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Biofinance: Speculation, Risk, Debt, and Value from Bios: A conference report

2017-02-27 10:00:10

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How does the financialization of life itself figure as a new means of producing value in modern technoscience? That is the question that motivated Kirk Fiereck to convene the panel “Biofinance: Speculation, Risk, Debt, and Value from Bios” at the 2016 American Anthropological Association meeting in Minneapolis, Minnesota this November. Fiereck, panelists Melina Sherman, Danya Glabau, and Emily Xi Lin, discussant Kristin Peterson, and chair David Pederson, offered new ways to think about how financialized life is a source of value, and what this means for the ethics and practice of biomedicine in sites throughout the globe.

In writing this conference report, Fiereck, Sherman, and Glabau each contributed short comments about their talks, which were edited together in the unified first half of this report. The second half includes further reflections that we have attributed to each scholar individually as a way to illustrate the diverse, possibly divergent, uses of “biofinance” as a concept.

The Papers

Melina Sherman opened the panel with, “Biofinancial Investments and Disinvestments: Examining the U.S. Opioid Epidemic,” which focused on the cultural and institutional construction of pharmaceutical markets – in particular, the market for prescription painkillers. Markets, especially those situated within the bioeconomy – an economic space in which capital is organized through life (bios) in its various forms – constitute the broader context in which biofinancial practices are situated. Her paper explored the ways in which the selective investments and divestments of federal regulators and opioid consumers condition the growth of this market. The market for prescription opioids is a good example of what Sherman calls an “addiction market” (see also Lovell, 2006), where addiction (understood as a destructive attachment – in this case, of a person to a prescription drug) is built-in to the cultural and economic processes that drive market formation and growth.

Biofinance plays a crucial role in shaping the dynamics of addiction markets – namely through the biofinancial practice of investing in domains where life is valued, manufactured, bought, and sold. The ongoing opioid epidemic, as Sherman showed, is framed by biofinancial investments. These include the U.S. Food and Drug Administration's investment in new pharmaceutical technologies as a means of regulatory intervention and the risk-hedging practices of opioid consumers that continually reinforce their relationship to the prescription opioid market. These activities contribute to the expansion of the market for prescription opioids and condition the formation (and perhaps also the prolongation) of the ongoing opioid "epidemic."

Danya Glabau's talk, titled "Pricing the EpiPen: Financial Returns and the Care Thesis of Biomedicine," offered an example of how pharmaceutical company pricing strategies support the valuation of pharmaceutical companies while potentially limiting access to necessary medications in the United States. In the third week of August this year, news broke in the American media that the EpiPen epinephrine auto-injector, branded and sold by Mylan Pharmaceuticals, had increased over 400% in price since 2007. Patients with insurance found themselves on the hook for growing out of pocket costs as insurers covered smaller portions of the cost and limited refills, and patients without insurance made do with fewer or no devices based on their budgets. The news brought long-simmering discontent in the food allergy community about the price of this device – considered a necessary, life-saving treatment by patients, caretakers, doctors, and policy makers alike – into the public eye. This episode is a crucial moment in what Glabau (2016) has called "the moral life of epinephrine". It highlights the trade-offs people with food allergies must make between the moral obligation to do whatever is necessary to protect the at-risk lives of people with food allergies and the financially exploitive arrangements that govern who does and does not have access to biomedical care in the contemporary United States.

At stake in this controversy, as well as in other recent pricing controversies involving Turing Pharmaceuticals and Theranos, Inc., are questions about who deserves care, what counts as affordable care, and the possibilities for or limits of a pharmaceutical company's responsibility to provide life-saving medications to its customers. The extending reach of financial actors, models, techniques, and practices – such as those that optimize pricing to optimize revenue – into the pharmaceutical industry have added new variables to the moral calculus of biomedical care.

