

Introduction: Industrial Evolution

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Remember when I was crawling around the attic, looking for my old Planters-peanut-man Halloween costume? I didn't donate it to the children's theater, like I told you. I salvaged the monocle, top hat, and cane, combined them with a swallowtail tuxedo, and stole away to a midnight screening of the underrated masterpiece *The League of Extraordinary Gentlemen*. [...] No, I won't take off my topcoat. And that's exactly my point. I understand your confusion. The nascent trend I have latched onto is difficult to define. (Kaye 2008)

In introducing this special issue of *Neo-Victorian Studies* on the subject of steampunk, we find ourselves faced with a predictable but difficult task: defining steampunk. Our epigraph's speaker, the fictional star of one of *McSweeney's* 'Imagined Monologues', observes, if comically, what have been considered the key characteristics of steampunk: it is "nascent" and "difficult to define", evocative of various, sometimes conflicting traditions (Kaye 2008). That being said, one common element arguably shared by all steampunk texts, objects, or performances is the one on which this journal is predicated: the invocation of Victorianism. In literary culture, this can mean a narrative set in Victorian London; one set in a futuristic world that retains or reverts to the aesthetic hallmarks of the Victorian period; a piece of speculative historical fiction that deploys Victorian subjects; or a text that incorporates anachronistic versions of nineteenth-century technologies. In material culture, the Victorian-ness of steampunk usually involves the incorporation of stylised Victorian-era objects or costumes. As such, steampunk is, in many ways, exemplary of the neo-Victorian impulse that this journal is committed to investigating. The neo-Victorian enterprise is, of course, expansive, but it is necessarily historically conscious and very often includes what Marie-Luise Kohlke describes as "cultural memory work" (Kohlke 2008: 9). Steampunk seems precisely to illustrate, and perhaps even perform, a kind of cultural memory work, wherein our projections and fantasies about the Victorian era meet the tropes and techniques of science fiction, to produce a genre that revels in anachronism while exposing history's overlapping layers. In this introduction, we will

examine steampunk (literature and culture) primarily via its aesthetics of time, technology, and materiality, connecting both to the genre's Victorian aspirations and its contemporary relevance.

1. (Neo-)Victorian Temporality

The curiously hybrid temporality of steampunk is among its most compelling characteristics, as well as the feature that makes it such an apt subject for a special issue of *Neo-Victorian Studies*. Like most science fiction, it takes us out of our present moment; but instead of giving us a recognisably futuristic setting, complete with futuristic technology, steampunk provides us with anachronism: a past that is borrowing from the future or a future borrowing from the past. There are many different iterations of this: the actualisation of Charles Babbage's analytical machines within William Gibson and Bruce Sterling's *The Difference Engine* (1990); the reversion of one future, nanotech-enabled tribe to Victorian-era social organisation with the result that they actually call themselves 'the neo-Victorians' in Neal Stephenson's *The Diamond Age* (1995); or the actual nineteenth-century aesthetics that inform both steampunk modifications of machinery and fetishisations of gadgets. If, as Gibson suggests in a 2008 interview, science fiction most often understands its present by looking to a future (qtd. Parker 2008), what does it mean when a subgenre and a cultural phenomenon looks to the past to understand more contemporary anxieties?

As a literary move, this concern with the past is certainly not without precedent. While some Victorian-era science fiction is futuristic (H.G. Wells's *The Time Machine* [1895] may serve as a canonical example), the Victorians were no strangers to backward-looking aesthetics, from Thomas Carlyle's *Past and Present* (1843), to Alfred Tennyson's Arthurian poems, to John Ruskin's engagement with ruins and medieval architecture. Texts like William Morris's *News From Nowhere* (1890), with its utopian imagining of a futuristic socialist society, where stability has been achieved through a kind of reversion to an agrarian (but egalitarian) mode of the past, may be said to fuse aspects of such forward- and backward-looking impulses. In each of these examples, the authors, to some degree, look to the past to make sense of the present. Whether to highlight the relative advancements and progress of the nineteenth century or, as was more common, to wax nostalgic for the order and hierarchies of the past, Victorian writers frequently understood themselves with respect to cultures

of the distant past, a paradigm not radically different from the contemporary reader's interaction with the Victorian within steampunk.

