University of BRISTOL

Doing the Future Differently?

Doing the future differently: Sociology, data science and the promise of a new response-ability

Susan Halford

susan.Halford@bristol.ac.uk

@susanjhalford

bristol.ac.uk

The stand-off

'[this] is a world where massive amounts of data and applied mathematics replace every other tool that might be brought to bear. Out with every theory of human behaviour, from linguistics to sociology. Forget taxonomy, ontology and psychology … With enough data the numbers speak for themselves' (Chris Anderson, 2008)

- Data capture only some social traces
- Data are partial, although often lacking demographic detail and provenance
- Data demand computational methods
- Lack of substantive and theoretical expertise

- The Future

My aim is to move beyond this impasse

- Marginalising sociology from a powerful new data assemblage, from new resources & from the future

  '[w]hatever value big data may have for "knowing capitalism", its' value to social science has … [f]or the present at least, to remain very much open to question' (Goldthorpe 2016; pp.80-1)

- Limiting the capacity and value of data science

  … an increasing number of experts are saying more insistently … Big Data does not automatically yield good analytics' and insisting that 'Big Data is a tool, but should not be considered the solution' (Wired 2013)

  The best minds of my generation are thinking about how to make people click ads … that sucks' (Jeff Hammerbacher who coined the term 'data science', O'Neill and Schutt 2013; p. 352)

Building a Middle ground

Take 1: Symphonic Social Science: harnessing similarities and differences between data science and sociological approaches to data, method and theory to overcome the impasse.

Take 2: Doing the Future Differently

Towards a new response-ability (Haraway 2016) in the digital age.

Take 1: Symphonic Social Science

Article

Sociology
1–17
© The Author(s) 2017
Reprints and permissions:
sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/0038038517698639
journals.sagepub.com/home/soc
SAGE

Speaking Sociologically with Big Data: Symphonic Social Science and the Future for Big Data Research

Susan Halford
University of Southampton, UK

Mike Savage
London School of Economics, UK

Abstract
Recent years have seen persistent tension between proponents of big data analytics, using new forms of digital data to make computational and statistical claims about 'the social', and many sociologists sceptical about the value of big data, its associated methods and claims to knowledge. We seek to move beyond this, taking inspiration from a mode of argumentation pursued by Piketty, Putnam and Wilkinson and Pickett that we label 'symphonic social science'. This bears both striking similarities and significant differences to the big data paradigm and – as such – offers the potential to do big data analytics differently. This offers value to those already working with big data – for whom the difficulties of making useful and sustainable claims about the social are increasingly apparent – and to sociologists, offering a mode of practice that might shape big data analytics for the future.

Keywords
big data, computational methods, sociology, symphonic social science, visualisation

Introduction

Our article is intended to make an original contribution to the debate on 'big data' and social research. This is grounded in our own reflections on the 'big data' both as an empirical phenomenon and an emergent field of practice in which claims to knowledge

Corresponding author:
Susan Halford, School of Social Sciences, University of Southampton, Building 58, Salisbury Road, Highfield, Southampton SO17 1BJ, UK.
Email: susan.halford@soton.ac.uk

Savage M and Burrows R (2007) **'The coming crisis of empirical sociology'** *Sociology*, 41(5) pp.885-899.

Halford S, Pope C and Weal M (2013) **'Digital Futures? Sociological challenges and opportunities in the emergent Semantic Web'** *Sociology* 47(1) 173-189

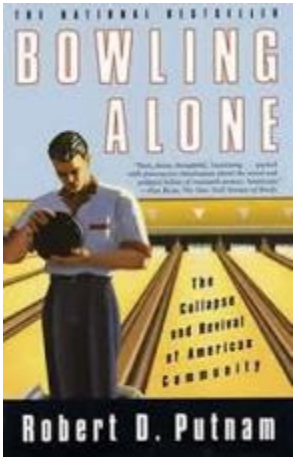
Savage M (2013) **'The 'social life of methods': a critical introduction'** *Theory, Culture and Society*, 30 (4). 3-21.

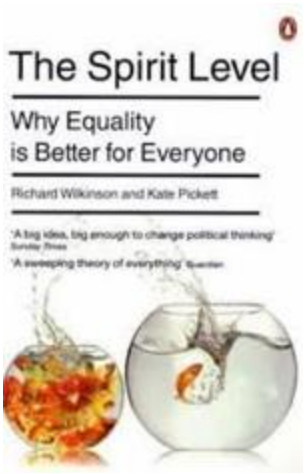
Tinati R, Halford S, Carr L and Pope C (2014) **'Big Data: Methodological Challenges and Approaches for Sociological Analysis'** *Sociology* 48 (4), pp. 663-68.

