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Walking Code

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Abstract

This paper describes an early stage research project that seeks to apply Situationist concepts of psychogeography to urban walking as artistic and activist practice. The project seeks to ultimately create a syntax that can be used to describe and codify the subjective spatial practice of walking in the city. This process is a conceptual and discursive exercise to generate new knowledge about urban space as embodied data space that seeks to create a practical open framework that can be deployed to algorithmically generate walking experiences tailored toward specific desires and activities.

This will be achieved through the development of algorithmic methods to analyze, comprehensively describe and codify urban walking movements, developing a granular understanding of spatial movements. Walking in this project is understood as a performative act situated within urban systems based on data and algorithmic processes. As urban space is increasingly defined, determined and abstracted by these processes this effort seeks to propose a counter-movement building a language of urban walking to appropriate these processes to create rich crowd sourced walking experiences that suggest alternative user-centric modes of reclaiming the right to the city. This, of course, will also be embedded in data.

Psychogeography

This project begins with psychogeography as a research method. Psychogeography can be simply defined at one level as “the effect of the geographical environment on the emotions and behaviours of individuals”. (Woods, 2010) The practice was introduced and refined by the Situationist International (SI) an Avant-Garde group that existed between 1957 and 1972 mainly active in mainland Europe with a strong Franco-Belgian focus. Psychogeography from a Situationist perspective begins with Charles Baudrillard's account of the flâneur and Walter Benjamin's treatment of him as the quintessential figure of modernity, the man in the crowd but not of the crowd whose natural habitat of the Paris arcades were overtaken by the redevelopment of Baron Haussmann. For Benjamin the practices of the flâneur resist the logic of capitalism and the instrumentalisation of urban space, but the flâneur himself is an anachronism in the modern city (Tester, 1994, p.14) that I suggest elsewhere adds little to our current situation. (McGarrigle, 2013b)

The Situationists, “bored in the city” (Chtcheglov, 1953), sought to re-enchant urban space and create a New Babylon (Nieuwenhuys, 1974), a city worthy of the desires of its inhabitants. Central to this was to be a deep study of urban psychogeography which would be achieved using research methods such as the *dérive* “a technique of rapid passage through varied ambiances” (Debord, 1958) that would identify

and classify the psychogeographical ambiances of urban space in a systematic fashion. I draw attention to its intended role and importance as a practice-based research methodology, even if this was never fully realized by the Situationists.

In his *Introduction to a Critique of Urban Geography* Guy Debord introduces the concept;

Psychogeography could set for itself the study of the precise laws and specific effects of the geographical environment, consciously organized or not, on the emotions and behaviour of individuals. (Debord, 1958)

But this definition is then immediately qualified and rendered more ambiguous with;

The adjective psychogeographical, retaining a rather pleasing vagueness, can thus be applied to the findings arrived at by this type of investigation, to their influence on human feelings, and even more generally to any situation or conduct that seems to reflect the same spirit of discovery.

Indeed, it's not unreasonable to say that psychogeography as defined can encompass myriad urban practices that explore, reveal and disrupt the structures, narratives and histories of urban space particularly if they have a research aspect to them. It is this research-based practice aspect that is key to the Situationist approach to psychogeography, and it is one that lends itself to a contemporary rethinking of its techniques as expanded practice.

Psychogeography as a research method sought to map out the psychogeographical contours of the city, exposing the multi-layered complexities and interconnectedness of the zones of ambiance that dictate these flows of the city. For the Situationists knowledge of the psychogeography of a city was an essential prelude to its re-enchantment and remaking as Situationist city. However, as with much of the situationist program, this was left unfinished. Surveys such as that completed by Abdelhafid Khatib around Les Halles in Paris in 1958 (Sadler, 1998, p. 63) and Ralph Rumney's psychogeographical report from Venice (Sadler, 1998, p. 73) are the only comprehensive examples of psychogeography as research method. They stand in contrast to Debord's own efforts in his celebrated collaged maps *The Naked City* and *Discours Sur le Passions D'amour*. (Andreotti, 2002) These are more codified and, though they work as artworks, as research they remain inaccessible without a detailed, and unavailable, knowledge of their author's method. Geographer Denis Woods notes that Khatib's psychogeographic mapping of Les Halles in Paris with its detailed description echoes the simultaneous but unconnected efforts of the urban planner Kevin Lynch in Boston that would later become his influential book *The Image of the City*. (1962) This similarity again emphasizes and strengthens this reading of psychogeography as research method.