Emily Xi Lin presented "Bio-financial Economy of Love and Risks: Examining Autism Care in China", which opened up more intimate aspects of biofinance. Her paper demonstrated how the liberalization of the Chinese economy touches down in the lives of mothers raising autistic

children. Paradoxically, as the economy booms, state investment in rural health services lags behind, requiring the mothers she observed to invest more time and affective labor into caring for their children. This dynamic of de- and hyper-investment appears to be part of a broader movement toward market-based healthcare, which individualizes health and sorts access to care infrastructures along the lines of gender, class, and region.

Kirk Fiereck closed the panel with his talk, titled “Pharmaceutical Derivatives: Hedging Risk, Producing Connectivity, Redistributing Debt.” He explored the curious kinships between two risk-hedging technologies: pharmaceutical prophylaxis and financial derivatives. These entities are not just commodities. Rather they are contract-commodities and are the most fundamental building blocks of emergent and increasingly dominant forms of circulation-based (as opposed to production-based) economies in late capitalist societies (on financial derivatives and capitalist cultures of circulation see, LiPuma and Lee 2004). Put more simply, these two special vehicles of exchange are similar to Marx’s commodity. Yet, as contract-commodities they radically differ from the commodity as they are a degree further abstracted from and abstracting of the social relations that commodities themselves express. Unlike commodities, which are produced through labor within cultures of capitalist production, these social forms are produced through calculations of abstract risk linked to certain commodities, not labor, within cultures of capitalist circulation.

To ground this exploration of pharmaceutical derivatives, Fiereck focused on the experiences and narratives of black gay South African men who were taking part in the Cape Town arm of a global clinical trial, which operated across four continents, six countries and eleven cities. The trial successfully determined the efficacy of repurposing HIV antiretroviral treatments as HIV prevention, which has become known as pre-exposure prophylaxis, or PrEP. He also compared the distributions of risk and health surpluses that have been produced in the wake of the PrEP rollouts that have resulted in uneven access through public health systems globally. Ultimately the analysis showed that biofinancial practices are much more widely distributed than previously imagined and that race and sexuality are being reinscribed as radically new forms of social difference in the context of biofinancial cultures. In particular, He traced the emergence of biofinancial logics were among some of the world’s most marginalized populations: namely black gay South African men who were taking part of the trial. This was compared to the racialized distribution of the PrEP intervention to affluent, and primarily white, populations through private health insurance schemes while the black gay men whose bodies authorized the efficacy data in South Africa still lacked access to PrEP in the national public health system.

Reflections

Melina Sherman: Each of the presentations that made up this panel attended to the ways in which bio-capital undergirds and hails the domain of public health. As theorized by Kaushik Sunder Rajan, biocapital "asks the question of how life gets redefined through the contradictory processes of commodification" (2006: 47). As a commodity, life is reconstituted as something that can be manufactured, distributed, purchased and consumed. Thus, we are encouraged to ask, borrowing from Nikolas Rose (2007), what are the effects of such a transformation of "life itself?"

In my work, the creation of "addiction markets" is one consequence of life's commoditization within the bioeconomy. These markets, which form the context of biofinance, also frame the ongoing "opioid epidemic" and provide a lens for understanding the forces at work behind the skyrocketing rates of overdose deaths in the United States. For Lin, the commoditization of life itself means that some human relations – in particular, relations of love and care – become tethered to economic practices and market dynamics. In the case of autism care in China, the financialization of care-giving practices goes hand-in-hand with the social policing of certain parents and families, in particular those who may not be as financially equipped to invest in China's increasingly costly economy of care. For Kirk, the commoditization of life prompts a reconsideration of the meaning of preventive interventions for HIV/AIDS, drugs which now take on the quality of risk-hedging instruments rather than merely medical treatments for disease. And finally, for Danya, bio-capital is what undergirds many of the practices and logics of pharmaceutical executives and thereby conditions the process of pharmaceutical drug development. In this context, the financialization of life includes not only investing in health but also creating health surpluses such that companies' long-term investments continually ensure returns and secure their biofinancial futures.

