Victorian Murder and the Digital Humanities

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Abstract: The rapid extension of what has become known as the Digital Humanities has resulted in an array of online resources for researchers within the subdiscipline of Victorian Studies. But the increasingly acquisitive nature of these digital projects poses the question as to what happens once all the information and material we have related to the Victorians has been archived? This paper is an attempt to anticipate this question with specific reference to future digital resources for the study of 'Victorian murder culture', and in particular, the essentially textual nature of the nineteenth-century experience of crime. It will argue that there is potential for new forms of digital-humanities archive that offer a more participatory user experience, one that nurtures a cognitively empathic understanding of the complex intertextuality of Victorian crime culture.

When I began work on this article I had in mind a fresh look at why it was that Victorian culture appears to have been so consumed with crime and murder, despite the fact that there was little evidence, during most of the nineteenth century, of a significant increase in the rate of violent crime—certainly if the flatlining, and eventually decreasing rates of criminal prosecution across the period are anything to go by (Anon 2017).

The research phase of the project began with me instinctively reaching for my tablet, soon flicking through the bookmarked go-to list of trusty nineteenth-century digital resources—research behaviour that, I have since learnt, has become rather passé: '81% of a sample of humanities researchers identified themselves as extensive users of digital resources, and 83% of the sample agreed or strongly agreed with the statement that digital resources had changed the way that they did their research' (Prescott 2011). My digital-research practice has evolved over the years almost without me noticing, a manifestation of the growing prevalence of the broad framework of 'digital-world' research and online scholarship rooted in new 'textual media' and 'situated material technologies' (Liu 2016) that is known as the Digital Humanities. Even if we might baulk at such an homogenising label for what is evidently an heterogeneous body of digital resources ('less a unified field than an array of convergent practices' (Burdick et al. 2012)), it is hard to deny that these new resources have fundamentally transformed the academic landscape, with print clearly 'no longer the primary medium in which knowledge is produced and disseminated' (Burdick et al. 2012).

Beginning with The British Newspaper Archive, I initially worked through a series of prosaic keyword searches, looking for mentions of 'crime', 'murder', and 'detective', and was quickly provided with appropriate and useful source materials. The British Newspaper Archive might not be free—sitting as it does behind a paywall—and its scanned-in pages are not always easy to read, but the range of material it offers is not only impressive but also sourced through a user-friendly search process that requires none of the time-consuming rooting around of pre-internet research. And, for the purposes of comparison, my 'murder' keyword search generated three short articles from the

same edition of Berrow's Worcester Journal—Saturday 14 April 1866; they were titled 'General Intelligence', 'Miscellaneous Readings', and 'News'.

At this point in the process, the digital archive had done its job. It had provided me with material I needed, and which I could then go on to examine in terms of specific focus, context, and point-of-view—all aspects that fall outside the purview of most online databases, which identify relevant research materials separated, even detached, from such wider contexts. As Leary puts it: 'the inherent disaggregation of texts approached via electronic searching' creates what is best described as a 'cherry-picking approach to reading' (Leary 2005). As such, searchable electronic archives present their findings in ways that mask the extent to which the 'meaning' of each individual item of evidence, or text, is often contingent on its relations with other texts, including, though not limited to, those published and/or read alongside it. When confronted with an array of material from a digital archive, all cleanly and conveniently sourced, it is easy to lose sight of the importance of these inevitable, vital, interrelations, such is the effectiveness of the digital technology in reconfiguring 'the conditions under which the disciplines produce and codify knowledge' (Mussell 2013), using subliminal metadata and algorithmic calculations (Presner and Schnapp 2009) in so doing.

With this in mind, in considering these three articles from Berrow's Worcester Journal, I did begin to reflect on the convenience of the digital research process, and to think about digital resources that might be of even more assistance in coming to terms with what I will throughout this paper call 'Victorian murder culture'. In particular, I pondered the meta-research question as to how online archives might help establish the 'serendipity of unexpected connections' (Leary 2005, p. 74) between Victorian crime texts of all kinds, how they might be configured in ways that shed new light on the nineteenth-century reader's experience of murder culture, ultimately fostering greater levels of 'cognitive empathy' between the twenty-first century reader/researcher and these historical readers. 'Cognitive empathy', as a concept, is especially useful here, because it refers to 'the intellectual and imaginative apprehension of another's state or condition without actually experiencing that person's feelings' (Hogan 1969)—and it was the intellectual process of reading with which I was most interested.