Steampunk does not, however, consistently set itself or its stories in the past – or even consistently in a future that looks like the past – but overtly blends various time periods. Moreover, the arrangement of blended anachronisms is relatively unimportant. The setting could be a nineteenth-century England where technologies are more advanced, as in *The Difference Engine* or S.M. Peters's *Whitechapel Gods* (2008); or it could be a futuristic and potentially alien world where some technologies or social structures have not advanced beyond the nineteenth-century, as is the case in *The Diamond Age* or Philip Pullman's *The Golden Compass* (1995). In other words, steampunk does more than simply invoke a distant past: it creates a new paradigm in which technologies, aesthetics, and ideas mark different times simultaneously, instead of signposting different historical periods; anachronism is not anomalous but becomes the norm.

In many ways, the Victorians provide an ideal source of inspiration for these revised temporal paradigms. Nineteenth-century England was the site of major upheavals in how people understood time, due in part to technological innovation. In both paradigmatic and quotidian ways, the Industrial Revolution accelerated the shift from agrarian time to factory time and rewrote the relationships between time and productivity. In *The Railway Journey*, Wolfgang Schivelbusch has written persuasively about the inception of "railway time", which severed the connections between time and space by ushering in an era where larger swaths of land could be traversed in shorter spans of time; Schivelbusch describes this effect as the "annihilation of time and space" (Schivelbusch 1986: 33). Such perceptual shrinking of space or lengthening of time produced a different way of feeling one's self in time while travelling. Patricia Murphy, in *Time is of the Essence*, describes how the standardisation of time was spurred by the demands of the railways schedule. Mechanisation and attendant technotemporal innovations radically shifted how time worked and felt for Victorian subjects (Murphy 2001). That is, while mechanisation and railway travel may have changed the way time was measured, they also radically changed the way time was *felt*. We see a version of this upheaval for the viewer or reader of steampunk, for whom an experience of Victorian fiction and culture, one that has been shaped by our contemporary constructions of 'Victorian-ness', is blended with impressions and experience of science

fiction, themselves also shaped by the cultural discourse that constructs 'science fiction' as genre. The apparent incompatibilities of Victorian literature and science fiction (high literature versus popular literature; canonical fiction versus genre fiction) are smoothed out in steampunk art and literature. The temporal aesthetics of both Victorianism and anachronistic technologies are mashed together, presenting a new and somewhat disjunctive aesthetic experience

Yet industrial upheaval was hardly the only force reformulating time during the period. The scientific discourse of the nineteenth century also shifted perceptions of time and perhaps plays an even more substantive role in the temporality of steampunk culture. Charles Lyell's three-volume *Principles of Geology* (1830-1833) lengthened the planet's timeline to a degree that staggered the Victorian imagination. Lyell's work created a kind of catastrophe for the nineteenth-century subjects' understanding of the earth's history by insisting that there had been, in fact, no catastrophe. Prior to Lyell's work most geologists subscribed to the theory of catastrophism for explaining the origin of the earth and its formation. Jerome Buckley, in *The Triumph of Time*, notes that

the orthodox theory of the earth, through the eighteen thirties and even into the forties, remained catastrophism, the notion that sudden cataclysms of nature, violent upheavals, and inundations, had given the world its shape and structure. (Buckley 1966: 27)

Catastrophism seemed to support the Biblical narrative of the earth's formation and development. The theory endorsed a planetary age that mapped onto the Genesis account, and it allowed major events such as the Great Flood to determine the planet's physical history.

In contrast, Lyell built on the earlier work of geologist and chemist James Hutton to develop a theory of uniformitarianism. Lyell's supposition was that without any indisputable physical evidence of catastrophe, one must instead proceed under the assumption that the earth's history could be extrapolated from the available evidence: fossil records, sedimentary deposits, and landscape features. From that evidence, he concluded that the earth was in fact much older than had been thought and that slow, gradual changes – not catastrophic events – accounted for the planet's present

condition. Lyell proposed that the “assemblage of general causes” apparent to the geologists surveying their planet

may have been sufficient to produce, by their various combinations, the endless diversity of effects, of which the shell of the earth has preserved memorials, and, consistently with these principles, the recurrence of analogous changes is expected by them in time to come. (Lyell 1997: 26)

Accordingly, James A. Secord summarises Lyell’s uniformitarianism as “the doctrine [...] of slow change wrought by such quiet agents as erosion and sedimentary deposit, forces everywhere still evident” (Secord 1997: xvi). By focusing on changes that are “still evident”, Lyell’s theory suggested that the forces that shaped the Earth in the past continued to work within in his – and our own – times. This emphasis on continued, observable forces at work in the present is signalled by Lyell’s subtitle to the text: “An attempt to explain the former changes of the Earth’s surface by reference to causes *now* in action” (emphasis added). In fact, Lyell’s entire paradigm is often summed up as ‘the present is the key to the past’.

