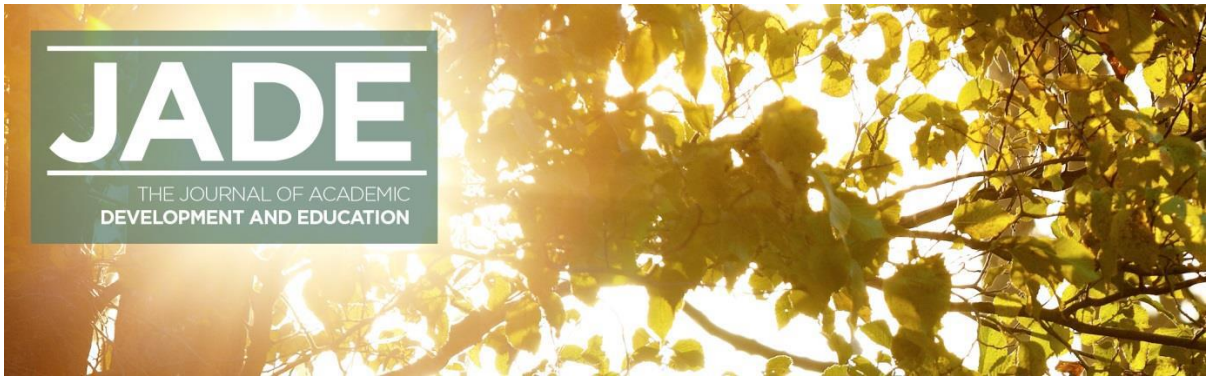

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Article:

Making the Case for Digital Mapping as a Tool for Learning about the Past

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Abstract

Despite the fact that almost all historians today make use of such online tools as Google Books and digitised primary source archives, it is still considered unusual to make computer software a core part of one's methodology for learning about the past. This paper makes the case for the use of digital mapping as a tool which allows and encourages us to ask new questions of long-studied areas of history, and to pass knowledge on to others in new ways. It addresses and answers some criticisms that are commonly presented against digital mapping as a methodology, as well as exploring the benefits of the use of digital maps through the discussion of a previous project carried out by the author, in which a map was made and analysed showing popular political activity in Manchester and its surrounding areas in the 1790s.

Key words

Digital humanities, history, eighteenth century, GIS

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Main text

> "Digital technologies are enabling a revolution more profound than the invention of the printing press. Every single smart phone has the same computer power as NASA had at its disposal when it sent the Apollo missions to the moon."[i] – Richard Clay, 2014

In March 2015, I was fortunate to be given a tour of the Digital Humanities Hub at the University of Birmingham by its then co-director, Richard Clay. Clay had an infectious enthusiasm for the possibilities that digital technologies provide to revolutionise both academic research, and the arenas of public history and heritage. Over the next year, it quickly became apparent to me that the excitement surrounding the idea of combining cutting-edge digital technology with scholarly research – and, in particular, historical research – was not confined to the team at Birmingham. Over the past few years, historians worldwide have been beginning to experiment with these ideas, pushing the boundaries of what it means to conduct and present research.

A whole host of historical projects have been undertaken recently which have utilised such digital tools as social media, crowdsourcing and video gaming.[ii] Additionally, as user-friendly mapmaking tools such as Google Maps have become ubiquitous, a wealth of historical work has sprung up utilising these pieces of software, as well as other geographic information systems (GIS) such as ArcGIS and QGIS. Some projects have been aimed at making historical knowledge and artefacts more accessible to the general public. A map made by the Chateau de Versailles charting the funeral procession of Louis XIV, and an interactive historical map of Birmingham produced by the University of Birmingham for the city's museum, provide some prime examples.[iii] Others are collaborative, encouraging the public to get involved in the mapmaking process; the LGBTQ Pride of Place project exemplifies this approach, as the content of its map is crowdsourced.[iv] Conversely, some projects have been undertaken by scholars and for scholars. Locating London's Past, for example, was carried out by three universities working together to create a digital reproduction of a 1746 map of London, on which several different sets of historical data can be plotted for research purposes.[v] These undertakings, and many more like them, have drawn the attention of the academic community to the far-reaching, exciting possibilities that are presented by advances in digital mapmaking technologies. It is now fully apparent that these technologies have the potential to revolutionise the ways in which the academic community interacts with the public; to transform the ways in which knowledge is shared within academia; and to open up new ways for scholars to engage with their sources.

