

## A Boneyard of Data: Graffiti and Street Art's Temporalities

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### Abstract

*In the era of Instagram, graffiti and street art are increasingly produced as digital objects, shaped by the architecture of digital platforms and the aggregated responses of audiences, transmuted into data. This paper focuses on one aspect of this context: the complex temporal existence of graffiti and street art - their duration, speed and acceleration - across multiple time zones. It asks: how is the consumption of graffiti and street art as digital images affecting its production? Has digital culture accelerated the production of graffiti and street art, driving shorter, faster cycles of repainting, with a greater ephemerality matched by parallel and potentially infinite lives on digital servers and devices? Using data generated over a period of 500 days at a single suburban painting site dubbed 'the Boneyard', this paper attempts to track the accelerating rhythms of graffiti in digital culture. It uses a number of methods to map the duration of pieces on walls and their digital echoes, including Photographic recording, data visualisation and social network analysis. Ultimately, this research seeks to extend existing methods of longitudinal analysis and to make a broader argument about the effects of social media on graffiti's aesthetic features.*

**Keywords:** Instagram, Photography, social media, walls, social network analysis, graffiti, street art, art audiences

### 1. Introduction

In the era of Instagram, graffiti and street art are increasingly produced as digital objects, shaped by the protocols of digital platforms and the aggregated responses of global audiences converted into data (Avramidis & Drakopoulou 2015; MacDowall 2016). My previous research attempted to use data analytics to trace an expansive global portrait of the major players and institutions in an emerging street art world. It used data generated from the top 100 graffiti and street art accounts to sketch the geographic contours and key players, as well as think critically about how Instagram is shaping creative practices (MacDowall, 2016). This paper acts as a counterpoint to the large scale portrait, instead attempting to see some of the effects of this global institutionalisation on a single site, at street level, based on data collected daily over a two-year period at an anonymous site dubbed "the Boneyard"

There have been many attempts to chart the longitudinal analysis of graffiti at

single sites over long periods: these include books on New York walls or individual Halls of Fame and impressive web sites such as Cassidy Curtis' *Graffiti Archaeology* project, which produced time-lapse interactive maps of key graffiti sites in San Francisco, Los Angeles and New York. This project began with Curtis' own Photographs around 2005 and eventually crowd sourced images via Flickr, building a community of interest around the project (Curtis, 2008). More recently, Susan Hansen and Danny Flynn have proposed a formalised methodology for repeat Photography and longitudinal analysis, in order to show how walls function as a form of "asynchronous, yet sequential, communication" (Hansen & Flynn, 2015). In a similar vein archaeologists Alex G Hale and later, Annie Leigh Campbell, have used Instagram to follow the changes in a wall over a year, with the description and analysis occurring on a weekly basis. (@alexghale; @annie-leighcampbell)

Whether a personal collection memorialising a site, a custom-built interface that allowed users to cycle through ye-

ars of graffiti in a single motion or a weekly practice using a phone app, longitudinal analysis offers a number of benefits. Graffiti and street art are increasingly viewed via screens, and often in ways which abstract them from both spatial and social context. They are also increasingly represented through the logic of the art market (a singular, identifiable author of a discrete object) rather than as a practice with more complicated authorship (MacDowall, 2014). In this context, the method of longitudinal site analysis promises to restore both the contextual and collective dimensions of the practice. As Hansen and Flynn argue, repeat Photography does not make a distinction between “‘artistic’ images and more visually ‘offensive’ tags”, instead highlighting “graffiti and street art’s existence within a field of social interaction” (Hansen & Flynn, 2015). In this piece, I’m also suggesting that longitudinal analysis can also draw attention to the complex temporalities of existence and visibility of graffiti and street art in the digital era.

The architecture of Instagram produces a temporality based on an ever-present now. It’s primary expression is through the platform’s home feed, where images are organised according to the moment they were posted. In the classic version of the platform, (2010-2016), Instagram images were not time- or date-stamped but were described only in relation to the present (e.g. 5 mins ago, 62 weeks ago). From early 2016, the Instagram algorithm now adjusts the temporal feed, inserting trending items at later times, and items displayed in users accounts are now listed by the date on which they were posted.

The complex temporalities of Instagram are also produced by the mixed origins of its content and the production of memory. In its design, the platform was originally conceived as a forum for current, original Photographic content (referred to as OC) and the Instagram rules still refer to this ethos. Some practices have been instituted to encourage the posting of new content rather than old, such as the official #tbt (#throwbackthursday) hash-tag, which attempts to contain the posting of nostalgic material to a single day of the week. However, the platform has plenty of content that diverges from this original intent, such as the production and sharing of memes. Also, the sheer demand for constant posting overwhelms the temporalities of production for most artists and writers, meaning that contemporary content must either

be split into multiple fragments (for example, the posting of a detail of an artwork, followed later by the full image), supplemented by everyday observational content or by older content from one’s archive. Particularly in graffiti culture, Instagram has seen the posting of large amounts of from personal archives from the analogue era, reversing a trend in which personal albums and archives were not shared but existed in a closed economy. In the Instagram era, the practice of secrecy in which images were previously confined to ‘the vault’ has been replaced to some degree with the hive-like, collective sharing characteristic of a broader Internet culture.

