



Being stuck in (live) time: the sticky sociological imagination

Emma Uprichard

Abstract: Recently, Savage and Burrows (2007) have argued that one way to invigorate sociology's 'empirical crisis' is to take advantage of live, web-based digital transactional data. This paper argues that whilst sociologists do indeed need to engage with this growing digital data deluge, there are longer-term risks involved that need to be considered. More precisely, C. Wright Mills' 'sociological imagination' is used as the basis for the kind of sociological research that one might aim for, even within the digital era. In so doing, it is suggested that current forms of engaging with transactional social data are problematic to the sociological imagination because they tend to be ahistorical and focus mainly on 'now casting'. The ahistorical nature of this genre of digital research, it is argued, necessarily restricts the possibility of developing a serious sociological imagination. In turn, it is concluded, there is a need to think beyond the digitized surfaces of the plastic present and to consider the impact that time and temporality, particularly within the digital arena, have on shaping our sociological imagination.

Keywords: ahistorical, big data, digital sociology, empirical crisis, live sociology, now casting, plastic present, sociological imagination, sticky time, transactional data

Introduction

Savage and Burrows (2007) have recently suggested that there is an impending 'empirical crisis' in British sociology. Their argument stems from the fact that in an age of 'knowing capitalism' (Thrift, 2005), digital crumbs are routinely produced through everyday online interactions, and that sociologists must engage further with these kinds of data. Their argument goes beyond injecting e-science (back) into sociology, to offer a radical rethink of what the contemporary sociologist's methodological toolbox needs to be. They point out that in the early days of the discipline, sociologists were considered to be the methodological innovators of the time, with the sample survey and the interview setting them apart from other disciplines in their ability to know the social in

exciting ways. In contrast, contemporary sociologists are seriously lagging behind, methodologically speaking that is, compared to the efforts of, say, commercial enterprises, who are far more in tune with the computational needs required to collate and explore the data deluge that is ubiquitous to modern social life.

In effect, Savage and Burrows have, albeit unintentionally, signalled a 'green light' to sociologists doing the kind of digital research in question here. To be fair, other than concluding by saying that what is needed is description, which 'seeks to link narrative, numbers, and images in ways that engage with, and critique, the kinds of routine transactional analyses that now proliferate' (2007: 896), they say very little about the specific details of empirical endeavour that they are advocating. That said, as will be spelt out further in this chapter, when we do examine empirical research that does deal directly with the kind of transactional web data that Savage and Burrows explicitly encourage us to engage with, apprehensions about what is at stake are raised. These apprehensions, it will be suggested, tap into precisely the issues that they were highlighting, namely the conduct of empirical sociological research given the data deluge that is upon us.

This article supports Savage and Burrows' (2007) main point that sociologists need to further engage with digital transactional data, but utilizes C. Wright Mills' (1959) 'sociological imagination' as a critical basis for proposing the kind of sociological research that one might aim for, even within the digital era. In so doing, it is suggested that current forms of engaging with transactional social data are problematic to the sociological imagination because they tend to be ahistorical. To be clear, this paper excludes archival digital research, which is certainly historically orientated, but focuses instead on a particular genre of emerging transactional research that is quintessentially presentist. Because this genre of digital research tends to focus on the relative 'now' – the 'plastic present' as it is referred to here – rather than pushing researchers to advance Mills' promise of the sociological imagination, this new genre of empirical research tends to be conducive to keeping people 'stuck' in their various 'series of traps'. Just as Mills argued that time, and particularly history, need to be central elements of any social study that seeks to foster the sociological imagination, so too is it argued here that transactional research needs to be further permeated in time more generally in order to go beyond the 'now' focus that tends to feature in this genre of research.

An emerging genre of ahistorical digital research

There seems to be a growing excitement and interest in an emerging genre of digital social research across the globe. In the UK, this is particularly noticeable with its key social and natural science funding bodies, the ESRC and the EPSRC, each investing in cross-disciplinary projects that develop 'new technology, innovation and skills' as a way of tackling the 'digital economy'. Savage

and Burrows' (2007) paper on the 'empirical crisis' is precisely about our need to engage empirically and methodologically with 'transactional' digital data as a means of confronting the online data deluge. Whether we see it under the auspices of 'e-science', the 'digital economy', 'transactional data', 'big data' research, the point is there is an emerging genre of empirical research that is gaining greater currency across the disciplines, which typically models, explores and analyses massive Internet-based datasets. Because of the typical size of these datasets – terabytes, petabytes or larger – some have begun talking about 'big data' research (Bollier, 2010). Despite its name, it is not the size of the datasets that makes this kind of analysis particular; it is also the fact that the data are unstructured, mixed format (eg visual, text, numerical etc). Sometimes these databases result in networks (eg Twitter), sometimes less so or not at all. Data tends to be unwieldy, dynamic and noisy, and is typically produced by 'scraping' or 'crawling' the Internet, and making the most of the automated 'web crumbs', 'web logs' or 'tags', etc, which are created through individual user actions, via IP-addresses, tagging etc.