Of course, the use of maps to present historical work and to aid an understanding of the past is not entirely new – they have long been published in works of history in order to assist the imagination and understanding of readers, or to show data such as population statistics. Moreover, scholars influenced by the spatial turn have made

use of maps in innovative, creative and analytical ways; Lynda Nead's work on Victorian London constitutes a prime example of this.[vi] However, the difference between the use of these printed maps, and the creation of the aforementioned digital mapping projects, is twofold: digital maps have the potential to be interactive, and can include much more information without becoming overcrowded than traditional printed maps can.

This latter fact was particularly significant in a digital mapping project that I undertook as part of my undergraduate dissertation in History, which I have outlined in a previous article in the *Journal of Academic Development and Education*.[vii] Using Google Earth Pro, I mapped 100 different popular political events (riots, meetings of political societies, protests and such like) which took place in Manchester and its surrounding areas between 1792 and 1795 – years which saw a particularly high level of political mobilisation and polarisation in reaction to the ongoing French Revolution. The sheer amount of information that has been mapped – event details, fully-referenced sources, and quotations from these sources, for a hundred different radical and conservative occurrences – could physically not have been included on a printed piece of cartography. Additionally, the quickness and ease of mapping with Google Earth allowed this vast amount of information to be found, collected and typed up from a wide array of primary sources. To carry out a similar project before the digital mapmaking advances of recent decades would have been unimaginable without working alongside a cartographer, and would have taken so much time that it would simply have not been a viable option for an undergraduate dissertation.

As well as being inspired by recent historical digital mapping projects, the methodology of the dissertation was influenced by Franco Moretti's work *Graphs, Maps, Trees: Abstract Models for Literary History*.[viii] In this text, Moretti encourages literary critics to move away from closely reading texts, in favour of creating "graphs, maps, and trees" through a particular process in which "you *reduce* the text to a few elements, and *abstract* them from the narrative flow, and create a new, *artificial* object" (emphases in original).[ix] The artificiality of these "objects", as Moretti refers to them, comes from the fact that they require a deliberate distortion of the original texts in order to create "forms" and "models".[x] These objects are not an end in themselves, and they are not designed to replace or fully represent the original texts. Rather, they are a means to an end – a way of "[bringing] some hidden patterns to the surface".[xi] *Graphs, Maps, Trees* may have been targeted at scholars of literature, but its argument is nonetheless applicable to the study of history. Just as creating artificial objects out of literary works can bring to light new patterns and anomalies that need explaining, mapping primary sources leads the historian to engage with the past in new ways, thereby bringing attention to trends and issues which may have gone unnoticed.

An "intellectual Trojan horse"?

Whilst many humanities scholars have begun to explore the digital possibilities set out by Moretti and others, there is still more to be done. Currently, the digital humanities is a growing sector, but one which remains largely the preserve of a relatively small, committed group of academics. Despite the fact that almost all historians use such online tools as Google Books and digitised primary sources, making computer software a core part of their methodology is still considered unusual. In other words, a digital approach to history is not yet mainstream.

This has in part been due to the fact that, despite the many benefits of using such tools as digital maps for learning about the past, there has been resistance towards these methodologies amongst many in the humanities. Johanna Drucker's article 'Humanities Approaches to Graphical Display' provides an example of the sense of unease held by many, arguing that "applications such as GIS mapping… are a kind of intellectual Trojan horse".[xii] Drucker argues that "Google maps and bar charts… pass as unquestioned representations of "what is""; that they do not adequately represent the real-world, emotional experiences of historical actors; and that humanities scholars can be quick to use complex labels such as "nation" and "gender" in a simplistic manner in their maps and graphs.[xiii] Indeed, Drucker makes some important points. It is imperative that digital humanities scholars remember that abstract objects do not, in themselves, present complete representations of real-world events. As the theorist Henri Lefebvre famously demonstrated in *The Production of Space*, representations of space (i.e. maps) do not allow the viewer to fully understand "each member of… society's relationship to that space", or the "imagination" of users who mentally relate the space to different "symbols and signs".[xiv] If scholars do not bear this in mind, then digital creations could potentially be wrongly mistaken as total representations of real-world events and experiences.