Developing a more engaged, human relationship between researcher and research material is, however, not typical of the current tranche of digital resources related to the nineteenth century. The only real exception to this that I have come across is the Victorian Serial Novels (see http://victorianserialnovels.org/) website, which commits to capturing a more rounded appreciation of what it means to be 'Reading Like a Victorian'. Therein, the chronology of nineteenth-century serial publishing it provides as its organizing principle is an invitation for twenty-first century readers to engage with the featured Victorian novels as the very first readers of these publications would have done.

The paper that emerged out of all this rumination is still broadly about Victorian murder culture. But it is also, and equally, about how Digital Humanities resources might contribute to a more nuanced awareness of how the Victorians experienced crime, and especially, murder. And because this experience was for many Victorians primarily textual, this focus leads to an exploration of specific ways digital resources might mimic the nineteenth-century reading experience in order to enhance the twenty-first century researcher's cognitive empathy with Victorian murder culture. Ultimately, I will argue that digital-archive resources can exploit the available technology beyond the current concern with ever-greater levels of accessible ease-of-use, and instead to create hermeneutical virtual spaces, concerned not so much with what each individual archival text might mean in and of itself, but rather with the nature of the textual interpretative process, the 'fusion of horizons' (Gadamer 2004) within the sort of textual environment with which Victorian readers were familiar.

So, as things currently stand the landscape of digital humanities scholarship within Victorian Studies is densely-populated. This is a subdiscipline that has been at the forefront of developments in digital curation, with the digital mediation of Victorian culture so wide-ranging as to make it difficult to think of too many of its facets that have not already been subject to some form of 'computational analysis via digital surrogates and models of various kinds' (Stauffer 2015). Consequently, the Digital Humanities seems inextricably linked to developments in Victorian Studies

(Felluga 2005), with many scholars with nineteenth-century specialisms now feeling 'that they cannot adequately conduct their research without access to the various digital databases' (Felluga 2013).

Furthermore, there is such a rich variety and extraordinary range of material available to researchers and archivists, the kaleidoscopic output of the first industrial economy of mass production (most of which is now conveniently out of copyright), that there are an almost immeasurable number of opportunities to re-see the Victorian world through the lens of technological media, whether these provide new knowledge about familiar topics, or else provide the period with a kind of Neo-Victorian makeover: 'shining plainer, bluer, maybe even happier than before' (Stauffer 2015, p. 8). Pre-eminent in this vast range of material was, for a long time, *The Victorian Web*, one of the oldest academic and scholarly websites—a repository not of whole texts but of, in its own words, 'nodes in a network of complex connections' that emphasize 'the link rather than the search tool' (Landow 2018b). But the landscape of digital resources in this area is now so well populated that this pre-eminence has been challenged by an array of numerous other archives and databases. These include:

Parliament online, a detailed archive of primary political records, legislation, and political-historical detail; At the Circulating Library, an impressive database of Victorian fiction, including biographical and bibliographic information related to more than 15,000 titles and 3000 authors; the British Library Discovering Literature series of secondary critical introductions; the Victorian Research Web, a resource overview; The Victorian Plays Project, a digital archive of selected original plays from T.H. Lacy's Acting Edition of Victorian Plays (1848–1873); Victorian Popular Culture, a portal to a rich variety of primary visual and other textual material; Victorian Studies Bibliography, an index of over 400 journals featuring scholarship from 1991–2003; the Interactive Bradshaw's Guide for Tourists in GB, with maps, plans, and illustrations; Darwin Online, the world's largest and most widely-used resource on Darwin, with more than 400,000 pages and images; Victorian Periodicals, a selected bibliography; The Railways Archive, containing nearly 5000 original documents related to nearly 10,000 historical railway accidents; The Online Books Page, a searchable database of more than two million original books; Wiley's Online New Companion Series, providing a 'sophisticated overviews of key topics'; Charles Booth's London, a searchable database of nineteenth-century maps and police notebooks; Archive.org, the Google funded, nonprofit digital library of free books; Google N-Gram View, the online search engine for the study of vocabulary-frequency in published books from 1500–2008; Our World in Data historical population datasets; Galton.org, a detailed, searchable guide to the life and works of one of the fathers of Eugenics; The Victorian Dictionary of London; Who's Who of Victorian Cinema, featuring secondary information about the earliest days of this technology; Aspects of the Victorian Book, a critical source for book historians; the Internet Library of Early Journals, another invaluable source database; and Science in the Nineteenth-Century Periodical, an accessible shortcut for researchers across disciplinary areas.

