“One False View From Nowhere”

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My research project looks at the way that attention is experienced and understood in light of the distracting effects of social media and the mobile internet, and how this might contribute to the construction of subjectivity. I’m interested in the experience of distractibility that is a common companion to these new technologies and devices. Mobile devices and software produce new attentional demands by generating huge quantities of information – updates, notifications, messages and so on – that we as users have to find ways to deal with. It’s been suggested that this quantity of information is so significant that we often deal with it quasi-autonomously at the margins of our attention rather than in the thematic focus of our attention[1], and that this is a way of preventing ourselves being overwhelmed and made anxious by it.

I’m exploring this topic through the production of artworks that use digital media as the medium or context for the work, although I also make art in other media such as photography and video. While not strictly limiting my practice to digital media, I am mainly interested in how artistic practices negotiate this digitally inflected territory.

I’m at the stage in my PhD where I’m exploring a range of different methods, and this paper talks specifically about only one type of practice that I’ve adopted: a practice of gathering data about my own computer usage. The first part of this paper will outline some experimental works that I’ve made in pursuit of this enquiry, and the second part will attempt to situate these in relation to some relevant theoretical contexts.

1. Works

There is a significant quantity of literature about distraction that approaches the subject in terms of its impact on productivity. For this reason, gathering data about my own levels of productivity through my engagement and interaction with my computer seemed like a viable first step to practically exploring this. My initial approach was to use a piece of off-the-shelf software called Rescue Time [2]. This commercial software runs in the computer’s

[1] While there are a number of alternative models of the attentional field, for the purposes of this paper I am using P Sven Arvidson’s model (2003), which is based on earlier work by Aron Gurwitsch.

[2] Downloadable from http://www.rescuetime.com.

background and measures the quantity of time spent on particular tasks. It's mainly intended to help freelancers measure the amount of time they might be spending using particular pieces of software so they can bill their clients more accurately, but it's also promoted as anti-distraction software, to help its users focus on work by revealing how productive – or otherwise – they might have been during a specified time frame.

I ran this software for a few weeks, allowing it to monitor and record my activity. While I did discover some interesting data about my computer usage, such as how many hours per week I spent using my web browser or email client, Rescue Time didn't really offer enough of a drill-down into my material interaction with the computer. Information about how much time I spend on particular tasks informed me about my interaction with the device only in terms of my software usage and productivity, and ignored the actual embodied interaction that being a computer user involves.

In order to find out more about this, I needed a different type of software, something more akin to key-logging spyware. After locating a lot of very suspect pay-for and free key-logging apps, I settled on a piece of software called RUI–Recording User Interface [3]. Designed for use by interface designers so that they can record interactions with designed interfaces for the purposes of software testing, the software consists of a script written in C. This meant that I could check the code for suspicious routines to assess any risk of privacy violation, and also offered the possibility of modifying it in future to better suit my needs.

```
Subject Name: mday
File Created: 4/5/2015 12:30:40 PM
Elapsed Time    Action  X       Y
0       Moved   307     222
 0.714  Moved   306     222
 0.980  Moved   306     223
 0.997  Moved   306     225
 1.013  Moved   307     232
 1.030  Moved   314     248
 1.046  Moved   324     268
 1.063  Moved   334     287
 1.080  Moved   344     310
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474.419 Moved   416     538
474.435 Moved   418     538
474.452 Moved   420     538
474.559 Pressed Left
474.655 Released        Left
474.718 Moved   421     538
474.801 Moved   422     538
474.818 Moved   422     537
474.834 Moved   423     537
475.712 KEY     RETURN
475.768 KEY     TAB
476.520 KEY     w
```

Figure 1: Sample RUI Dataset

The dataset produced by RUI gives very detailed information about physical interactions with the computer. It measures mouse or track-pad movement, and records cursor position, as well as key strokes and mouse-button presses, time-stamping all of these and presenting them in a tab-delimited text file for further processing.

[3] For more information, see http://acs.ist.psu.edu/projects/RUI/.

Having gathered several sessions of this data while I was producing the conference presentation, and taking a lead from Robin Nelson (2013), I wanted to try and defamiliarise this data and therefore my interaction with the computer, hoping that this would facilitate more creative insight into these processes. Creative coding is part of my skillset, although I am not a trained programmer, so my first attempts to work with the data involved producing a system (using Processing [4]) to simply play back the mouse movement from the data in real time as an animation.

