

Forms of binding: On data and not 'fitting in'

Anirban Gupta-Nigam

NECSUS 5 (1), Spring 2016: 111–130

URL: <https://necsus-ejms.org/forms-binding-data-not-fitting>

Keywords: anomaly, background media, digital, media, new media, pattern recognition, qualculation, relation, relief, small data, targeting

Saddleworth Moor

On 26 January 2016 *The Guardian* reported the following: '[a] man who died on a remote hillside may have been making a pilgrimage to the scene of plane crash that killed 24 people in 1949, police have said – possibly because he was related to a victim of the disaster'.[1] By the time the report was published the police had already spent six weeks investigating this case of a man – possibly between 65 and 75 years old – who travelled 320 kilometres from Ealing in London to Saddleworth Moor in Greater Manchester. Unable to identify the man or trace him back to a specific social circuit, the police hypothesised that he might have returned to the scene of a mid-20th century plane crash because he was either related to a victim of that crash or was himself a survivor. The police claimed that the anonymous man could potentially have been one of two young boys who survived the crash: Michael Prestwich and Stephen Evans. Prestwich died a few years later at the age of twelve in a railway accident and, as a story by BBC *Newsnight* revealed, the Stephen Evans who survived the crash is alive and well.[2] A few days after The Guardian report was published a story on Sky News suggested that the unidentified man could potentially be Hugh Toner, father of Sean Toner, an Irishman who went missing from Craigavon Area Hospital on Monday, 7 February 1994, 'dressed only in a vest and white pyjama bottoms'.[3]

I will return to this vignette towards the end of my comments. For the moment I want to note two aspects of the story that are relevant to my argument. First, consider the strangeness of the situation itself: a man who, in our hyper-digitised age of location tracking and biometrics, remains almost entirely unaccounted for. We can reconstruct the path he took to reach the 'remote hillside' but we cannot place him within a socially-legible context. His life remains a mystery hovering just outside our grasp. It is the stuff of televisual crime fantasies – that moment on a forensic drama when they discover a 'John Doe' floating in a river. It is odd, remarkable, and worrying precisely because the massive security architectures we have surrounded ourselves with are meant to prevent such anomalous occurrences. No one is meant to remain unaccounted for, and yet the only image we have of this potentially anonymous man (as of now) is a haunting screenshot taken from a CCTV camera as he descended an escalator in the course of his pilgrimage. Second, consider reportage of the event: faced with an informational vacuum journalists and the police alike flood newsprint and the airwaves with *data* – when he travelled, where he travelled from and to, animated maps of the route he might have taken, his approximate age, details of a 1949 crash that may or may not explain the circumstances of his demise. How are we to understand these two complementary occurrences – the death of a man unaccounted for and the attempt to account for him by fitting him precisely into the patterns he resists being fit into? The story from Saddleworth Moor is indicative of a larger anxiety that surfaces in our societies today, an anxiety centred not on anomalous events but almost-singular ones – events that do not quite fit the pattern we expect them to. Such events occur when the *relational bind* of data frays a little bit. As I will argue, such almost-singular acts of fraying are terrifying precisely because they are *not* anomalies. Patterns can account for anomalies – a bomb blast or a terrorist attack is unexpected but not unaccountable. However minor occurrences, events that do not 'fit' present a different challenge altogether.

The relational bind

In a recent article published in *Medium* anthropologist Tricia Wang put forth an eloquent argument complicating the unthinking embrace of big data by corporations and people alike. Since large datasets do not necessarily supply the most insightful or rigorous information, she suggested that big

data must be complemented by 'thick data'. A nod to Clifford Geertz' idea of 'thick description', the latter serves to defend the ethnographer's work, proposing that small data is critical in unpacking what massive patterns fail to reveal.

Big Data requires a humongous N to uncover patterns at a large scale while Thick Data requires a small N to see human-centered patterns in depth. Both types of Thick Data relies [sic] on human learning, while Big Data relies on machine learning. Thick Data reveals the social context of connections between data points while Big Data reveals insights with a particular range of quantified data points. Thick Data techniques accepts [sic] irreducible complexity, while Big Data techniques isolates variables to identify patterns. Thick Data loses scale while Big Data loses resolution.[4]

Wang's 'thick data' formulation – one which has attracted a fair amount of attention among the online media commentariat – is by no means an exceptional one. Jenna Burrell,[5] danah boyd and Kate Crawford,[6] Samuel Arbesman,[7] and Gary Marcus[8] have all made similar arguments about the follies and problems of hyping big data over more interpretive methods of gaining knowledge. At a time when machine learning-oriented pattern recognition seems to be foundational to establishing new coordinates for governance, policing, and marketing alike, these repeated calls to take the minor, the small, and the apparently insignificant seriously are important to pay attention to. Rather than reemphasising this line of argumentation I am interested in foregrounding – if somewhat provocatively and speculatively – certain assumptions that are foundational *both* to the proponents of big data and their critics. The proposition that 'data' (in the plural) structure the world or that the patterns generated from data determine to a large extent how the social field is organised has not yet been adequately examined by scholars involved in the debate on big data. My argument is therefore allied to but not the same as the argument made by Lisa Gitelman in her introduction to the edited collection *"Raw Data" is an Oxymoron*. [9] That particular claim rests on interrogating the interpretive exercise that frames data from its point of origin; it is not primarily concerned with the ethical and political questions surrounding the mechanisms by which such data is generated, interpreted, and used. I am interested in thinking through the manner in which pattern recognition determines and structures the world. In a sense there is nothing 'new' about pattern recognition – the technique has been central to the apparatus of governance and capitalism since the inception of modernity, as the work of statistical historians has emphatically

demonstrated.[10] However, the landscape today is transforming quite rapidly.

