Medical Imaginaries and Technological Futures: Transformations of Subjectivities in Biomedicine

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By

This report highlights the activities of the Science, Technology and Medicine Interest Group (one of several special interest groups affiliated with the Society for Medical Anthropology (SMA)) at the 2011 Annual Meetings of the Society for the Social Studies of Science (4S) conference in Cleveland, OH in early November. Within the broader structure of the SMA, STM promotes the anthropological study of scientific research, technological transformation and professional medicine and its effects on policy, culture and experience.

I served as co-organizer and chair of the panel which showcased a range of theoretical and methodological approaches, applied to the study of a variety of medical technologies. Unlike the AAAs, there is no predetermined theme for the 4S conference, which allowed us quite a bit of flexibility in choosing a direction for the panel. The other organizers – Betsey Brada, Ramah McKay, and Aaron Seaman – and I agreed that a focus on the implementation of new medical technologies, broadly conceived, could showcase the dynamic contributions of our members in the fields of anthropology and science/technology studies. In particular, we wanted to explore how seemingly inert objects have the power to reconstruct cultural ideologies and expectations as they become both normative and contested fixtures in modern life.

Thinking about the "social lives" of things (Appadurai 1988) or the "lifecycles" of medicines (Geest et al. 1996) seemed like a logical place to begin exploring the trajectories of medical technologies through the multiple networks, actors, and exchanges that give them social value and cultural meaning. In particular, Mary-Jo Delvecchio Good's concept of "medical imaginaries" offered us a framework for understanding these fluid contexts in which technologies operate. She writes:

> "[People] invest in the medical imaginary – the many-possibility enterprise – culturally and emotionally, as well as financially. Enthusiasm for medicine's possibilities arises not necessarily from the material products with therapeutic efficacy but through the production of ideas, with potential although not yet proven therapeutic efficacy." (Delvecchio-Good 2001:397)

Although the piece focuses on U.S. technologies, we found her approach useful for several reasons. First, it allowed us to articulate the cultural power of medical objects beyond their pragmatic value and contextualize the ways in which the affective dimensions of health intersect with larger political and economic agendas. Second, it shifted emphasis away from the efficacy of technologies and instead emphasized their influence on discourses of health, performance, agency, morality, and modernity. Finally, it captured the diachronic relationship between humans and technologies over time and provides a framework within which to imagine what a technologically mediated future might mean for existing configurations of agency and subjectivity. As we reviewed abstracts, we were excited to see authors addressing a wide variety of technologies, offering the possibility for a comparative examination of how the relative complexity (or lack thereof) of these objects influenced and was in turn influenced by the local and institutional worlds through which these technologies moved. We also wanted to imagine what kinds of promising or anxious social futures they might signal: futures with safer, modern births; futures without cognitive limitations; futures free of genetic disorders; and futures where clinical care is delivered at the touch of a button.

Our panel was scheduled for the first time-slot of the day. Despite the hour, by the end of the session conference attendees had filled all the seats in the room and many had settled on the floor. What follows is a brief description of each paper and of the invited discussion that followed.

Struggles Over Birthing Tools: Shaping Personhood and Imagined Futures in Rural Indonesia by **Vanessa Hildebrand**, Case Western Reserve University

Hildebrand began the panel with an analysis of how a seemingly modest technology – namely, scissors – had become the site of contests over authority with regard to birthing practices. In rural Indonesia, she explained, traditional and clinic midwives compete for both patients and status: The former represent the preservation of local knowledge and practice, while the latter promise the safety and efficacy of biomedicine. In this context, the use of umbilical cord scissors is regarded as a right reserved for clinic midwives and represents access to a privileged body of obstetric knowledge. Some traditional midwives, however, use these tools in order to craft a hybrid and fluid form of local modernity where they are seen as translators of biomedicine who can offer safer care while circumventing the clinic's political mission and its ties to Indonesia's central government. Drawing on the narratives of both sets of midwives, Hildebrand successfully demonstrated how a simple tool can become a strategic instrument as women negotiated nationalist pressures to adopt a

particular medical modernity and their own desires for safer births. ([A closely related piece](#) of Hildebrand's was just published in *Culture, Medicine and Psychiatry*).