Whilst any such brief list of Digital Humanities resources is inevitably only a fraction of the whole story, it does at least indicate the vibrancy of this particular area of scholarship, with many valuable resources providing ever more accessible forms of online material—and thus exponentially increasing the amount of information at the fingertips of keyboard researchers. Yet, despite what one could be mistaken for thinking was a shared commitment to accessibility, a number of the most important resources applicable to many subject areas, including Victorian Studies, reside behind paywalls or have been absorbed into subscription platforms. Thus, there are clear limitations to the access we have to certain kinds of knowledge, privileging researchers affiliated to institutional or university libraries, and especially those from larger, more resource-rich institutions that can afford to invest large sums of money each year in academic online research tools. Academic Search Complete, Project Muse, and JSTOR (for just a few examples), demand subscriptions in excess of £20,000 per annum (each), with other, more specialised, commercially-produced resources, such as the impressive Adam Mathew *Victorian Popular Culture* holdings, and the *Nineteenth-Century Collections Online* project, requiring even greater investment than that.

High-price subscription resources such as these serve as barriers to participation in up-to-date research, part of a wider emerging technological infrastructure that many claim demonstrates the

'powerlessness of the scholarly community' (Prescott 2011, p. 65) to prevent major areas of knowledge becoming effectively colonised by vast commercial organisations: 'so much of the cultural record effectively appropriated' (Prescott 2011, p. 65). Initiatives such as *Google Books*, working in partnership with the largest institutional libraries, have become quasi-gatekeepers to knowledge and information. Its espoused commitment to digitizing every book that has ever been printed suggests a genuine dedication to enabling easy access to an extraordinary amount of source material, but even where there are no up-front access charges for accessing certain materials, commercial platforms are finding other ways of making a return on their investment, through pop-up advertising or, more worryingly, data harvesting. And beyond matters of economics, there might still be an inherent downside to having so much of the shared knowledge-base 'managed' by such multinational commercial companies.

A further consequence of the current level of digital acquisitiveness is the logical inevitability that all of the available primary artefacts, records, and texts of the Victorian world will one day be archived in one database or other, as part of a world of what Borgmann calls 'utopian hyper-information' (Borgmann 2000). At that time, the historical period that was the first to become obsessed with the statistical and quantitative measurement of human experience, will itself have become a set of digitised records. Yet, the apparently inevitable drive towards universal digitization, towards a point when it might be genuinely credible to argue that we digitally know everything there is to know about the Victorians, risks overlooking or downgrading the importance of those aspects of Victorian experience that might always lie beyond the digital grasp: experiences, thoughts, feelings, and motivations for which there is no record, or direct evidence. Because obviously not all features of human experience lend themselves to being catalogued within supposedly exhaustive online databases. For instance, whilst it is feasible to archive crime and police records as part of the study of murder culture, and therein to establish definitively who did what, to whom, and when, within a given crime scenario, it is much more difficult to archive the individual, personal experiences of the people who read about, witnessed, or even committed crimes such as murder—especially when those people lived many years in the past. Whilst we might these days have uncovered more evidence of individual past lives and accounts of everyday experiences than we have ever had before, through the discovery of pertinent diaries, journals, and other personal communications, there are still many more voices that we have not heard from and will indeed probably never hear from. Evidence in some cases has been lost, but more often there simply never was any evidence in the first place, because we are talking about people who never had a platform to articulate their experiences, and therein left nothing tangible behind to be archived.

In order to counteract the inevitability of such lacunae in our knowledge base regarding Victorian murder culture, to try and enact the cultural and personal silences, it is thus essential to consider new approaches, new philosophies of digital representation and archiving. This doesn't necessarily mean using virtual or augmented realities, or any other cutting-edge technology that could serve as a bridge between past and present, but rather it invites the redeployment of current technology so as to enhance our knowledge and understanding of the Victorian experience of crime at a human level, drawing on more imaginative, more aesthetic, models of digital curation so to do. This is something hinted at by Alan Liu:

Something else missing in the digital humanities—more on the text oriented than new media studies side—is what might be called data aesthetics. By contrast with new-media art or net art, the parts of the field that emerged from text analysis, text encoding, edition- and archive-building, and so on have paid scant attention to the aesthetic and affective experience of processing and harvesting data (Liu 2016, p. 27).