Still, digital humanities projects do not *have* to be "intellectual Trojan [horses]", as long as scholars are careful to remember the artificiality of their creations. In carrying out my own digital mapping project, I was fully aware that my map would not display the human experiences of historical actors – indeed, this was never its purpose. In mapping an attack on the premises of the radical newspaper printers Matthew Falkner and William Birch, for example, my aim was not to capture the very real sense of fear that these men must have felt at this time, but simply to show that this was a location of popular politically-motivated activity, as part of a wider analysis of spatial trends.[xv] Just as it would be unfair for one to criticise a novel writer for suspending facts in order to explore the emotions of fictional characters in fictional settings, it does not make sense to criticise makers of digital maps for not completely representing the human experience. Generally, the scholars creating these maps did not *set out* to do this, and they are aware of the limitations of their methodologies.

Moreover, it is possible to take a critical approach to the labels that one may use to simplify, order and present data. Upon viewing the map created for this project, some may find a point of contention in the use of two colours to distinguish between 'radical' and 'loyalist' activity, thereby not reflecting the variance in militancy of

different groups and individuals. However, the map is only intended to be a starting point for a more complex analysis of this activity. As Chris Johanson and Elaine Sullivan write in 'Teaching Digital Humanities through Digital Cultural Mapping', these maps can provide "tools and methods that contribute… to current scholarly conversations in more established disciplines".[xvi] They do not encourage the sort of simplistic thinking alleged by critics – rather, they "facilitate the analytical, critical and speculative methods to study the human condition".[xvii] As will be explored later in this paper, the use of a 'radical' and 'loyalist' binary in fact encouraged a deeper consideration of these concepts.

Additionally, Drucker argues that the creation of graphs and maps is a simple, "naturalized" case of instantaneously producing "Google maps and bar charts generated from spread sheets" of data with one click.[xviii] Many of the accessible pieces of digital software available today are certainly easier and quicker to use than traditional methods of map and graph-making, but to suggest that the use of them takes a lack of thought is simply inaccurate. When digital mapping, for example, it takes a lot of critical and creative thinking in order to make an informed decision on which programs to use; to decide what information should be displayed to users; to overcome any problems that arise in the mapping process, and so on. In creating the map for my dissertation, I had to think carefully about striking a balance between the inclusion of detail (i.e., fully referencing the sources for each pin and including direct quotations from sources), and having the time to gather the amount of pins that I would need in order to be able to start spotting useful and accurate trends. Also, a considerable amount of thought was needed to decide which program to use. Google Earth Pro was not utilised because it is "naturalized" and commonplace; rather, it was carefully chosen due to its ability to accommodate custom base maps – which allowed the accurate plotting of pins on a historical map of Lancashire – as well as the ease with which the software allows maps to be shared and interacted with by users. In short, far from being "intellectual Trojan horse[s]" which sap scholars of their critical thinking skills, digital graphs, maps and charts come with their own unique challenges.[xix] The end products created with digital software may look deceptively simple, but the process of making them takes inventiveness, careful thought, and a lot of trial and error.

Learning from the process as well as the end product

Whilst the initial premise for my digital mapping project was to create a map and then use this resource to analyse trends of radicalism and conservatism, I quickly discovered that the actual *process* of creating an artificial object out of historical data is as significant as the end product. In making a digital map, the historian is not only encouraged to solve technical problems. The process leads them to engage with primary sources in a completely different manner to that which they may be used to, and to ask questions about these sources that they may otherwise not have had reason to consider. As discussed above, my map utilises a binary colour coding system in which pins showing radical occurrences are coloured red, and those

signifying loyalist activities are blue. Such a binary system was utilised in part to keep the map visually simple to allow the spotting of trends and patterns. More importantly, it was designed to reflect the fact that the French Revolution really *did* lead to a polarisation of popular political activity in Britain. It is true that prominent political reformers such as Charles James Fox often took a more centrist position than staunch radicals would like them to take, and that there could be tension between conservative politicians and the popular loyalist movement.[xx] Still, these various groups sat on two distinct sides of fierce post-French Revolution political debates regarding the reform of the political system, the issue of the Two Acts, and Britain's involvement in the French Revolutionary Wars.[xxi] In popular culture, conservative and reformist political figureheads were portrayed as being on contrasting sides of debates surrounding whether the revolution in France was a positive or negative development, and the two popular movements were given much the same treatment.[xxii] The political atmosphere of 1792-1795 really was one in which individuals were seen to be either siding with the existing government, or against them (and implicitly *with* revolutionary France), no matter how moderate or militant they may have actually been.

