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Big Data or 'Big Ethnographic Data'? Positioning Big Data within the ethnographic space

JOHN CURRAN
JC Innovation & Strategy

This paper offers a cultural analysis of the different narratives that currently frame the concept of Big Data. With specific attention to how the ethnographic community has approached Big Data, I will make the point that the ethnographic community needs to rethink what its offer is within the business world. Instead of trying to position ethnography as a discipline that provides deep insights to human behaviour (which we often call 'the why'), while Big Data offers broad accounts based on large data collection, I make the case that both approaches should be seen as being positioned within an ethnographic space. This is because both ethnography and Big Data are interested in human behaviour and the cultural field and both are interested in generating insights. We should therefore situate Big Data and ethnography as a relationship that exists in a new epistemological field, a field that is both interpretative and data driven. This field I call 'Big Ethnographic Data.

INTRODUCTION

> "To do something interdisciplinary it's not enough to choose a 'subject' (a theme) and gather around it two or three sciences. Interdisciplinary consists in creating a new object that belongs to no one" (Barthes in Clifford 1986)

The relationship between numbers and human and cultural narratives has historically oscillated between trying to forge relationships with each other to mudslinging criticism at each other (Hammersly 1989). The relationship has never been harmonised but instead has been based on a game of justifying importance over each other. Which process is the most relevant? Which is the most 'true'? Which is the most reliable approach? These questions form some of the common pillars that frame this uncomfortable relationship.

With the ever-increasing visibility of Big Data we are seeing this debate develop further. Gone is the tennis match between 'quant' and 'qual' and welcome the tennis match between the big serving Big Data verses the human focused approaches to data collection, especially ethnography. How this match will end is unpredictable since little is known about the new big server, however, if we look back at history we might get a clue that neither will run out winners. By using the example between 'arm-chair' anthropologists and the birth of ethnography at the turn of the 20th Century, we can learn that criticisms towards Big Data carries many of the same characteristics directed at arm-chair anthropologists, by the then new anthropologists (especially Malinowski) (1922) that promoted a new field work, ethnography.

This paper will focus on two areas. The first one will be based around a cultural analysis of the fast emerging debate between Big Data and ethnography. It will argue that instead of recreating similar debates around the need for a human centred approach as well has statistical representation, we need to re-evaluate the 'ethnographic offer'. The second will make the claim that as ethnographers, we need to take a reflective approach to this debate and instead of trying to enter into a similar debate around relevance of data collection, we should explore how the discipline of ethnography needs to develop and fundamentally re-shape its offer within the non-academic space.

This paper will make a bold attempt at beginning of a new discussion on 'what ethnography is' in relation to Big Data and make the point that ethnography needs to create a new paradigm that shifts from shaping its identity by claiming to understand the 'whys' around cultural behaviour to one where it and Big Data are actually focusing on the same epistemological field, one that is situated within human behaviour and crucially cultural interpretation. Both should therefore be seen as interpretive epistemological approaches to analysis for human behaviour and cultural dispositions. Therefore, I want to try and explore ways in which we can move away from positioning ethnography as something that Big Data needs to one where both are actually ethnographic. In other words, both explore the 'big' by understanding culture holistically. They should therefore both sit in a similar space which I call 'Big Ethnographic Data'.

Before developing this argument, I want to state that this paper should be read as a document to generate discussion that will at least allow us to step back and begin to develop the core offers and merits of an ethnographic approach and theoretical thinking. It is not set up to be fixed. And as the author, I would hope that it would be challenged and developed through discussion and debate. I am not at this stage offering a new model but instead set out the infrastructure to start building one as a community.

DEFINING BIG DATA – A CULTURAL ANALYSIS

Defining Big Data seems to be a complex task since it appears to have the ability to quantify so many areas of our lives, if not all areas of our lives through digitalisation and 'datafication'. The technology revolution has provided platforms that have enabled data to be collected on mass and at a more rapid rate. Trawling through many definitions I have come across two broad areas of interest. The first is its ability to collect data on large issues relating to, for example, health, illness, economics, planning and energy. Here Big Data works as a means of understanding human centred macro trends. A good example of this is Google Flu Trends[1] that can track in almost near to real time influenza epidemics so to help direct medical resources to the most important places. Big Data is also being used as a 'preventative' approach to predicating and forecasting within financial and retail spaces. Leading US banks such as Wells Fargo and Bank of America, consumer goods companies such as Coca-Cola and 3M, and retailers including Wal-Mart are all using Big Data analytics

[1] http://www.google.org/flutrends/

to improve the running of their business models and to anticipate changes in demand before they actually occur (Financial Times, 2013).