This paper explores one aspect of this context: the complex temporal existence of graffiti and street art - their duration, speed and acceleration – across multiple time zones. It asks: how is the consumption of graffiti and street art as digital images affecting its production? Has digital culture accelerated the production of graffiti and street art, driving shorter, faster cycles of repainting, with a greater ephemerality matched by parallel and potentially infinite lives on digital servers and devices? In short, is Instagram driving both an amplification of graffiti and street art (expanding both its global audience and at times, its physical scale) and an acceleration of temporalities and cycles of production?

## 2. Method

To explore this question, the paper uses data generated over a period of 600 days, from mid-2014 to the present at a single painting site dubbed ‘the Boneyard’. It uses a number of methods to map the duration of pieces on walls and their digital echoes, including Photographic recording, data visualisation and social network analysis. Ultimately, this research seeks to extend existing methods of longitudinal analysis and eventually to make a broader argument about the effects of social media on graffiti’s aesthetic features.

As outlined in my previous research, I have conceived of graffiti and street art as related but distinct categories that overlap in complicated ways (MacDowall 2014; MacDowall, 2016). Attitudes to data and data collection may be one strong point of difference. In general street artists are strongly embedded in social media, in which the collection and use of data has become normalised, despite revelations about its deployment for commercial gain or state surveillance (MacDowall, 2016). While individual street artists have produced

critiques of social media (“Fakebook”, etc) or occasionally opt out of social media, the practice is heavily embedded in post-internet culture and the logic of social media platforms, in which the production of data and quantification is a natural element. In contrast, graffiti culture has a more ambivalent relationship to data, having roots in an analogue era in which data collection was associated with law enforcement and the collection of information. From the mid-1990s, law enforcement in many countries used a database system to record vandalism and calculate the cost of cleaning, down to the physical surface area of graffiti. More recently, data collection has also been the realm of commercial cleaning contractors tasked with graffiti removal, who document the before and after of cleaning. Some commercial anti-graffiti companies also offer to perform data collection and analysis in order to aid in the prosecution of graffiti writers (some deploying remote electronic trip-wires and cameras camouflaged with 3-D printed objects).

This ambivalence towards data collection has shaped the research in a number of ways. Firstly, in this project I have chosen to anonymise the site and the artists involved, in order for the study itself neither to affect the painting at the site nor to provide anything that might identify or be useful evidence against the participants. For simplicity I assigned the artist an alias (in addition to their tag, already an alias) based on the NATO phonetic alphabet.

Secondly, in designing the methods and analysis I’ve also taken care not to use methods that could lead to the identification of the participants. In many circumstances, even carefully anonymised data or meta-data can be used to identify individuals or places (Haugea et. al 2016). As we have seen in the recent controversy over the use of data analytic methods to uncover Banksy’s identity, the use of large data sets and meta-data are often used in the service of control societies. However, many of these methods are already used by law enforcement officers and other agencies and I have taken some of my methods from strategies used by the military strategists in counterinsurgency operations (Everton, 2012). As I’ll discuss, the site I chose was also under electronic surveillance for period of time.

Anonymising the participants protects them and the painting site but it also lends it an abstract quality. So much of what

we know about graffiti culture comes from an immersion in a particular place, a familiarity with the local history or writers, crews, styles and spots. We are also encouraged to take graffiti as it presents itself, as a visual object seeking attention, often dominating our vision. Thinking about walls as the producers of data undermines and cools this immediate visual stimuli and response, allowing us to see the broader patterns at play. We can now think less about this wall being in a particular city or being painted by particular writers and more about

Finally, the abstract quality of the data also creates meta-data, that is, information that is emptied of content but makes visible other qualities: the timing and duration of activities, the existence and contours of networks, extrapolated from the habits of individual relationships. Considering graffiti in relation to data and meta-data, both in a practical sense and for the broader conceptual horizons these ideas represent.

The painting site was chosen for the research because it had an number of unusual features,

- it is suburban, rather than in the inner city where graffiti is intensified;
- the site is fenced but there are a number of access points and it is not regularly policed;
- there are few residential properties nearby and the adjoining businesses are separated by large fences or walls.;
- While located some distance from the inner-city, it was close to a major arterial route;
- It is set back from the main road, so that the graffiti can only be briefly glimpsed from passing cars some 120 metres away. There is very limited passing foot traffic;
- The site is well known amongst the graffiti community in the city concerned.

I was initially drawn to the site by an acceleration of painting: the development of a large- scale piece, quickly defaced or painted over, then two or three pieces in rapid succession. Unlike in previous graffiti eras, the defacement or slashing did not seem to deter intensive painting at the site. Was the acquisition of a Photograph of the piece (rather than a continuing piece) and the digital audience (rather than the very small numbers of actual visitors) sufficient motivation? Was this a case not just of the normal secluded painting in abandoned buildings that had happened for decades but a subtle