Contemporary Psychogeography

Psychogeography has since taken many forms as an active practice that, I suggest, is rethought for different situations and urban and social conditions. The influence of Ralph Rumney and his account of Venice, that earned him expulsion from the SI, has spawned a rich tradition of British

psychogeography. This tradition while invoking the Situationist practice traces its roots further back to the opium fueled wanderings of Thomas deQuincey, the writings of Arthur Machen and the theory of ley lines with nods to William Blake as the godfather of psychogeography. Contemporary British psychogeography is perhaps best exemplified by the writer and film maker Iain Sinclair's pedestrian circumnavigation of London's M25 motorway of *London Orbital*. (2002) Sinclair's method of walking and talking along routes of significance – for *London Orbital* he travels within the sonic footprint of London's ring road that he establishes as a symbol of Thatcher's Britain (she opened the road as one of her first tasks as PM in 1979) – follows a strategy that would be familiar to the SI. However, his attention to history and narrative, his adherence to the theory of ley lines most markedly in his 1979 book *Lud Heat* (Coverley, 2010, p. 51) and lack of a revolutionary program mark his practice out as distinct from that of the SI but nonetheless related. Sinclair's work inspired a resurgence of psychogeography in 1990s and 2000s Britain with groups in many cities¹ and the establishment of a distinctive flavor of psychogeography as urban exploration combined with radical spatial critique². Manchester psychogeography group the Loiterers Resistance Movement (LRM) describe psychogeography as an attempts to “decode the palimpsest of the streets, uncover power structures and discover the extraordinary in the mundane”³

The *dérive* as chief psychogeographic method privileges the act of walking in the city above others. The peripatetic act places the walker at street level moving at moving at a human pace, where the walker can read the city as a text, interpret the signs that encode the stories and actions that transform space into the human centered place. Walking according to Michel deCerteau (1984, p. 97) is in fact one of those systems that in fact make up the city.

The act of psychogeographic walking can be multiform; an act of re-appropriation taking back the space of the city and reasserting a right to the city, making the city anew through a considered process of re-enchantment, a process of rendering the familiar strange, or a searching for the psychogeographic traces through a process of close reading. The SI saw psychogeography as a quasi-scientific activity, psychogeographers would use situationist methods like the *dérive* to analyze the ambiances of the city, to map them and produce reports that would add to the knowledge of the city's psychogeographical ambiances. This data would then inform Situationist architectural and urbanist practices such as Constant's New Babylon leading eventually to the situationist city (Sadler, 1998). However, though theoretically rich and ambitious the SI project was unrealized with little in the way of organized or systematic research ever taking place. (Sadler, 1998, p.106).

The City as Data Space

In considering contemporary psychogeography we must also consider changing urban conditions of which the pervasiveness of code in urban space is the most significant. The contemporary city can be thought of as existing “as a haze of software instructions” where “nearly every urban practice is becoming mediated by code’ (Amin and Thrift, 2002, p.125) to the extent that space can be thought of

¹ Merlin Coverley maps these groups comprehensively in *Psychogeography* (2006).

² For example in the work of Stewart Home and the LRM.

³ See <http://nowhere-fest.blogspot.com/>

as being automatically produced (Thrift and French, 2002). These spaces have been theorized as code/space by Kitchin and Dodge, a condition wherein the correct functioning of software systems is required for space to function correctly (2011). The concept of space being produced originates with Henri Lefebvre's theory of spatial production (1991) that holds that urban space is a complex intermix of competing spaces produced by the spatial practices of different communities and interests, rendering space a social product. The production of space for Lefebvre was crucial in determining who had a right to the city, for space once produced has a control function in that it "permits fresh actions to occur, while suggesting others and prohibiting yet others" (1991, p. 73) while also allowing for the production of new space. According to Mark Gottdeiner, space has

the property of being materialized by a specific social process to act back upon itself and that process. It is, therefore, simultaneously material object or product, the medium of social relations, and the reproducer of material objects and social relations (1985, p. 129)

When space is being produced through the action of code, with algorithms determining this process of production, problems of democratic oversight are raised particularly when the control functions of space are being produced through proprietary coded processes. The use of coded processes that are obscured from view or otherwise unavailable for scrutiny or modification either through a general inaccessibility of code for the non-expert or because it is restricted as proprietary intellectual property (Gillespie, 2013) has profound implications for what Lefebvre called the right to the city . This right to the city is characterized by geographer David Harvey as

far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right since this transformation inevitably depends upon the exercise of a collective power to reshape the processes of urbanization (2008)

In an era of the smart city where software has an enhanced role in the control, governance and surveillance of urban space the right to the city must also include a right to oversight of, and the ability to modify, coded systems.