Lyell’s invocation of causes “still in action” resonates with what many scholars say about speculative fiction: those anxieties which inform the moment of a text’s production are those that inform its representation of its projected temporal settings; the causes of the present are “still in action” in the future. In other words, the present is the key to such texts’ particular futures. Of course, Lyell’s uniformitarianism actually proposes that the *present*, rather than future, is the key to the past. Indeed, steampunk looks to the present to illuminate the past, the past to illuminate the present, the future to illuminate the past, and the past to illuminate the future: its most defining feature may therefore be the jumbling of markers from different time periods in order to illuminate compatibility. Catastrophism troubles the relate-ability of the past to the present, insisting on such radical changes that geological periods cannot be legibly connected to each other unless an unseen (and un-evidenced) catastrophe is invoked. This paradigm resonates with the more contemporary concept of technological singularity, which itself informs so much science fiction, especially the cyberpunk novels that dominated speculative fiction in the 1980s.¹ Furthermore, catastrophism does not insist on the primacy of visible evidence. Uniformitarianism

suggests that the past, present, and, implicitly, the future, no matter how incompatible they seem, can be linked via causes we now see in action. M.R. Leeder, in his analysis of the “foundations of sedimentology”, notes that

[Lyell] saw all Earth surface processes as aimed towards one or the other of [reproduction via sediment deposit or destruction via erosion], with the resulting balance being the state of the Earth as we see it now, or at any time in the past. Thus it was Lyell’s philosophy that as we look back through the Earth’s history we should look for a similar balance. (Leeder 1998: 98)

The geologic record, containing visible data that marks distinctions between geologic ages, can be understood through a lens that focuses on the commonalities.

Steampunk is premised on these temporal connections, especially in visible manifestations. Steampunk asks us, perhaps via its material culture even more than through its fictional instantiations, to consider the apparent disjunction of a turn-key starter and a laptop computer (see Figure 1).



Figure 1: Detail, Datamancer’s Steampunk Laptop.
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Then steampunk asks us to look harder and apprehend their aesthetic compatibility. Calling it aesthetic compatibility may, in fact, understate the point. In the laptop, modded by the technical artist Datamancer (Richard R. Nagy), the compatibility is operational: turning the key actually boots the machine.ⁱⁱ

We might say steampunk takes the paradigm one step further and asks what happens when the markers of various time periods are estranged from their contexts and made simultaneous. Steampunk enacts key principles of uniformitarianism by forcing the apparently disjunctive markers of time periods – laptops and brass lion’s feet – to reveal their affinities. The point of modding your laptop to look like a turn-of-the-previous-century machine is not to create an object so radically mashed-up that one cannot discern its functionality, but to discover their aesthetic commonalities, to blend them in a way that verges on cancelling the difference.

While the staging of this uniformity is most immediately apparent in steampunk objects, we discover it in literature as well. Stephenson’s *The Diamond Age* provides a particularly apt world, a futuristic one in which the members of the most powerful social and economic demographic, the neo-Victorians (or ‘Vickys’, as they are called by the novel’s more irreverent characters), have decided that modelling their social structure, education system, aesthetic modes, and parliamentary monarchy on the Victorians of the past is more conducive to success than any other option. In other words, they identify the “causes still in action” – the values, goals, and methods applicable to both the Victorian-era and this ‘new’ world of nanotechnological tribalism – and string them together to form an identity-narrative that explains the two periods in relation to one another. The novel’s protagonist engineer, John Percival Hackworth, observes that his tribe’s insight and achievement consist of “look[ing] to the nineteenth century for stable social models”, while having “outgrown much of the ignorance and resolved many of the contradictions that characterised that era” (Stephenson 2000: 24). The novel very explicitly positions the nanotechnological revolution that precedes the novel’s action as analogous to the Industrial Revolution of the Victorian era, with the neo-Victorians in control of the technological advances and therefore at the top of the global food chain.