Danya Glabau: The work of this panel as a whole extends existing analysis and critique of the complicity between finance, the state, and the pharmaceutical industry, questions central to the work of medical anthropologists Adriana Petryna (2004, 2009) Joseph Dumit (2012), Stefan Ecks (2008), Sharon Kaufman (2015), and Kristin Peterson (2014), among many others in anthropology and in sociology, STS, and history. Collectively, this constitutes an emphatic case that a fuller ethnographic understanding of biomedicine today and in the near future demands that medical anthropologists attend to the Wall Street-style financial logics that increasingly power its productivity. This is, of course, no simple task. I believe it requires, as Janet Roitman (2014) asserts, self-reflection within our field about the kinds of expertise that anthropologists must acquire as part of our scholarly practice. We might all need to become investment

bankers or CEOs or entrepreneurs for a time to be able to apprehend the full meaning of “risk” as a financial object, practice, and concept that shapes which medical interventions do or do not make it into clinical trials, what forces map out their lives as marketed products, and how they do or do not reinforce patterns of uneven access to care.

Since the panel, I have also been thinking about the three words scholars now have to describe closely related ways of understanding the relationship between capital and biotechnoscience: *biocapital* (Sunder Rajan 2006), *bioeconomy* (Cooper and Waldby 2014, Birch 2016), and, now, *biofinance*. Out of these three, biofinance is the most verb-y, as “finance” on its own is both a noun and a verb. That excites my ethnographic instincts because it suggests a focus on material-semiotic practices and techniques, rather than on idealized schematics and structures. If biofinance is something we can conceive of as always-in-practice and always-in-formation, up and down scales of space, volume, and complexity, it suggests to me that ethics and politics can remain central to the program. Where people *do* things, they also *think about doing* things and do things *in relation with and to* other actors. In action and relation are opportunities for the economies and dependencies of the bioeconomy, or of biocapital, to be reconfigured otherwise.

Understanding the investment practices of pharmaceutical companies, for example, might give better leverage on regulating the financial industry or on professional organizations’ codes of ethics. Detailed stories about the conflicts inherent in doing medical research at a university today make a strong case for beefing up public funding of medical research. The speculative practices of opioid users, mothers of autistic children, or “MSM” suggest better ways to arrange public health interventions. My hope for biofinance research, then, is the hope that it can be a platform for informed intervention in the ethics and practices of biotechnoscience where it affects the lives of real patients – a tall order indeed.

Kirk Fiereck: In organizing this panel, a primary goal was to juxtapose a diverse set of ethnographic dispatches that were documenting global trends in pharmaceutical prophylaxis in conceptually, materially, geographically, temporally and affectively far-flung locales. In retrospect, the richness of the ethnographic accounts were both fortuitous as well as formidable test cases for the elasticity of a paradigm I refer to as biofinance. Moreover, the papers demonstrated the irreducibility of biofinancial cultures to existing sociocultural paradigms of biocapital, which have been narrowly limited to contexts of industrial biocapital. When such analyses have focused on the financial aspects of biocaptial, they have limited their focus on elite actors, thus producing accounts of biofinancial cultures from only the most privileged of perspectives. What is more, these analyses have inadvertently fetishized biofinancial social forms of

contract-commodity, property (risk profile), and value (risk data) as merely industrial social forms of commodity, property (in things, or rights to things), and value (capital).

The context of both Sherman's "addiction markets" and my exploration of "pharmaceutical derivatives" departs from, yet compliments, existing sociocultural analyses of biocapital (Sunder Rajan 2006) and the bioeconomy (Cooper and Waldby 2014, Birch 2016). More to the point, our analyses, "question the relevance of placing the large, manufacturing firm at the center of analysis" (van der Zwan 2014: 120). It is clearly the aggregation of smaller scale, democratized, and decentralized social actors who are best thought of as human capital that have heretofore been ignored in the bioeconomy literature. Put simply, pharmaceutical derivatives are increasingly used like financial derivatives, by a vast range of actors across various social hierarchies (e.g., class, race, gender, sexuality, nationality, etc), when they are used to treat abstract biomedical risks and not disease. Such democratization disrupts the traditional industrial (bio)capitalist antinomies of class that pit labor and capital against one another. Across all of the presentations, such polar distinctions implode when biofinancial subjects are clearly both, particularly given the figure of human capital that is a central subjective player in cultures of biofinance.