Such a concern with the aesthetics of digital archives might encourage 'radically new' (Heuser and Le-Khac 2011) kinds of digital resources, just as Jerome McGann's call for a move beyond 'traditional text-centred editorial models' (McGann 2010) of archive chimes with the development of the seminal NINES (Networked Infrastructure for Nineteenth-Century Electronic Scholarship) project. These sort of innovative impulses also gave energy to digital resources that were much more 'manipulable to the scholar's needs and interests' (Burdick et al. 2012) in the ways they experimented

with what Barker calls 'open-endedness' (Barker et al. 2011); these include the *Stanford Literary Lab*, *Transcribe Bentham*, and AHRC-funded *Constructing Scientific Communities: Citizen Science in the 19th and 21st Centuries* ventures. At their core these projects, themselves new 'modes of scholarship' (Prescott 2011, p. 71), utilise digital aesthetics in order to enable forms of user participation that foster innovative thinking in relation to future 'themes for scholarly research' (McGann 2010, p. 40).

But there is a long way to go until such innovation is the norm. On the whole, many on the current menu of digital archives are much more conventional in what they offer, and in the area of Victorian murder culture especially most of online materials are accessed through conventional forms of search-engine-driven functionality. This is perhaps a reflection of the fact that user-friendly design now seems commonly recognised to be the baseline requirement for 'successful' digital archives (LAIRAH Project 2006), with digitised material seen to be 'of little use' unless it can be 'surfaced and represented in digestible forms' (Barker et al. 2011, p. 187). The conventionality of the keyword-search model predominates even within what are otherwise invaluable digital resources, such as The British Newspaper Archive and all its subarchives, including a number that shed particular light on Victorian murder culture, such as The Illustrated Police News. Functionality is also the order of the day with crime resources such as the fascinating online edition of James Greenwood's The Seven Curses of London; the Oxford LibGuides, with their repository of statistical crime data; the easy-to-use broadside collections at the Bodleian Library and Harvard Law School Library; the Victorian crime scene material featured in The History Channel online; and, The Proceedings of the Old Bailey 1674–1913, with its wealth of historical and contextual background information, along with its 'Digital Panopticon' feature, that allows user searches of records related to more than 90,000 Old Baily convicts.

There is an unfortunate unintended consequence to the efficiency of such resources, however; because for all their streamlined simplicity, their seemingly uncomplicated compartmentalization of Victorian crime culture is at its core anachronistic. The taxonomies of the Victorian world they proffer simplify complex discourses of nineteenth-century 'knowledge' on strictly contemporary lines— privileging subject/disciplinary categories that have their origins in the twentieth- and twenty-first centuries, at the expense of categories of knowledge with which the Victorians themselves would have been familiar. This anachronism is thus a symptom of the fundamental tension between an inherent desire to be user-friendly and accessible for twenty-first century users/subscribers, and the wider intellectual coherence and appropriateness of the resources in terms of aiding the understanding of the underlying nature of the Victorian past in its own terms.

A phenomenon such as Victorian murder culture, for instance, is not suited to being compartmentalised and streamlined. For in reality it was articulated, and experienced, as a multidimensional, interwoven social and cultural spectacle, one for which any convenient, discipline-specific taxonomy is unhelpful. Atomising nineteenth-century crime texts hinders, rather than furthers our comprehension of the issues at stake. Victorian periodical publication in particular was much more loosely organised than this, with often no disciplinary or generic boundaries apparent in the presentation and arrangement of the material published within each edition. Therein the Victorian multiplicity of knowledge was woven through a melange of public discourses, with the lines 'between popular and professional, commercial, and learned' continually 'blurred', and no coherent 'formal curriculum' (Daunton 2005) of disciplines being adhered to. This encouraged Victorians to view knowledge in a much more 'complex, varied, and unpredictable' way, in terms of an implicit and ongoing 'transmission of methods and insights from one field of investigation to another' (Bod et al. 2016). Consequently, individual Victorian texts themselves regularly straddled the boundaries between what we in the twenty-first century would see as multiple, distinct categories of information and knowledge.