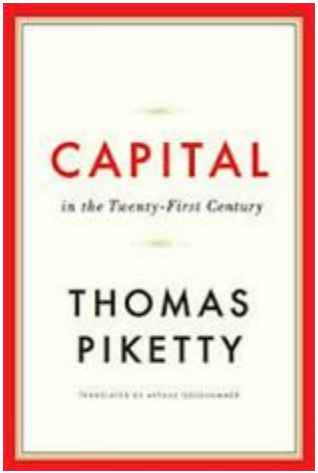
Halford S (2015) **'Big Data and the politics of discipline'** *Discover Society* July 30, 2015
http://discoversociety.org/2015/07/30/big-data-and-the-politics-of-discipline/

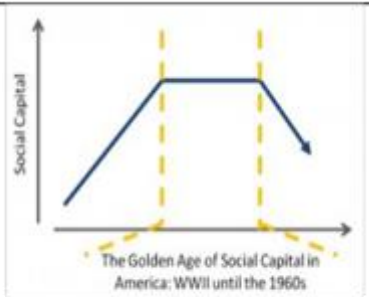
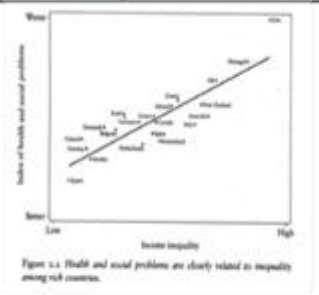
Halford, S., Weal, M., Tinati, R., Carr, L., Pope, C. 2018) *'Understanding the production and circulation of social media data: Towards methodological principles and praxis'* **New Media and Society** 20(9) pp.3341-3358.

The Inspiration







	Putnam (2000) *Bowling Alone*	Wilkinson & Pickett (2009) *The Spirit Level*	Piketty (2014) *Capital*
Data	US Census, surveys of social and political trends, membership data, Gallup polls, etc.	National survey data, registration data, ethnographic data.	Multiple and diverse taxation records from 1700-2010, registration data.
Methods	Descriptive statistics, bi-variate frequencies	Descriptive statistics, linear regression, macro level comparisons	Descriptive statistics, frequencies over time.
Visualisation	 The Golden Age of Social Capital in America: WWII until the 1960s		

Data, method and visualisation woven into a repeat refrain, combined with theory as a composite whole to makes powerful arguments about the nature of social life and social change over the long term

A Symphonic Aesthetic

- A new form of argumentation in its own right
- Opportunities to engage with and disrupt big data analytics

The promise

- **Similarities:**
  - Re-purposing multiple & varied 'found' data sources
  - Emphasis on correlation
  - Use of visualisation
- **Differences**
  - Theoretical awareness
  - Choice of data
  - Temporality
  - Role of correlation
  - Practice of visualisation

… the similarities place symphonic social science on the same territory as big data analytics whilst the differences hold out the possibility of doing things differently.

- **Still some way to go:**
  - Symphonic authors do not use new forms of digital data
  - Their methods cannot be simply applied
  - Big data demand new and unfamiliar skills & collaborations

- **Directions for travel:**
  - Critical Data Pragmatism
  - Methodological Pluralism
  - Engaging domain expertise and theory in abductive reasoning
  - Visualisation as a boundary object for interdisciplinary research practice

Take 2: The Future

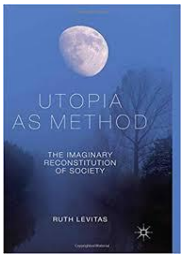
- Data Science as a predictive paradigm
- Real world applications of AI as ‘the future’ (care robots, driverless cars, smart factories, remote surgery, etc.)

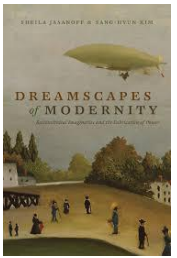
- Sociological scepticism

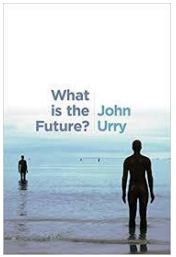
Can we overcome this impasse to think together about the future?

Sociologies of the Future

1: The future is made from the past and the present: social and political relations, institutional arrangements, material infrastructures and cultural narratives. It cannot be conjured from nothing – but emerges in the interplay of a range of social and technical actors and the power relations between them.