Big or small, data makes sense of the social. Data makes the world actionable.[11] Data binds. Data produces subjects, markets, and worlds. The argument for thick data is not an argument against big data; it is a call to better refine and better interpret the information at hand. In the following I want to examine the other side of this phenomenon: not the patterns data create to make sense of the world but forms of life that never quite rise to the status of becoming-data. If big data-based pattern recognition techniques bind us into massive relational entities by combining discrete bits of information[12] then how can we begin to comprehend the desire to break free of relation? At a time when relation has become ontological – we are told to be social, network, and connect – is there any hope of locating a space away from the informational bind of relation? Can anyone break free of the pattern that determines their place in the world? Is such breaking away to be understood automatically as a kind of anomaly?

The ‘data’ I am referring to here is so small that one cannot sample or aggregate it. It exists, at best, at the level of individual desires to be free of governing structural patterns; at worst it is not even a consciously-articulated desire. For a long time affect theorists have tried to get at the region of such singular experience by interrogating myriad encounters between humans and the worlds they are immersed in.[13] The pre-constructivist, pre-social thrust of a lot of affect theory does not entirely put the question to rest. To interrogate the problem from a different angle, in the next section of this article I will provide an account of how exactly big data patterns the social field. I will argue that patterns function in the background, adhering to the logic of what Nigel Thrift has called ‘qualculation’. Massive automated and backgrounded operations serve as a ‘technical unconscious’[14] that binds discrete entities, events, and subjects into relational wholes or patterns. In this endeavour both big and small data play a crucial part by *making information legible* through the act of interpretation. Following an explication of the logic of structuring background media I will take a historical detour into the work of Georges Canguilhem and Ian Hacking to show how the patterns that make the social legible are themselves inherently and ontologically fractured. Finally, I will return to Saddleworth Moore and its ‘remote hillside’ to better articulate the threat posed by the almost-singular.

Qualculative background media

The relational bind I gestured to above is produced in large part by forms of background media that structure the organisation of the social field. A historical archaeology of such media is beyond the scope of this essay, but it is important to note that the automated mechanisms I discuss here are only the latest manifestation of vast media apparatuses that silently perform functions without the explicit knowledge of people. This is not to suggest that people are unaware of such media, merely that they are not greatly concerned by their presence. Indeed, 'all human activity depends on an imputed background whose content is rarely questioned: it is there because it is there'.^[15] We can discern various kinds of pre-digital background media. The numerical and statistical modes of classification and categorisation Michel Foucault^[16] wrote extensively about are one example of governmental technologies that permeate the social field to such an extent that the very categories they create become naturalised and commonsensical over time.^[17] An extension of these technologies occurs in the form of paperwork, particularly in bureaucratic contexts. Paperwork – the forms we will, the documents we submit to make ourselves legible to authorities – is perhaps the background media of the 20th century par excellence. This kind of media is omnipresent and fundamental but at the same time highly invisible and occluded from the realm of public thought or consideration. Hence only scholarly moves to take such media seriously^[18] end up reflecting on their banal, mundane, yet structuring presence.

The emergence of digital media in general and machine learning in particular has to a large extent literalised the notion of the background. Computers are always running background functions; apps are always updating without our knowledge (or, often, explicit consent); location data is transmitted without pause whenever our devices are connected. In such circumstances the biopolitical relational bind Foucault theorised becomes stronger – it presses more firmly against our bodies.^[19] Geographer Nigel Thrift helpfully refers to automated pattern recognition as 'qualculation' – a term he borrows from scholars like Michel Callon and Franck Cochoy.^[20] Given his interest in affective life-worlds it is not entirely surprising that Thrift traces the contemporary qualculative situation back to the early 20th century origins of cinema and German psychophysical theory. By drawing attention to the realm of perception the psychophysical tradition tried to understand human action and behaviour in terms other than will or

conscious striving. Instead, psychophysical theorists argued that perception was prior to consciousness and played a structuring role in how humans interacted with the world.[21] Thrift, who often uses the word ‘background’ when discussing qualculation, argues that ‘shards of psychophysical thinking sank into the ambient background of everyday life, and have stayed there ever since.’[22] Within the scheme of this argument proliferation of digital devices and the new media ecosystem, more generally ‘a vast epistemic apparatus of screenness’,[23] brings the ambient background sharply into focus.