Thus, the inherent commitment of contemporary digital resources to facilitate easier 'access, use, and interpretation' (Biber and Luker 2014) to the past, through a 'meaningful ordering' (Featherstone 2000) of the complexity of Victorian knowledge, actually ends up inhibiting our wider understanding. Viewing the period through the lens of contemporary knowledge paradigms— 'disciplinary, interdisciplinary, multidisciplinary, transdisciplinary, cross-disciplinary, or even

nondisciplinary' (Mitchell et al. 2018)—actually distorts rather than illuminates it as a research field. It is as if the efforts of these digital archives to 'remedy' the inherent 'fragmentation' (Featherstone 2000, p. 166) of Victorian murder culture so as to make it more digestible for researchers have ended up masking some of its most intriguing features, offering instead a more 'nostalgic' (Featherstone 2000, p. 166), sanitised vision of the discursive context with many of the wrinkles ironed flat. Even The Victorian Web, while making much of its innovative nodal arrangement of the various strands of nineteenth-century knowledge, ultimately still ends up organizing itself around a twentieth/twenty-first century taxonomy of subject areas: Social History, Political History, Philosophy, Religion, Science, Visual Arts, Music and Theatre, and Economics. Ultimately, it falls back on what Llewellyn has called the 'seeming security of coherency…and textual order' (Llewellyn 2009).

The fundamental difference between such atomising digital incarnations of the nineteenth century and the heteroglossia of Victorian murder culture itself is evident from even the briefest consideration of any of the relevant individual texts from the period. Take the article 'Murder Mania' (L.R. 1849), for example, published in the 1849 edition of Chamber's Edinburgh Journal; this is a highly suggestive and insightful article that poignantly captures the wider popular-cultural fixation and public paranoia regarding serious violent crimes against the person. Any researcher coming across it would quickly realise it has much to tell/show on this subject. Yet, at the same time they would also instantly recognise the implied dialogue between this piece and a plethora of other crime-culture texts of the period, and how together these texts were speaking to the same wider cultural anxiety about murder as a sociocultural phenomenon. As such, it is impossible not to conclude that when viewed in isolation, the importance and wider cultural poignancy of the article is minimised. 'Murder Mania' comes to life when it is situated in relation to this range of other works, especially the other articles published in the same edition of the journal, those that provide its own immediate textual context. There is surely much value in considering, for example, how the Victorian reader's interpretation of 'Murder Mania' was affected by their parallel reading of the short metaphysical reflection on the nature of existence that immediately precedes it in the journal, titled 'Light and Darkness'; or the brief nonfictional study of 'The Growth of New York' that also precedes it; or the poem 'Guardian Angels' that is a further part of its textual frame; as with the adjacent study of 'Crime and Genius', the moralising short story called 'The Legacy', the first-person narrative account of the wonders of British industrialisation, and the obituary of 'Madame Récamier', the French society celebrity who had recently died in Paris from cholera.

The various intertextual relationships 'Murder Mania' has with these other texts in this edition of Chamber's are fundamental elements of its meaning, interpretation, and reception—both in the nineteenth century and now. It is a textual context that helps flesh out what Raymond Williams called the 'structure of feeling' within which the meanings and values of the text are 'actively lived and felt' (Williams 1972) by the reader. The cultural significance of such a text comes only through this interconnectedness, especially in the case of Victorian periodicals that were so often characterised by generic and disciplinary fluidity. There was a kind of inherent, relaxed overlap between potentially distinct subject areas that is entirely at odds with the tendency of the present day to publish in specialisms or niches, which is why the content of Chamber's is so diverse, featuring material from subject areas including popular fiction, biography, philosophy, poetry, journalism, geometry, and linguistics. What is remarkable is that in the Victorian context these subject areas coexisted within the pages of the same journal, ensuring that Victorian murder culture at a textual level became a broad-based, interconnected dialogue between disciplinary fields. Texts such as 'Murder Mania' were as such not 'inert' (Foucault 1972), in the sense that how they were interpreted was conditional on which other texts, out of a multiplicity of other works, were read alongside them.

The significant role of these various texts in shaping and reflecting Victorian murder culture was made manifest by the growing importance of reading as a social practice, particularly the role of reading as the chief means by which readers formed attitudes and beliefs about the world around them. Texts provided windows onto aspects of life of which the readers themselves often had no direct experience. And as the literate classes grew in number then the importance of this reading in

the formation of individual and group identities also grew: 'more and more, as the [nineteenth] century progressed, it was the ill-educated mass audience with pennies in its pocket that called the tune to which writers and editors danced' (Altick 1957). Cultural experience became increasingly textual for large swathes of the population, via an effective deluge of newly-published material they had to digest: 'the number of new [newspaper and periodical] titles per decade rose to 968 in the 1830s, 1639 in the 1860s, and 3423 in the 1890s', with (for just one regional example) 'the total circulation of all London newspapers, just 56,000 in 1837, jumped to 410,000 by 1874 and 680,000 in 1887' (Rose 2001). More than ever before, reading as a social practice took its place within what Michael De Certeau calls the commonplace 'everyday practices, "ways of operating" or doing things' (De Certeau 1988) of the Victorian population.

