

Deborah Lupton: Liquid metaphors for Big Data seek to familiarise technology

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Continuing our series on big data and its implications for research, [Mark Carrigan](#) talks to [Deborah Lupton](#) about how sociologists are involved in making sense of and positioning big data. The popularity of the topic provides a great chance for critical reflection on the creation and authority of big data. Also of interest to social researchers are the nature metaphors used to discuss data, such as 'flows' and 'flood', and the growth of opportunities to explore how small data juxtapose against big data.



In your upcoming book, you analyse 'big data' from the perspective of digital sociology. What does this perspective contribute to existing debates?

Yes, my *Digital Sociology* book includes a chapter on the critical sociology of big data. The big data phenomenon is a topic that is of vital interest for critical social researchers because discussion and use of it has penetrated into so many areas of social life, social institutions and identity and because it has received a high degree of attention across a range of media.

So much popular coverage of big data tends to either take the approach that massive data sets offer a solution to almost any problem because of the new and detailed insights they are supposedly able to offer, or that there is so much data that we are overwhelmed by how to deal with and make sense of these data. Since the Snowden revelations there is also a growing discourse in the popular media concerning the surveillance capacities of big data and how we may be secretly observed or commercially manipulated via these technologies or commercially manipulated. From a critical sociological perspective we are able to examine these different discourses and practices and place them in their broader social, cultural, political and ethical contexts: that is, to problematise big data.

I also argue in the book that as reflexive sociologists we are able to use and position big data in various ways. First, we can join the data-harvesting trend by simply using the data as they are generated for all sorts of social research topics. Second, we can seek to investigate the black box of how and why these data are generated and analyse the human decision-making that creates big data. And third, we can analyse the broader social and political contexts of the authority and effects of big data and the algorithms that collect, distribute and manage big data.

Metaphors abound in the emerging discourse surrounding big data. What do these reveal about the social life of big data and algorithms?

We seem unable to talk about the big data phenomenon without using metaphors that are often drawn from nature. The most common metaphorical system that is used employs liquidity metaphors, referring to 'drowning' in big data, data 'flows' and 'floods' or the big data 'tsunami'. I argue that these metaphors suggest both the sense that big data are constantly mobile and circulating from one site to another, and that they are overwhelming in their magnitude.

Metaphors drawn from nature have been common in representing digital technologies since their emergence, as Sue Thomas points out in her book *Technobiophilia*. They are a way of seeking to domesticate and familiarise technologies that may appear threatening in their novelty and strangeness, and work to incorporate technologies into a pre-existing world view. Conceptualising digital data as liquid flows helps us to conceptualise and make sense of the phenomenon. But nature is not always benign, as the metaphors of 'big data floods' and 'tsunamis' suggest. Here again the meaning that there is something threatening about big data emerges.



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Is there a risk that established approaches in the social sciences might come to be cast pejoratively as ‘small data’? How should we respond to this?

It may well be the case that established approaches in the social sciences are represented as focusing only on ‘small data’. But I do not see this nomination as a threat, but rather as an opportunity. For a new project I have been investigating portrayals of ‘small’ as compared to ‘big’ data. What is interesting is the value that ‘small data’ are beginning to be invested with in many forums. Increasingly we are seeing discussions in the marketing and computer science literature concerning how small data provide meaning to big data and may be more valid. Small data are represented as offering an important alternative to big data because they are viewed as more insightful and detailed and also as more manageable in their size. This relates back to the notion that big data are threatening or challenging because of their volume.

Here again, as critical and reflexive social researchers we can investigate the social and cultural aspects of portrayals of small data in the popular media or technical literature as they are juxtaposed against big data. As we have always done, we can highlight the ways in which small data are socially constructed. We can also continue to generate and use small data for our own research purposes, as we have been doing for a long time. This is where the opportunity to distinguish ourselves as offering a unique perspective on both small and big data emerges.

This interview is part of an ongoing series on the [Philosophy of Data Science](#). Previous interviews in the series: [Rob Kitchin](#), [Evelyn Ruppert](#).

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