Nevertheless, by forcing the labelling of each primary source as neatly 'radical' or 'loyalist', the mapmaking process brought to my attention some of the nuances within these movements. With regards to radicalism, for example, it quickly became apparent that some radical activity was overtly in favour of the developments in France – the signing of the London Corresponding Society's 'Address to the French National Convention' by some Manchester groups in 1792 provides one such example.[xxiii] Other radical activity was not so overtly linked to the Revolution, but nevertheless took place in the name of "the Constitutional Rights and Liberties of the People".[xxiv] Such events involved the use of language which strongly echoed that used by revolutionaries. They can thus be ascertained as radical occurrences, whose participants simply took care to avoid being directly and dangerously affiliated with the Revolution. These kinds of complexities in the two popular movements that I researched came to light through having to label and colour each event as 'radical' or 'loyalist', and thus having to constantly keep at the forefront of my mind – and constantly question – what these terms mean, and what they meant to contemporaries.

Similarly, mapping popular political activity encouraged me to constantly evaluate what constitutes popular activity, and what does not. I defined popular political activity as any occurrence which was politically motivated and actively participated in, or carried out, by members of the general public. However, despite having a clear idea of what constitutes popular political activity, many events came to my attention which led me to think carefully about just how publicly-driven activity which seemed "popular" on the surface really was. One example of this occurred when mapping the aforementioned attacks on the premises of the radical newspaper publishers Falkner and Birch in Manchester in December 1792. Three main social groups were involved

in the night's events: There were the owners of the private residences with property rights on their side; there was the loyalist crowd (with brute force and sheer numbers on their side, but nevertheless sitting on the wrong side of the law); and there were the local magistrates and constables who effectively decided the outcome of the day. Many accounts describe radical property owners appealing to local officers to protect them and call off the hostile crowds. Indeed, in eighteenth-century Britain, these were the only people under whose remit it fell to restore order in riots, aside from the army and militia.[xxv] Thomas Walker, a radical leader, wrote that "Messrs. Falkner and Birch… sent one of their friends… to the senior Constable, desiring his protection" and were refused help.[xxvi] He also alleged that "a Deputy Constable… went to the mob, and clapping some of them on the back… said "Good lads, good lads"".[xxvii] A selection of anonymous eyewitness statements of the night's events was also published in Walker's text.[xxviii] One of these stated that Mr Bentley, a magistrate, "at first objected [to read the riot act]… and said he was going to bed"; that Falkner and Birch were reprimanded by Bentley's clerk for daring to "call out a magistrate on such a trifling peace of business as the breaking of a few windows… by a few *chance* stones" (emphasis in original); and that a friend of the radical publishers was "threatened by force… to be kicked out of doors" by the "company" of a constable that he appealed to for help.[xxix]

Here, we can see evidence of the mob driving events – *they* were filling the streets outside radical premises, chanting and throwing stones – but the local magistrates and constables nonetheless having the *real* power and control over the space. They permitted the violence that took place through inaction, and even through intimidation of the men who tried to seek help from them, thereby suppressing the property rights of the radicals who were attacked. It is highly likely that the local officials concerned would have been able to predict the effects of their inaction, or of their encouragement of the mob. Whilst the words of one deputy constable suggests that some underestimated the severity of the crowd – "Oh! Let them alone, they are loyal subjects, let them frighten [Falkner] a bit! ! [sic]" – the veracity of this is questionable, as Manchester had already seen loyalist violence earlier that year.[xxx] The dominant cultural presentation of radicals may have been that of dangerous, treasonous individuals, and the loyalists may have been often presented as protectors of the nation, but officials working in Manchester in 1792 must have known the true threat to public order that loyalist crowds could pose.[xxxi] The events of December 1792 were certainly popular political events, then, but it must be acknowledged they were officially sanctioned ones too. The process of deciding whether or not to incorporate such events as this into the map thus led me to explore further questions about the extent to which space in Manchester and its surrounding areas was controlled by officials such as boroughreeves and constables; by private individuals with property rights; or by crowds.

