Data-Driven Design Guide for Discussion

Created by Kate McEntee and Jess Bird for Design & Ethics #6 August 2019

Q: How do we define data? What's our experiences working with data and design? Definitions of 'data-driven' from the readings include:

"'data-driven approach' to design: a human-centered design process that brings quantitative data to the forefront of every decision and pushes design teams to think less on their feet and instead more in a way that constantly responds to data." (Portable)

"My most recent definition of data-driven design is that it means digitalisation and automation of design research... data-driven design means using more data, particularly quantitative, in the design process." (Nordcloud)

"The existing frameworks are mostly relying on a qualitative approach to describe users, experiences and systems - but if design is transitioning to focusing on a local-based globally-connected community in continuous exchange of information, values and culture (Tonkinwise, 2015), we could consider to better integrate data coming from other relevant sources available nowadays, and embrace that evolving context and dimension with a mixed of quantitative and qualitative approaches …. We argue that using digital data and analysing them both qualitatively and quantitatively can be extremely useful in the complex social, technical and economic contexts where design is called to intervene." (Tassi, et. al.)

Q: What do we value about quantitative and qualitative approaches?

"The short story written about the data-driven service design event gives an opinion I can readily agree with: quantitative data must complement, challenge and give a foundation for qualitative data … The long-term experience design specialist Kerry Bodine puts it as **"service design requires a mix of research inputs."** She has expressed a great concern of over-reliance on big data methods **without** the complementary qualitative insights. This relationship has been previously highlighted by Pamela Pavliscak under the terms **big and thick data**, in order to highlight their contemporary nature." (Nordcloud, emphasis in original)

"You might interview, co-design, develop empathy and insights and ask why, why, why with more than a hundred doctors and, hopefully, you will come up with some aggregate information on the key problems ... you've lost time … And when you are not afforded that time, the trade-off you make means researching with fewer people, which inevitably you justify by claiming that your insights may not be statistically significant, but they are significantly deeper." (Portable)

"Our sense of discomfort is that often design thinking, and even co-design practices, can become bloated and unnecessarily heavy, weighed down by bureaucracy and excessive tasks that waste time. At best, user research can be an effective way to generate validated insights that help designers make confident decisions where before there were only biases and assumptions, but at its worst, it's a time-consuming exercise for risk-averse organisations to feel they've done their due diligence…" (Portable)

Q: Digital data vs Big Data. What's the relationship between quantitative data, digital data and big data? How in our work are they treated the same and differently?

"Digital Methods differ from the research programs focused on big-data. The emphasis of Digital Methods is not in the magnitude of digital data analysed but in the critical affordances deployed by the data-acquisition protocol." (Tassi, et. al)

""Big data" is no longer just a trend predicted by futurists. It's well and truly here and it's here to stay … But "big data" is yesterday's buzzword. "Data science" is today's – except this time the buzzword actually has

meaning. Data science is about applying the scientific method to data: Take a hypothesis, design an experiment, and test your hypothesis using the data you have." (Portable)

Q: Consider the 2 statements below from the Portable report. What do we need to consider when the time it takes to gather insights about user behaviour, and applying that speed to our approaches in not-for-profit, justice and health sectors?
"People could lose their jobs from the information they provide and the access they give. A new minister or government could get sworn in, introducing new legislation or initiatives that renders your work redundant for the next eight years. A competitor could get their product to market quicker than yours and eat up all of the oxygen that could otherwise have been yours to gain users and impact. There are many costs to seeking truths about user behaviors, but time is always the biggest and most serious." (p. 10)

"Customer experience (CX) design is already leveraging a lot of the same principles to generate outcomes, however this field is mainly stuck in the world of retail and ecommerce and not really employed by those seeking to solve larger, more complicated problems faced by government, not-for-profit, the justice sector, health organisations, and other NGOs." (p. 20)