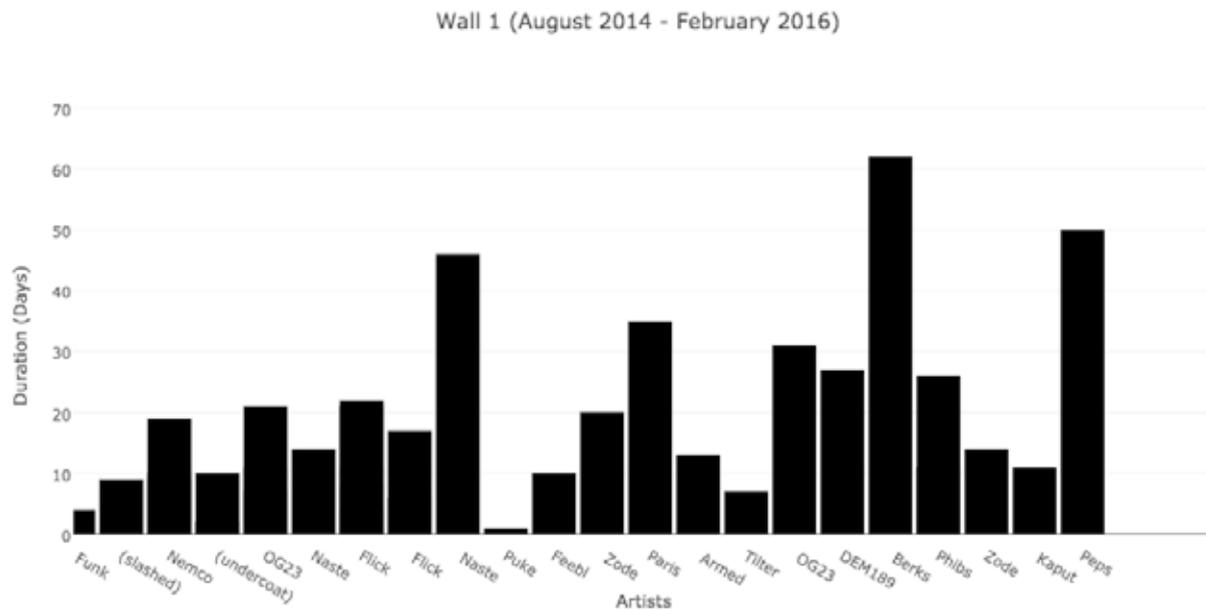


Fig 1. Frequency of painting of Wall 1

shift in which the walls had become a backdrop for the production of digital content. The intensive painting and quick turnover suggested this was the case.

Over the period of analysis the site itself as gone through a number of changes and will likely be subject to intensive development in the near future. I visited the site almost daily from July, 2014 to the present (currently for 600 days). I cross-checked my data against Instagram posts and a graffiti blog. Needless to say, this kind of data collection is very intensive and time-consuming. I made a decision to focus the data collection on the three main walls (usually allowing space for 6 pieces at any one time). As the site gained popularity, new peripheral areas were painted (a low wall, a somewhat scrappy additional wall, etc) but most of the pieces were on the six sites I had chosen.

The site was first termed “the Boneyard” in a social media posting about the site by an international graffiti writer. The term has several resonances, capturing both the physical appearance of the site as a home for scraps (often strewn with piles of dumped rubbish, broken glass and empty spray-cans (Fig 2) , as well as sexual connotations. The Boneyard Project was also a landmark street art project initiated in 2010, where artists painted derelict aeroplanes in in Tucson,

Arizona. By coincidence I’d written previously about a graffiti crew, whose key member had a similar name (MacDowall 2006). The history of the site isn’t covered in detail here, but it has also been used informally as a skate and bike park, with both temporary and permanently constructed areas.

Finally, the notion of a boneyard, and a pile of skeletal components also provided an image of a pile of data, discarded, stripped components and building blocks that accumulate at any site of productive labour. The idea of boneyard of data brings to mind the vast quantities of data produced in this era, often stock-piled, far exceeding the capacity for analysis,

### 3. Analysis

A total of 186 pieces were painted at the six adjoining walls over 600 days by 73 artists. For example, Fig. 1 shows the pattern of repainting for a single wall. Over this period, 15 of the 22 pieces painted lasted for less than three weeks, with the longest lasting for two months. Only four pieces lasted longer than a month.

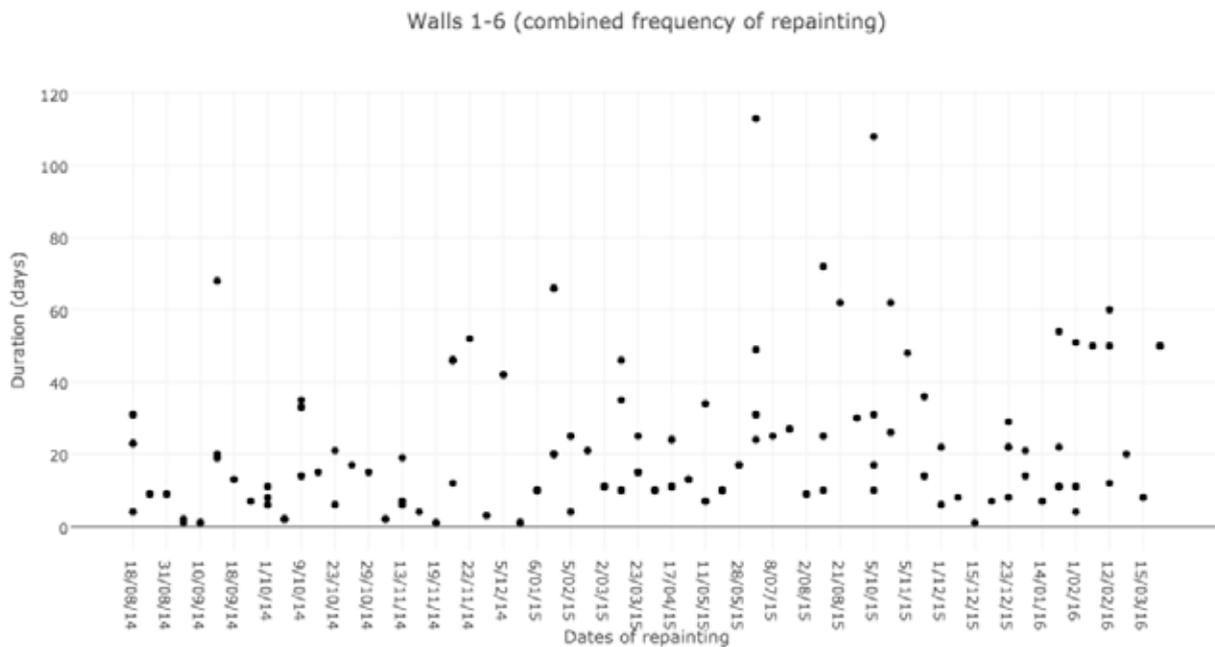


Fig 2. Frequency of repainting (Walls 1-6)