For our purpose here it furthermore clearly requires a rethinking of the situationist understanding of psychogeography. As psychogeography requires a close reading of the ambiances of urban space then, when these ambiances are produced by code-based processes, new approaches are required to scrutinize and reflect on the nature and function of these spaces. The widespread deployment of networked location-aware technologies such as smart phones interacting with, often global, software platforms not only enables a range of new spatial practices but also renders the very act of walking in the city as data. As the city becomes increasingly described through data most, if not all, activities leave a data trail. For example the simple act of walking carrying a location-aware smart phone tracks your position through cell phone towers, GPS as well as through the detection of wi-fi signals with known locations – even if not connected to them. Add to this device operating systems, any number of mobile apps that capture position, from social media to fit-bit type fitness monitors and even urban sensor networks that track device movements through sensors embedded in street furniture that track device MAC number unique identifiers. (Kitchin, 2015)

These developments call for a new reading of the spatiality of the city and the action of walking in networked hertzian space that, I suggest, can be provided through a psychogeography that attends to data and their corresponding systems. This demands an acknowledgement that it is also a producer of data and can therefore be described by data. However, when we consider the city as data space the differentiated zones of ambiances and the psychogeographic flows dictated by these zones, aspects that modify our experience and movement through the city not to mention our understanding of the city, can be captured, manipulated and understood through data. This understanding of this condition, and practice emanating from this understanding, might be termed data-psychogeography.

Data Psychogeography

Firstly to clear up any misapprehensions, data psychogeography does not mean that the psychogeography of a city must conform to being objectively quantified as data objects, like bicycle thefts or car accidents, with anything not describable or calculable through rubrics that privilege objective fact-based events being discarded. Rather it acknowledges the fact that in the data city every walking act is also a data act that is always already described as data, and resides in some database⁴. Not only is every movement, psychogeographic or not, rendered as data but is also enmeshed in a contingent data space where every action intersects in myriad ways with other data events. For example a psychogeographer walks past a cctv camera that records her image, analyses it in real-time with a facial recognition (or gait analysis) algorithm such as OpenCV⁵ comparing to a database of faces known to law enforcement and saves it to a database with its associated metadata. Data-psychogeography begins with this acknowledgement that as psychogeography generates data it is also inscribed in data. Therefore, if we can describe psychogeographical acts as data we can also codify psychogeographical accounts of the city using methods that allow for saving and sharing of these data descriptions and their collation in open databases. Ultimately I propose that this data could enable the creation of rich accounts that psychogeographically annotate cities, and the opportunity to use this data to generate psychogeographical models and experiences tailored toward specific desires and needs.

In this respect data psychogeography points toward a method of harnessing the collective effort of psychogeographers to understand cities as situationist space, to create a counter movement to what Lefebvre saw as the abstraction of city space as “conceived space” measurable quantifiable and controllable (Lefebvre, 1991, p.38) This approach seeks methods that analyze and capture the city as lived space through recording the phenomenological experience of being in the city. One method is through developing a syntax of lived spatial experience that allows psychogeographers to annotate their activities in granular detail, creating a dynamic codification of the knowledge gained from the experience of being in the city, a knowledge that is constantly refreshed and made new in response to our dynamic urban environment. As the psychic ambiances of the city are expressions of, and responses

⁴ I discuss technical aspects of this datafication process in digital artworks elsewhere (McGarrigle, 2015) and suggest that these processes are replicated in psychogeographic artworks.

⁵ OpenCV is the most widely used computer vision algorithm

to, the socio-political, economic and geographic factors that shape urban space, psychogeography offers readings of these spaces and introduces new spatial practices that, as Lefebvre suggests, produce counter spaces that challenge and disrupt the dominant spaces of the city. Data-psychogeography, in addition to offering a data-driven codification and recording of psychogeography and its action in the city, also refers to the leveraging of available layers of data as a guide to the practice of psychogeography. This can involve dérives based on economic data such as this author's *NAMALand* tours that toured the city of Dublin based on a data-set that connected sites throughout the city with the Troika bailout (McGarrigle, 2013a) or my *JoyceWalks* series that generated dérives based on a remapping of McGarrigle, C. (2013) *Augmented Resistance: the possibilities for AR and data driven art. Leonardo Electronic Almanac, Not Here Not There Volume 19 Issue 1*, January 2013. pp106-122.f routes from Joyce's *Ulysses* (McGarrigle, 2009).

