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access, use and attitudes to technology in Europe's schools, Brussels, European Union.

- Fenwick, T. and Edwards, R. (2010) *Actor-network Theory in Education*, London, Routledge.
- Fenwick, T., Edwards, R. and Sawchuk, P. (2011) Emerging Approaches to Educational Research: Tracing the Socio-Material, London, Routledge.
- Illich, I. (1971) Deschooling Society, New York, Harper and Row.
- MIUR (2015) Piano Nazionale Scuola Digitale, URL http://www.istru-zione.it/scuola digitale/allegati/Materiali/pnsd-layout-30.10-WEB.pdf, [Accessed 2019-04-30].
- Postman, N. (1995) *The End of Education: Redefining the Value of School*, New York, Vintage.
- Selwyn, N. and Jandrić, P. (2020) *Postdigital Living in the Age of Covid-19: Unset-tling What We See as Possible*, in "Postdigital Science and Education", 2(3), pp. 989-1005.

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David Neyland, Vera Ehrenstein and Sveta Milyaeva

Can Markets Solve Problems? An Empirical Inquiry into Neoliberalism in Action, Cambridge, MA, the MIT Press, 2019, pp. 336

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Neyland, Ehrenstein and Milyaeva's monograph poses the question of whether or not markets solve problems. Although ultimately the authors leave the reader to answer this question for themselves, they do provide more than enough empirical detail to allow them to do so. After a grounding in the fundaments of neoliberalism (e.g. Harvey 2005) and the issues associated with markets being introduced to areas from which the public sector wishes to withdraw, the reader is introduced to the sensibilities of social Studies of Science and Technology through the work of Callon (1998; 2007) and others. Through these works, the reader is alerted to the fact that markets are created – through disentangling relations between actors before re-entangling them into new configurations. Such work, drawing as it does on ANT, also draws attention both to important non-human actors – non-human actors form the network linkages the make possible these new configurations - and to the fact that markets are performative, the result of the work done by the many public and private organizations who undertake to create them. This introductory chapter is clear to note

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also the negative consequences of creating markets – primarily through the mechanism of externalizing unwanted costs. Thus, such issues as living wages, working conditions, environmental degradation and loss of rights are seen as outside of the strategic and legal purview of the organizations involved. Yet, as the authors note, externalizing costs is precisely the reason that markets are made to appear more "efficient" than managed public services burdened with broader social responsibilities.

The book then goes on, through subsequent chapters, to lay out the detail of their own original empirical work. The chapters comprise a number of examples of attempts to instigate working markets in previously publicly funded arenas and in one instance, a new market where the existing one was failing. The examples covered include using markets to regulate carbon emissions through carbon trading, persuading pharmaceutical companies to make low-cost vaccines for the third world by guaranteeing sales, using competitive pressures (ranking) to determine the allocation of funding for university research in the UK, transforming private data into a market where citizens can secure ownership over and then rent their data, bringing private actors in to deliver services for vulnerable children and the privatization of UK student maintenance through a loans system and saleable student debt.

These empirical accounts are really the heart of the book. They provide an extensive and detailed resource for academics, students and policy makers interested in precisely how markets are created. The accounts build only loosely on the work of ANT authors in showing how markets are literally brought into being through accounting techniques, contract negotiations, demand guarantees and return calculations. The authors unpack how markets are negotiated and re-negotiated over time to meet the needs of its defined stakeholders and beneficiaries. The journeys from public good and prevention of harm, to markets and investment opportunities, we find, are hard fought, complex and expensive.

Throughout these chapters there is a great deal of constraint on the part of the authors. We are walked through even-handed and pluralistic accounts of the minutia of how and what it is that forms and holds markets together. In many respects the accounts function as mini-histories of the work of market builders. While the focus is upon how markets are achieved there are still plenty of examples of how this work can produce poor outcomes. We learn, for example, that the system of "carbon trading" put in place to replace pollution regulation, gave poor results because EU negotiators, keen to placate industry, set pollution limits too high. These were then easily met by normal technology change. Because of the difficulty of arriving at the first set of agreements, there was little appetite to go through the process again to adjust the limit on more than an irregular basis. We find a similar story for the UK governments' decision that University's should compete with one another for public research support. We learn

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about the huge effort and cost required to set up the scheme and the enormous efforts gone to ensure the credibility of the results. What we learn from the examples is that markets take huge amounts of administrative effort to set up, meaning that once in place they resist adjustment – unlike the imaged free-markets of neoliberal advocates – real markets are complex socio-material, behemoth and quasi-bureaucratic entanglements.

Social care provides a more disturbing example of what it really means to turn a public service into a market. Here private agencies were brought in to work with/for local authorities in social care, using what is termed Social Impact Bonds. In the example provided private agencies where offered the opportunity to work with children at risk of being taken into care - investors would be paid by results, numbers of children kept out of care, ensuring their best effort through market discipline but also showing a clear path toward profit. In effect, disadvantaged children were transformed into an investment opportunity. The scheme, a pilot and skewed heavily in favour of investors, was scrapped after a change in government policy. Government withdrawal from responsibility for financially supporting students in the UK through government grants created a similar "investment opportunity" - this time in the form of packaged up student debt that was then sold to investors. Here, government increasingly worried that it would not be able to "sell" the debt, was forced to offer it on increasingly advantageous terms. Concerns on both sides of the Atlantic over the use of personal data reflects the different political hues of how markets are deployed. While in the US individuals are assumed to own their data and are therefore taken to be in a position to seek economic rent from it as responsible economic actors. In the EU, GDPR rules reflected a quite different assumption, that citizens should be protected from predatory data-monetizing enterprises.