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Kirk Fiereck is a medical anthropologist specializing in economic and queer anthropology in South Africa. He is currently working on two ethnographic projects. The first is on “Ethnointimacies.” It explores the entwinement of ethnicity and sexuality when LGBTQ and gender nonconforming South Africans draw upon customary, constitutional, as well as biomedical sex/gender ideologies to enact hybrid forms of queer personhood. They do so by juxtaposing multiple sexual and gender identities across overlapping cultural contexts. The second project is on “Biofinance,” and explores how these experiences are largely effaced by biomedical interventions based on new sexual risk-hedging technologies, such as pre-exposure prophylaxis (PrEP), hormone therapies, and plan-B.

These pharmaceuticals enable practices that mirror the trading of financial derivatives whereby subjects are compelled to speculatively treat (or hedge) risk instead of disease. This second project aims to understand how categories of social difference such as class, race, ethnicity, gender, and sexuality are being reinscribed in the face of changing forms of value production, property, wealth, and risk. It also concentrates on new global forms of sociality that are being produced through biofinancialized calculations of abstract risk in the context of global experimental apparatuses, such as the global clinical trial. These trials are supra-national and work to subsume and efface local cultural forms within the circulation of cosmopolitical categories such as "MSM" and "transgender."

Melina Sherman is a doctoral candidate at the Annenberg School for Communication and Journalism at the University of Southern California. She is currently writing her dissertation about the cultural and institutional conditions underpinning the ongoing 'opioid epidemic' in the United States. Her research areas of interest include medical anthropology, STS, biopolitics, risk, pharmaceutical markets, and the reciprocal relationship between culture and economics.

Danya Glabau is Core Faculty at the Brooklyn Institute for Social Research , where she teaches courses on STS and anthropology. She received her PhD in Science and Technology Studies (STS) and a B.A. in Biological Sciences from Cornell University. Her work on medicine in the United States blends STS and Medical Anthropology to investigate how morality, political economy, and patient experience influences what counts as "good" health care in the United States. Her dissertation and first book project examines these issues in the context of the politics of food allergy in the United States. She is now pursuing new research on the financialization of biomedical research and collaborating on PIP (Practically In Person), an exhibition that explores how women artists and feminist theory can shape the development of virtual reality technologies.

AMA citation
Glabau D, Fiereck K, Sherman M. Biofinance: Speculation, Risk, Debt, and Value from Bios: A conference report. *Somatosphere*. 2017. Available at: http://somatosphere.net/?p=13423. Accessed February 27, 2017.

APA citation
Glabau, Danya, Fiereck, Kirk & Sherman, Melina. (2017). *Biofinance: Speculation, Risk, Debt, and Value from Bios: A conference report*. Retrieved February 27, 2017, from Somatosphere Web site: http://somatosphere.net/?p=13423

Chicago citation
Glabau, Danya, Kirk Fiereck and Melina Sherman. 2017. Biofinance: Speculation, Risk, Debt, and Value from Bios: A conference report. Somatosphere. http://somatosphere.net/?p=13423 (accessed February 27, 2017).

Harvard citation
Glabau, D, Fiereck, K & Sherman, M 2017, *Biofinance: Speculation, Risk, Debt, and Value from Bios: A conference report*, Somatosphere. Retrieved February 27, 2017, from <http://somatosphere.net/?p=13423>

MLA citation
Glabau, Danya, Kirk Fiereck and Melina Sherman. "Biofinance: Speculation, Risk, Debt, and Value from Bios: A conference report." 27 Feb. 2017. Somatosphere. Accessed 27 Feb. 2017.<http://somatosphere.net/?p=13423>