



Digital Transformations of the Sciences and Humanities, Eric T. Meyer and R. Schroeder. Cambridge, MA: MIT Press, 2015, pp. 271, £27.95; ISBN 978-0-262-02874-5. Language: English.

In their book 'Knowledge Machines: Digital Transformations of the Sciences and Humanities', Eric Meyer and Ralph Schroeder examine the internet from the perspective of 'e-research', namely 'the use of digital tools and data for the distributed and collaborative production of knowledge' (p. 4). This, of course, is far from a mere theoretical exploration as it builds heavily on work and empirical research that both authors have published in the past, discussing the concept of 'e-research'. The first 43 pages of the book serve the main purpose of introducing the reader to the concept of 'e-research'. At the same time though, this introduction frames well the main argument running through the book: the authors put particular stress on the potential that 'e-research' holds for explaining the occurrence of the phenomenon of 'knowledge machines', namely noticeable transformations in

generating knowledge in the digital era, in a way that internet studies and the sociology of science and technology fail to fully account for (p. 42).

Chapters 2 and 3 document this transformation of knowledge through data driven practices that have resulted in a cyber-infrastructure for digital research. The next two chapters turn to particular examples of data driven advancement of knowledge and offer a series of case studies both authors have conducted/been involved with in the past, which focus on collaborative computation (Chapter 4) and data sharing (Chapter 5). These are case studies that incorporate methodologies from various fields, ranging from large scale projects in the life sciences (p. 72) and literary studies (p. 86), to smaller scale projects in marine mammal science (p. 97), psychiatric genetics (p. 101) and data collection and sharing practices (p. 105). It is not however until chapter 10 that all these case studies are placed within the contextual frame of knowledge machines, whereby a schematic taxonomy explains how an 'increased scientization in the social sciences and humanities' is advancing knowledge (p. 204). The authors seem mindful of the fact that certain limitations (Chapters 8 and 9) do pose a series of impediments to the rise of e-research, which however does not take away from the great potential the latter holds for transforming knowledge in the long run.

This is not a light read; far from it. However, the main argument that flows throughout the book is presented in such a tight manner that—although not fully unpacked until chapter 10—it does communicate clearly what the book is and is not about. The focal point is not the internet per se but the advances in internet related capabilities that enable a collaborative production of knowledge (p. 4). In this vein, the internet is treated as a research tool that can be utilised broadly, beyond the narrow confinements of researchers following a strict computational methodology. The book explains how the internet has shaped the production of knowledge—by providing an infrastructure that generates more than mere information; moreover, it is claimed that the internet (and data-driven) practices could even go as far as allowing one the ability to manipulate data and in certain ways affect the production of knowledge. The mayhem of data manipulation in e-research is not explored in further depth, as it falls largely beyond the scope of this book, yet the mentions of algorithmically driven processes of providing access to knowledge (Chapter 7) provide the reader with ample food for thought.

The book follows down the path of a series of similar publications, such as Sunstein's *Infotopia* (2006), Benkler's *Wealth of the Networks* (2006) and Shirky's *Cognitive Surplus* (2010). That said, what sets it apart from these volumes (and makes it incredibly timely) is that the authors have chosen to go beyond the phenomenon of the collaborative economy of ideas, to address how the

research from across a number of disciplines is being shaped by digital transformations brought about by the internet.

Bibliography

- Benkler Y (2006) *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. New Haven: Yale University Press
- Shirky C (2010) *Cognitive Surplus: Creativity and Generosity in a Connected Age*. NY: The Penguin Press
- Sunstein C (2006) *Infotopia: How Minds Produce Knowledge*. Oxford: Oxford University Press