

Will data palaces need to be made of steel, concrete and wires, too?

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1 WHERE DESIGN AND STS MEET?

I should perhaps start this position paper by noting that I do not consider myself a designer. I would not describe my research as 'designerly', either. However, I have found that the conversations that designers seem to be having about data seem to be having about data reflect some of the ways that I have been thinking about data in my own research over the last few years. I have been looking at how data is constructed and used, mostly in the context of how people work. (Including how professional researchers make use of data.)

The kinds of questions that designers are asking about what can be done with data mirror the kinds of questions Science and Technology Studies researchers are asking about how data (and related infrastructures[4]) are constructed, maintained and used. Feinberg has explicitly and convincingly made the connection between these fields of study, nothing that "data generation within a design perspective, demonstrating how data creation can be understood as a multilayered set of interlocking design activities" [2, p.2952].

I am hoping to learn more at the workshop about designers' perspectives on data. I am drawn to understand their perspectives, because, I think, they might help to provide layers of process and practice that help take constructivist accounts of data into a more practical space. In particular, I am interested to explore what design approaches to data might help us as researchers learn about our own research practices (i.e., in a metascientific context), in addition to being deployed as an empirical method.

2 COMPETING IMPERATIVES WITH DATA

My academic training has generally had a psychological angle. One of the things I have got out of this training has been an appreciation of the ways in which trade-offs modulate behaviour [1]. One of the things I am interested in is the design perspectives on trade-offs when working with data. The call for participation for the workshop suggests that, in relation to data, "this ubiquity of presence, of availability as a resource, has yet to be met with diversity or plurality of use, craft, and experience".

I think it is worth thinking about why this might be, and specifically which parts of trade-off that people are optimising for. For instance, it might be that the adoption of off-the-shelf tools for analysis and interpretation of data reflect a limited incentive to do otherwise. Why do something risky when something already well known can produce results that are acceptable? Is the position that designers are taking along trade-off curves (e.g., to focus on one side of a trade-off over another) a conscious decision? Is it implied by existing tools? Does it reflect 'irrational' mores; trends, fashions, whatever is currently being marketed at them?

I think that by trying to understand the nature of the trade-offs that mean that we are not currently meeting our collective aspirations for data as a design material might give us a better idea of where we might want to focus for developing more sophisticated processes and uses for data. Would it be possible to encourage different kinds of choices with the use of data, and what would need to be valued for this to happen? I would be keen to understand more about

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the constraints that designers are working under, and, especially, the extent to which these constraints are similar to those under which scientific researchers are also working.

3 COMMODITY DATA AS BUILDING BLOCKS

The call for papers for this workshop suggests that we are perhaps only just beginning to understand what we can do with data: “*To labor the metaphor, if data were wood, we have only been using them to make simple tables and chairs, not buildings, sculptures, boats, and paper.*”

One of the things I am interested in is the relationship between commodity and craft. I have written about the connection between these concepts [3] in relation to the larger research process (i.e., not only data). In my work, I have argued that research involves selectively moving between modes of consumption and craft in order to maximise knowledge generation. Craft research activities might be underpinned by commodity research artefacts (e.g., analytic tools). In the context of data, commodity data might be the kinds of data that we can get quickly and cheaply from digital sensors. Location. Barometric pressure. Ambient noise levels. These commodity datasets can in turn be used to underpin more craft-oriented data; perhaps they can be used as probes for elicitation, for instance.

The metaphor in the workshop’s call for participation points to this kind of craft-consumption relationship, in which commodity items can be used to develop more elaborate structures – crafted data palaces made out of commodity data materials. What I would like to discuss with other attendees is whether we should or ought to think in this way when we are thinking of as data as a design material. Perhaps more imaginative and sophisticated ways of using data mean dropping this analogy; it might be that using commodity data as a building block constraints our thinking about what we can do with it, and that exciting new ways of using data imply a qualitative rupture with those commodities; the things we can build from commodity data might be interesting and powerful, but it might be that this approach leaves some kinds of knowledge inaccessible.

It might also be that everything is, or ought to be, reducible to commodity components. Perhaps this approach is *preferable*, because it is most likely to be adopted in practical contexts. Perhaps the commensurability of commodity data components would enable faster iteration, or more complete knowledge transfer within organisations and communities. I don’t have a clear idea about what the answers here might be, but I think the ways that designers think about materials and processes mean that I might have a better idea about how to try and answer these questions, having participated in the workshop. I very much look forward to receiving the benefit of colleagues’ expertise.

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