The geologic debate, itself relevant to the shifting Victorian temporality that is so important to steampunk, is overtly referenced in another foundational text for the steampunk genre: Gibson and Sterling's *The Difference Engine*. In the novel's alternate Victorian world, the major players in the field of Victorian geology – Charles Lyell, William Buckland, Georges Cuvier – are all mentioned at some point. One of the novel's protagonists, Edward (Ned) Mallory, is a pioneering scientist (he discovered the "brontosaurus" in North America) and Catastrophist, who makes frequent mention of the associated debates, particularly with reference to his rivals in the scientific community. In explaining the distribution of influence within that community, he tells a friend who hints at Mallory's likely elevation to a Lordship, "You don't know the politics of the Royal Society. I'm a Catastrophist. The Uniformitarians hold sway, when it comes to the granting of tenures and honors [sic]. Men like Lyell, and that damned fool Rudwick" (Gibson and Sterling 1992: 85). (Mallory actually imagines that Lyell himself is actively sabotaging him throughout the novel; see Gibson and Sterling 1992: 200.) When arguing about the proper way to display the brontosaurus skeleton he brings home, Mallory suggests that decisions about its posture are in fact arguments about the two worldviews:

The Uniformitarian faction wish these creatures to seem dull and sluggish! Dinosaurs will then fit their slope of gradual development, a slow progression to the present day. Whereas, if you grant the role of Catastrophe, you admit a far greater state of Darwinian fitness for these magnificent creatures, wounding as that may seem to the vanities of [us] tiny modern-day mammals [...]. (Gibson and Sterling 1992: 124)

The power struggle Mallory refers to is representative of how the paradigms are depicted throughout the novel; the narrative positions Lyell's uniformitarian insights as divisive but increasingly dominant. They are also, surprisingly enough, somewhat boring. Benjamin Disraeli, who in this novel's world is both a ghost writer and an author of "sensation-novels" (Gibson and Sterling 1992: 120), reminds Mallory as much while they work on a book about the latter's American adventures. According to Disraeli, catastrophism

[m]akes a fine climax, that business with the great smashing comet, and the great black dust-storm wiping out all reptilian life and so forth. Very dramatic, very catastrophic. That's what the public likes about Catastrophism, Mallory. Catastrophe feels better than this Uniformity drivel about the Earth being a thousand million years old. Tedious and boring – boring on the face of it! (Gibson and Sterling 1992: 195)

Counterintuitively, catastrophe “feels better” than uniformity. Disraeli is probably right, in terms of explaining history in both a marketable and comfortable way. Catastrophe, after all, seems to allow for all the divine interventions of a Bible-driven reading of history, and it certainly makes things more exciting by condensing the timeline and insisting that systemic changes can happen (and have happened!) in the blink of an eye. As Mallory puts it, “Nature *does* leap [...]. Complex systems can make sudden transformations” (Gibson and Sterling 1992: 125, original emphasis). Indeed, catastrophism is the paradigm that lends itself most to a belief in exceptionalism, whether that exceptional thing be (Western) humanity, the Industrial Revolution, or the British Empire.

In keeping with actual geologists, Mallory comes to a different perspective, if only gradually, by the end of the novel:

Envision Edward Mallory in the scholarly office of his palatial Cambridge home. It is late. The great palaeontologist, his field-days long behind him and his Presidency [of the Royal Society] resigned, now devotes the winter of his life to matters of theory, and to the subtler outreaches of scientific administration.

Lord Mallory has long since modified the radical Catastrophist doctrines of his youth, gracefully abandoning the discredited notion that the Earth is no more than three hundred thousand years old – radioactive dating having proven otherwise. It is enough, for Mallory, that Catastrophism proved a fortunate road to higher geological truth, leading him to his greatest personal triumph: the discovery, in 1865, of continental drift. (Gibson and Sterling 1992: 319-320)

In Mallory's shift from catastrophism to uniformitarianism, we see a mirror for steampunk's unique and definitive invocation of temporality. Steampunk assembles a new temporality, one that relies on surface details of anachronism, incompatibilities, and non-linearity. And yet this approach to temporality, for all of its novelty, has the simultaneous and paradoxical effect of minimising the categorical differences between time periods. Steampunk illuminates the compatibility of laptops and brass, of steam engines and nanotechnology. Steampunk insists, in other words, on our continuing status as 'other Victorians' and does so in part through a manipulation of temporality that in its very machinations invokes the temporal revisions and reversals of the Victorian era.