This is why finding new ways of capturing the actual, personal experience of Victorian periodical and magazine readers is so important, and why we require future digital archives to illustrate the multiplicity of links that existed between texts of all kinds during this period. For, the extent to which we can appreciate how texts, in all of their intertextual relationships, shaped Victorian attitudes, knowledge, and beliefs regarding crime and murder, is necessarily related to our understanding of the nature of the process by which these readers assimilated each 'virtual dimension of reality' (Iser 1972) into their wider understanding and awareness of their 'whole way of life' (Williams 1960). And this is no straightforward task; the sort of intertextuality we are talking about was rarely conscious or deliberate, neither was it necessarily about textual connections that were expressed. Rather, the term 'intertextuality' is used here to try to capture a much broader, subtle, and frankly nebulous interrelation of texts connected in varied, hard to ascertain ways. It still exists at the levels of what Kristeva defined as the 'horizontal axis (subject-addressee)' and the 'vertical axis (text-context)' (Kristeva 1986), but Victorian murder culture is much more hard to pin down than something that can more easily be mapped onto each 'given text' (Kristeva 1986, p. 37). Rather, its intertextual connections are characterised by a 'plurality of independent and unmerged voices and consciousnesses…a genuine polyphony' (Bakhtin 1984) wherein multiple, fluid, reader experiences and interpretations are inevitable: 'in accordance with multiple relations, maintained or blurred in accordance with specific regularities' (Foucault 1972, p. 129).

But despite its complexity, it is vital for us to grasp the nature of this intertextual context as a necessary step to appreciating each text in terms of both the 'system of its enunciability' and the 'system of its functioning' (Foucault 1972, p. 129). Digital archives will add value to such sources by capturing this, through their augmentation of the reading/researching experience, via (for just a few possible examples) their particular arrangement of materials; their linking of murder texts to other texts published at the same time; the allusions and cross-references that readers can use to forge their own paths between materials; their overlays and annotations related to the level and demography of the readership; their highlighting of common features of articles and periodicals; their connections between individual texts and wider public discourse; and, their explanations of the broad cultural impact and relevance of texts and genres of all kinds. Ultimately, the technology can allow the researcher to conduct an informed, educated, perusal of the archival material on their own terms, without having their path narrowed or directed by a search engine. The aesthetics of such digital platforms thus becomes a fundamental aspect of the research process, 'contiguous with that being represented and not … something suspended above and distant from the represented' (Taussig 1992). It is about an archival infrastructure that metaphorically captures aspects of the nature of the information and material it is hosting.

What is being anticipated is the sort of multifaceted, multi-access hypertext that has previously been developed for the process of digital storytelling within subject areas such as creative writing and literary studies; this provides a potential model for interactive digital archiving. Because hypertexts can empower readers, writers, and curators by providing for a level of participation and engagement that traditional archives, or even more traditional digital archives, can and do not: 'effectively and massively' revising how both writers and researchers 'organize and look at text' (Cotkin 1996). Shelley Jackson's Patchwork Girl (1995) was one of the first digitally-articulated novels that offered such a level of engagement, and since then interactive reader/audience textual

experiences, utilising 3D modelling, VR headsets, and Augmented Reality applications, have been embedded in the pedagogies of a number of different other disciplinary areas, as well as in the everyday operations of museums, galleries, and cultural attractions across the world—part of the wider focus on finding new ways to '"see" and understand' (Sanders 2014) archival materials.

The inherent features of such hypertext formats lend themselves aptly to capturing 'multiple text' (Landow 2018a) phenomena such as Victorian murder culture. They provide users with opportunities 'to interact with resources in a nonlinear fashion' (Bolick 2006), mimicking the Victorian reader's common experience of crime and murder. Pioneering online resources such as George Landow's The Dickens Web, and the JISC-funded Connected Histories hub, illustrate how hypertext forms can handle the necessary fluid organisation of materials, but they demonstrate less of an explicit concern with more interactive forms of user participation. For the latter, it seems, our models might more usefully come from advances in contemporary gaming, in particular so-called 'sandbox' or 'open world' frameworks that have been utilised within many of the most successful game titles of the past decade (including the Call of Duty, GTA, Assassin's Creed, and Fortnite). These frameworks offer heightened senses of user freedom, interpretation, and exploration, and clearly lend themselves to being repurposed so as to enable researchers to explore digital archives on their own terms, in a free-form fashion, rather than solely through the windows of orthodox, delimiting, search engines. Research archives would therein move away from rigid structuring, and the deployment of 'invisible walls' (Wardrip-Fruin and Harrigan 2004) that subtly, unconsciously shape the direction of the user, and instead allow the user-researcher to control their own experience. This is the logical end-point of McGann's clarion call for digital innovation (discussed earlier in this paper), and an extension of the levels of audience direction found in interactive documentaries such as Welcome to Pine Point (2010) and Journey to the End of Coal (2008)—wherein the nature of the story that unfolds depends on the individual choices of the individual with the mouse in their hand. Digital murder archives can be equally permissible, allowing researchers to roam, opt in and out, and to follow paths that digital curators might not themselves have anticipated; just as Victorian readers could have forged their own paths through periodicals and magazines, flicking from article to article.