The future potential of digital constructions of space in the humanities

The digital mapping undertaken as part of this project, and similar work carried out by historians such as Katrina Navickas, only scratches the surface with regards to the potential interactions between new technologies and spatial history.[xxxii] Indeed, for an idea of what *could* be done, I would argue that we should look to the arena of video gaming. In recent years, such releases as *Assassin's Creed Unity* and *Tom Clancy's The Division* have amply illustrated what current software has the capacity to create.[xxxiii] Entire cities have been recreated in incredible detail – including Revolutionary Paris in the case of *Unity*, and contemporary New York in the case of *The Division*.[xxxiv] Players can explore these locations, jumping between digital maps and realistic surroundings.[xxxv] The kinds of software used to create these games could equally be used by historians to create recreations of particular historical streets, houses or public spaces from their primary research. These could then be used in spatial analyses by this historian; they could be consulted by other researchers; and they could constitute useful teaching tools, both in a university setting and in a public history context. Researchers could use a digital replica of eighteenth century Paris comparable to that seen in *Unity*, for example, as a springboard to explore questions surrounding how interactions between Parisians and their urban space shaped the developments of the Revolution. Perhaps in future years, rather than presenting research in the form of a monograph or an article, some historians could even present their work in digital, visual, or virtual reality formats, comparable to the video games of our contemporary culture. These prospects are immensely exciting, and potentially revolutionary.

Of course, there are practical issues in the way of humanities scholars producing such grand digital historical projects. First and foremost, one cannot imagine historians receiving the same kind of budget as the teams behind popular video games. Secondly, more complex digital history projects would likely require collaboration with other fields, including computer science and games design. However, let us consider these two issues in turn. My dissertation project showed what is possible with *no* budget, and there is a wealth of free, more advanced computer software in existence which would be suitable for use by historians to create tools for analysing and exploring historical spaces.[xxxvi] Using low-budget software and a small team of researchers would mean that the cost of cutting-edge digital historical projects could potentially be no different to that of more traditional research projects. Secondly, it is true that large, complex historical projects using digital methodologies would often require interdisciplinary collaborations, but surely this is a good thing. Some of the most innovative, exciting and interesting approaches to history have come about as a result of academics stretching across disciplines. Examples include Katherine Astbury's research on the French Revolution which relies on scientific developments in trauma studies, and scholarship on national identity and the environment with close links to the field of human geography, such as Thomas Lekan's *Imagining the Nation in Nature*.[xxxvii] History must always evolve and change (otherwise we would forever be writing much the same material), and it has always done so in a way inspired by other disciplines,

which have helped to drive historical research and writing in new directions. The linguistic turn had its roots in literary analysis; the spatial turn had geographical roots; and in today's increasingly technological world, it seems highly likely that the next great 'turn' will be a digital one.

In creating a digital map of political activity in late eighteenth-century Manchester and its surrounding areas, I used standard historical sources: newspapers, the minutes of political societies, books written by contemporaries, and such like. Yet by engaging with these sources in an untraditional manner, trends were brought to my attention which would otherwise have been much more difficult to spot. Moreover, my methodology encouraged me to ask certain questions about the nature of radicalism and loyalism; the definition of popular activity; and much more. Returning to *Graphs, Maps, Trees*: Franco Moretti writes that "the map is [not]… an explanation" in and of itself, but something that "shows us that there is something *that needs to be explained*" (emphases in original).[xxxviii] My research provides clear evidence of this. Many of the questions that I have been led to ask surrounding the multi-faceted nature of radicalism and loyalism, and considering the forces behind apparently 'popular' activity, did not arise from looking at the map as a finished product. These findings, and many others, arose through the process of digital mapping itself.

Also, the scope of the project in itself provides an indication of the research potential opened up by digital software. Over the course of an academic year, with no funding or bespoke software, a map was created which holds over 15,000 words of source and contextual information on 100 popular political events for users to explore in order to learn about this significant period in British political history. This map has then been analysed, and in my previous work, has been used to contribute to the wider debate surrounding the rise and fall of the radical movement in these years.[xxxix] If one undergraduate student can build and analyse a map like this in a relatively short amount of time and with minimal resources, then imagine what could be done by a team operating over a few years, with funding and specially constructed software. The research possibilities presented by digital mapping tools are practically endless, and they are endlessly exciting.

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