Why codify these practices? Is psychogeography not an ephemeral practice of tactical resistance, offering temporal interventions that appear and recede? The reasons, I suggest, are twofold. Psychogeography in its original incarnation was a research method designed to generate new knowledge about the city. For this to be effective it must be archived and shared through a structured research process this makes this knowledge knowable and accessible. Secondly a codification of the process, in addition to offering a description of these spatial practices, serves to aggregate and make public this psychogeographic knowledge gained from interventionist dérives and spatial research, this in turn becomes a resource to be accessed for further research. It is important to note that this is never a fixed static body of knowledge, it is emergent, evolving as the spatial practices that feed it constantly and dynamically rethink what it is to be in the city.

Walking as Data

However when considering the practice of walking in the city through data there exists a gap between what can be described as data events – location, direction, speed, time, environmental measurements and so forth – and the more subjective experiential aspects that are harder to describe but nonetheless define the quality of the experience and capture the psychogeographic contours of any space. This echoes Michel deCerteau's dictum that maps and accounts of walking while describing locational aspects of walking will always miss the practice of the walk, the relational activity that distinguishes one walk from another, what he calls the act of passing-by (deCerteau, 1984, p. 97). Any account of urban movements and urban life that is told through data must then tend toward that which leaves a data trail, and even in an era of big data regimes of collection, data is always already cooked, never raw (Gitelman, 2013). The promise of big data is that combination of static and real time data, structured and unstructured, can be parsed and analyzed to produce insights without the need to pre-structure the collection regime toward specific goals, with limits being access to processing power and data volume (Kitchin, 2014). This, however, doesn't capture how I feel as I walk down a particular street on a wet Wednesday morning. It lacks insight into the decision making process that makes me turn left instead of right while on a *dérive* inspired by a historical reading of the revolutionary role of Dublin's General

Post Office rather than simply popping in to post a letter on my lunch break. Unless of course I share all my motivations on Twitter and this can be correlated with other data about me across multiple devices and platforms.

To be in a city today and participate in the life of a city is to generate a detailed and complex record of your activity that is being saved to databases and cross correlated across any number of platforms and data sources from credit and purchase histories to travel records and internet searches. This data is packaged and sold in a burgeoning data marketplace and leveraged across platforms by major internet players such as Facebook, Google, Apple and Amazon (Angwin, 2014), not to mention the US government's security service the NSA (Greenwald, 2014). Concerns over privacy and surveillance aside, this data represents a comprehensive picture of how the space of the city is used in a detail that was hitherto unavailable. Data on these movements through space is analyzed for surveys of spatial usage with systems like Space Syntax offering urban planners tools for designing spaces for maximum footfall, and through research analyzing urban movement through cell phone and taxi records by MIT's Senseable City Lab.⁶ Recently work by researchers at Yahoo has even generating happy walking routes through data mining social media for locations that are most often described as beautiful, quiet and happy (Quercia et al., 2014). This research seeks to apply similar approaches in a more comprehensive way to psychogeography.

A walking syntax

Central to this data psychogeography effort is the codification of the experience of walking in the city. This relies on the development of a syntax of walking that is sufficiently flexible to describe a myriad physical locations, environmental conditions, psychogeographical ambiances and subjective experiences of being in the city in addition to capturing the influence of algorithmic instruction. This builds on classical ideas of the Situationist *dérive* as research method and urban intervention, accounts for contemporary psychogeography from Iain Sinclair to Will Self as well as urban exploration and multiple other practices such as infrastructural tours (Burrington) or projects that visit locations of political, historical and economic significance (McGarrigle, 2009; 2012).

This is an early stage project that identifies the problem of developing a syntax of urban walking and seeks to develop this into a robust method that allows for the construction of a crowd sourced data collection platform that can aggregate a body of psychogeographic knowledge from cities around the world. This builds on the practical experience of creating a series of participatory walking art projects that invoked psychogeographical concepts in developing technologically mediated navigations of urban space. These include projects such as *Joyce Walks* (McGarrigle, 2009), a walking art platform that allowed user to generate *dérives* based on a remapping of routes from Joyce's *Ulysses* to any city in the world with the results mapped, documented and recorded to a database, and *NAMAland* (McGarrigle, 2013a) an augmented reality mobile app that made visible aspects of the Irish financial collapse and Troika bailout and facilitated walking-talking tours of these locations. The method being developed is a

⁶ Realtime Rome (2006) <http://senseable.mit.edu/realtimerome/>

practice-based one that builds experientially on previous work and the knowledge gained from the creation of a series of walking art and psychogeographical participatory art projects.

