definitions of atherosclerosis (thickening of the intima seen under a microscope in autopsies or amputated legs) and clinical symptoms or illness experiences. Such gaps between methods, epistemologies, and specialties are neatly aligned, if at all, only in textbooks or retrospective scientific articles, a feature also probed in Löwy's 1996 book on cancer trials of IL-2 between hematology and immunology laboratories, and by Peter Keating and Alberto Cambrosio's exploration of how, in the 1980s, the flow cytometer, cytogenetics, and molecular biology changed the classification of leukemias (hematologists) and lymphomas (solid tumor specialists).

Many mental illnesses are now defined by the drugs they react to; pharmaceutical companies market on this circular evidence; objectivity is claimed with tactics outlined by Evans-Pritchard. So it is interesting that PTSD, a non-drug defined category, entered the DSM III because of Vietnam War veterans and their physicians lobbying for disability pensions and medical care. Alan Young explores here and in his 1995 book the deep play of trauma and "grammars of remembering and forgetting," objective measures, therapeutic needs, corporate marketing, and epistemological circular argumentation.

Can we locate these deep plays—biopolitics of norms and power; dissonances of biomedicine, clinical symptoms, and illness narratives; new technologies reworking disciplinary authority structures; aporia of drugs and psychodynamics—on the ethical and political plateaus in the crossings of new technologies?

(3) ETHICAL PLATEAUS

Our sense of body, self, biopolitics, and biocapital (to make live, to let die) are changed by tests such as pap smears and mammogram-screening. Patricia Kaufert reviews the struggles: (1) over whether such screens should be only for women over 50; (2) between radiologists seeing "instances" versus epidemiologists' "number manipulations"

of statistics patterns, the struggle of image versus logic (see Peter Galison's 1997 account of similar epistemological battles in high energy physics); and (3) the dissonance between "at least two conversations . . . going on simultaneously," that of "rates and ratios, survival times, the calculation of risk, mortality and cost-effectiveness," and that of "emotion, faith, responsibility, mortality . . . compliance, guilt, fear and death" (p. 166). One thinks here of Byron Good's work on medicine as moral drama with *soeteriology* never far from the surface, and Mary-Jo DelVecchio Good's work on narratives of hope and the doctors' strategies of using statistics. Kaufert reminds that the availability of screening (even if you do not actually have a test) changes our sense of the body and self "by introducing us to fear." One thinks of Rayna Rapp's work on amniocentesis, Adriana Petryna's work on biological citizenship, and João Biehl's work on repeated AIDS testing in Brazil among those who test negative but use the testing as a technology of the self.

The "doubled discourse" of normalization and difference in families who accept Down's Syndrome children, described by Rayna Rapp, points to an ethical plateau of institutional access (working-class and single parents who do not have the time for activist or support groups), kinship mobilization in some subcultures (to care for a disabled child), and medical evolutionary dogmas that assume families will choose abortion in contrast to the "ethnography of social context" making visible different religious attitudes toward life and difference (*soeteriology* never far from the surface).

Joe Dumit describes "diseases you must fight to have," syndromes not traceable to biomedical mechanisms although causes aplenty can be adduced (MCS, ADD, CFS, Gulf War Syndrome, even PTSD, schizophrenia, and depression). Here an ethical plateau of "many layers of social control intersect": refusal by employers and insurers to pay for diagnostic brain scans (funding research to demonstrate MCS is psychological); different interpretations of brain scans; patients picking court jurisdictions in which more favorable diagnostic reasoning is evidenced; ability of insurance companies to rewrite policies when courts find against them.

Margaret Lock contrasts the ethical plateaus of Japanese resistance to brain death and organ transplantation with the more repressed and sublimated U.S. ambivalences. U.S. intensive care physicians claim brain death is determinate and irreversible, yet of 32 interviewed, only six had signed donor cards. U.S. physicians use ideologies of altruism and creating meaning out of accidental death to overcome ambivalences and downplay the shock on the side of donors. One thinks here of Rene Fox and Judith Swazey's studies of the complex psychological dynamics of live donors, and their dismay at the course of experimentation with artificial hearts. Japan legalized brain death in 1997, but it remains controversial, the target of organized opposition and filings of legal charges against physicians for murder. In deep play fashion, Lock lists the variety of registers on which brain

death and organ transplantation “signal danger, loud and clear, to many Japanese”: the relationships of Japan to the West, tradition to modernity, culture to technology, fears about the integrity of physicians, lack of institutionalized informed consent, and worries that organ transplants are inherently nonegalitarian.

In India, while the first heart transplant was made with altruistic national pride by the widow of a businessman to a border soldier, in later cases organ donation became a coercive choice for the poor (viz. Lawrence Cohen on the stimulation of a kidney market in the Madras-Bangalore-Hyderabad triangle). Das mounts an anthropological challenge to bioethics and regulated markets proposed as a control on the growth of black markets. “There are no principles... of just exchange in the case of organ transplants” (p. 282). Against bioethics’ use of contract theory, Das invokes first a cultural analysis of the law: Legal theory recognizes background assumptions to legal rules that prevent contract law to imperialize all other areas of life. A capitalist may not invoke ideas of consent to avoid compensation for industrial accidents. Laws of duress protect those in unequal positions. Second, Das uses an “ethnography of social contexts” to show that what might seem ethical in the abstract (autonomy over one’s body) “can be productive of violence at the level of local communities.” A vocabulary of rights here is a “convenient fiction that masks new ways of recycling for the benefit of the rich” (p. 284).

Das affirms ethnography as experimental systems—“different statutes and laws, but also different temporalities... new kinds of subjects and objects... no simple way of deciding before the investigation either the subjects or the objects... cannot exclude the systems of expert knowledge any more than... the donors and recipients”—for delineating new ethical plateaus and “the questions posed by new technologies” (p. 284).

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Transnationalism, Panethnicity, and Segmented Assimilation: Latina/o Community Formation in the United States

Legacies: The Story of the Immigrant Second Generation. Alejandro Portes and Rubén G. Rumbaut. Berkeley: University of California Press, 2001. 430 pp.

Hispanas de Queens: Latino Panethnicity in a New York City Neighborhood. Milagros Ricourt and Ruby Danta. Ithaca, NY: Cornell University Press, 2003. 168 pp.

Transnational Latina/o Communities: Politics, Processes, and Cultures. Carlos G. Vélez-Ibañez and Anna Sampaio, eds. Lanham, MD: Rowman and Littlefield Publishers, Inc., 2002. 307 pp.

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The impact of Latina/o community formation in the United States is the common subject of these three books. The authors discuss the settling of Latinas/os as an ethnic minority in the United States. These books complement each other, revealing how processes of assimilation, panethnicity, and transnationalism shape the lives of Latinas/os. They reflect current debates within Latina/o studies and the importance of its intersection with Latin American studies.