Software, Thrift suggests, is the critical media that allows backgrounds to structure the everyday. This is mainly because the smoothness (what in jargon might be called ‘transparency’) of functioning software makes its actual mechanisms invisible to the user. Users seldom think about the vast quantities of real time calculations and operations that allow a particular experience to occur. Also, as it becomes ever more present in a range of (often interlinked) devices, users get accustomed to software – much as they do to standards and quality checks. This form of user ‘absorption’ renders software into a ‘technological unconscious’.[24] Once it enters an unreflexive space the work of background media becomes easier. As Thrift writes, today ‘these background time-spaces are changing their character, producing new kinds of behaviours that would not have been possible before and new types of objects which presage more active environments’.[25]

If the Foucauldian phase of governmentality was premised on calculative rationality then qualculation emerges as the centrepiece governance in societies of control. Here Thrift’s intervention is critical in formulating precisely how background media not only amasses data but actively *structures* the social field through ‘many millions of calculations continually ... made in the background of any encounter’.[26] In such contexts calculation is no longer a precision operation. ‘Rather, because of massive increases in computing power, it has become a means of making quantitative judgments and working with ambiguity’.[27] Thrift’s mention of uncertainty and ambiguity point to the manner in which continuous background calculations (what we can in shorthand call ‘machine learning’) are capable of adaptation and mutation in keeping up with a rapidly-changing media-tised world.[28]

Qualculation, which designates a certain fusion of quality and quantity, not only names an almost epochal change in forms of governing but also inaugurates a kind of rationality that can accommodate logics other than

hard numbers. In control society statistics are only part of the game. Qual-culation introduces into the logic of numbers 'an artificial world that is increasingly sentient, and potentially adaptive'.[29] Cochoy's work on 'equipped cognition' in the context of shopping is instructive in considering how the qualculative background structures social life. Arguing that the shopping cart introduces a 'volumetric' judgement into the shopper's choices (which complement her purely economic rationalisations for buying specific commodities), Cochoy shows how the qualculative background – in this case the shopping cart – is not something one is unaware of even as it transforms one's habits, gestures, and economic life.[30] However, as the shopping cart example also illustrates, neither pattern recognition nor qual-culation are purely digital inventions. These processes might be accelerated under conditions of ubiquitous computing but background media have structured the social for a much longer time. In addition to the politics of paperwork one could of course profitably consider the relationship between the frame and the background in Erving Goffman's work or sociological studies of attention and irrelevance as informing a longer history of qualculative backgrounds that Thrift himself often underplays or overlooks entirely.[31]

Mentioning this longer history is important because its elision is not entirely incidental in Thrift's work. As critics like Mark Hansen correctly note, Thrift's particular attention to qualculative regimes is framed to a large extent by his investment in the politics of affect. Hansen's perceptive and persuasive critique of qual-culation (and Thrift's larger project on nonrepresentational theory) identifies 'his embrace of media's radical exteriority' as a precondition for qualculative background operations. Hansen worries that Thrift simultaneously reduces media to something *outside* human experience *and* continues to hold on to a 'neurophenomenological' notion of experience. From Hansen's point of view (a view I would largely concur with) such a tendency to hold on to a biologically-pure moment of affective intensity that exceeds technical mediation is untenable and naturalises our interface with technology in the broadest sense.[32] In considering how qualculative abstractions pattern the social field I am therefore in agreement with Hansen's spin on Thrift – a spin which insists that if properly understood qualculative media foreclose any possibility of pre-technical access to the world. By extending Thrift's digital paradigm to the world of shopping carts and Goffmanian frame analysis we therefore attempt to both historicise qual-culation and retain its imbrication with technical forms.

All of which is to say that qualculative rationalities form the backbone of big *and* small data. No interpretive move is possible without a consideration of the qualculations that are always-already present within any analytic system. Therefore, regardless of whether we devote ourselves to discerning patterns in large datasets or decrypting the thicker stories datasets contain we are never removed from the qualculative sphere. Because qualculation can handle uncertainty, ambiguity, and affect, the distinction between ‘big’ and ‘small’ is partly incidental to its operation. Therefore, rather than focus exclusively on the *size* of datasets it is perhaps equally important to attend to the overarching logic by which both big and small data operate. This is what I refer to as the logic of relation or the relational bind. Indeed, Thrift’s explication of qualculation points precisely in this direction, since he is not merely interrogating algorithmic mechanisms but also new paradigms of embodiment: ‘I want to argue that in the qualculative world, the hand will take on some different styles of haptic inquiry: it will *reach* out and *touch* in different ways.’[33] In other words, within the emerging software-based algorithmic qualculative ecosystem it is difficult to separate specific, individual sensations from larger patterns gleaned through data. The big and small are not opposites but, as Wang cannily points out, complement each other. When considered in terms of a ‘bind’ it becomes clear that data, big and small, work to structure, contain, and produce the social field. This is as true of machine learning as it is of the social frames that hold a person’s presentation of self in place. If all of these comments are still too abstract as propositions then some illustrative demonstration might be useful.

Targets

The ‘age’ of big data is an age of the target. Philosopher Grégoire Chamayou has even suggested that we might be entering ‘targeted societies’.[34] Chamayou’s work strives hard to disentangle the multiple logics of targeting at work in different contexts – from the militaristic to the governmental and the corporate.[35] Drones are obviously exemplary devices that map vast territories, create what Chamayou calls ‘patterns of life’, and then eliminate enemies by sifting anomalies from these well-established patterns. Target culture is entirely characterised by the relational bind. Targeting binds together discrete pieces of information and ‘raw’ data into sensible, actionable patterns from which anomalies are spotted and excised.