The accounts themselves as I say are highly restrained and to an extent this is frustrating. They are detailed, but not made to work very hard in terms of new theoretical insights or critical analysis. So much more could have been said, for example, about the huge con that student loans were (Mason 2016). The book would have felt richer if the reader where given a sense of this historical roots of this shift, the economic chaos that has resulted from it and the social and growing political disenchantment in it. It was also surprising, but perhaps in keeping the restrained tenor of the book, that the authors avoided the more scandalous examples of private investment in public goods in the UK, US and elsewhere – such as publicprivate partnerships in building schools and hospitals in the UK (e.g. Plimmer 2016) or privatized water supply where under-investment has led to crumbling infrastructure and to attempts by some municipalities to pull ownership back into public hands (e.g. McDonald and Swyngedouw 2019). Or for that matter, the deaths that have occurred on British railways as a direct result of under-resourced privatized maintenance (Murray 2002). Moreover, given the empirical detail of this book, I think there was Book Review 157

an opportunity to talk more about precisely why market entanglements end up producing such poor results. STS theory in markets, such as Callon's, is not further developed across the chapters.

The final chapter returns once again to theory and is more analytical in approach. Here, again, rather than building on the ANT introduced in the first chapter, we are introduced instead to Kuhn's concept of scientific paradigms and in particular his idea of problem-solution coupling. The departure into quite different theory is odd, but the subsequent discussion is actually a very useful way to frame how market dogma operates. Problems are defined in such a way as to align with marketisation-as-solution. Further problems, stemming from the attempt to marketize, are coupled to further solutions (standards, contracts, participation) as means to move forward, while remaining within a market solution frame. Many aspects of the cases are then re-described in this framing to good effect. As a reader I was a little unsure why this concept was not a shaping narrative throughout the accounts. There are some links here back to more contemporary STS thinking, but largely by way of analogy with what is already evident from the empirical evidence collected.

The book's strength ultimately is in its empirical detail rather than in its theoretical or critical contribution. Readers of this book will gain excellent insights into the minutia of, in particular, the detailed contract negotiations that bring markets into reality, as well as useful insights into how to create vehicles to attract private investment to existing public services. The book is a must for policy makers who may still be thinking of heading down this road (or indeed who need to understand where they are presently, in order to more easily reverse out of it). What the book is not is an attempt to move STS theory on or to provide a thoroughgoing critique of marketization. Students of neoliberal-inspired policy making will find plenty of detail. The book offers valuable insight into how markets are made to work, while ultimately sidestepping the question of whether they do or not. Spoiler alert, they don't – but we knew that already.

References

- Callon, M. (1998) The Laws of Markets, Oxford, Blackwell.
- Callon, M. (2007) An Essay on the Contribution of Markets to the Growing Proliferation of the Social, in "Theory, Culture and Society", 24, pp. 139-63.
- Harvey, D. (2005) A Brief History of Neoliberalism. Oxford, Oxford University Press.
- Mason, P. (2016) *PostCapitalism: A Guide to Our Future*, UK, Penguin Random House.
- McDonald, D. A. and Swyngedouw, E. (2019) *The New Water Wars: Struggles for Remunicipalisation*, in "Water Alternatives", 12 (2), pp. 322-333.
- Murray, A. (2002) Off the Rails: The Crisis on Britain's Railways (Britain's Great

158 Tecnoscienza – 11 (2)

Rail Crisis - Cause, Consequences and Cure), London, Verso.

Plimmer, G. (2016) Rising NHS trust deficits spark investor concerns, in "Financial Times", June 20^{th} .

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Tom Nichols

The Death of Expertise: The Campaign Against Established Knowledge and Why It Matters, Oxford, Oxford University Press, 2017, pp. 252

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According to Wiebe Bijker, Roland Bal and Ruud Hendriks (2009) we live in paradoxical times. Scientific advice is asked for all serious problems, but as soon as it is given, citizens, politicians and organizations comment on and criticize it. This paradox of scientific authority is at the origins of what has been called a crisis of expertise, a widespread trend which is grounded not only in socio-technical developments, such as the spread of social media, but also in cultural and political changes related to new visions of democracy and the democratization of science.

The crisis of expertise is a topic that is currently in vogue, and has been widely discussed in the field of science and technology studies and other academic communities (Collins and Evans 2007; see issue 3/2003 of "Social Studies of Science"). This area of research is also linked to a more recent, broader debate about the so-called "post-truth era" (see issue 4/2017 of "Social Studies of Science"), which highlights the development of an "epistemic turn" in Western democracies that produced a less critical relationship with deception (Keyes 2004). Under the aegis of the post-truth thesis, scholars have shown how a plurality of "truth markets" coexist within the new post-truth regime (Harsin 2015).

In this context, it is disappointing that an established scholar such as Tom Nichols does not feel the need to address the studies and opinions of his fellow experts, even in a text with pretensions to popular appeal. There is something paradoxical in describing and stigmatizing the end of expertise without drawing upon the knowledge of experts on the end of expertise. A typical failure on the part of experts that has contributed to the crisis of expertise is, according to Nichols, cross-expertise violations, that is, the overconfidence that leads experts to make pronouncements on matters far beyond their general area of competence and use their own epistemic authority to lend weight to hastily constructed opinions. This book is a blatant example of a political scientist overreaching into a field in which he lacks competence.