The second area, and the one I want to focus on for this paper, is how Big Data makes cultural profiles of who we are. The who-we-are part relates to every aspect of our lives: from what political dispositions we might have, to what we buy as consumers, to the media we attach ourselves to and to who we like and who we worship. Journalist, Steven Poole, has recently written in the New Statesman that through "Big Data analysis, the "cloud" comes to know an awful lot about us. Simply analysing a person's Facebook "likes" can identify a person's sexual orientation or history of drug use" (2013). Amazon can now understand more about its readers through e-books than ever before in the publishing world. They can understand the types of books that people enjoy, the length of time it takes to read and when and where in the book people 'drop off'. Commercially, the outcomes for Amazon are massive, because they are able to understand the taste-zeitgeist of their readers and potentially manufacture books to fit into their readers' tastes. Or at least dictate to authors how their books should swing. This is revolutionary within the world of publishing that has traditionally relied on reviews and sales to cage consumer taste. Alex Alter (2012), writing in the Wall Street Journal explains that:

"In the past, publishers and authors had no way of knowing what happens when a reader sits down with a book. Does the reader quit after three pages, or finish it in a single sitting? Do most readers skip over the introduction, or read it closely, underlining passages and scrawling notes in the margins? Now, e-books are providing a glimpse into the story behind the sales figures, revealing not only how many people buy particular books, but how intensely they read them."

What we are seeing is that through social media and technology, Big Data is beginning to move in to a position where it can generate mass social profiles on groups and individuals that offer more than just "what we do" to "what we like" and interestingly, "how we think". Here we are seeing "datafication" exploring and trying to understand the cultural spaces where human behavior is shaped, similar to what the French anthropologist, Pierre Bourdieu, called the habitus (1977) which focuses on how values, dispositions and tastes are formulated and shaped within social groups in an everyday context. Crucially, the habitus is acquired within the 'field' where the relationship between individual subjectivity and social structures is molded. I will explore the similarities in more detail between what Big Data is attempting to focus on and what ethnography does focus on later in this paper. But what is important about Big Data sitting in the space of culture is that the cultural data becomes an attractive area of investigation and a prized asset and commodity. For example, The Financial Times recently wrote an article called Building a Big Data Strategy (June 4th, 2013) where the journalists claimed that the "data-driven economy is upon us. First-generation internet companies such as Google and Amazon, have demonstrated "data alchemy" - turning data into gold - and now others realise that great opportunity can be seized by using Big Data and the big ideas that come along with it".

It appears that Big Data is not just about collecting mass amounts of data relevant to human life it also attempts to provide a key outcome of such data – ideas.

QUESTIONING BIG DATA – A GENERAL VIEW

Along with all the positive waves associated with Big Data comes a tsunami of concerns about how Big Data is structured and what it can or cannot offer and for whom and for what purpose. Protecting our privacy against the ability of every part of our lives to be monitored has led to journalists, academics and industry professionals to call for an ethical code that will protect our individual and social privacy so that all powerful bodies do not control what we do through a Foucauldian (1977) gaze where surveillance makes our bodies become "docile". This takes place under the structured and psychological system of self-regulation of the body and self thus not knowing when we are being watched and monitored. Like prisoners, we act out in a way that makes our behavior suitable to the needs of the institutions of power, or to use Althusser's (1970) term – the State Apparatus.

Jane Frost, Chief Executive of the Market Research Society in the UK explains in Marketing Magazine (May 30th 2013) that issues around data privacy are now crucial so that large organizations understand limitations in what they can or cannot have access to. She makes the important point that:

> Businesses need to provide clear explanations of why they want personal data, what it will be used for and, critically, what steps they are taking to ensure that they are acquiring and using data in a responsible way…. At the moment, there is no way for consumers to own their data and tie it in with their right to be forgotten. People are requesting data privacy more and more but there is a time when data will suddenly be out there and people will be surprised by how it is being used. Customers see organizations as responsible for the whole supply chain meaning that trust and transparency must be present at every point of interaction.

Within commercial, public and political fields, trust between organization, consumer and voters is critical and therefore, calls for transparency in regards to what is being done with everyday data are important no doubt.

However, the temptation for large organizations to gather data with a new and more sophisticated trawler net becomes an interesting topic where mass data can create mass insights so that those big organizations can better the brands and products their consumers buy, and provide them with more options based on their personal and social characteristics. Good brands and good products also create trust right?