Whatever the format, though, these web crumbs usually have a time and space stamp, and indeed it is this aspect of the data that tends to be captured and exploited in some way. These 'time-space stamps' within the data deluge have become the gold nuggets from which any sociological potentiality regarding 'who', 'where' and 'what time' the web crumbs were generated is squeezed out. As Hudson-Smith *et al.* (2007: 9) point out:

Tagging not only the type of information but where such information is produced, who uses it and at what time it is generated is fast becoming the killer application that roots information about interactivity generated across the web to systems that users can easily access and use in their own interactions with others. (Hudson-Smith *et al.*, 2007: 9)

The fact that so much information can be time-space stamped has led to an increased focus on 'real-time' methods, where streaming real-time data is harnessed as a way of capturing live trends, real time events. Research that exploits micro-blogging sites such as Twitter are excellent examples of the relative ahistorical nature that encompasses this genre of digital research (see, for example, Huberman *et al.*, 2008; Gruzid *et al.*, 2011; Cheong and Lee, 2011). CASA's Tweet-o-Meters (see <http://www.casa.ucl.ac.uk/tom/>) is another example; it provides a visual and dynamic display of the quantity of tweets every minute in nine cities across the world. Other examples might include efforts that go into displaying a weekend of tweets (Hudson-Smith, 2011) or even five minutes of Tweet data (Hudson-Smith *et al.*, 2007). Google 'real time' alerts are alternative examples of the kind of genre discussed here, as are the Google maps mash-ups that depict 'live crime' – events that occur in real time and can be collated and gathered as they happen. Google's Flu Trends (see <http://www.google.org/flutrends/>) perhaps epitomizes the genre of research in question best of all, insofar as it uses real-time searches to trace where flu outbreaks may occur, and provides therefore a real live example of the ways in which 'real-time' web data

can be fed back into almost 'real-time' representations of 'now'. Readers will have their own examples in mind, since the Internet is riddled with a myriad of examples of such 'live data streams'. Increasingly, researchers are developing tools and ways of harvesting these live data sources. Like the poverty stricken scavengers who go through rubbish tips in the poorest places of the globe, the technologically savvy alchemists see their futures in data-mining the 'rubbish' that our online mundane transactions and interactions leave behind, and turning timely web data into 'gold'. The richness and power of 'real-time' or 'live' data lie in their speed, providing the 'newest', 'latest', 'most recent', 'most timely' snap-shots of 'now'. It is especially in these 'live' data mining activities, where 'time-space' stamps are increasingly collated and analysed in as close to 'real-time' as is possible, that we also see this growing 'ahistorical' genre of digital research take centre stage.

Of course, as with all research approaches, it is easy to criticize this emerging genre of digital research for lacking in this or that, and although it is true that the ahistorical nature inherent within this genre of digital research is what is being highlighted here, it seems unfair to judge it too harshly, for three main reasons. First, the world is increasingly shaped and moulded by swathes of digital information and it is therefore right and proper that contemporary social science also engages with all things digital. Secondly, the field of 'transactional social science' – if it can even be called that yet – is in its relative infancy. Social scientists are still learning and/or fine tuning their methodological and computational skills and/or developing better collaborative relationships with those outside the social sciences who already possess them. Over time, improvements will be made, developments and new tools will facilitate new forms of doing and knowing. Thirdly, because of the sheer volume of data, much of the labour involved in actually trying to do anything meaningful with it necessarily goes into various data reduction techniques. Data reduction is of course a necessary part of many empirical approaches. The more data there is to deal with, the more data reduction techniques will need to be employed. As Bollier (2010: 15) points out, 'at some point, less becomes more because all you are interested in doing is to prune the [big] data, so that you can stare at the "less"'.

What this means in this case is that priorities are shifted somewhat, albeit necessarily. The onus is placed on data mining, computational power, (re)presentations or visualizations of large swathes of data at the expense of the substantive issues at hand. Indeed, McCulloch (2011) hits the nail on the head by pointing out that when data crunching becomes the focus, we are missing the point to analysing data in the first place. As he explains: 'Placing the emphasis on data and computing technology seems to me counter-productive not only from the point of view of understanding what data have to tell us but also removes a lot of the enjoyment from doing data analysis.' He raises a genuinely difficult predicament. Big data research requires one or more processes of data reduction to make it manageable.