Semantically, targeting connotes something quite complex – it refers to the focalisation on something *singular* (either a person, or a location, or a consumer market). At the same time this singularity only emerges from the amassing of vast quantities of data. Importantly (an aspect Chamayou tends to overlook), the military and the marketing logics of targeting singularise to very different ends: while the former targets to kill the latter targets to sell. The act of 'targeting' therefore quite easily bridges the different calculative rationalities that underlie contemporary forms of biopolitical governance. The epistemological paradigm for determining who can be killed and who should be sold what commodity is essentially the same.

Relationality emerges as an important category in this context because, as previously mentioned, targeting has weird semantic connotations. Dictionary definitions of the word target suggest it refers to *a* person, object, or place – emphasis on *a*. However, the act of targeting can simultaneously refer to one or multiple persons, things, and objects. Target populations (citizens, enemies, and consumers) are a statistical norm determined by the analysis of patterns produced through data. However, whether in the field of governance and marketing or in militaristic operations patterns are produced primarily through highly personalised and individualised data. The work of scholars like Frank Pasquale is extremely on point here in showing how fragmentation and personalisation contribute to the production of large-scale patterns that determine how a governing entity acts.[36] Given this situation I would suggest that the optic on big data changes radically the moment we turn our attention away, even slightly, from the work of algorithms to the actions of users. When journalists write 'you are what you click'[37] they evoke a world where highly fragmented, individualised, and micro-level actions contribute to the production of massive quantities of data. Often users are unaware of the constant calculative tracking that collates their browsing and shopping habits into larger preferential groups. On other occasions they are aware but helpless or unconcerned about preventing such tracking.

The slogan 'you are what you click' poetically encapsulates both the relational bind and the combination of big and small data in making the world actionable through patterns. Ultimately nothing works without patterning. The entire operation of social life is premised on modes of targeting, the clustering of subjects, enemies, and consumers, in an effort to figure out how the social can be made actionable. Such endeavours ontologise relation – they make relation a precondition for existing within the social

sphere. Through Unique Identity Cards (India), the virtual abolishment of cash economies (United States of America), and sneaky third party trackers (almost all online experience around the world) relationality is embedded into the fabric of our being. To be a 'user' today is to be a perpetual target. While the fortunate only have their bank accounts and inner desires cross-linked and collected the unfortunate slip from being target consumers to targeted enemies. This layout demonstrates with a fair amount of clarity the dense interconnection between individual targets and target populations or markets. The one and the many, the small and the big, are not quite opposed but sutured together in the paradigm of big data. Therefore, small data is not an escape but a corrective to large-scale patterns. Small data does not necessarily upset the structure of the world but does help background media *better* pattern the social. Wang's call is in fact based on this promise: thick data, she argues quite unapologetically, will help companies see the minor narratives machine learning cannot account for or explain. It is no surprise then that under such circumstances the user becomes ever more bound to structuring calculative backgrounds. She is quite literally determined by them; her identity is the data she secretes. Two questions logically follow from the state of affairs as they stand: does singularity have any meaning if datasets can effectively oscillate between the singular (targets) and plural (targeting), and is there any 'outside' to the relational bind of (big and small) data? To take these questions in order a short historical detour is required.

Patterns and anomalies

Canguilhem's norm

If Georges Canguilhem remains one of the most important thinkers to have addressed the problem of norms and anomalies this is primarily because he demonstrated that the problem at hand is a temporal one. At the beginning of *The Normal and the Pathological* Canguilhem invokes two traditions of thought about disease and illness. One, deriving roughly from Louis Pasteur, focused on infections and germs. This model emphasised the link between visibility and action – technical prostheses that allow us to see the offending presence in our bodies also allow us to expel this presence. Canguilhem calls this way of thinking 'ontological'. By contrast the Greek tradition was 'dynamic' or 'functional' since there disease was conceptualised not through

'localisation' (to specific organs) but 'totalisation' (to the environment). Based on the theory of humours Greek medicine generalised the problem of disease – it was not in some specific place within the body but in man himself.[38]

Both the ontological and functional approaches share the perspective that disease either represents the organism's war with the environment around it (outside) or an internal struggle within it. Therefore in both of these views the state of being diseased (the pathological) differs from a condition of normality. Canguilhem discusses how various traditions of medicinal practice as well as sociological thought based on medical analogies (like Auguste Comte's) essentially took the pathological as a deviation from the normal state of things.[39] No matter how interdependent the two states were assumed to be the fundamental fact was that the deduction of pathology rested on an assessment of its divergence from the normal. Simultaneously, in order to judge or quantify how (much) the pathological diverged the normal had to be decoded and stabilised too.[40] In other words it is difficult to separate either the pathological or the normal as temporally prior since the determination of one already requires an implicit taxonomy of the other. The norm itself – that which is at the crux of most modern pattern recognition systems – presents a challenge of its own.