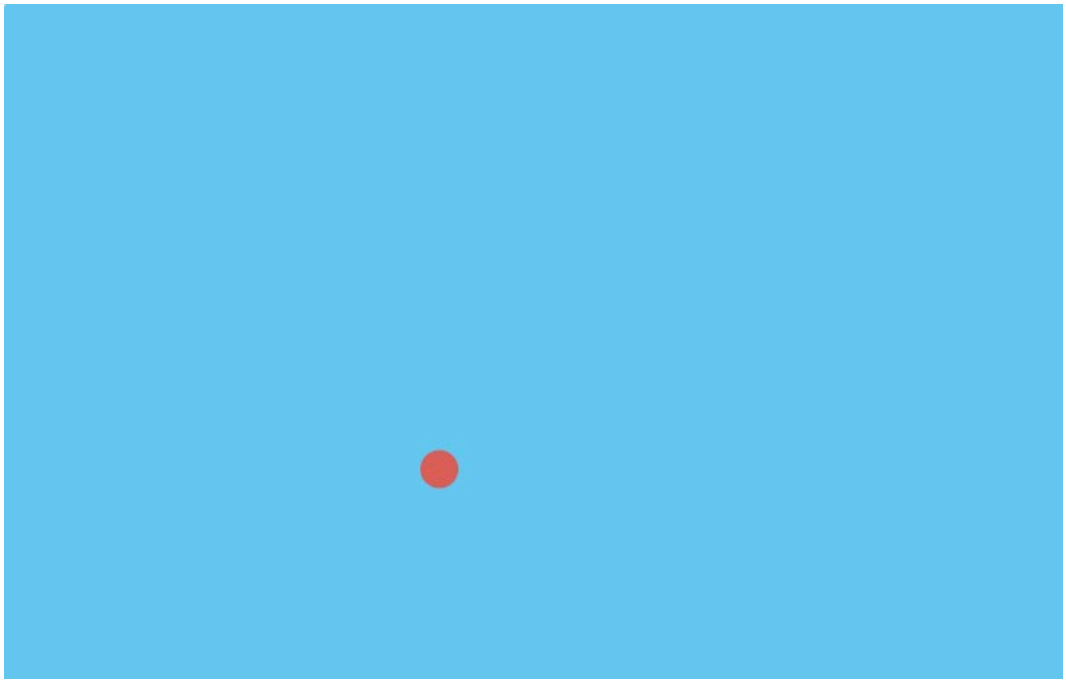

Figure 2: Screenshot of mouse movement animation. Full video viewable at https://vimeo.com/125739220.

On seeing the animation, the first thing I noticed and that was surprising was that the movement of the dot looked very organic and human. This shouldn't have been surprising, since I am organic and I generated the movement that created the data, but there is something about the process of abstracting that movement through numerical data that made me expect it to play back less fluidly than it did. In terms of its status as an animation, and aside from its relationship to data gathering, the piece deploys the viewer's attention in particular ways: there are moments of suspense, moments when the viewer might experience proairetic expectation while waiting for the next flurry of activity. It's also easy to anthropomorphise the movement of the dot, perhaps to see it as a sentient creature running around the screen.

[4] Processing is a programming language, development environment and community. For more information, see http://processing.org/.