It is difficult to see how it would be possible to empirically engage with the digital data deluge without data reduction techniques. Indeed, one might go as

far as to say that *the* key empirical issue in trying to engage with the digital data deluge is precisely one of data reduction. Which techniques are most meaningful? What information is lost and at what cost? Which data are accessed and which are not? How does data reduction advance our knowledge about types of cases? Ultimately, these questions come down to a basic sampling problem: is it better to sample and generalize? Or should we take the whole and reduce it? The answers are not trivial. Big data puts these big problems back onto the methodologist's work table.

'Timing' the (sticky) sociological imagination

To be clear, the position argued here is not that these live / real time or transactional data analyses are a problem per se. Since so much data is produced, any attempt to explore the data deluge is potentially helpful and beneficial in itself. The problem, however, is that at the moment, this genre of digital research tends to be very narrowly located in time – hence why, for the purposes of this paper, the term 'ahistorical digital research' will be used to refer broadly to a particular genre of digital social science. The term 'ahistorical' is, strictly speaking, still temporal; it is just that its time horizon is so relatively small. As Mills (1959: 165) puts it, 'A-historical studies usually tend to be static or very short-term studies of a limited milieu'. The strength of focusing on the 'now' is simultaneously this new genre's ultimate weakness. Its 'ahistoricity' is its 'Achilles heel', if you like. To sociologists, the intrinsic ahistoricity of this new genre of digital research matters a great deal. For however we choose to 'crunch' or mine our digital data deluge, as empirical sociologists engaged in the kind of research that Mills' was advocating, our work needs to go some way towards ensuring that 'the sociological imagination has its chance to make a difference in the quality of human life in our time' (Mills, 1959: 248).

It is worth returning to Mills on this last point, as he set out quite clearly the kind of critical empirical sociology that is also being advocated in this discussion. After all, any criticism about a particular genre of empirical research belies a set of assumptions about the kind of empirical research that might be otherwise preferred. Whilst avoiding a synopsis of Mills' thesis about the sociological imagination, I want to draw out three points that are specific to the argument raised here in relation to problems of the ahistorical nature of the new genre of digital research, particularly vis-à-vis this new genre's departure from Mills' vision of sociological research. First, Mills was very clear that in order to deliver the promise of the sociological imagination, which helps to free each and everyone of us from feeling trapped, it is necessary to turn to 'biography, history, society as coordinates of a well considered social study'. Indeed, it is precisely in Mills' three point hinge-pin that we see the severity of the 'fault-line' within the emerging ahistorical digital research critiqued here – a faint but visible crack that risks being serious if ignored in the long run.

This new genre of ahistorical digital research seldom does anything resembling ‘biography, history and society’. This is not because it is impossible to do this digitally. In many ways, the digital lends itself to precisely the kind of multi-level, rich in context, and historically orientated research that has the potential of fulfilling the promise of the sociological imagination. Blogs, for instance, do place the individual actor at the heart of the digital ocean and also lend themselves to situating biography within society. Even there, however, ‘history’ is neglected, insofar as research that focuses on blogs rarely does much else other than simply describing what numerous blogs are reporting ‘now’, in much the same way as micro-blogging (eg Twitter) research does. Indeed, at the moment, most of the work that goes into producing anything sensible out of the masses of digital data ultimately has very little to do with ‘biography’, ‘history’ or ‘society’. The cost of this omission is that this ahistorical genre of digital research tends to overlook the importance of time as ‘nested’. Yet as Lewis and Weigart (1981) put it, all social acts are temporally embedded within other social acts. Indeed, they go as far as stating that ‘time embeddedness’ is key to understanding social action in the first place. That is to say, ‘Not only are self-time structures embedded within interactional time structures, but both of these micro-level temporal structures are, in turn, embedded within the larger, macro-level temporal orders of the social institutions and of the culture’ (Lewis and Weigart, 1981: 538). Mills’ three coordinates of ‘biography, history and society’ directly tap into Lewis and Weigart’s point about the importance of relating time to social action and vice versa: social action is necessarily situated in time and always and everywhere nested intricately within larger temporal orders. Therefore, to understand *any* of those coordinates – that is, biography, history or society – even in themselves, it is necessary to play close attention to their respective temporalities.