Take for example the UK supermarket chain Tesco. By using Big Data, and lots of it, they were able to understand the consumption habits of new parents pre and post the arrival of their first born baby. What Tesco focused on, amongst many aspects of the new families lives, was that when parents were buying nappies. Tesco would send them discount vouchers for beer because they realized that the father would have less chance of going to the pub (The Economist, May 19th 2012).

Therefore, the concept of consumer trust becomes more complex than stating the need for transparency when we know that trust between consumers and organizations is partly formulated on emotional, psychological and cultural needs. This then sets up a more

complex structure to what an ethical code could look like. Fundamentally, Big Data provides the ability to tap in to the desires[2] of the consumers in ways that can be unconscious to them.

By exploring issues around data and privacy we can see that there are concerns relating to the role of people and their sense of self and privacy rights. This is countered with discourses of excitement or utopia where Big Data will make the world a better place for us all. An example of this utopia is captured in a recent article by Jane Wakefield of the BBC where she explores how Big Data is being used to understand what makes cities 'happy' or 'unhappy'. She states that research carried out by the Advanced Computing Centre at the University of Vermont used 37 million geo-located tweets from 180,000 people in the US to explore this concept. They found that words such as 'starving' and 'heartburn' were more used in tweets within cities with high rates of obesity. However, the key point of this type of research is to monitor in real-time the changing behaviours or urban populations (BBC, 27th August 2013).

A final critique of Big Data I want to briefly explore and which leads on to the following discussion on the relationship between Big Data and ethnography, is the concept of 'raw data' or the notion that Big Data is akin to a directionless machine that needs to scoff as much data as possible so to keep its parts oiled and alive. In other words, there is so much data that it is difficult to know what parts of it to analyse. Steve Poole in The New Statesman (May 29th 2013) states that when "you have a hammer, everything starts to look like a nail" and thus becomes tempting to hit and hard to quantify because you are hitting so many nails. While Carl Miller of Demos Think Tank in London, recently posted a blog for the EPIC London 2013 conference and argued that due to the often arbitrary and incidental way that data is collected it can often ignore context, culture and nuances because the data is so raw (2013). Therefore, Big Data has an identity that is potentially both clumsy and unsophisticated. However, is this really the case? In a blog post for *The Wire* titled "Why 'Big' is Blinding Us to the Real Value of Big Data" (28th August 2013), Matt Asay makes the point that only 28% of 'smart companies' state that data volume is their primary driver to using Big Data. He explains that the "smartest companies therefore first determining which questions it needs to answer, develop a hypothesis of data sources that will answer them, and then use flexible data infrastructure to capture the data". Therefore, asking the right questions first is key, which of course is difficult to do and get right.

Although Big Data is a very visible and attractive topic within the global media, business, politics and academia, it is still at the stage of development and maturing leaving us trying to understand how its arrival will change the world. Being part of change of any type, both good and bad, comes with a sense of pain and conflict before things settle. It is this stage that I think we are at.

[2] The idea that Big Data focuses on desires was an insight I took from a Royal College of Art (RCA) graduate on the Design Interactions MA called Owen Wells.

ETHNOGRAPHY QUESTIONING BIG DATA

I am interested in how the commercial world of ethnography has responded to Big Data's popularity. This is partly because I am an anthropologist and ethnographer that works in the business world, but also because I think the current discourses around what Big Data is offers ethnography the conceptual space to deconstruct its own offer, both internally within the ethnographic discipline and to the outside world.

I want to explore some important points that have been made from within the ethnographic field so as a means of marking where the current arguments are situated. Later on in this paper I will take these to understand how we might re-think the ethnographic offer in relation to Big Data.

Core to ethnography is its ability to understand everyday life and how humans, as social beings, make sense of their worlds and social structures. Using theories on ritual, symbolism, metaphor and weaving these with theoretical discourses around politics, religion, identity, gender, power, art and consumption (to name a few) provide the ethnographic field with a holistic foundation to aid in the epistemological exploration of knowledge and understanding. If done right, we can take these analytical theories and apply them to the world of business, politics, design, branding, education and health so to create opportunities of clients.

The Big Data party has led to ethnographers staunchly defending their approach by showing what ethnography can offer and what Big Data cannot offer and how importance must be given to ethnography and Big Data working in 'partnership'. This is a point made in a recent blog by Tricia Wang where she states that ethnographers "must engage with Big Data. Otherwise our work can be all too easily shoved into another department, minimized as a small line item on a budget, and relegated to the small data corner" (2013).