In his reflections on anomalies Canguilhem points to two aspects that characterise the normal: the normal is what 'ought to be' and at the same time it represents the 'majority of cases' or a 'mathematical average'.[41] We use the word so commonly in both senses that we seldom think about the fact that the two have potentially very different meanings, or meanings that can only coexist in tension. The 'ought' clearly gestures to normativity to something idealised or desirable. By contrast the mathematical average merely refers to numerical preponderance. The ideal and the average are clearly somewhat at odds. In Canguilhem's terms the normal therefore designates both the 'habitual' and the 'ideal'.[42] These considerations open the window to the philosophical dimension of normativity wherein the normative not only establishes norms but also qualifies and judges all actions in relation to such norms.[43]

With these definitions in mind we can better understand the distinction between an anomaly and the abnormal; the former is essentially an irregularity. So Canguilhem argues that 'in a strictly semantic sense "anomaly" points to a fact, and is a descriptive term, while "abnormal" implies a reference to value and is an evaluative, normative term'.[44] Through Foucault

we of course already know part of this story, but what Canguilhem's words point clearly to is the fact that the *abnormal is a normative category and in that sense belongs within the same universe as the normal*. The pathological too, by definition, is not a statistical deviation; like the abnormal it is normative. When people speak of pathological anomalies they misunderstand both the anomaly (as normative instead of deviant) and the pathological: 'the pathological is not the absence of a biological norm: it is another norm but one which is, comparatively speaking, pushed aside by life'.[45]

Canguilhem's incisive comments help us identify a common mistake that is rampant in our time: the consideration of abnormalities as anomalous. The abnormal or the pathological is a normative pattern. Therefore Canguilhem's implicit suggestion seems to be that an anomaly is that which exceeds the scope of patterning in general, both the normal and the pathological. In terms of my discussion thus far Canguilhem's suggestion opens the door for us to consider two crucial things: first, that the normal and the abnormal are both products of patterning, or the relational bind of data; second, that the anomaly is an excess that can potentially escape this bind. However, such a view would serve to undercut the distinction I made earlier between an anomaly (that which patterns can account for) and an almost-singularity (that which remains unaccountable). Having established the normativity of the abnormal the next step of the argument has to demonstrate that anomalies are also patterned; they are bound to the abnormal and are in that sense deeply entwined to the relational bind. Here Ian Hacking's work provides a useful supplement to Canguilhem.

Hacking's excess

Much of Hacking's revelations revolve around what he identifies as the two poles of Foucault's notion of biopower. If one of those poles relates to anatomo-politics the other relates to biopolitics. While the former leads to calibrated studies of the emergence and shaping of subjectivities (focused on the human body) the latter concerns itself with the consideration of large statistical aggregates (focused on populations). 'Biopolitics is, of course, less fun to study than anatomo-politics', Hacking writes,[46] but it has two important effects (overt and subversive) that determine much of what goes on in society. The overt effect is easier to challenge, counter, and ignore because while it seeks (ideally) to control and govern populations through information it seldom succeeds. Information and control, Hacking says, usually look more like 'disinformation and mismanagement'.[47] The sub-

versive effects of enumeration are trickier to contend with in large part because they are often unintended consequences of the stated aim of aggregative operations. Subversive effects arise from the hunger statistics has to divide data into kinds. Hacking's archaeology of the biopolitical logics underpinning statistical rationalities remain extremely relevant to debates surrounding big data because he takes Canguilhem's temporalisation of pathologies and norms a step further to show how modern statistical knowledge makes the anomalous accountable.

In the early 19th century the place of quantification in social theory was an open question. Auguste Comte, the founder of modern sociology, referred to his work as 'social physics' or 'social mechanics' in an effort to distinguish it from the pure numerically-oriented study of probabilities. However, Hacking argues that the Belgian astronomer Adolphe Quetelet won the day – to such an extent that 'an enormously influential body of modern sociological thought takes for granted that social laws will be cast in statistical form'.[48] Quetelet's work along with that of Durkheim (on suicide) and Willcox (on divorces) had a pivotal role to play in this statisticisation of social theory. This process of statisticisation was complemented by the end of the 19th century by CS Peirce's claim that 'we live in a universe of chance'.[49]

On the face of it these assertions seem to be incompatible. How can a society patterned on statistical laws also be one caught in the throes of chance? Hacking connects the emergence of this epistemological position to the erosion of an older one which posited determinism as the basis of social transformation. Simply speaking, determinism held that any transformation or change that occurred resulted from either laws of the past or those of nature. Although certain statistical aggregates did exist in 1800 they were taken to be summaries of facts, not probabilities. By the end of the century however those 'facts' were increasingly described as probabilities; but the death of determinism did not create new kinds of 'freedom', writes Hacking. Instead what emerged was 'the taming of chance'; chance became 'real' because 'one had found the form of laws that were to govern chance'.[50] Making the implications of this shift explicit Hacking confesses that he is 'interested in the growth of the possibility that real chance exists and is part of the underlying structure of the world'.[51]

