Luigi Pellizzoni and Marja Ylönen (eds.)

Neoliberalism and Technoscience: Critical Assessments. Farnham: Ashgate, 2012, pp. 246.

Barbara L. Allen *Virginia Tech University*

This book and its message does not purport to present a cohesive view of the relationship between technoscience and neoliberalism, but instead is a collection of a broad array of interpretations written by over a dozen scholars addressing this topic. The editors of *Neoliberalism and Technoscience: Critical Assessments* state that while, this "[t]heoretical and methodological pluralism may lose something in argumentative elegance", the variety of ideas seeks to be "thought-provoking" at the very least (233). I think the editors, Luigi Pellizzoni and Marja Ylönen, have taken on a difficult task by not inscribing the collection a bit more carefully with a more cohesive theoretical framework (13). While a plethora of ideas regarding the relationship between neoliberalism and technoscience may seem fair-minded and all encompassing, it left this reader wondering exactly what it was I was trying to understand. That said, there were some excellent analyses in this volume worthy of the importance of this political juggernaut in our contemporary world.

The term, neoliberalism, a key condition of late capitalism, should be defined before beginning any serious critique. I take as a starting definition that of David Harvey: "Neoliberalism is in the first instance a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade"(2). The role of the state is to facilitate the construction of markets where they do not exist (i.e. water, pollution, carbon, health care, etc.) but to withdraw from any form of social provision through privatization, deregulation and the like. This is a fairly mainstream definition but, as the editors point out, there are many definitions to choose from when considering an analysis of neoliberalism.

The book consists of 3 sections, each containing 3 chapters on topics examining the governmental, institutional, and cultural aspects of the neoliberalism/technoscience relationship as well as specific issues regarding humanity/humanism and the environment. In the editors', Pellizzoni and Ylönen's chapter, "Hegemonic contingencies: Neoliberalized technoscience and neorationality", the premise gets at the heart of one of the problems in the book. They assert that studies of neoliberalism fall into two camps: those that examine the economic/political processes (i.e. Harvey's concept, mentioned above) and those that see it as a discourse between individuals, nature, and society – a sort of Foucauldian "governmentality" perspective. These latter approaches, argue the editors,, have opened up

deliberative processes in science and technology but at the same time such processes carefully construct their publics, a sort of disguised hegemony masquerading as democratic. These processes of co-option and obscuration of power combined with growing economic commodification and appropriation leads to a less-then-free public realm where agency is construed as entrepreneurialism.

In the chapter, "Neoliberalism and technology: Perpetual innovation or perpetual crisis?", Reynolds and Szerszynski make a strong and coherent argument that the new industrial economy is not new but, instead, a continuance of labor flows south and shipping containers north that has characterized global re-spatialization in the previous decades. The neoliberal knowledge based economy could be characterized by the financial speculation and creation of global financial innovations such as derivatives and futures that brought the entire market down in 2008. So instead of science as a new force of production, science is instead "cannibalized and privatized" such that it becomes a product itself (42).

Simone Arnaldi examines the promises and perils of human enhancement in his chapter on the intersection of transhumanism and neoliberalism. While the fountain of youth ethos and the push for the utopian body pervade transhumanist thinking, Arnaldi points to some darker elements in this evolution. Leaving our "political futures to be created as an aggregate result of personal choices", problematically envisions the market as mechanism for social coordination (99). The chapter includes a thoughtful analysis of the notion of perfectibility in transhumanism and neoliberalism in the work of Francis Fukuyama.

Providing another analysis of human enhancement, Imre Bárd's article contrasts the arguments of bioconservatives with those of transhumanists. The first group sees human enhancement and the drive for bio perfection as impinging on human dignity and potentially creating severe injustices and political imbalances. On the other hand the technoprogressive thinkers argue that humans have always enhanced their performance with technology and this era is part of that continuum. The latter position is closely aligned with neoliberal capitalism and the "rise of enterprise culture" leading to the autonomous, self-governed "entrepreneurial self" (126). He concludes with the very interesting question of how we can understand human enhancement differently once disentangled from politically problematic neoliberal narratives.

The final section of the book covers one of neoliberalism's strongholds in technoscience and governance — environmental issues. Les Levidow et al. show the influence of neoliberal politics on the emergence of sustainable biofuels policy in the EU through the use of supposedly benign market mechanisms to guide production and use. A technological "fix" developed to define *sustainable* biofuels has been the creation of carbon cycle accounting. This lies at the heart of the EU's "Low-Carbon Economy," a policy concept fetishizing carbon cycles as the prime indicator of sustainability" (165). The overall impact of this technological fram-

ing has been to depoliticize the agendas inherent turning biofuels "green" while at the same time marginalizing other voices, including those from the global South and critics of GM agriculture.

Nicely expanding the carbon market debate is Anders Blok's chapter, "Configuring *homo carbonomicus*: Carbon markets, calculative techniques, and the green neoliberal". Carbon markets have become "core sites of the contentious entanglement of new techno-scientific knowledge, neo-liberal market-based policies, and public concerns with environmental risks" (187). Expanding the often optimistic governmentality approaches to neoliberalism, Blok points to the plethora of technoscientific institutions, mechanisms, and emergent expertise necessary to sustain carbon marketization while simultaneously shaping political subjectivities and resistance. He argues that *homo carbonomicus* is at the same time an imperfect neoliberal subject and, following Boltanski and Thévenot, an embodiment of several moral grammars of worth or ethico-political standpoints.

Several days ago I spoke with a U.S. Environmental Protection Agency (EPA) official whose job it was to regulate industrial hazards. He explained to me that given the current anti-regulatory spirit (i.e. neoliberal political "lobbying" from industry) in the US, the agency had to think of creative ways to regulate. Besides the agency's declining funding there was additional pressure not to *do* anything. The EPA official explained that their new approach was to innovate in terms of making more data available to citizens to use as they want. His hope was that the agency could work with data specialists to help design ways in which an inordinate amount of environmental data could be made understandable and useable by non-experts. So as in Harvey's definition of neoliberalism, the EPA is not regulating in the traditional sense, but instead is relying on the entrepreneurial citizen with free access to information to make choices for themselves. From a governmentality perspective —an approach espoused by some in this volume — the EPA could be seen to be enabling a civic participatory realm full of deliberatory opportunities and democratic promise. I have serious doubts that this will be the outcome.

References

Harvey, D. (2005) *A Brief History of Neoliberalism*, Oxford, New York: Oxford University Press.

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