The importance of situating the empirical – digital or otherwise – within time brings us to the second point worth highlighting in Mills’ work. He was vehement about the need to conduct ‘historically orientated work’. He explains:

We can examine trends in an effort to answer the question ‘Where are we going?’ – and that is what social scientists are often trying to do. In doing so, we are trying to study history rather than retreat into it, to pay attention to contemporary trends without being merely journalistic, to gauge the future of the trends without being merely prophetic [. . .] And we have always to balance the immediacy of the knife-edge present with the generality needed to bring out the meaning of specific trends for the period as a whole. (Mills, 1959: 170)

It seems that the balance has been completely lost, with a focus on the ‘knife-edge present’ winning out in this new genre of ‘live’ sociology. The relatively narrow time focus of these large data-mining exercises creates a genre of asynchronous snapshots, which ultimately fail to offer insights into any real historical trends.

In effect, the crux of my argument has much in common with some critiques of cross-sectional research designs. Although cross-sectional research has clear

benefits with regards to costs in time and in finance, it is clearly not the design to explore trends. Of course, cross-sections over time can be used to extend the benefits to do just that, and they should be. Indeed, Li and Li (2011) are exemplary insofar as they do indeed try to go beyond the single time-point by gathering Twitter data every three minutes between two time points. This is a vast improvement to the single time points so often captured in these efforts and also signposts the potential future of this kind of real-time data-mining. Unfortunately, though, despite the immense amount of work that necessarily needs to go into extending the temporal horizon of the research design, the two time points still just provide a total time period of only 19 days. Likewise, despite collecting hourly tweets that resulted in 46,097 tweets about the Winter Olympics, Gruzd *et al.* (2011) also end up just examining three weeks of data. Whether the time span is five minutes, two weeks, one or two or six or seven months, this is hardly the ‘historically orientated research’ that Mills was arguing for and this is precisely the problem at the core of this new genre of ahistorical digital research. As Ito (quoted in Bollier, 2010: 19; original emphasis) aptly sums up, ‘Big Data is about exactly *right now*, with no historical context that is predictive’.

That said, Mills goes on to specify something rather important about history, which brings us to the third and final point worth highlighting here:

Periods and societies differ in respect to whether or not understanding them requires direct references to ‘historical factors’. The historical nature of a given society in a given period may be such that ‘the historical past’ is only indirectly relevant to its understanding. [. . .] The *relevance* of history, in short, is itself subject to the principle of historical specificity. (Mills, 1959: 172–173)

Aside from the fact that Mills was attempting to distinguish ‘history’ from ‘historical sociology’, what Mills was getting at here was that the relevance of history is itself subject to sociological scrutiny and will recursively feed back into disciplinary modes of what is considered to be or not to be acceptable empirical practice. Whilst not wanting to get into that particular bone of contention, it follows that the ahistorical nature of this new genre of digital research might itself be a reflection of the ‘presentist’ focus that is mediated by all that is digital. Therefore, it might be concluded, the relevance of history is also eroded in this new genre of digital research. What happened last week on, say, Twitter has indeed the flavour of being ‘old news’. One might indeed agree with Mills, therefore, that the relevancy of history is dependent on context. As he goes on to explain, ‘Everything, to be sure, may be said always to have “come out of the past” but the meaning of that phrase – “to come out of the past” – is what is at issue’ (Mills, 1959: 173).

Of course, the meanings of ‘past’, ‘present’ and ‘future’ are dependent on the time horizons associated with each of them. As Adam (2004) explains:

What time is, how it is conceptualized, what it means in practice, how the parameters set by nature are transcended through the ages, what changes are wrought by the

quest for know-how and control, all these issues belong together. Collectively, they illuminate the wider picture and provide us with a basis from which to get a sense of the role of time in cultural existence in general and contemporary social life in particular. (Adam, 2004: 150)

This echoes greatly with Mead's (2002 [1932]) notion that time is fundamentally 'social' – it is always 'relational'. Mills was also all too aware of the 'social' nature of time, and of the construction of history in particular. Indeed he goes as far as saying that this feature of time's relevance – ie time's relevance as socially constructed in historical context – is likely to be positively detrimental to the sociological imagination. 'Such a retreat from history makes it impossible', he argues, 'to understand precisely the most contemporary features of this one society, which is a historical structure that we cannot hope to understand unless we are guided by the sociological principle of historical specificity' (1959: 174). Hence, however 'history' is constructed, whether it is deemed relevant or not, it is always necessary to understanding contemporary society.

