Book reviews

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Digital Methods in Contemporary Social Sciences

Helene Snee, Christine Hine, Yvette Morey, Steven Roberts, Hayley Watson (eds.), ***Digital Methods for Social Science: An Interdisciplinary Guide to Research Innovation***
(Palgrave MacMillan, London, 2015)

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The integration of new media in almost every part of our experience (personal life, communication, research, business etc.) led to an enormous quantity of very different kind of data. Their investigations raised many questions from the scholars and practitioners, putting pressure on the methods that should help us understand these data. Moreover, the fine borderline between online and offline activities (mobile devices being an important factor here) requests a complex methodological design in order to comprehend a social phenomenon that permeates this line. New Media generate data, but represent a powerful research medium and also an archival resource. Their internal rules depending on computational factors must cooperate with the rules of the research (ethical, legal). The particular kind of social forms as networks or virtual realities challenged the plethora of previous methods, examining implicitly their applicability and extent. The new contemporary social configurations require methods that can decipher them and that can be congruent with their specificities. In this vein, on the one hand digital technologies create new information and new figures of sociality and on the other hand they provoke the rethinking of the toolkit that can measure them.

One of the important contributions that has grown from these ideas is the book edited by Helene Snee, Christine Hine, Yvette Morey, Steven Roberts and Hayley Watson and published in 2015 at Palgrave MacMillan. All five editors are preoccupied with the social science methodology. Thus, Helene Snee is Lecturer in Sociology at Manchester Metropolitan University. She is author of *A Cosmopolitan Journey? Difference, Distinction and Identity Work in Gap Year Travel* (Ashgate, 2014). The book is a sociological study of gap year travel, that tried to answer the question: ”Does travel broaden the mind?” Christine Hine is Reader in Sociology at the University of Surrey. She was a leading voice in pointing out the importance of methodologies for understanding the Internet. Now, she focuses on the sociology of science and technology, including ethnographic approaches which combine online and offline social aspects. She published the following books: *Ethnography for the Internet: Embedded,*

Embodied and Everyday (Bloomsbury, 2015), *Virtual Research Methods* (four volumes, Sage Publications Limited, 2013), *The Internet. Understanding Qualitative Research* (Oxford University Press, 2012), *Systematics as cyberscience: Computers, Change, and Continuity in Science* (The MIT Press, 2008). Yvette Morey is Research Fellow at the Centre for the Study of Behaviour Change and Influence at the University of the West of England. She conducts interdisciplinary research on young people, wellbeing, and participation in online and offline communities using digital methods. Steven Roberts is Senior Lecturer in Sociology at Monash University. His area of expertise is the sociology of contemporary transitions from youth to young adulthood. Hayley Watson is Senior Research Analyst at Trilateral Research & Consulting, with main interests in legal, ethical, and social aspects in the use of IT, for crisis management. Also, all the contributors to this volume are experimented with new media and methodology.

The book is divided in four parts: ”Big Data, Thick Data: Social Media Analysis”, ”Combining and Comparing Methods”, ”Developing Innovations in Digital Methods”, and ”Digital Research: Challenges and Contentions”. The first part approaches the problem of rich or thick data available online. Twitter and Facebook are the two cases discussed extensively here; Twitter is the best example that requires ”methodological innovation in precarious spaces” (Axel Bruns and Jean Burgess’ s article), pointing out the challenge of access to data from social media streaming. Data collection and visual representation for social media analytics may confront a series of practical issues, discussed by P. Brooker, J. Barnett, T. Cribbin, and S. Sharma. Facebook is examined as a ”mainstream research tool and ethnographic site” (Eve Stirling), because the constant presence on Facebook transforms it into a representative ”place”, a nodal point towards our lives and also towards other sites.

The second part of the book is focused on cases that dealt with the combination and the comparison between traditional methods and approaches and the digital ones. Thus, the increase of research participation through mixing modes is analyzed by J. Hope, while R. de Roock, I. Bhatt, and J. Adams explored innovative methods in digital literacy studies. Also, this part covers the problem of polls; J. Sajuria and J. Fábrega think that, in the case of Twitter, it cannot replace opinion surveys, but it can complement them.