In essence Hacking's work makes two emphatic points that we must note. First, in the 19th century chance was tamed through its integration into emerging rationalities centred on mathematics and processes of randomisa-

tion in experiment design; second, the rise of statistics was central to this integration. Without pressing the point too much we can immediately note that statistics performs a kind of social pattern recognition. Even Durkheim's study of suicide, for instance, was a study of patterns of social abnormality filtered through the apparatus of statistics and moral science. At first glance, within the statistical regime, chance became similar to what Canguilhem called the anomaly – it was an excess that broke free of social patterns. However, Hacking's emphasis on chance as an *underlying structure of the world* makes a much bolder claim: the anomaly is folded into the very structure of the pattern itself. In other words it is the pattern that *enables* the anomaly. Chance can only exist when an epistemological space has been cleared for its flourishing. Prior to that, when the world is determined by preordained laws, chance means nothing. To a certain degree then absolute indeterminacy is itself *systemic*. Seen in this light we can no longer hold on to the anomalous as that which is excessive to the system. Indeed the anomaly is part of what the pattern produces. Matthew Fuller and Andrew Goffey's work makes this argument even more explicit in demonstrating that within digital infrastructures patterns are produced by denying any event its singularity or uniqueness.[52] If some form of binding did not occur, if each bit of information were to be treated on its own terms, then no patterns could ever be established. The fabric of the social would in such a situation begin to come apart.

Read together Canguilhem and Hacking help us both locate and question the function of the anomalous or the singular as an instantiation of politics. More importantly they caution against the romanticisation of both singularity or excess as effective politics. If guerrilla media or the valourisation of spam, hacking, and other such acts of digital 'resistance' work with a simple binary of the 'system' and its others then Canguilhem and Hacking warn us that these others are already to some extent patterned into the system. Emergent debates over big versus small or raw versus cooked data therefore sidestep the problem somewhat. They overlook, naturalise, and ontologise the relational bind and then seek forms of political or ethical response that might break, exceed, or refine the system (depending on one's political proclivities). Rather than search for a supplement or symptom that might reveal the system's inner logic, rather than attempt to better understand that logic through smarter data, I turn in conclusion to the figuration of relief as a possible (if bleak) political response to our situation.[53]

Relief

In attempting to delineate the dense, vertiginous logic by which big and small data together pattern and structure the social field I have thus far suggested that pattern formation occurs in the background as a form of qualculation that we are aware of but choose to overlook. The patterns thus created bind us together ever more tightly into a nightmarish vision of the global village from where there is little chance of escaping. Moreover, escape is to a large extent already patterned into the system; it is accounted for and statistically factored into the logic of our database existence. In such a situation where does one begin to locate politics? Unlike some incisive and important critics of big data whom I have gestured to in the preceding pages I remain sceptical of small or thick data as a political response that can upset how the social is structured. Indeed, as I have tried to argue, small data only ends up further refining and honing the tools of control (or targeting or biopolitical governmentality – the precise terminology is not important at this moment), making its apparatus nimbler and dexterous.

In closing we could return to the remote hillside of Saddleworth Moor. The profusion of data produced around that anonymous man's journey and the scattered details of a life that may or may not be his seems to overcompensate for the black hole of information surrounding the circumstances of his death. Before reading this vacuum back into the more familiar tropes of off-the-grid living or non-enumerated populations we would do well to remember that, following the logic of my argument, both of the latter categories are epistemologically accounted for in the world we inhabit. We might not have data on the poor, refugees, or slum dwellers who fall below the state's apparatus of legibility and therefore escape the logic of targeting, but such a logic has factored them into the lifeblood of the system. They are precisely what have been 'tamed' in a world without genuine chance.

The sort of unaccountedness I am after looks a little different because it is fragmented, invisible, and to a large extent unquantifiable. Our anonymous man in Saddleworth Moor was not an excess or an anomaly but an almost-singularity^[54] that every metric of small and big data together *ought* to have accounted for. His death was clearly not meaningless. It *was* a pilgrimage. How could *this* be the event we cannot explain? In a world where there is an answer for every kind of anomaly – from a random attack on the streets of a Western city to a click on a shopping website that breaks with one's product preferences – how can something apparently so

full of meaning confound our ability to understand it? In a world where mantras like ‘the exception explains the rule’ have rendered the idea of anomalies utterly banal and pointless can we still find instantiations of a true exception – not a sovereign exception but a simple act of living that does not ‘fit’? I am not sure. But I do think that the resources for such actions lie elsewhere than in the places we normally look. They lie not in the archives of radical revolutionary action or impassioned claims to the political. Rather, they reside in forms of withdrawal, withholding, and relief – expressive acts that are neither necessarily political nor quite legible *even to the actors themselves*. [55]

A politics of relief does not announce itself as politics. It does not seek to overthrow structuring patterns or refine modes of reading data. It acknowledges all of this and searches for a few moments, perhaps entirely temporary and ‘meaningless’, of respite; a few moments of not having to think about the world and its bouquet of horrors. Like a sculptural relief, in these moments a person steps out from the background structuring her, looks around, makes the pilgrimage, and then, eventually, slips into the background again.

Author

Anirban Gupta-Nigam is in the PhD Program in Visual Studies at the University of California, Irvine. His work engages the intersections between information extraction and technologies of interiority.