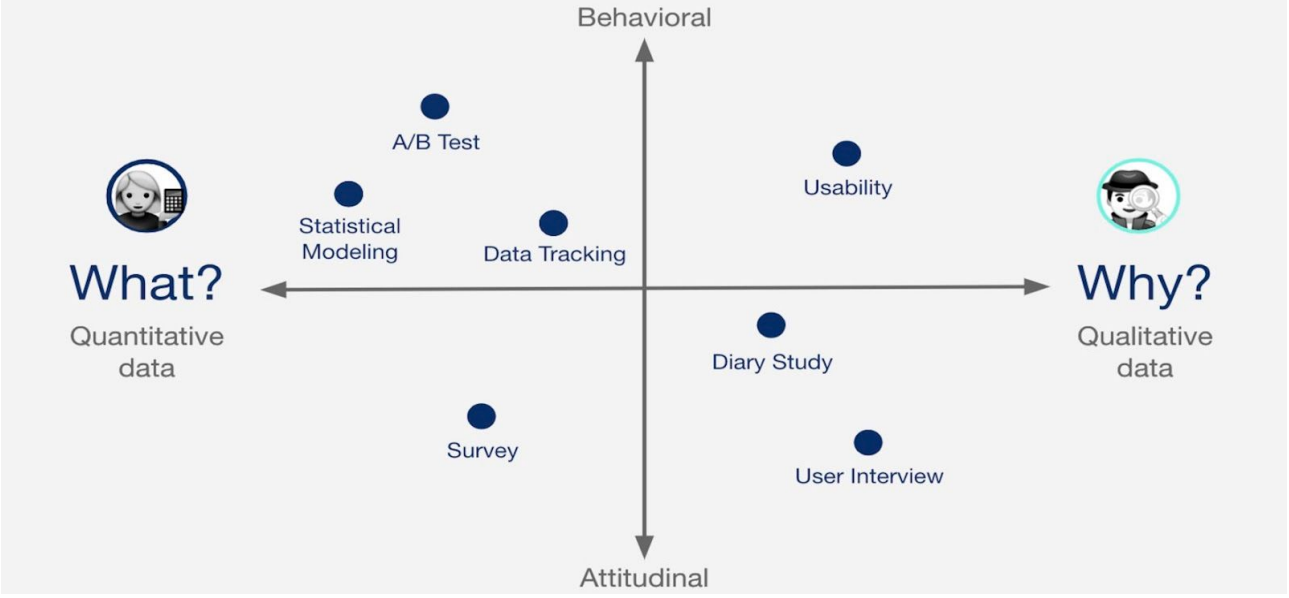
Q: What purpose would we like to see big, digital, quantitative data serve?
"I believe a thoughtful analysis of big data can serve three purposes in service design:

1. Identify opportunities for new experiences
2. Inspire solution creation
3. Validate solutions*

* difficult to validate without a detailed implementation and answering the how question"
(Nordcloud)

"Petteri has personally transformed from a quantitative data specialist to a designer that sees value in both types of data. "The best uses of quantitative data lie in proofing new ideas and verifying a business case around it," he believes." (Nordcloud)

Q: Methods: How do we choose methods for our research tasks? What informs those decisions? How (do) we combine different methods in productive ways?



"As we can see from visualizing our methodologies in this "What-Why Framework," User Researchers and Data Scientists are natural partners. Data Scientists look at the large-scale, overarching trends in user

behavior through methods such as A/B tests and statistical modeling. User Researchers apply methods such as interviews and surveys, to explore the self-reported listener experience to understand the mental models and perceptions of Spotify." (Spotify)

Sources from:

- What is Data-Driven Service Design? (Nordcloud): https://nordcloud.com/what-is-data-driven-service-design/
- Data-Driven Design report (Portable): https://www.portable.com.au/reports/principles-of-data-driven-design
- Digital Methods for service design: Experimenting with data-driven frameworks (Tassi et al): http://www.ep.liu.se/ecp/150/091/ecp18150091.pdf
- Simultaneous Triangulation: Mixing User Research & Data Science Methods (Spotify): https://spotify.design/articles/2019-07-17/simultaneous-triangulation-mixing-user-research-data-science-methods/