The third part inspects the development of innovations in online methods, from their positioning (A. Estalella) to their reinvention (E. Hutchinson). The photo elicitation and the asynchronous interview were deeply investigated in this section of *Digital Methods for Social Science: An Interdisciplinary Guide to Research Innovation*. An interesting article explores the subjects of digital stories and of skill transfer in digital environments. Thus, V. Tedder raises important questions understudied in the digital literature: how skills are transmitted and learned in online spaces and how digital methods can be used to study these situations?

The fourth part investigates the digital methods as mainstream methodology in the case of several debates in educational research (J. Knox), in research of young people (E. Bond and S. Agnew), and also in ethical frame (C. Hewson).

What is important in my opinion is that this book gains in profundity by postulating three interrelated key paths: innovation, the "mainstreaming" of digital methods and the interdisciplinary approach. Articulated in this manner, the perspective presented in *Digital Methods for Social Science: An Interdisciplinary Guide to Research Innovation* doesn't hide the "scene" of using the digital methods, and doesn't limit itself to a description of digital methodology. Insisting on the role of online methods, the book allows the construction of a meta-discourse about the complex relations between social phenomena and the methods used to "catch" them. The changes in the social forms call for innovations in methodology. Thus, as new technologies become central in our lives, social sciences have to take into consideration the contribution of digital methods, with their limitations and risks. Even they were coined "Internet research methods", "e-research" (A. Bryman), "virtual methods" (C. Hine), "digital methods" (R. Rogers), "online research methods" (N. Fielding, R. M. Lee, G. Blank) or "cyber research methods" (Weible, Wallace), they are able – alone or working together with other "traditional" social research methods – to clarify some relevant aspects of contemporary life. As the editors emphasized, the dichotomies between mainstream and marginal, digital and conventional should not be read as "real distinctions". Nevertheless, the clarification of the role of digital methods in the social science methodology is a task that the authors are assuming in the very beginning despite the "intellectual skepticism" about them.

As Noortje Marres pointed out in Foreword, we witness the re-negotiation of social methodology in academia, society, and industry. In this context, this book brings a critical edge to this debate, its contributions being useful for the large public, students and researchers who are interested in comprehending the contemporary world, being aware of the large repertoire of methods now available for them.

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Big Data

Viktor Mayer-Schönberger, Kenneth Cukier, *Big Data: A Revolution that will transform how we live, work and think*
(Eamon Dolan/Mariner Books, Boston-New York, 2014)

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"Knowledge society" – a concept with more or less correspondence in real life - gradually became quite popular. In many countries, it represents an ideal of development for contemporary society. It could designate, basically, a type of society in which every important aspect of daily life is treated on a scientific basis, using a specific set of scientific knowledge.

Given the strong historical link between technology and socio-economical progress in human societies, we could see the implementation of knowledge society as an opportunity for the rise of a new cultural paradigm after the modern and postmodern ones. Modernism was a rationalistic unitary cultural project rooted in the Enlightenment movement and adopted in an age when the social consequences of Scientific Revolution could no longer be ignored. Quite similarly, the Atomic Age accommodated a turning point in the cultural transition towards postmodernism for Western developed countries. Suddenly, the specter of total annihilation of human kind called for a new attitude towards the capacity of technology to solve the major problems of humanity. Postmodernism, with its irony regarding any sort of axiological hierarchies, was born. In the same time, the invention of digital technology started to induce several changes in the control of information on a planetary scale. Thus, information society represents today not only a fundamental condition for the rise of knowledge society and of its cultural paradigm, but also a reality with strong consequences at a socio-economical level.

Contemporary society, being more and more dependent on information technology, offers opportunities for some countries to burn fast the historical stages of industrial progress and to achieve in a short period of time high levels of economic development. Of course, globalization influences a lot this dynamics, the new socio-economic context being considered by many as having a cultural corresponding paradigm called post-postmodernism or even "hyper-modernism". The phenomenon that triggered such a spectacular change is an accelerated accumulation of digital information that is saved and processed.