References

- Agre, P.E. ‘Surveillance and Capture: Two Models of Privacy’, *The Information Society* 10, no. 2, April 1994:101-127.
- Arbesman, S. ‘Stop Hying Big Data and Start Paying Attention to “Long Data”’, *WIRED*, 29 January 2013: <http://www.wired.com/2013/01/forget-big-data-think-long-data/>.
- Auerbach, D. ‘You Are What You Click: On Microtargeting’, *The Nation*, 4 March 2013: <http://www.thenation.com/article/you-are-what-you-click-microtargeting/>.
- BBC Newsnight. *The Modern Mystery on Saddleworth Moor*, 2016: <https://www.youtube.com/watch?v=KRJXkZ82uOc>.
- boyd, d. and Crawford, K. ‘Critical Questions for Big Data’, *Information, Communication & Society* 15, no. 5, June 2012: 662-679.
- Burchell, G., Gordon C., and Miller, P (eds). *The Foucault effect: Studies in governmentality*. Chicago: University of Chicago Press, 1991.

- Burrell, J. 'The Ethnographer's Complete Guide to Big Data: Small Data People in a Big Data World', *Ethnography Matters*, 28 May 2012: <http://ethnographymatters.net/blog/2012/05/28/small-data-people-in-a-big-data-world/>.
- Callon, M., and Law, J. 'On Qualculation, Agency, and Otherness', *Environment and Planning D: Society and Space* 23, no. 5, October 2005: 717-733.
- Canguilhem, G. *The normal and the pathological*. New York: Zone Books, 1991.
- Chamayou, G. 'Patterns of Life: A Very Short History of Schematic Bodies', *The Funambulist Magazine*, 4 December 2014: <http://thefunambulist.net/2014/12/04/the-funambulist-papers-57-schematic-bodies-notes-on-a-patterns-genealogy-by-gregoire-chamayou/>.
- *A theory of the drone*. New York: The New Press, 2015.
- Cochoy, F. 'Calculation, Qualculation, Calculation: Shopping Cart Arithmetic, Equipped Cognition and the Clustered Consumer', *Marketing Theory* 8, no. 1, March 2008: 15-44.
- Cohn, B. *An anthropologist among the historians and other essays*. Delhi: Oxford University Press, 1987.
- Fuller, M. and Goffey, A. 'Digital Infrastructures and the Machinery of Topological Abstraction', *Theory, Culture & Society* 29, no. 4-5, July 2012: 311-333.
- Galloway, A.R. *Laruelle: Against the digital*. Minneapolis: University of Minnesota Press, 2014.
- Gitelman, L (ed.). 'Raw data' is an oxymoron. Cambridge: MIT Press, 2013.
- *Paper knowledge: Toward a media history of documents*. Durham: Duke University Press, 2014.
- Goffman, E. *Frame analysis: An essay on the organization of experience*. Boston: Northeastern University Press, 1986.
- Hacking, I. 'Biopower and the Avalanche of Printed Numbers', *Humanities in Society* 5, 1982: 279-295.
- 'How Should We Do the History of Statistics?' in *The Foucault effect: Studies in governmentality*, edited by G. Burchell, C. Gordon, and P. Miller. Chicago: University of Chicago Press, 1991: 181-195.
- Halpern, O. *Beautiful data: A history of vision and reason since 1945*. Durham: Duke University Press, 2015.
- Hansen, M.B.N. *Feed-forward: On the future of twenty-first-century media*. Chicago: University of Chicago Press, 2015.
- Hull, M. *Government of paper: The materiality of bureaucracy in urban Pakistan*. Berkeley: University of California Press, 2012.
- Kitchin, R. *The data revolution: Big data, open data, data infrastructures and their consequences*. London: Sage Publications, 2014.
- Kittler, F. *Gramophone, film, typewriter*. Stanford: Stanford University Press, 1999.
- Marcus, G. 'Steamrolled by Big Data', *The New Yorker*, 29 March 2013: <http://www.newyorker.com/tech/elements/steamrolled-by-big-data>.
- Massumi, B. *Parables for the virtual: Movement, affect, sensation*. Durham: Duke University Press, 2002.
- Nancy, J.-L. *Being singular plural*. Stanford: Stanford University Press, 2000.
- Parisi, L. *Contagious architecture: Computation, aesthetics, and space*. Cambridge: MIT Press, 2013.
- Parveen, N. 'Man Who Died on Moor "May Have Been on Plane Crash Pilgrimage"', *The Guardian*, 26 January 2016: <http://www.theguardian.com/uk-news/2016/jan/26/man-died-saddleshworth-moor-1949-plane-crash-pilgrimage>.
- Pasquale, F. *The black box society: The secret algorithms that control money and information*. Cambridge: Harvard University Press, 2015.
- Porter, T.M. *Trust in numbers: The pursuit of objectivity in science and public life*. Princeton: Princeton University Press, 1995.
- 'Saddleshworth Moor Body Could Be Missing Father', *Sky News*: <http://news.sky.com/story/1632544/saddleshworth-moor-body-could-be-missing-father> (accessed on 31 January 2016).
- Sheller, M. 'The New Mobilities Paradigm for a Live Sociology', *Current Sociology* 62, no. 6, October 2014: 789-811.
- Shroff, G. *The intelligent web: Search, smart algorithms, and big data*. Delhi: Oxford University Press, 2013.