Note that Mills' call for historically orientated research has much in common with the real weakness inherent in cross-sectional designs, which ultimately, Mann (2003: 57) argues, 'do not provide an explanation for their findings'. That is to say, not only do cross-sectional studies fail to provide an explanation for their findings, they cannot do so. This is the paradox of cross-sections: the only way of explaining their findings is by situating them within relevant longitudinal research and/or other methods. The same might be said for ahistorical digital research. As interesting as the findings may be, they cannot in themselves provide an explanation for their findings; longitudinal methods alongside them are necessary. As Mills (1959: 165) explains, 'Not only are our chances of becoming aware of structure increased by historical work; we cannot hope to understand any single society, even as a static affair, without the use of historical materials.' This is primarily why the new genre of ahistorical digital research is not in itself able to deliver the promise of the sociological imagination.

Some readers might protest and retort that no one has ever argued that this new genre of digital research ever could be or ever would be conducive to developing sociological imagination. However, this would be missing the point. It is not just that this genre of ahistorical digital research fails to deliver the promise, which may or may not be contested. Rather, the combined effect of the ahistorical nature *and* the fact that we are dealing with findings about the relative present means that: (a) not only are we unable to provide explanations for what is there, but (b) the findings have the potential to be immediately (re)used by those on whom the data is based in the first place. Hence, as will be suggested, it is not simply that ahistorical digital research hinders the sociological imagination, but that it also, more worryingly, makes for a 'sticky' sociological imagination, which maintains the status quo and keeps us in tighter traps in a series of recursive presents.

A 'sticky' sociological imagination?

Suggesting that the new genre of ahistorical digital research is conducive to keeping us trapped in our present(s) is perhaps a rather extreme version of possible realities. It certainly needs to be explained and justified. In effect, two main interrelated processes are involved in making this argument, the first of which concerns the recursivity of the digital with the world the digital represents, and the second concerns the nature of time itself. Both processes feedback into how we think about and act in the world and ultimately the possibilities of what it means to live in it also. As Hörning *et al.* (1999: 305) argue, 'Time unfolds in the interrelationship between people and the world; thus, practice creates and structures time, and the varying combinations of time within a social formation generate and change time structures.' And so it is with the digital in all its forms. The interrelationships between the digital and representations of the digital, structure time; vice versa, time structures those interrelationships.

A similar point is made in relation to space in Batty's (1997) concept of the 'computable city'. There, Batty (1997) sets forth some of the implications involved in modelling cities and in particular the impact real-time data collection (eg traffic flows) has on short- and longer-term decision making and subsequently the urban form of the actual city. In the 'computable city', the virtual world of data and the real city intersect and recursively and iteratively interact together in ways that are difficult to predict. As Hudson-Smith *et al.* (2007) explain:

the virtual world and its [digital] mirror gives back to the physical world, completing the loop of recursion in strange and enticing ways. This is then the prospect: of mirror world standing astride both the real and the virtual, of information being recursed into many forms and being made available in diverse ways to people acting as avatars to people acting as themselves but in weird and wonderful environments yet to be invented. (Hudson-Smith *et al.*, 2007: 20)

Indeed, if we think of the digital as a mirror, and research on the digital as representations of that mirror, what we create is a constant recursive dynamic interaction between the world (digital or otherwise) and its representations. When dealing with real-time digital representations, the speed of the recursion is significantly accelerated. In such a scenario, it is possible to envisage a constant 'to-and-fro' between what seems to be happening, say, in real-time tweets, those observing those events, who then act upon them within seconds, minutes, hours or days, who then may or may not impact on what is 'tweeted' again, and so on and so on. This may seem like a trivial possibility, but when such real-time observations are used to police, survey, sell, etc then the recursion between real-time events and representations of real-time events becomes highly political. Moreover, in such a context, the temporal focus becomes more and more about the plasticity of the present, and transforms the relevance of other time horizons. As Hörning *et al.* argued over a decade ago:

New technologies provoke new processes and experiences of temporal differentiation.
New technologies may contribute to the reconfiguration of time, but when the plastic-

ity of time becomes an object of reflection and change, time practices may start to challenge and subvert taken-for-granted uses of technology and may lead to a transformation of the technologies themselves. (Hörning *et al.*, 1999: 305)