What is remarkable in this respect is not only the amount of data, but also the new manner in which they are exploited.

In this context, one of the most interesting books that describe this phenomenon, a phenomenon with deep economic, social and even cultural consequences, is the book entitled *Big Data: A Revolution that will transform how we live, work and think* and written by Viktor Mayer-Schönberger and Kenneth Cukier. The first edition of the book was published by Eamon Dolan/Houghton Mifflin Harcourt at 5 March 2013, while the second edition was published by Eamon Dolan/Mariner Books (Reprint Edition) at 4 March 2014 in Boston-New York. Soon after the publishing moment, the book was followed by other books on the same subject, including a few written by the same authors. We consider this aspect as indicating the importance of the subject.

As the title itself points out, the main idea of the book is that humanity entered a new phase of digital revolution that will change our lives radically. The transformation is so radical due to the fact that almost every aspect of our lives can be transformed in data that can be stored. We already experience a few aspects of the new state of affairs, starting with our options for online purchases, our preferences for different touristic locations, food, clothing, certain business partners or even our political preferences.

The more we express these preferences on the internet, the more they are transformed in data that help make up our profile, a profile that can be used by different institutions, and a profile that can be sold to different companies. Big Data means this age in the history of humanity dominated by the technology of information that is capable to store and exploit this huge amount of data about people and their activities. Of course, one big question that arises immediately refers to the possible consequences of this phenomenon.

As we are going to see, the consequences might be more complex than we think, especially because of the new level in processing data that has already been achieved. The technology for storing data was improved in the last years, together with the algorithms used in classifying and analyzing this data. The authors of the book are fully qualified to understand and describe these transformations for the large public, Viktor Mayer-Schönberger being professor at Oxford University, while Kenneth Cukier is a writer specialized on business topics, being an active collaborator of *The Economist* Review.

The two authors begin their work by presenting the case of the H1N1 flue crisis in 2009. The spreading of the flue in United States was so rapid, that classical surveillance organized by governmental agencies proved inefficient in anticipating the dynamics of the crisis. In this context, an initiative of Google Company that used new algorithms for processing different categories of data at their disposal saved the situation for the physicians who were struggling with the crisis. With this occasions, specialists in information technology understood that processing a huge amount of unorganized data is possible and can prove to be surprisingly efficient in solving various kinds of problems.

The trick is that the same data can be used for extracting different kinds of information using different algorithms, whilst classical methods in acquiring scientific data did not allow such a thing. Moreover, due to limitations in financing the research, quite often the classical methods in acquiring scientific data offer an incomplete perspective over a complex phenomenon, especially in what regards large groups of people. Given the fact that the new achievements in collecting and analyzing Big Data allow the surpassing of such limitations, the authors conclude that science, especially medical science will gain much advantage in the future, as a consequence of this new phase in digital revolution. From an epistemological point of view, one could say that Big Data allows and will allow more and more the validation of different scientific hypotheses using the same amount of data, a process that nowadays takes place rarely, on a very low scale.

One condition for all these things to happen would be the development of huge data bases to store different kinds of data about each of us. Our health, our habits, our preferences, our professional activity as well as our hobbies would be stored somewhere by someone, being analyzed with different algorithms. But, of course, this aspect raises serious concerns in what regards the possibility of maintaining privacy. Monitoring somebody on a daily basis will allow some specialists to create a detailed profile of that person, a profile that could jeopardize their private life. Also, nobody could predict who and with what intentions will exploit those data at a certain moment in the future. This entire situation made the authors speak at a certain point in their book about *the dictatorship of data,* which could affect our daily lives in the future. In this context, new laws, new attitudes and new behaviors could be developed in the future in an effort to preserve private life, or at least a certain amount of intimacy. If we take into account the way in which the Internet affects our lives, this battle may have already started.

However, at the bottom of this new existence in contemporary information society, with its immense advantages on one hand and its frightful threats on the other, lays the concept that gives the title of this very interesting book: *Big Data.*