The development of such a permissive readerly interactivity combines the vast scope of existing resources such as the Pro Quest Historical Newspapers and Gale Historical Newspapers resources, then adds a more 'constitutive' (Mussell 2013, p. 89) capability in terms of how researchers are empowered in new ways of working with the archive material, with the digital architecture fleshing out what Tony Bennett calls the wider 'reading formation' (Bennett 1983)—the 'webs of significance' (Geertz 1973) that inform the phenomenology of reading. Only then will digital resources fully explore the 'dynamic structure' (Iser 1972, p. 279) and 'virtuality' (Iser 1972, p. 280) of each archived text, within the context of the intertextual 'modality of perception' (Riffaterre 1980) of each reader. Victorian Serial Novels (see http://victorianserialnovels.org/) is the only current online resource that comes close to this, providing, as it does, information on each individual published text in its serial instalments to encourage readers to imagine what it might have been like to read these texts during the Victorian era. Therein, in its own unostentatious fashion, it is in agreement with Andersson's assertion that innovations in digital aesthetics can take us 'closer to the lived experience of the past' (Andersson 2017), and in particular to the experience of those readers Wilkie Collins labelled the 'Unknown Public' (Collins 1858).

Advocating the use of digital archives to enhance 'cognitive empathy' between twenty-first- and nineteenth-century readers also signals, indirectly, agreement with Andersson's assertion. For it embodies an acceptance that such a degree of empathy with the past is possible, and furthermore that this is possible through a simulation of Victorian murder culture at a textual level. But there is also an implicit acceptance that there are limits to what can be achieved in this way by digital curators. Any enhanced understanding of 'the minds of ordinary readers in history, to discover what they read and how they read it' (Rose 2001, p. 1) only reaches so far. Because reading as a social activity is essentially an interaction between what Bennett calls the 'cultural activated text and the culturally activated reader'; and this process of interpretation is as such necessarily 'structured by the material, social, ideological, and institutional relationships in which both text and readers are inescapably

inscribed' (Bennett 1983, p. 218). As a result, every reading formation is acknowledged to be entwined in the culture(s) within which texts and readers exist, and through which they are 'activated'. And it might just be that there is no digital resource that is ever going to be able to replicate the full extent of that.

So, the notion of walking in the shoes of 'ordinary' Victorians, through the application of a form of cognitive empathy, has limits. But that does not mean that digital curators should not strive to connect researchers to a more 'human' sense of the past, even while they recognise the problematic nature of such an aspiration. There will always be a degree of 'historical imagination' (Collingwood 1935), surely, or even some of what Harold called 'fictive imagining' (Harold 2003), as we deploy the technological infrastructure and digitally 're-experience' (Mink 1966) that past. This is why, so far, many curators of academic digital resources have appeared reluctant to utilise such experiential, participatory models of research practice. It is a reflection of an underlying squeamishness about blurring the lines between scholarly research and what is often dismissed as 'edutainment' (Koke 2017), with the use of technological innovation in academic resources haunted by the anxiety of being seen trying to 'replicate the video game environment' (Staley 1999).