Governments, the military and commercial enterprises have known this for some time. The increased availability of real-time data sources increasingly means that ‘to know’ becomes not so much about how to predict the future, but how to predict ‘now’, or better still, ‘to know about now before now has happened’. This being the case, this new genre of ahistorical research becomes part of the necessary processes involved in facilitating and increasingly making possible a new form of predictive research, which is focused on knowing more about the present. Bollier (2010: 20) talks about this as the rise of ‘now-casting’, where real-time data is used ‘to describe contemporaneous activities *before* official data sources are available’. The more this happens, and the more live methods and technologies become appropriated within the public sphere (see Graham, 2010), the more the question about what it means to do and live in and with the mundanity of the present is problematized. Indeed, this set of recursions leads to a whole new set of time practices, each one differentiating alternative sets of ‘presents’, eg present present, past present, future present etc (see Adam, 2004). This resonates somewhat with Schutz and Luckmann’s (1973) idea of persistently interacting multiple life-worlds in which the temporal frames of the ‘past’ and ‘future’ simultaneously exist in the ‘present’ as body rhythms, social seasons, cycles, social routines and so on. As Abbott (2001) argues:

the ‘size’ of the present is something encoded at any given time into the social structure . . . Moreover, just as there are many social structures that overlap, drawing the same individuals into do zones of different intersecting structures, so too do the presents those structures imply overlap and intersect. (Abbott, 2001: 235)

As the present is embedded into structures and vice versa, the more important the present becomes. On the other hand, where the ‘past’ and ‘future’ increasingly become a matter of hours or days, and ultimately more like our present ‘present’, the present itself becomes more and more plastic, to be stretched, manipulated, moulded and ultimately ‘casted’ by those who can access more of it in the supposed ‘now’.

‘Now-casting’ arguably turns the promise of the sociological imagination on its head. After all, whilst it is possible to argue that Mills was inflating the importance of history, the key reason for him doing so was ironically because he was all too aware of how important a role history plays in shaping the future. The conception and perception of the relevancy of history – ie ‘the principle of historical specificity’ – was precisely what Mills understood to be at the core of the sociological imagination. As he explains:

Within an individual’s biography and within a society’s history, the social task of reason is to formulate choices, to enlarge the scope of human decisions in the making of history. The future of human affairs is not merely some set of variables to be predicted. The future is what is to be decided – within the limits, to be sure, of historical

possibility. But this possibility is not fixed; in our time the limits seem very broad indeed. (Mills, 1959: 174)

Mills is far from alone in stressing the importance of history in shaping the future. In *The World of Propensities*, for example, Popper (1990) suggests that the propensity of an event is dependent on how that event is perceived and understood; vice versa, how it is perceived and understood can change the event's propensity to occur is 'ontological and relational, and always dynamic even if the absolute probabilistic value' (1990: 17). Moreover, Popper continues:

in our real changing world, the situation and, with it, the possibilities, and thus propensities, change all the time. They certainly may change if we, or any other organisms, *prefer* one possibility to another; or if we *discover* a possibility where we have not seen one before. Our very understanding of the world changes the conditions of the changing world; and so do our wishes, our preferences, our motivations, our hopes, our phantasies, our hypotheses, our theories. (Popper, 1990: 17; original emphasis)

The conceptions of the past and present affect the notion of the future. The 'recursivity' of 'temporal structures and dispositions' also lies at the heart of Bourdieu's (1990) concept of 'habitus'. He writes:

The habitus is the principle of a selective perception of the indices tending to conform and reinforce it rather than transform it, a matrix generating responses adapted in advance to all objective condition identical to or homologous with the (past) conditions of its production; it adjusts itself to a probable future which it anticipates and helps to bring about because it reads it directly in the present of the presumed world, the only one it can ever know . . . This disposition, always marked by its (social) conditions of acquisition and realization, tends to adjust to the objective changes of satisfying need or desire, *inclining agents to 'cut their coats according to their cloth', and so to become the accomplices of the processes that tend to make the probable a reality.* (Bourdieu, 1990: 64–65; emphasis added)

The interdependency between the past, present and future is essentially an argument I have made elsewhere (Uprichard, 2011) specifically in relation to the need for 'narratives of the future' in social research. Drawing on Mead's *Philosophy of the Present* (2002 [1932]) to develop a tentative 'philosophy of the future', I argued that the possibility of future imaginations is always and necessarily recursively shaped by narratives *of* and *in* the past and present. The point being that if we only focus on the present, or even plastic versions of the present, then we will also tend to 'cut our coats according to our present cloths', to extend Bourdieu's analogy. This is only going to make us more and more stuck in a constant series of 'presents', making the present more and more plastic, as we (re)re-negotiate the meanings of 'past' and 'future', 'history' and 'now'. When time is considered in this way, then the 'stickiness' of time and temporality also becomes apparent.

Mead (2002 [1932]: 46) refers to this 'present' recursion quite explicitly: 'We orientate ourselves not with reference to the past which was a present within

which the emergent appeared, but in such a restatement of the past as conditioning the future'. Yet if we see the digital as a mirror recursively mediating, facilitating, catalysing and affecting action, and we inject notions of time, temporality, speed, and present into those recursive dynamics and feedback loops, then it is also possible to envisage a future of constant recursive presents, where we become stuck as we struggle to try to orientate ourselves according to redescrptions of the present as reconditioning the present.