One of the central distinctions that have been identified between the two is the fact that ethnography provides deep understanding in to the 'hows' and the 'whys' of human behavior. Sam Ladner explains that Big Data fails to provide adequate insight into why users use a product because this data lacks holistic understanding. She goes on to state that Big Data "provides a culturally illiterate portrait" (2012:33). Fundamentally, the point that Ladner is making is that Big Data needs ethnography to uncover the 'hows' and 'whys' of human behaviour.

This argument has also been central to ethnographic blog discussion points. For example, Tricia Wang distinguishes between what Big Data offers and what ethnography needs to offer. She proposes the concept of 'Thick Data', which she describes as the:

> best method for mapping unknown territory. When organizations want to know what they do not already know, they need Thick Data because it gives something that Big Data explicitly does not—inspiration. The act of collecting and analyzing stories produces insights (2013).

The problem however with these arguments is that other areas of qualitative research are also now making similar claims as ethnography is to understanding the why as a means of producing creative and inspiring insights so to distinguish themselves from Big Data.

Returning to Jane Frost, Chief Executive of the Market Research Society in the UK who makes the point that "Big data may tell you how many customers you have won or lost but not necessarily why. This (the why) is the intelligence that can really make a difference" (Market Research Magazine, May 30th 2013). The quote assumes that qualitative approaches are positioned within an elite of creating game change insights while Big Data is less capable of doing this. The irony is that many of the distinctions we make as ethnographers in relation to Big Data are also the same arguments we have used in the past to distinguish ourselves from more traditional qualitative research methods, namely the 'dreaded' use of focus groups. In other words, focus groups are based on asking questions while ethnography understands the thick description – the why.

I am not refuting that ethnography is excellent at generating deep insights. However, I question the over use of this term – the why. We are in serious danger of over using it as a default term as means of distinguishing ourselves within a highly competitive market. It is therefore at risk of becoming meaningless or even worst, attempting to assume that what the why represents is 'fact' or 'truth'. Understanding the why is extremely complex, both in relation to methodological approach but also professional ability. It is highly psychoanalytical which itself is embedded heavily within culture, while also being shaped by culture.

We need to start by rethinking how we frame the why by stepping back and asking ourselves two interlinked questions. 1) What would the insight world look like if Big Data also claimed to position itself within the why space? And 2) What would stories look like and feel like if generated through Big Data? The previous examples of Tesco understanding why new fathers need discounted beer, or the future of amazon being able to write literature to fit in to the psychological and emotional needs of the reader hints at the point that Big Data will, in the future, be able to understand the why and tell stories…. literately. If this is the case, then the cultural space where ethnographers sit will also change. Therefore it is crucial that ethnography challenges itself rather than using the default button and attempt to explain what it offers and what Big Data cannot offer. By doing this will enable ethnography to build its identity and offers.

MOVING TOWARDS 'BIG ETHNOGRAPHIC DATA'

I think there are two steps we need to start the process of ethnographic change. The first is based on taking a brief look back in time where we see that this tension between data and anthropology has been played out for a while. The second is to understand Big Data anthropologically. By doing this, we can then begin to reframe what the ethnographic offer could look like.

The social anthropologist Adam Kuper describes the mood of British Anthropology in the first few decades of the 20th century as one that "would have to stress the overriding concern with the accumulation of data" (Kuper, 5:1983). Anthropological data previously relied on missionaries providing travel logs to 'arm chair' anthropologists that sat in comfortable libraries or universities to make sense of the data. Such was this new data on new and 'exotic' worlds it symbolized the 'Big Data' of its time and helped shape grand and universal models of culture and evolution. Enter Bronislaw Malinowski and his desire to develop anthropology through a new professional form of data collection, ethnography.

Malinowski rejected the 'arm chair' methodology of creating meaning through second hand data and advocated that models of culture and evolution needed to be built on data collected first hand so to be tested in detail and scientifically.

In the early 20th Century Malinowski, as the only professionally trained anthropologist to carry out such field research, drew up three kinds of data that had to be collected.

1. "Statistical documentation through concrete evidence"
2. Observing and recording social actions in an ethnographic diary
3. Collecting ethnographic statements (Kuper, 15:1983)

If we look at these three data points, they all dovetail together as a means of not creating 'small data' but creating big and deep data of the society being studied. Importantly, Malinowski was not attempting to create just ethnographic stories but his main aim was to develop robust scientific models of societies by collecting many different levels of data so to feed in to his functionalist model of society and culture.

So, if we interpret Malinowski's approach to ethnography we can see that much of his focus was on developing accounts of human life based on in-depth and broad data collected over a long period of time. This was not a rejection of Western science but rather an attempt to create even better and more robust data on human and social life both big and deep.