Typically, we might use the term “lifespan” to describe the duration of a piece, however this would not be accurate here. Firstly, the wall has been repainted, rather than cleaned, so though most of the pieces are no longer visible, they still exist under the layers of paint and potentially could be recovered or revealed under certain circumstances. Secondly, the piece’s “lifespans” are dramatically lengthened by their transformation into a digital object.

Given the culture of the site and the frequency of repainting, this is certainly part of the intended nature of the artwork. Artists were meticulous in documenting their work, often asking others to capture additional Photos if the originals were not of a high quality. Four of the six wall faces towards the rising sun and are unshaded, often being in intense sun. Artists also commented on the difficulty of Photographing the work at certain times of day and year.

Of course, simply painting in a remote location does not mean artists are painting for an absent audience. It is clear in the continual crafting and improvising of designs, some artists are painting for the pleasure of the activity itself, or for more personal reasons. Occasionally, the painting had an explicit social function, such as memorial. However, there were often explicit mentions of Instagram in the pieces and

regular Instagram posts of the paintings by the artists themselves, indicating that this was a significant dimension of their practice.

When the data for all six walls is added the pattern looks more pronounced, as often walls were repainted at the same time, in groups of 2-4 artists (Fig 2).

A rough line of fit shows that the average lifespan of the pieces is relatively static across the two years, rising slightly from an average of 13 days in (2014) to 29 days (in 2016) (Fig. 3). While the overall high turnover of the wall is in line with the notion that graffiti production is accelerated in the Instagram era, the slow increase in duration from less than two weeks to almost a month does not support the acceleration thesis.

However, one factor that may be influencing this average, and one that is often invisible in accounts of graffiti, is the effect of the weather. Despite its digital life, graffiti and street art remain material practices that are shaped by the rhythms of climate. The painting site is in a city with a temperate climate, though for 4-5 months of the year it is prone to cold and wet weather. While graffiti is readily produced in extreme

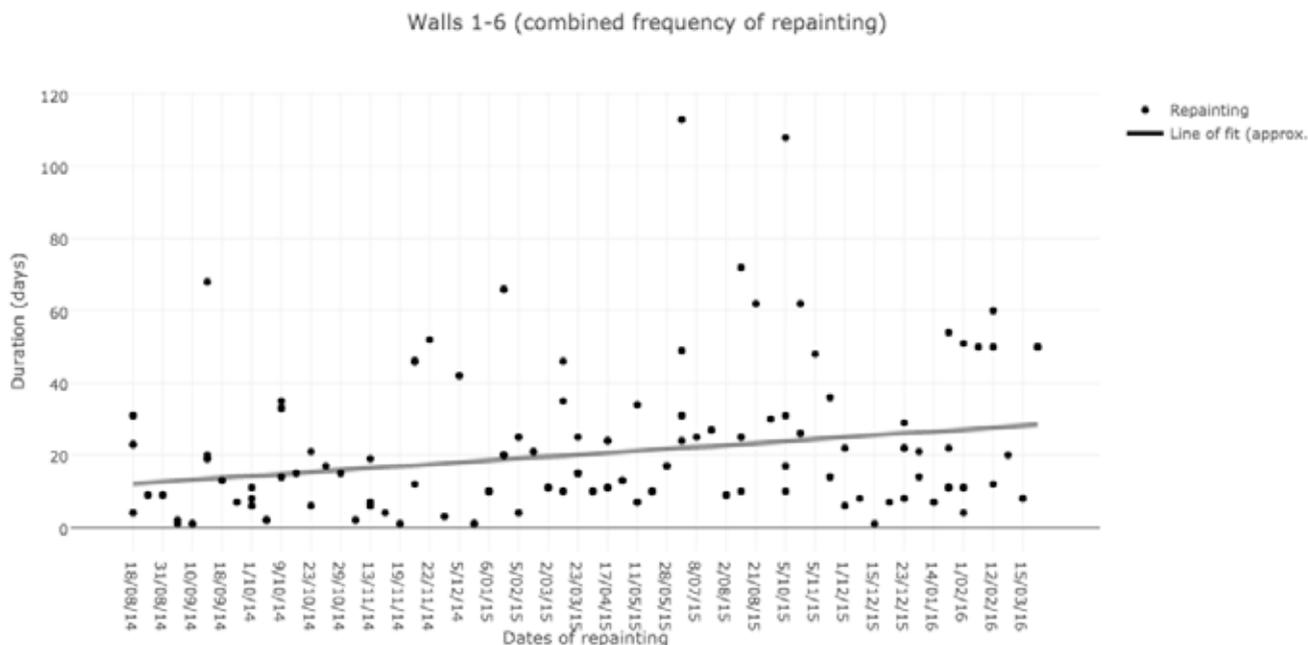


Fig 3. Frequency of repainting (Walls 1-6) with estimated line of fit

conditions, the uses of this site, as a site for leisurely, often communal painting, that is largely designed for the production of content for a digital audience rather than a passing one, means that the weather may have a greater effect.