Where real-time digital representations increasingly interact within shorter time spans, the temporal frames, which make up the ahistorical habitus of 'structuring structures and dispositions' to produce more 'present', are multiplied, refracted and recursively and iteratively fed back into everyday life itself quicker than ever before. Therefore, far from speeding up the possibility of alternative emergent futures, ahistorical digital research actually has the potential of doing the opposite, of slowing the present down, keeping us in an ever plastic notion of 'now', without the recourse of drawing on 'history' in the sense that Mills was encouraging. As Abbott (2001) suggests, a feature of time itself is that it is:

highly local, in the sense that it is proper to a particular place and moment, with large inclusive presents reading beyond it topologically and temporally. Time is indexical, because of this multiplicity of overlapping presents, yet inclusive, because their relations are of inclusion rather than quantity. (Abbott, 2001: 295)

Mills' sociological imagination, though, depends on 'longer term trends' (1959: 168), but the genre of ahistorical digital research that is increasingly being conducted just does not engage with time and temporality in the way that it could ever hope to deliver Mills' 'promise'. Yet if we are committed to the sociological imagination (Mills), or to having a say on the world of emergent propensities (Popper), or to becoming accomplices to processes that might make probable new and different realities (Bourdieu, 1990), and therefore negotiating 'projected' and 'desired' possible futures (see Uprichard and Byrne, 2006), then it is also necessary to inject time and temporality routinely and mundanely into our social research practices. This applies also to rethinking the importance of time in the new genre of digital research. As Abbott (2001: 182) notes, 'serious reflection about basic temporal assumptions can help us improve all our work'.

Conclusion

Like a hamster running on a wheel that can never run faster than the wheel can spin, we can never keep up with our own data production. We are always going to need to produce findings about the present faster and faster also, but we are not going to keep up (see Gleick, 1999). Of course, we will need to try to find ways to deal with that. One option might well be 'live methods' and 'real time' data collection and analysis. But is focusing on the 'now' the way to go? Is that really what we want to do? The answer to those questions as they are addressed

here is a definite ‘no’, for fear of increasing the likelihood that we will become (more) stuck in a series of perpetual presents without any recourse to either understand our pasts or affect the future.

Thus, on the one hand, it is appropriate that the data deluge has forced a re-focus on method in sociology, especially since so much of our digital everyday life can also be tracked, monitored and measured there too. On the other hand, and this is the key point, we must not get too carried away with what we can or cannot do and in effect become distracted from what we should be doing. Just because we can, say, track and monitor millions of ‘tweets’ across a particular time and space does not necessarily mean that this is either useful or meaningful. The quest to do more ahistorical digital work of that kind is akin to improving our success rate at hitting the bull’s eye at the wrong target. At some point, we need to ask ourselves ‘why’ we are doing it, and more importantly, what the point to sociological research is in the first place. After all, if, as C. Wright Mills has argued, part of the main aim of doing sociology is to try to develop a ‘sociological imagination’, then surely we need to also think beyond the digitized surfaces of the plastic present? As Abbott (2001) writes:

The social world is constantly changing and reforming itself. To be sure, large parts of the social world reproduce themselves continually; much of it looks stable. But this is mere appearance. What transpires is reproduction, not endurance. The central reason for making this assumption is practical. It is possible to explain reproduction as a phenomenon sometimes produced by perpetual change; it is not possible to explain change as a phenomenon sometimes produced by perpetual stasis. (Abbott, 2011: 254)

This article has drawn on a lot of concepts and ideas and spun them together into a web of relative temporal gloom, where we become supposedly stuck, frozen in time in a sticky plastic present. Underpinning the entire discussion, though, has been the importance of thinking seriously about Savage and Burrows’ (2007) call for a methodological engagement with the data deluge and what that might mean to the future of sociology. More poignant still, has been an explicit quest to consider time seriously within that remit. This has been done by drawing on Mills’ ‘sociological imagination’ as a way of unpacking some of the ‘time-work’ that is riddled in his work and his promise to sociology more generally. In effect, the issue has been about how we ‘do’ time, methodologically and epistemologically, within an ever-changing world, with ever-changing biographies and (re)moving histories.