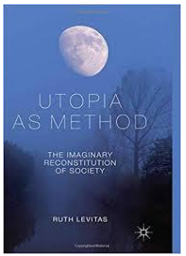


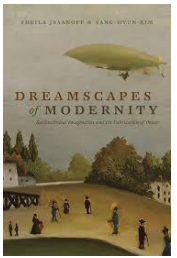


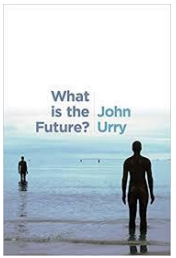


Sociologies of the Future

2: How the future is imagined contributes to making the future. The future is a *'cultural fact'* (Appadurai 2013) made through *'sociotechnical imaginaries'* …*'collectively held, institutionally stabilised and politically performed visions of desirable futures'* that may come to appear as *'unmediated representations of a social body's norms and values'* as they move from *'origins'* to *'embedding'* perhaps *'resistance'* and on to *'extension'* (Jasanoff 2015)

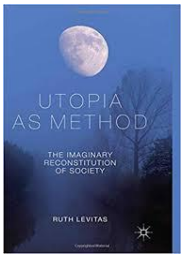


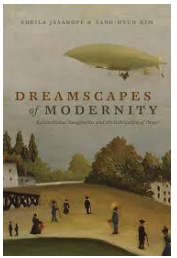


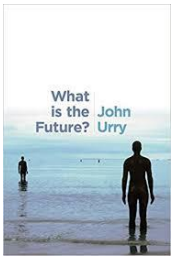


Sociologies of the Future

3: *'Who or what owns the future'* (Urry 2016) is an exercise of power. Dominant imaginaries *'shape what is thinkable'* (Ruppert 2018). Who has the capacity to do this? The odds are stacked unevenly but the *'politics of possibility'* can triumph over the *'politics of probability'* (Appadurai 2013) – opening the possibility for alternative future**s** that *'people would sooner inhabit'* (Jasanoff 2015).



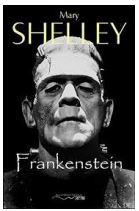


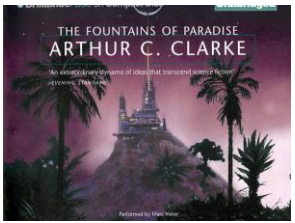


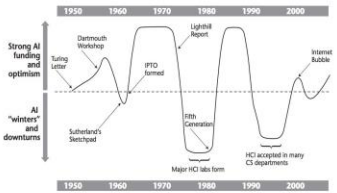
The Present Futures of AI

- Narrative rigidities – from utopia to dystopia, in a cycle of AI 'winters'.
- *'AI promises to transform more than just the way we do business – it will touch every corner of society'* (Intel), will *'solve the world's most pressing problems'* (Microsoft), *'has the potential to solve all the most difficult problems of today and tomorrow'* (IBM), *one of the most important things humanity is working on, its more profound than electricity or fire'* (Google)

- OR *'humanity's biggest existential threat'* (Musk 2018)





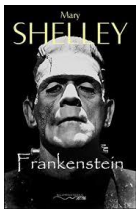


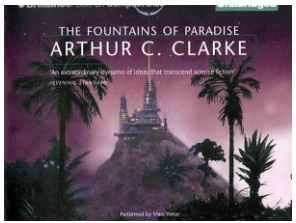
Source: @samim

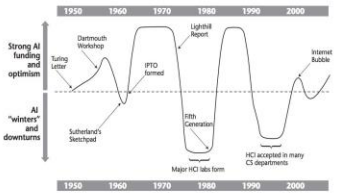
The Present Futures of AI

- Fires up the imaginary [origins] yet *'when figures like Musk and Zuckerberg talk about artificial intelligence, they aren't really talking about AI—not as in the software and hardware and robots … they are talking about words, and ideas. They are framing their individual and corporate hopes, dreams and strategies'* (Bogost 2017).

- Narrative driven by certainty, little attention to sociotechnical thickness [embedding]







Source: @samim

The Present Futures of AI

- Impact of AI will depend on the uses to which it is put
- For all the promises … fire and electricity …

> *'that's why we built Google Assistant, which allows you to have a natural conversation between you and Google. It's one assistant that's ready to help you through your day'.*

- Whose presents are being directed towards the future?

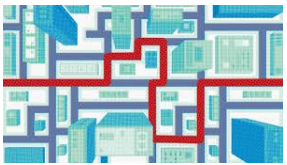
'…most such ideas come from a small group of elites who have been imagining and misunderstanding the interplay between technology and society since the 1950's' with *'marvellous stories of wacky ideas drowning out social ideas and making it impossible to have proper conversations'* (Broussard 2018)

… for the good of society, we cannot allow our world to be organized by learning algorithms whose creators are overwhelmingly dominated by one gender, ethnicity, age or culture' (Hall 2017)

Doing Futures Differently

- We should raise our ambitions
- The time for change is now

- Ethics training is a start
- Beyond moral philosophy → the ethics of care.
- More than people as data points or privacy regulators towards consideration of care, of fairness and equality, of the kind of society that we want to live in



Doing Futures Differently

1: AI for good

WeSAI could...