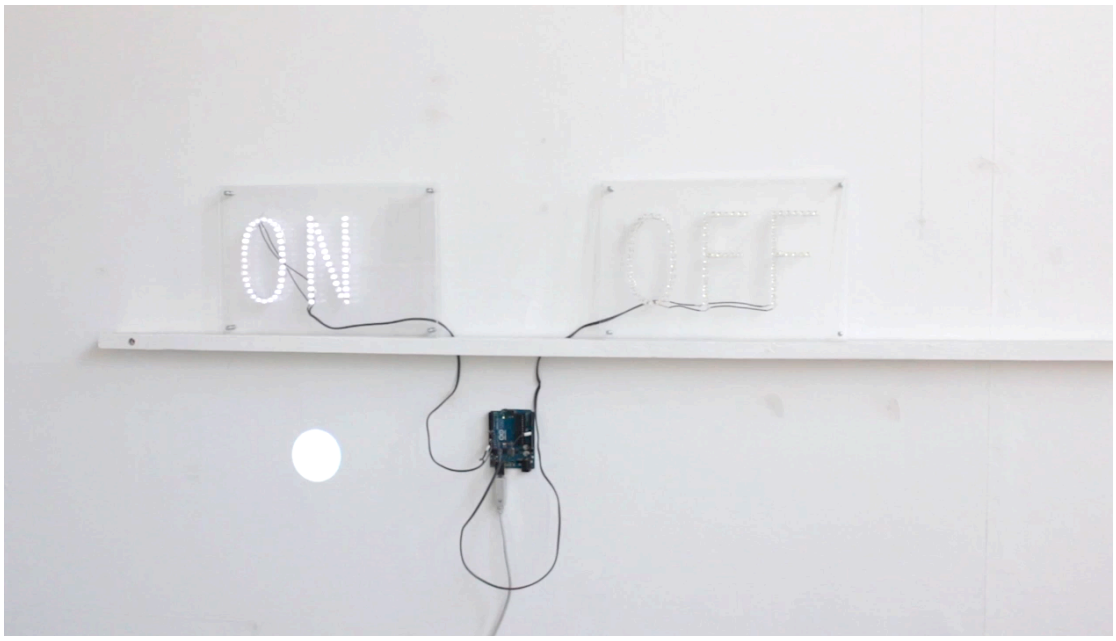

Figure 3: Three-dimensional visualisation. Video viewable at https://vimeo.com/121477013.

In order to develop the work further, I made a test piece that moved the visualisation into three dimensions, adding elements that reveal the mouse clicks in the data set. I produced two LED signs to indicate the status of the left mouse button: the ON sign was programmed to light up when the mouse button is pressed, and the OFF sign to light up when the mouse is not pressed. I was interested in how this plays linguistic tricks: when the mouse button is not clicked, the OFF sign is actually on. A version of the mouse movement animation was projected onto the signs. While the piece does begin to visually address the complexity of the layers of interaction that are experienced when using a computer, it also contains inconsistencies that are problematic in terms of my enquiry. There is a potential reading of the work in which online and offline activity could be seen to be different, separate, and binarily opposed experiences. I feel that online and offline experiences are far more blended or interleaved than the piece might infer on this reading.

Alongside this, I had produced a range of more graphical representations of the data. Using Processing, I produced a number of computer drawings that drew shapes in very pale ink wherever the mouse rested. The image that this process produced had areas of density where the mouse had been immobile for a time, and paler patterns of shape in areas where the mouse had been more mobile. Several versions were produced by modifying the parameters of the system: some changed the size and the colour of the circles that were drawn, again revealing something about the complexity of my interaction, but also producing images that were extremely de-differentiated and visually dense. I also experimented with different shapes and transparencies of mark.