If we are to understand change in and of the social world, and continue to keep alive our individual and collective imaginations of desired and projected alternatives, then there is also a need to understand how social phenomena are literally grounded in, and emergent from, multiple temporal interactions simultaneously. As Abbott (2001: 217) argues, ‘Reconstructing our full experience of time . . . requires comparison of durations’. A radical epistemological and methodological reconceptualization of time ‘in’ method is, therefore, required. Whilst each biography is relatively short, history and future of the social are not,

though that they are changing may be a contingent necessary condition of us knowing about them. Understanding the ways in which biographies and societies do and do not change within those different temporal dynamics to make different histories, presents and futures is one of our greatest empirical challenges, particularly when technologies keep recreating finer-grained classifications of time itself.

Acknowledgements

This work was supported by the Economic and Social Research Council [RES-061-25-0307].

References

- Abbott, A., (2001), *Time Matters: On Theory and Method*, Chicago: University of Chicago Press.
- Adam, B., (2004), *Time*, Cambridge: Polity Press.
- Batty, M., (1997), 'The computable city', *International Planning Studies*, 2 (2): 155–173.
- Bollier, D. (2010) 'The promise and peril of big data', Washington, DC: The Aspen Institute, available at: http://www.aspeninstitute.org/sites/default/files/content/docs/pubs/The_Promise_and_Peril_of_Big_Data.pdf (accessed 15 November 2011).
- Bourdieu, P., (1990), *The Logic of Practice*, Stanford, CA: Stanford University Press.
- Cheong, M. and Lee, V., (2011), 'A microblogging-based approach to terrorism informatics: exploration and chronicling civilian sentiment and response to terrorism events via Twitter', *Information Systems Frontiers*, 13 (1): 45–59.
- Gleick, J., (1999), *Faster: The Acceleration of Just about Everything*, London: Little, Brown and Company.
- Graham, S., (2010), *Cities under Siege: The New Military Urbanism*, London: Verso.
- Gruzd A., Doiron, S., and Mai, P., (2011), 'Is happiness contagious online? A case of Twitter and the 2010 Winter Olympics', *Proceedings of the 44th Hawaii International Conference on System Sciences*, 2011.
- Hörning, K. H., Ahrens, D. and Gerhard, A., (1999), 'Do technologies have time? New practices of time and the transformation of communication technologies', *Time and Society*, 8 (2): 293–308.
- Huberman, B., Romero, D. and Wu, F., (2008), 'Social networks that matter: Twitter under the microscope'. available at: <http://ssrn.com/abstract=1313405> (accessed 11 May 2011).
- Hudson-Smith, A., (2011), 'Response', invited panel discussant, in M. Savage and R. Burrows, 'The Empirical Crisis in Sociology', paper presented at British Sociological Association annual conference 2011, Leeds.
- Hudson-Smith, A., Milton, R., Dearden, D. and Batty, M., (2007), 'Virtual cities: digital mirrors into a recursive world', Working Paper 125, December, Centre for Advanced Spatial Analysis, University College London.
- Lewis, J. D. and Weigart, A. J., (1981), 'The structures and meanings of social time', *Social Forces*: 432–462.
- Li, Y.-M. and Li, T.-Y., (2011), 'Deriving marketing intelligence over microblogs', *Proceedings of the 44th Hawaii International Conference on System Sciences*, 2011.
- Mann C., (2003), 'Observational research methods. Research design II: cohort, cross sectional, and case-control studies', *Emergency Medicine Journal*, 20 (1): 54–60.
- McCulloch, A., (2011), 'Statistics and the information society', *Significance: Statistics Making Sense*, Web Exclusive April 2014, available at <http://www.significancemagazine.org/details/webexclusive/1048709/Statistics-and-the-Information-Society.html>.

- Mead, G. H., (2002 [1932]), *The Philosophy of the Present*. New York: Prometheus Books.
- Mills, C. W., (1959), *The Sociological Imagination*, New York: Oxford University Press.
- Popper, K., (1990), *A World of Propensities*, Bristol: Thoemmes.
- Savage, M. and Burrows, R., (2007), 'The coming crisis of empirical sociology', *Sociology*, 41 (5): 885–899.
- Schutz, A. and Luckmann, T., (1973), *The Structures of the Life-World*, Evanston, IL: Northwestern University Press.
- Thrift, N., (2005), *Knowing Capitalism*, London: Sage.
- Uprichard, E., (2011), 'Narratives of the future: complexity, time and temporality', in M. Williams and P. Vogt (eds), *The Sage Handbook of Innovation in Social Research Methods*, 103–119, London: Sage.
- Uprichard, E. and Byrne, D., (2006), 'Representing complex places: a narrative approach', *Environment and Planning A*, 38 (4): 665–667.