Walking Acts

To conceptualize the act of walking I introduce the notion of the *walking act*⁷ a peripatetic act that has a performative function beyond that of a journey or stroll. (Debord, 1958) I will briefly sketch out the initial thinking behind this notion with the proviso that this is indeed early stage research and will be further refined. The purpose is to distinguish between the intent of different forms of walking and to provide beginnings for a framework to analyze and describe the psychogeographical act of walking as performative spatial practice. Initially we could say that the situationist *dérive* as defined by Debord would then function as a walking act as would walking art works such as Adrian Piper's *Mythic Being* and *Catalysis* performances⁸, the walking projects of Francis Alys⁹ and a broad range of interpretations of psychogeography. However we would exclude instrumentalised walks such as walking to the train station or going for a stroll, though the boundaries would be expected to become rather indistinct and open to negotiation in many cases, for example when does a stroll stop and flanerier start? One of the first tasks of the research is to define further the walking act through further definition of the term, by learning from practice and from engaging with the communities of psychogeography.

The walking act centers on the intent of the act, this serves to differentiate the walk from everyday purposeful walking. Intent establishes the walk as having purpose beyond reaching a destination or getting some air, examples would include walking as research activity or as performance. Intent will need to be separated from goal orientated purpose, for example in a *dérive* the purpose is not to reach a destination but is embedded in the process of walking itself and the experiential qualities of the walking event. This successfully excludes the purposeful goal orientated walk, for example walking to the train station to catch the train, but is less successful in excluding the stroll whose purpose is not to reach a destination but more to enjoy the act of walking at any number of levels. The SI might exclude this as a mundane activity but certainly for contemporary psychogeographers a stroll that involves an awareness of psychogeographical effects would be included. However at this stage of the project we can leave these definitions somewhat ambiguous and return to them as the project progresses.

A central task of the project is to develop a syntax that allows us to describe the walking act as a series of components that, while individual to each walk, are common across all. At the highest level this is the algorithm of the walk, the set of instructions, theme or rules that establish the walking act itself. These can be navigating the streets of Paris while following a map of London or receiving instructions from social media followers that govern the actions of the walkers. This is knowable as it sets the route at the macro level and should be more or less reproducible, however, we would need to drill down to

⁷After Searle's speech act and DeCerteau's Walking Act discussed at length in the Walking in the City chapter of the Practice of Everyday Life. I hope to develop it further and in a different direction in this work.

⁸ See Adrianpiper.com

⁹ See francisalys.com

capture how these rules are contingently expressed in the performance of the walk. The complexity of any psychogeographic experience multiplies at this point with a multiple factors influencing and shaping the experience. I suggest that this can be considered in two broad categorizations, action and situation. Actions once again can be further structured into micro-displacements and micro-attentions, that is the granular contingent components which combine to form the macro-movement which are governed by the framing of the act in a close reading of the street. Whereas situation invokes a multiplicity of external factors – many of them accessible through city open data – from other walkers to weather, traffic, street life and so forth.

Future Work

As an early stage project the concepts discussed are being developed, this will lead to trial projects and development of the walking syntax. Once the syntax is formulated it will require extensively tested and refining in the field as an iterative process with multiple versions. This will be done initially at a natural language level but once the syntax has reached a reasonably robust level work will begin to transfer the concepts into a coded structure. The ambition is for a structure that will fully describe the walking act, allow for multiple levels of granular annotation and for its capture as data in an addressable database structure. This data will be contextualized with available data sources from real time social media and other locational information to city open data and weather reports and tracking position data for each walker.

It is proposed that a method of capturing these actions as data that can be crowd sourced will be devised. This data will be combined and cross referenced with location information – both the location of the walker and a description of what else is present in the location – providing information on not only what is physically present but how it affects the emotions of the individual. The artist Christian Nold in his *Emotional Cartography* series has previously used galvanic skin response monitors combined with GPS to track walkers' emotional response to location. In the interest of building a model that can be crowd sourced using easily available technology work will be done to explore the possibilities of using smart phone connected sensing apps that record bio-data alongside location in addition to custom devices using low cost electronics such as the Raspberry Pi Zero.

Conclusion

This paper outlines the background to, and the first steps of, an early stage research project that seeks to codify the experience of walking in the city as psychogeographical act. The project proposes an urban data aware psychogeography that draws on situationist techniques but addresses contemporary conditions with an emphasis on the role of data and data capture in urban space. The work proposes the first steps toward such a system for fully describing and capturing the psychogeographical experience of walking in the city, it is proposed that its employment of data techniques offers a counter movement to current ideas of the data city that has the potential to reinvigorate situationist notions of psychogeography and its role in re-enchanting the city.

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