There are two really important talks given by anthropologists who have started to position Big Data as more than a methodology. Genevieve Bell at Intel has suggested that we see Big Data as a person, meaning that it needs things like relationships and to not look bad. Furthermore, it needs to be situated within a location or country.

The second talk is by Mary Gray at Microsoft Research entitled 'Anthropology as Big Data' (October 2011). An anthropologist and senior researcher at Microsoft Research Gray makes the important point that we need to not see anthropology and Big Data as not being in opposition to each other, but should be seen as both focusing on data from interpretative stand points. Big Data being more based on 'snap shot' approaches, while anthropology being more akin to 'time-lapsed photography' where over time data is understood, like what Malinowski proposed. Both forms of data, Gray explains, produce significant data that tell us something about life. This coming together needs to form 'collaborative epistemologies'.

I feel that both these anthropological interpretations are similar to Malinowski because they begin a process of creating a new paradigm shift in what ethnography can offer because they both have begun to reframe what Big Data is from an anthropological perspective.

We need to start seeing Big Data as more than coders, algorithms and something that ethnography is not. We need to see Big Data as fundamentally another process of offering cultural interpretation. Key outputs from Big Data are framed around culture while also informing and shaping culture. As are the stories and observations we choose to document as ethnographers. Like ethnography, Big Data is more than just a methodology but a format to understand human behaviour and shaping our responses to it–from how we live to how we behave to how we consume cultural codes.

Positioning 'Big Data' as a new form of ethnography I believe will help it focus on what it can set out to do – principally, understand human and cultural behaviour. If we take the

view as ethnographers that the aim of Big Data is not the epistemological search for fact but rather the epistemological search for meaning (more interpretative) then this moves into an ethnographic space. There are also other synergies between the two, such as:

- Both are interested in the everyday culture
- Both explore patterns, movement and networks
- Both are interested in the physical – how the body interacts with products and space
- Both can attempt to understand taste in relation to consumption and life choices
- Both can offer holistic and synchronic approaches to analysis

Situating Big Data as interpretative is key for the development of ethnography because it provides an 'analytical hook' that joins Big Data with Ethnography in a cultural space – a space where meaning is generated. This is fundamentally the basis for the idea of 'Big Ethnographic Data'. I am aware that coders, mathematicians, data analysts and marketing & policy managers might find this an abstract concept. But I will argue that this way of seeing will generate ideas, stories and insights on human behaviour and importantly on the whys to our behaviour that are organic and ever changing, rather than static and assumed. The key challenge for us is to design and communicate how 'Big Ethnographic Data' can test hypothesis around large data pools and create interpretations and directions based on the data. A good starting point is that within this space the coder sits together with the anthropologist in a relationship and not a partnership so to identify the 'cultural field' to investigation.

Let me explain this through an example. A number of years ago I was approached by the World-renowned Institute of Psychiatry in London to offer anthropological consultancy on how psychiatrists worked. I would give keynote speeches on the merits of incorporating culture and anthropological thinking in to how these very data driven and bio medically framed experts understood mental illness and research. I would start by simply saying. "Like it or not, you are anthropologists, but you just don't know it….or you don't want to admit to it". This would cause uncomfortable laughter. What I would go on to explain was that their professional role was unique because psychiatry created a bridge between the world of data and Western rationality with the world of culture, the patients' rationality. Both worlds were interpretative and lived in the same space and both were crucial when making extremely important decisions based on medication and care. Reverting to one over the other would create an incomplete outcome that would have a direct negative impact on the patient and their family. Combining both positivistic rationality and cultural rationality usually resulted in more productive conclusions for all. Importantly, this meant that the anthropologist and psychiatrist formed a relationship…with the patient to design their care plan. However, getting the psychiatrists to have a paradigm shift in thinking was always a challenge.

CONCLUSION

My theory of 'Big Ethnographic Data' it is not about a division it is about shared interests and focuses that produce cultural interpretations. As stated earlier in this paper it is at a primary stage of development and needs input from the ethnographic community.

The key point is that we do not need to feel under threat by Big Data, or try to validate ethnography's worth by creating fixed boundaries of difference. Instead, our aim is to bring the Big Data world in to the ethnographic space so to generate interpretive models, stories and accounts of human life that range from large communities to first time parents. It is within this space that innovation strategies need to be born out of, strategies that will be unique and rich in holistic understanding and rationality. For this to be a success, the anthropologist and the coder need to sit at the same epistemological table.

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