It is only in a longitudinal analysis lasting over several years that the rhythms of the seasons can be made visible in the data and accounted for. Ideally, given the volatile nature of

contemporary seasons, data from a number of years would be used, so as to expose longer rhythms and patterns. However, overlaying the available data from the three calendar years of this study onto a single one 12 month period does show clusters activities in the warmer months of year, with the two pieces of longest duration roughly bookending the winter months (Fig 4).

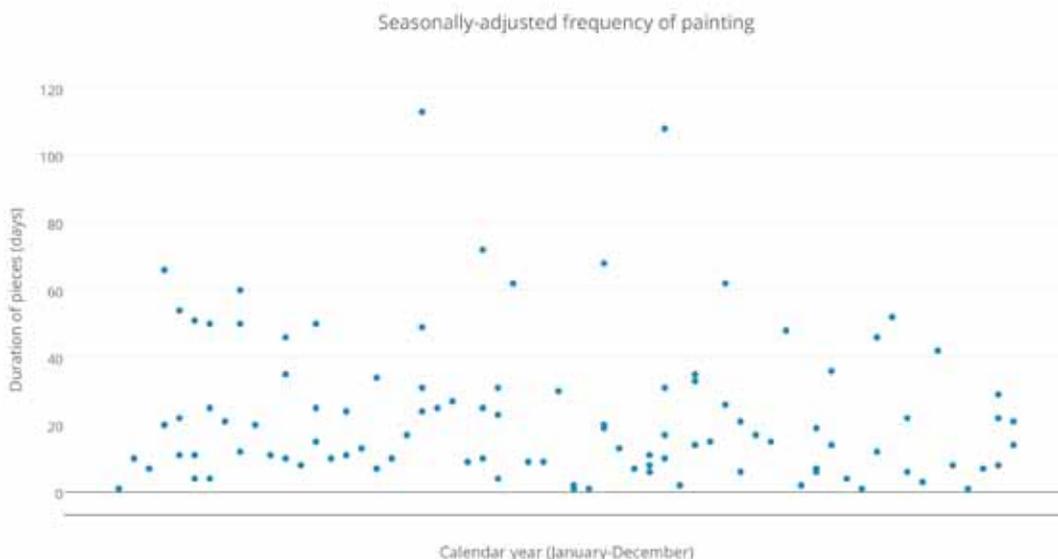


Fig 4. Seasonally adjusted frequency of painting

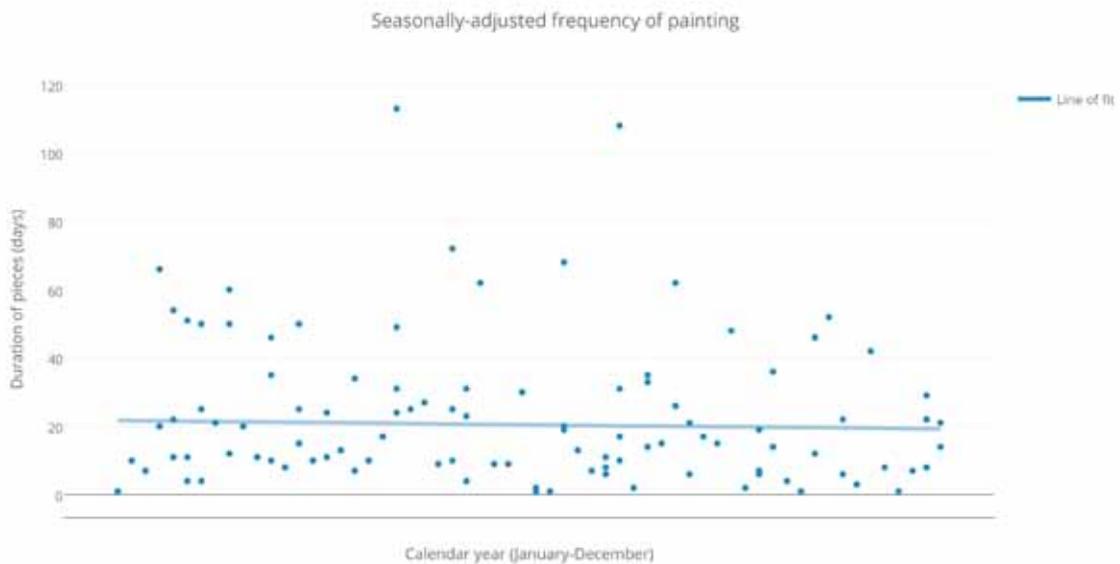


Fig 5. Seasonally-adjusted frequency of painting with line of fit

When a rough line of fit is calculated for the seasonally adjusted figures, a slow acceleration is visible, showing a slight decrease in the average duration of pieces over the 600 days, from around 22 days to 19 days (Fig 5.).