- Thrift, N. 'Remembering the Technological Unconscious by Foregrounding Knowledge of Position', *Environment and Planning D: Society and Space* 22, no. 1, February 2004a: 175-190.
- , 'Movement-Space: The Changing Domain of Thinking Resulting from the Development of New Kinds of Spatial Awareness', *Economy and Society* 33, no. 4, November 2004b: 582-604.
- , 'Beyond Mediation: Three New Material Registers and Their Consequences' in *Materiality*, edited by D. Miller. Durham: Duke University Press, 2005: 231-255.
- Wang, T. 'Why Big Data Needs Thick Data', *Medium*, 20 January 2016: <https://medium.com/ethnography-matters/why-big-data-needs-thick-data-b4b3e75e3d7?source=latest—#0881>.
- Watkin, C. 'A Different Alterity: Jean-Luc Nancy's "Singular Plural"', *Paragraph* 30, no. 2, 2007: 50-64.
- Zerubavel, E. *Hidden in plain sight: The social structure of irrelevance*. Oxford: Oxford University Press, 2015.

Notes

- [1] Parveen 2016.
- [2] BBC *Newsnight* 2016.
- [3] *Sky News* 2016.
- [4] Wang 2016.
- [5] Burrell 2012.
- [6] boyd & Crawford 2012.
- [7] Arbesman 2013.
- [8] Marcus 2013.
- [9] Gitelman 2013, p. 3.
- [10] Porter 1995.
- [11] Halpern 2015.
- [12] Kitchin 2014.
- [13] Massumi 2002.
- [14] Thrift 2004a.
- [15] Thrift 2004b, p. 584.
- [16] Burchell et al. 1991.
- [17] The emergence and proliferation of census-taking (particularly in colonial contexts) provides an exemplary case of vast infrastructural background media which determine how the social field is structured. In India, for example, the entanglement of caste categories and the census operations which legitimised and authorised the visibilisation of these categories is often hard to separate. Although artefactual to a large extent once established such categories become hardened, etched into social fabrics, and yet structure how that fabric is woven. For an early exploration of this logic see Bernard Cohn's essay 'The Census, Social Structure and Objectification in South Asia' (in Cohn 1987).
- [18] Hull 2012; Gitelman 2014.
- [19] One could make a strong case for significantly overhauling (if not dispensing with) the Foucauldian paradigm of biopolitics or panoptical surveillance in grappling with the logics of big data. Rather than refine biopolitics one could, with someone like Philip Agre, suggest that we

have witnessed a shift from surveillance to what he called 'capture' (1994) – or what Deleuze designates 'societies of control'. Indeed, I make a passing reference to control in the passages below. This is a discussion I am not entering for the time being since my interest at the moment is less in defending the ir/relevance of Foucault's work than in delineating the emergence of a specific logic of background media to which Foucault's analysis might only be tangentially relevant.

[20] See for example Callon & Law 2005; Cochoy 2008.

[21] Thrift 2005, pp. 234-236.

[22] Ibid., p. 237.

[23] Ibid.

[24] Ibid., pp. 240-242.

[25] Thrift 2004b, p. 583.

[26] Ibid., p. 584.

[27] Ibid.

[28] Also see Parisi 2013.

[29] Sheller 2014, p. 793.

[30] Cochoy 2008.

[31] Goffman 1986; Zerubavel 2015.

[32] Hansen 2015, pp. 214-219.

[33] Thrift 2004b, p. 599.

[34] Chamayou 2014.

[35] Chamayou 2015.

[36] Pasquale 2015.

[37] Auerbach 2013.

[38] Canguilhem 1991, pp. 40-41.

[39] Ibid., pp. 43-45.

[40] Ibid., p. 51.

[41] Ibid., p. 125.

[42] Ibid., p. 126.

[43] Ibid., pp. 126-127.

[44] Ibid., p. 132.

[45] Ibid., p. 144.

[46] Hacking 1982, p. 279.

[47] Ibid., p. 280.

[48] Hacking 1991, pp. 181-182.

[49] Ibid., p. 185.

[50] Ibid.

[51] Ibid., p. 187.

[52] Fuller & Goffey 2012.

[53] The Kittlerian undertone here is entirely intentional; 'media determine our situation' is perhaps one of the greatest articulations of the sort of systemic interiority I am referring to here – a system with virtually no outside (Kittler 1999).

[54] In fleshing out the 'almost-singular' more fully one could place it in conversation with other formulations, like Jean-Luc Nancy's notion of 'being singular plural'. Nancy's thought is obviously too sophisticated to go into in passing at present, but it is tempting to suggest that the positioning of relation as prior to singularity (of singularity as being always-already relational) further buttresses the difficulty of searching for forms of (pure) exteriority, excess, or alterity as the source of politics (cf. Nancy 2000; Watkin 2007).

[55] I should be clear here that the kind of withdrawal I am gesturing to is entirely different from the proliferation of 'withdrawals' in object-oriented-ontology literature. If anything I am more intrigued by Alexander Galloway's reading of Laruelle in this regard, although I would not suture my words to his too explicitly (Galloway 2014, particularly the chapters 'The Black Universe' and 'The Generic').