- maintain customized context description
- calls attention to what is exposed & who is seeing
- exemplify what can be deduced
- make things visible/understandable
- burst bubbles, fosters serendipity
- help raise awareness, educational level, computer literacy, Web skills
- report on neutrality, security etc.
- enforce (human) rights
- be scrutiny agent for important values

Source: Fabien Gandon (2018)

Doing Futures Differently

2: **Speculative design = re-thinking future sociotechnical assemblages**

- Utopia as method
- Real utopias
- the future is *'not a destination but a medium for imaginative thought'* (Dunne and Raby 2013) through which we might look at futures from different standpoints
- Bringing sociological and data science methods together

Doing Futures Differently

3: Democratising Futures

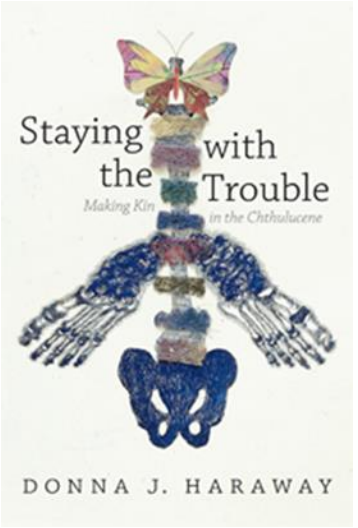
- Where are we now? What works well? And doesn't? For whom, when and why?
- What are the possible futures for specific AI applications?
- What would have to happen to get us there?
- Beyond the usual suspects *'diversifying the vision of the common good'* (Appadurai 2013; 16)
- Empowering participation in the future
- Bringing people back in – not as users or consumers, or in terms of impact but as part of the world we are building
- Building the capacity to aspire

Conclusions

- The digital age ties us together – sociologists, computer scientists, and others – whether we like it or not and disturbs how we are used to thinking an knowing

- Calls on us to move beyond *'comic faith in technofixes'* and the fatalism of critique where *'it's too late and there's no sense in trying to make anything better'*

- *'The task is to become capable … of response' to nurture a new 'response-ability' …* to focus on the *'more serious and lively task of making the future'*



We should think not only about *human futures in the context of rapidly changing technology* but also about *technology futures in the context of complex, unequal and fragile society*.

References

Anderson, M. (2008) 'The End of Theory: The Data Deluge Makes the Scientific Method Obsolete' *Wired* https://www.wired.com/2008/06/pb-theory/

Amsler, S. and Facer, K. (2017) 'Contesting anticipatory regimes in education: exploring alternative educational orientations towards the future' *Futures* 94: 6-14.

Appadurai, A. (2013) *The Future as Cultural Fact* London, Verso.

Balmer, A., Calvert, J., Marris, C;. Molyneux-Hodgson, S., From, E., Kearns, K, Bulpin,K, Schyfter, P., Mackenzie, A. and Martin, P. (2016) 'Five rules of thumb for post-ELSI interdisciplinary collaborations' *Journal of Responsible Innovation* 3(1) pp.73-80.

Bogost, I. (2017) '"Artificial intelligence has become meaningless"' *The Atlantic* https://www.theatlantic.com/technology/archive/2017/03/what-is-artificial-intelligence/518547/

Broussard, M. (2018) *Artificial Unintelligence* Cambridge, MIT Press.

Dunne, A. and Raby, F. (2013) *Speculative Everything: design, fiction and social dreaming* Cambridge, MIT Press.

Hall, W. (2017) 'Growing role of artificial intelligence in our lives is 'too important to leave to men'" *The Conversation* https://theconversation.com/growing-role-of-artificial-intelligence-in-our-lives-is-too-important-to-leave-to-men-82708

Haraway, D. (2016) *Staying with the Trouble* Durham, Duke University Press.

Jasanoff, S. and Kim, S-H.(2015) *Dreamscapes of Modernity* Chicago, Chicago University Press.

Pink, S. and Laznzeni, D. (2018) 'Future Anthropology Ethics and Datafication: temporality and responsibility in research' Social media and Society, April-June pp.,1-9.

Levitas, R. *Utopia as Method: the imaginary reconstitution of society* London, Palgrave Macmillan.

Levitas, R. (2017)'Where there is no vision, people perish' *Centre for Understanding of Sustainable Prosperity* **https://www.cusp.ac.uk/themes/m/m1-5/**

Urry, J. (2016) *What is the Future?* Bristol, Polity Press.

Wallerstein, E. (1996) *Open the Social Sciences: report of the Gulbenkian commission on the restructuring of the social sciences* Palo Alto, Stanford University Press.