Now for a more detailed analysis of the patterns produced by the durations of individual artists. In total there were 73 artists who painted at the site. Pieces lasted from 1 day to 113 days, but on average the walls were repainted every 20 days. For simplification, in this analysis I've removed artists who painted only once (53 artists, including some interstate and international artists). The remaining 20 artist's names have been made anonymous by assigning them randomly to the NATO phonetic alphabet (coincidentally, many of these are also the tags of well known graffiti writers such as Delta, though none of these writers appear in this study) (Fig. 6)

Alias	No. of pieces
Alpha	2
Bravo	2
Charlie	4
Delta	3
Echo	23
Foxtrot	3
Golf	4
Hotel	8
India	2
Juliet	4
Kilo	5
Lima	11
Mike	7
November	4
Oscar	2
Papa	3
Quebec	33
Romeo	2
Sierra	2
Tango	4

Fig 6. Number of paintings at the site (by artist)

By sorting this data by the number of pieces, it's clear that two artists – Quebec and Echo – were the most consistent painters at the site, both in terms of the numbers of pieces painted and the length of time during which they had pieces on the walls (Fig. 7). Indeed, both Quebec and Echo were so productive that they maintained a nearly constant presence across the six walls (sometimes with multiple pieces)

Alias	No. of pieces	Total days of pieces
Quebec	33	622
Echo	23	618
Lima	11	189
Hotel	8	87
Mike	7	112
Kilo	5	173
Charlie	4	64
Golf	4	32
Juliet	4	94
November	4	90
Tango	4	86
Delta	3	15
Foxtrot	3	55
Papa	3	174
Alpha	2	33
Bravo	2	24
India	2	24
Oscar	2	53
Romeo	2	32
Sierra	2	55

Fig 7. Number of paintings at the site (by artist and total duration)

The data can also be sorted to show the average duration of the pieces of each artist (Fig 8). Excluding the outlying Papa (who had one piece remain untouched throughout winter) the average duration of pieces clusters at 18.5 days.

Alias	No. of pieces	Total days of pieces	Average duration of pieces
Papa	3	174	58
Kilo	5	173	35
Sierra	2	55	28
Echo	23	618	27
Oscar	2	53	27
Juliet	4	94	24
November	4	90	23
Tango	4	86	22
Quebec	33	622	19
Foxtrot	3	55	18
Lima	11	189	17
Alpha	2	33	17
Mike	7	112	16
Charlie	4	64	16
Romeo	2	32	16
Bravo	2	24	12
India	2	24	12
Hotel	8	87	11
Golf	4	32	8
Delta	3	15	5

Fig 8. Number of paintings at the site (by artist, total duration and average duration)

The duration of a piece is measure we might use within a more traditional conception of graffiti culture, where respect was measured in part by the ability to ‘hold down a wall’, that is, within an economy where artists were encouraged to only paint over pieces with one of a higher quality, longevity of a piece was, in general, a sign that the work was respected (for aesthetic or social reasons). However, in the context of this site and the Instagram Era, this measure is less clear, as the pieces’ duration, in physical and virtual spaces, is more complex.

We have already abstracted the data by anonymising it, and removing reference to the actual content, leaving only dates