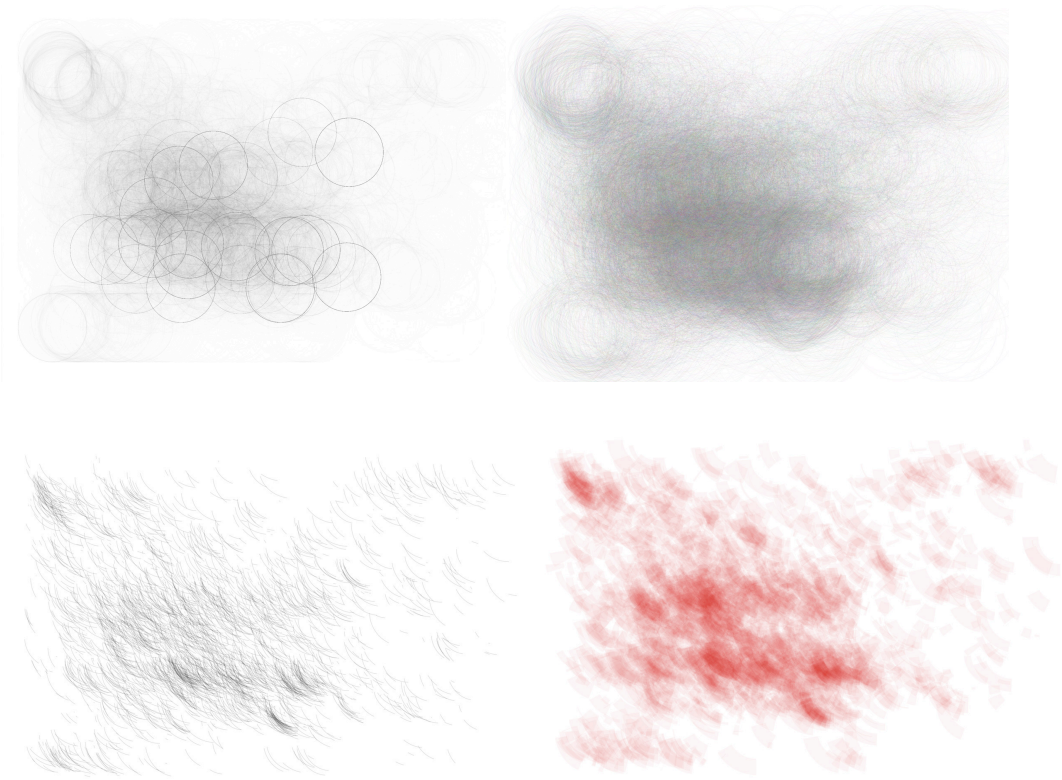

Figure 4: Graphical visualisations

These works have a very familiar look, sharing as they do visual characteristics with data representation works made by Casey Reas or Marius Watz dating from the the early 2000s[5]. They are also reminiscent of heat-maps that are commonly used in web or interface design.

Seeking to change direction from these familiar graphical approaches, I decided to try and visualise the key presses from the data in a physical way. I produced a system that would play back the key presses from the data using an Arduino microcontroller and a solenoid[6].

[5] See for example Marius Watz's BVALSYS at http://mariuswatz.com/2010/09/18/bvalsys/, or Casey Reas's archive website at http://www.reas.com.

[6] Arduino is an open-source electronics platform based on easy-to-use hardware and software. See http://www.arduino.cc/ for more information.

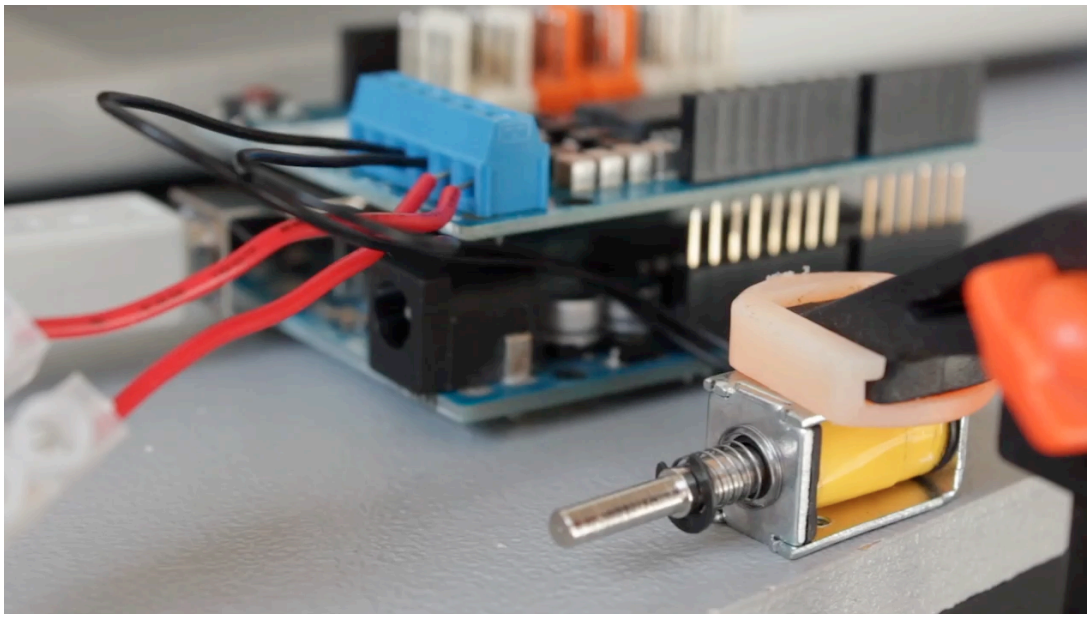

Figure 5: Solenoid system. Video documentation at http://vimeo.com/127730497.