The ambition in this paper for digitally representing the intertextual reading practice of the Victorian reader, 'grounded in the quotidian' (Brewer 2010), has no such squeamishness. Mimicking the reading practice of the past in order to explore Victorian murder culture will clearly entail an inevitable degree of approximation of that past experience, with the Victorian world coming to us as a form of 'simulation or constructed model' (Stauffer 2015, p. 1). But this 'spirit of serious play—at once disciplined and exploratory of new paradigms' (Liu 2014) is central to the attempt to facilitate cognitive empathy between contemporary and historical readers through the 'active management and enhancement' (National Research Council of the National Academies (NRCNA) 2015) of the research material. For the archive to be effective it needs to be a stimulating, engaging environment within which the phenomenology of reading—both of researchers and Victorian readers—is the means by which texts and meanings are 'activated'. The intention has to be to encourage the sort of exploratory research patterns that are contingent on how each researcher chooses to engage, rather than offering embedded, prescribed, delimited routes through the 'data deluge' (Abbott 2008). This requires an inherent open-endedness that allows them to anticipate, and replicate, the textual experience of the Victorian reader within the context of the wider 'murder culture', no matter however fluid, or nebulous, this may be as they follow the breadcrumbs from text to text, publication to publication, issue to issue. For this is essential in capturing Victorian murder in all of its 'pervasive, unsettling, and socially figured' (Tromp 2013) aspects.

In conclusion, whilst this model of participatory, exploratory digital resources might in theory benefit the study of a wide range of historical cultural phenomena, it is particularly appropriate to enlightening Victorian murder culture. This is primarily because Victorian murder culture was, for many ordinary people, entirely, or almost entirely, a textual experience. Despite the Victorian moral panic regarding supposed increases in crime rates, especially increases in 'violence against the person', the fact is that rates of criminal prosecution were pretty stable across much of the nineteenth century, before declining towards the end, and so if these are in any way representative of the level of actual incidences of crime during the period, then the chances of any individual Victorian experiencing crime first-hand were relatively low.

Yet, despite this, in texts of all kinds—from the novel form, to the New Journalism of the tabloid newspapers, to street broadsides, and to popular periodicals and magazines—crime, and often grievous, violent crime, became a ubiquitous subject matter; with murder, in particular, the pre-eminent bestseller of the age. According to Christopher Casey, between 1820–1870 'murder' appeared in 33 book titles per year on average (Casey 2011), with a noticeable increase across the whole century. Whereas in 1801 there were 67 individual articles that mentioned murder in The Times newspaper, by the 1850s the average number was 599 per year, and by the 1880s it was over 1000 (Casey 2011, p. 376). There were more publications, more journals, more newspapers, and most importantly more readers, than ever before. The popular media was only able to manufacture and sustain cultural

anxiety and paranoia regarding an imagined crime wave because the reading of crime-related texts had become such a key influence on how and what people thought about the world around them.

This textual nature of Victorian murder culture is especially significant because it means that this is one of the few aspects of Victorian culture that can be experienced by twenty-first century researchers in a way that is close, or at least that is broadly parallel, to how the Victorians themselves experienced it—vicariously. It comes to twenty-first century readers in many of the same forms (albeit digital versions of these) in which it was communicated, articulated, and mediated to our Victorian ancestors. Which provides researchers with an almost unique opportunity to consider (through cognitive empathy) the role of individual reading practice in how Victorians came to understand murder at a micro-level (personal and individual), looking behind the macro- (social and cultural) familiar master narratives of nineteenth-century crime and criminality—within which ideas of civilisation vs. immorality, Englishness vs. foreign Others, upper vs. lower classness, progress vs. decadence, religion vs. immorality, masculinity vs. femininity, social tradition vs. democracy, regularly played out. By looking at how Victorians read crime and murder, as a personal, individual, miniaturised dimension of their everyday experience, we will be better able to appreciate the private and the public nuances of this phenomenon.

Finally, it is worth noting that whilst digitally replicating the rhizomic patterns of Victorian reading entails something of a leap of faith, there is also a way in which such an endeavour is entirely in keeping with Victorian Studies scholarship up to this point. For, utilising digital architecture to make manifest the interweaving and overlapping discourses of knowledge that make up Victorian murder culture echoes the longstanding interdisciplinary traditions of the subdiscipline. And by happenstance, this sort of inter/cross-disciplinary methodology is also the only feasible way of getting to grips with the complex, multifaceted polyphony of the subject matter at hand. It is why it is so important that digital resources in this area are capable of managing, and embodying, the intersection between the social, cultural, political, historical, psychological, criminological dimensions it entails, and all of the tensions, contradictions, and inconsistencies between them. Only when twenty-first century researchers can engage with the textual material in a comparable fashion to Victorian readers will it be possible to better appreciate how the practice of reading texts of all kinds was such a key factor in the wider cultural experience of murder, through increased cognitive empathy between the present and past. Such digital resources can thus act as conduits to a more sensitive, nuanced grasp of one of the most notable predilections of the Victorian age.

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