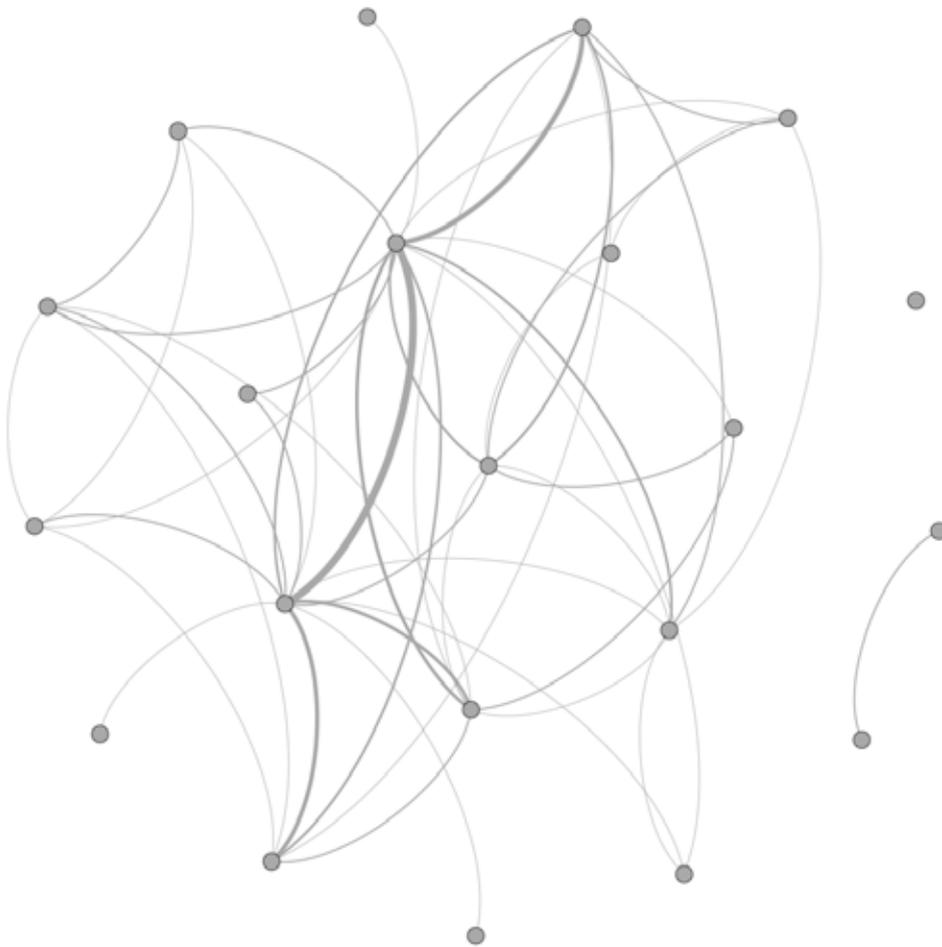


Fig 9. Preliminary social network map of artists

and durations. As many of the walls were painted with more than one piece at a time, the site can also produce a map of social relations, reflecting graffiti's dimension as a social, as well as aesthetic, practice. To produce a map of the social networks at the site, the data was coded to express a series of nodes (in this case, the list of 20 artists who painted more than once at the site) and a series of edges (expressing a relationship between artists who painted together). In the language of social network analysis these relationships are deemed "undirected", that is, expressing a connection between two nodes that doesn't originate at either node (unlike a telephone call or email). The mapping is also skewed because, for reasons of simplicity and scale, it excludes those who painted solo, or who only painted at the site once.

The picture of the social organisation of painters at the site shows a tightly connected community (Fig. 10). Almost

all members are connected to the social group and most members are connected to more than one other member. Social network analysis can quantify the number of direct connections of individual members, as well as features of the overall group, such as its density (actual connections between members, compared to the number of maximum theoretically possible connections, or the average connection or path between members across a number of nodes. (Kardushan 2012, p. 29-32). There are also examples of strong ties - in this case, artists painting together multiple times - compared to weaker ties, where interaction is more limited. (Fig. 10).

The two artists who have similar profiles in the earlier tables and who painted the most - Quebec (33 pieces) and Echo (23 pieces) - appear differently in the social network analysis. Quebec is at the centre of the social mapping, with another

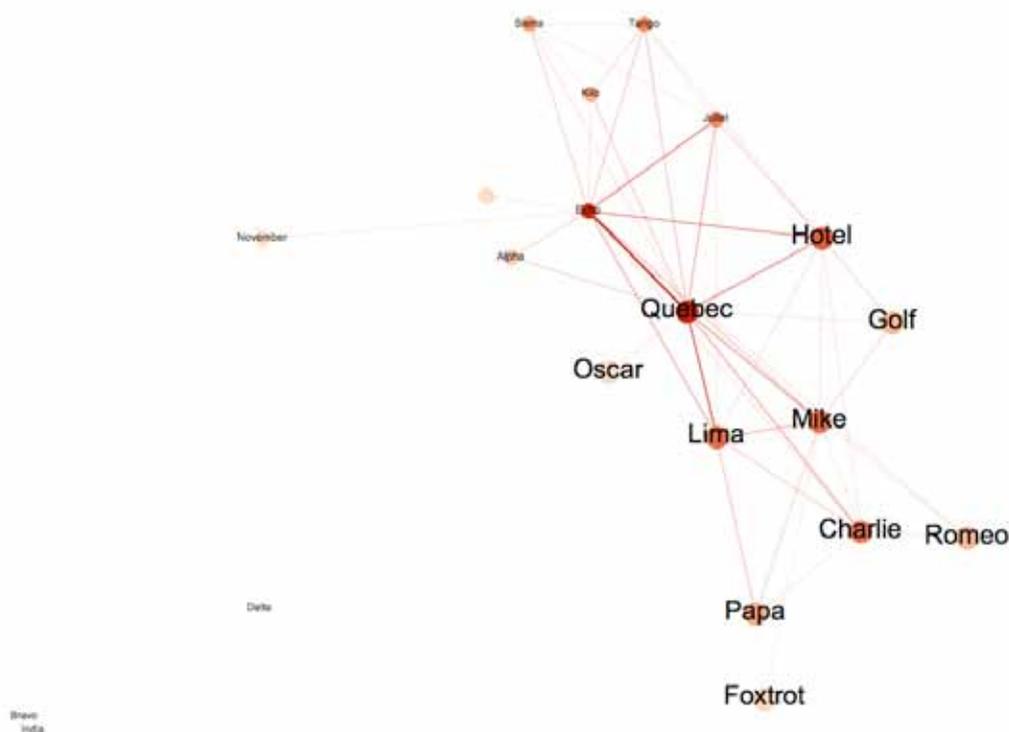


Fig 10. Preliminary social network map of artists, showing degrees and strength of connection

five artists (Hotel, Romeo, Lima, Mike and Charlie) having a high degree of connectivity. In contrast, Echo was on the periphery of the network, having painted with a smaller cohort of painters. According to social network theory, the shape of the network can help identify roles within it, such as brokers, bridges and structural holes (Everton, 2012: 253-285). Unlike the traditional models of criminal mapping that are familiar tropes of film and television, where the Photographs of criminal gangs are pinned to a police noticeboard in a hierarchical arrangement, social network analysis allows for the mapping of many differently shaped networks, from terrorist cells to community organisations. This social network is also a more expanded model of artistic authorship, showing how graffiti is as much the product of the labour of a collective network as of individual artists.

These two forms of data analysis – the mapping of artists and the duration of their pieces and the subsequent mapping of social relations – are an initial step in responding to the overall thesis of Instagram’s amplification and acceleration. The seasonally-adjusted figures for the duration of pieces point to acceleration of the production of graffiti. When social network model is supplemented by data on the artist’s Instagram postings of images from the site, this will provide a model for amplification, showing networks extend the reach of the pieces and how the walls have far greater digital audiences than physical visitors.