Once this system was up and running, I made the instinctive decision to position it in my studio against a metal surface – in this case the radiator – so that when activated the motion of the solenoid would sound like the keys of a traditional typewriter. The tapping action on the radiator also transmitted the sound through the heating system of the studios, sending a hard to locate but very annoying tapping sound around the building. This seems like a potentially interesting area for future development, in that a dataset that was generated by productive activity is here being deployed as a distraction to somebody else's productive activity in another part of the building. It might also be read as the tapping of a prisoner seeking to gain attention and release, only sounding like a typing pool rather than Morse code. Both these readings invoke the idea that the unbidden arrival of information into the thematic focus of attention is uncomfortable, distracting, and potentially overwhelming; and locates this discomfort in relation to productive work.

2. Context

The question of how these practical experiments can be understood as contributing to my research enquiry can be considered in a number of ways.

My first observation about these approaches is that each of them makes activities or experiences that are normally at the margins of attention more visible. When I'm using the computer, I'm not paying much attention to the physical sensation of the keys pressing against the ends of my fingertips. I am perceiving this, and it is part of my attentional field, but it's kept in the attentional margins. Bringing an awareness of that experience to the centre of attention feels like it might be a viable activity.

There is an existing artistic context for this approach. Evan Roth's exhibition *Voices Over The Horizon*[7], which was recently staged in London, examines the material infrastructure of the internet by focusing on the physical location that the cable carrying most of the UK's internet traffic arrives in the UK. Using a range of practical approaches from sonography to sculpture, Roth asks us to consider the material infrastructure that carries our internet communications. Timo Arnall, too, has produced a body of work that explores elements of computing's infrastructure that do not normally attract attention. Internet Machine (2014) is a multi-screen video portrait of a data centre, and the research project Touch (2006–10) consists of a visualisation of RFID signals that are often used in access cards and other near-field communication devices.

A second point raised by the practical enquiry is the relationship of the practice to data, and how that data might best be interpreted from an artistic and a research perspective. In this instance, I take a similar position to Stefanie Posavec, a non-coding artist who works with data in her work. She describes herself as a data illustrator, which she defines as:

> "… someone who represents data in order to communicate additional subjective messages that aren't found in the data itself". (2012)

This is definition is helpful, particularly with regard to the solenoid experiment outlined above, because it explicitly acknowledges the role of the researcher in the construction of the work the data is producing.

Another context that this practice of personal data gathering might intersect with is the Quantified Self movement [8]. The QS website is a hub for people who gather data about their activities and use that data to try and discover something about themselves, usually with the aim of self-improvement or self-development.

The status of quantification as a practice that aligns with neoliberal reasoning is an area that needs more thorough discussion than can be conducted in this paper. The interest in terms of my practical enquiry is that QS, and the interpretation of Big Data more generally, carries with it an assumption that the data will reveal something that was previously unrevealed: that truth somehow is out there in the data.

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[7] Exhibited at Carroll/Fletcher, Eastcastle Street, London between 6th March and 11th April 2015.

[8] For more information, see http://quantifiedself.com/.

Mark Andrejevic talks about this assumption in terms of its opposite: a disbelief in representations. Because there are so many representations available to us in the contemporary internet landscape, and because our participation in the production of such representations reveals to us their constructedness, and combined with the ease with which representations online can proliferate and contradict each other, he suggests that representations are losing their power to offer authoritative meaning. He describes this as the "demise of symbolic efficiency" in the face of "savvy disbelief". The consequences of this are that we take up various strategies that lead us to seek knowledge that is pre-discursive, that is not open to debate, in order to find meaning and to find truth. He claims that:

> "Perhaps the defining symptom of the demise of symbolic efficiency is the attempt to bypass mediation and its vagaries by gaining direct access to a pre-discursive truth not yet caught up in the tangles of representation." (2014, p14)

This move away from representation and toward 'truth in the data' feels like a move towards a type of objectivity at odds with contemporary social research. In the essay from which this paper borrows its title, Nathan Jurgenson describes this as a type of positivism. He claims that

> "Big Data positivism myopically regards the data passively collected by computers to be objective. But computers don't remember anything on their own." (2013)

For me, there is an interesting friction between the idea of a truth derived pre-discursively from data, and the idea of the researcher framing the reading of that data, carrying with them their own biases and cultural assumptions. Since the meanings that are attributed to art are almost always arrived at through social and discursive approaches, this seems to be a productive intersection in which to be working as an artist and as a researcher.

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