From ADHD Brains to Academic Gods*: Transformations of Subjectivity through Cognitive Enhancement by **Tazin Karim**, Michigan State University

My presentation explored how the growing imaginary of cognitive enhancement has influenced expectations of mental health and academic performance in the modern American university. The brain has become the final frontier of human medicine, offering the promise of increased intelligence, alertness and focus through pharmaceutical interventions. While the media tends to focus on normative arguments over the efficacy, access, and risk of these future wonder drugs, my research shows that college students are already experimenting with prescription stimulants in an attempt to take control over their own biomedical and social experiences. Based on original interview data, I demonstrated how treatments for ADHD and other conditions can lead multiples lives as medications, enhancers, and recreational drugs – and how students construct multiple and often contradictory identities (as patients, drug users/dealers, and academics) to maintain merit and justify their behaviors as noble pursuits towards academic and social development.

Anxious Futures: Expanded Newborn Screening and the Politics of Saving Lives by **Mara Buchbinder**, University of North Carolina-Chapel Hill and **Stefan Timmermans**, University of California, Los Angeles

Buchbinder and Timmermans examined the powerful role parent-advocates play in the expansion of newborn screening technologies. Drawing on three years of fieldwork in California, the authors argued that anxiety over saving babies is a primary factor that compels parents to comply with efforts to screen newborns for a range of genetic conditions. They argued that while increased population screening has come to represent an imaginary of democratized health, in many cases, the detected disease lacks a viable treatment or, when treatments exist, service providers and families lack the funds to administer them. Pulling from ethnographic interviews, the authors presented a compelling analysis of how parents become bound up in the affective economies of genetic technologies even when these technologies offer little benefit the health of their child in the long run.

Technological Utopianism and Medical Reform: Imaginaries of Telemedicine from the 1960s to the Present by **Matt Iles-Shih**, University of Utah School and **Victor Braitberg**, University of Arizona

Iles-Shih and Braitberg explored the history of telemedicine in order to analyze how the ideology of technological utopianism has actively reshaped expectations of health care delivery in modern time. Tracking the cultural history of this technological movement in the United States as it was influenced by advancements in information and communications technologies, they identified several historical trends. In its early incarnations, telemedicine had been promoted as a way to deal with a shortage of medical professional by redistributing their knowledge and expertise. More recent developments in telemedicine, however, reflect a move towards health as a consumer service that caters to a patient's individual needs and habits. Through their historical analysis, the authors showed how the ideology of technological utopianism has actively reshaped expectations of health care delivery in modern times.

Joseph Dumit, Director of Science and Technology Studies and Associate Professor of Anthropology, UC Davis

Dumit's discussion highlighted the power of these papers in analyzing medical imaginaries. He reminded us that technologies have not only social lives, but simultaneously real and imagined lives wherein their efficacy is dictated by culturally constructed expectations. In particular, Dumit emphasized the "not yet proven" aspects of these technologies and the imagined benefits that they provide as objects of medicine.

He focused first on the idea of "self-experimentation" as presented in my paper as strategies of identity formation and refusing authoritative control. How, he asked, are individuals experimenting with technologies to weigh their own benefits? Do screening practices, telemedical interactions, or hybrid birthing methods actually result in better health? He provided several examples of how these experimental technologies are simultaneously effective and performative. Dumit also drew on Iles-Shih and Braitenburg's paper to emphasize the importance of identifying historical and infrastructural contexts, including: how they fit into nationalist campaigns of modernity; the history of mental health treatment; and the repeated waves of attention to fetal screening.

Next, he considered the role of anxieties and persuasion in the narratives between doctors, parents and advocates of newborn screening technologies: the ways academic pressure each other to take cognitive enhancers to maintain their high-paced lifestyles; the desires for normalized health care that motivated the growth of telemedicine; and the ways Indonesian midwives capitalized on the fear or desire for modernity in their own battle for professional survival. Lastly, Dumit suggested that all the authors could consider their various technologies as sets of duels between groups, such as midwives, struggling for legitimacy. He posed some interesting questions about whether or not it would be possible to

actually (and ethically) test the efficacy of the technologies they represent: How could we test which form of birthing practice in Indonesia is better? Do prescription stimulants actually increase cognitive function in non-ADHD brains? Can technologically-mediated medical care ever replace or exceed the efficacy of a flesh-and-blood physician? These questions brought us back nicely to the crux of the panel –highlighting how the sheer promise of increased health, without any testable efficacy, is what gives these objects (and their users) both social meaning and power.

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The STM Interest Group was delighted by the lively interest and conversation this panel generated regarding the delicate yet powerful lives of medical technologies. We look forward with great interest to next year's 4S conference, and invite both students and more advanced scholars to join the group and participate in our activities. For more information, please contact our interest group chair, Betsey Brada (bbrada AT princeton DOT edu).

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