However, as an empirical exercise this project has some severe limitations. Due to the many complex factors through which graffiti is produced the results can’t be extrapolated to other sites nor can a causal link be demonstrated. However

this is not the aim of this research, which is rather to draw attention to the longer rhythms of collaboration and aesthetic innovation and to show how, in a data-driven era, walls and paintings can now speak the language of data. That is, I'm approaching this research not as a wholly empirical exercise but rather in the spirit of Fredric Jameson's notion of conceptual maps, drawing attention to the representational system that promise a totality while demarcating the horizon of our social worlds. Increasingly, graffiti and street art are produced in worlds where data exists in huge quantities, both as facts and frameworks, as a pile of bone-like relics and as a kind of cosmology.

#### 4. Other Instagrams

Finally, it is worth mentioning three other, more qualitative, aspects of research at the site that add to this picture, showing other ways in which the graffiti there is being shaped by digital platforms. On one visit I discovered a set of sketches next to a piece, drawings on wax paper of the preliminary outline of the mural. The type of line work and the semi-transparent material suggest these are tracings from the artist's own black book, perhaps so as not to bring a delicate and valuable object into a painting space, either to protect it from material damage or from scrutiny (other writers have discussed rushing home from an illegal painting session to rip the designs that have completed from their black books, to avoid them being used as evidence). So, the tracing functions as its own kind of media system, transmitting a near-exact copy from the black book to the wall, as on to cameras, where it multiplies out in clouds and feeds.

A second example hints at yet another parallel network of images. After a few months of observing and recording at the site I noticed a puzzling inconsistency in some of the images I had collected. Scanning through them on a laptop I noticed that a large square panel had fallen from an upper section of a brick wall (Walls 3 and 4). In early images it was fixed to the wall and in later images it was visible on the ground. However, in later images it reappeared in its original position.

What had happened? At first I thought there has been a problem with the data collection, that my images were out of sequence. Then, in a moment akin to Antonioni's film *Blow-Up*, in which the main protagonist discovers evidence of a

murder in a sequence of photos he has taken of a London park, I felt a similar uneasy thrill. The images were not out of order – the square board had been replaced, after a hidden camera had been installed behind it. Like in *Blow-Up*, the camera was even visible in the images, though unlike Antonioni's movie, I did not have the quality of analogue negatives to enlarge, but fuzzy jpegs.

What was going on? Here was another parallel image network – a literal mirror of the Instagram world that, instead of recording the changing surfaces of the wall, recorded the painters themselves. In this network, the wall appears only in the bottom of the frame, constituting the lower limit of the image. After several more site visits the origin of the camera became clearer – it was likely it had been installed by a local council initiative to gain information about rubbish dumping at the site, but as with many surveillance technologies, it recorded indiscriminately and its data would not be carefully regulated. The camera was soon destroyed but its shadow over the site remained.

Like the tracing paper sketches, this shadow network or surveillance raised many questions? How routine has digital surveillance become, even in marginal spaces, building its own relentless time-stamped recordings as evidence, a real-time recording of artist's labour, without the central image of the crime itself? It was also another parallel record of the site, for a time more efficient and complete than my own daily recordings. As I've previously argued, the relationship between graffiti and technology often includes a set of parallel uses between artists, state actors and corporate interests (MacDowall 2008).

But for the graffiti writers visiting the site wasn't Instagram also a surveillance machine, a self-service documentation and celebration, displaying and sharing the results of their law-breaking and their networks of friends and accomplices. Julian Assange, depicted as himself a practitioner of political graffiti in dramatized accounts of his early years, called the Internet 'the greatest surveillance machine ever invented'. In this vein, NSA whistleblower Edward Snowden argues the scandal of increasing digital surveillance of citizens is not that the law has been broken but what the law allows.

Grffiti writers have been arrested and convicted on the basis of posts to Instagram and it has become a recognised

method of criminal investigation in some jurisdictions, not just by police but by a range of agencies. This risk is exacerbated for crimes such as graffiti that are highly visual, often documented by the perpetrators and their associates and are often require extensive resources to track and prosecute by other means.

## 5. Conclusion

This research was spurred by an unusual cycle of painting I observed at a single site. In previous eras, the quick repainting of walls in a location of low visibility would likely deteriorate into lower grade pieces, in both terms of both materials and aesthetic complexity. Except for painting trains, what kind of writers would spend time and paint on a surface that would be repainted in a few days or a week? Is it possible that walls are becoming more like trains, fleeting and mobile? I also wondered, as many of those painting at the site were established writers now aged in their 30s and 40s who had come to prominence in the scene in the late 1980s and early 1990s, would their gathering produce new or old work? Instead of ushering in an era of complacency and nostalgia, was Instagram's thirst for content also driving an era of experimentation and stylistic development? Would it be possible to read in the aesthetics of these works and the patterns of production the shadow of the digital realm?

The response trialled in this piece was to consider the site not simply as the material surface of artworks or as a combination of social and spatial context as in much existing scholarship on graffiti and street art. Instead, this article thinks about walls as engines of data and meta-data and, while managing ethical considerations in an era of intensified surveillance, explore how longitudinal analysis combines with basic data visualisation and social network mapping techniques might register the effects acceleration and amplification of digital platforms such as Instagram. Some of the changes wrought by the digital environment, such as the explicit references to Instagram accounts and practices in the murals, are immediate, obvious and visible. Other changes are more complicated and subtle and likely involve longer-term trends, obscured by Instagram's complex temporalities and its insistence on a continuous now.

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