2. Why Steampunk Now?

Mallory's inclination to read history as a series of catastrophes informs many of the scenarios in cyberpunk fiction, as previously mentioned, but also resonates with some recurring themes in the cultural reaction to steampunk. There is a tendency to identify and define this new phenomenon (or any novel phenomenon) as radically new, a categorical break from preceding forms of science fiction and fan culture. While tempting, this view steampunk culture as a kind of eruptive event, whose mashup of time periods, art forms, and high and low culture, manifests an exception to established science fiction norms, has been shown by many scholars to be short-sighted (Hantke 1999; Nevins 2008; Onion 2008). We may look at some evidence that signals a meteoric rise to prominence (more on this below), but if we look with an eye for connections, a network of predecessors and influences becomes apparent.

That being said, one could reasonably conclude that steampunk is a recent phenomenon. For all intents and purposes, steampunk appears to have been barely a blip on the collective consciousness until 2007 – at least insofar as the collective consciousness can be measured by worldwide Internet traffic and can be reported by Google Trends (see Figure 2).

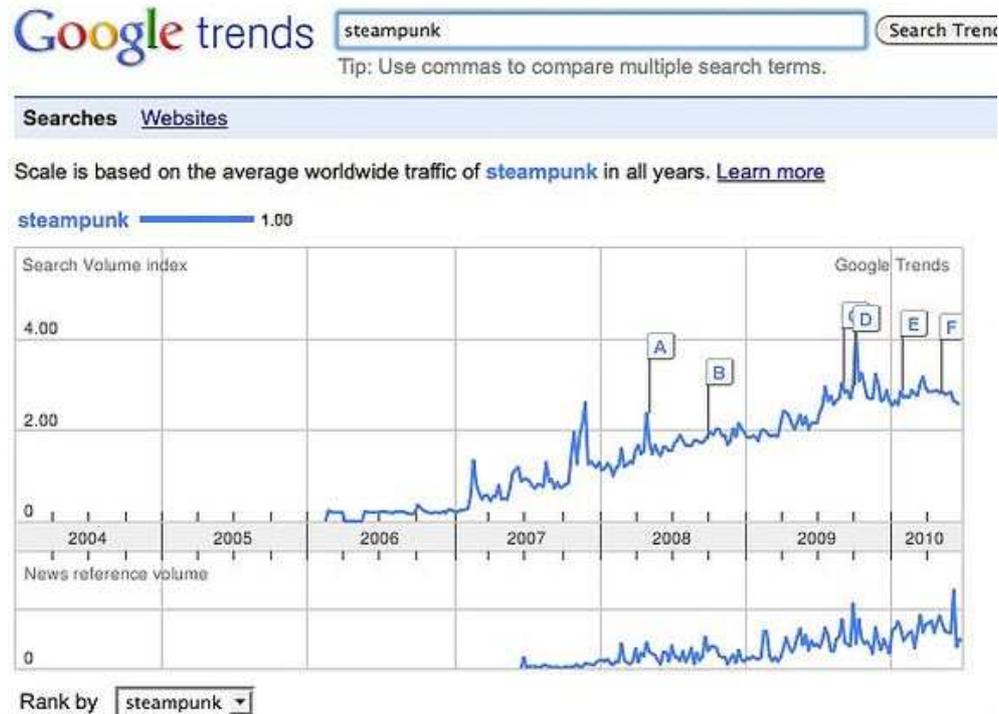


Figure 2: Detail, search of “Steampunk” on Google Trends, accessed 9 July 2010.ⁱⁱⁱ
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As this graph illustrates, from 2007 on, steampunk became increasingly visible online. Internet-based publications, such as the group blog ‘Boing Boing’ and the blogs of *Wired* magazine, began covering the do-it-yourself (DIY) and maker culture’s increasing fascination with a neo-Victorian design aesthetic. But steampunk perhaps becomes truly public with a May 2008 feature story in *The New York Times* (see La Ferla 2008). Later that same year, the GGOBOT Festival in Enschede, The Netherlands, embraced a steampunk theme, and in October of 2008, the inaugural ‘California Steampunk Convention’ (since renamed the ‘Nova Albion Steampunk Exhibition’) took place in the San Francisco metro area.^{iv} Such events have continued to the present, with – to cite only three examples – September 2009’s initial ‘The Asylum: The UK Steampunk Festival’ in Lincoln,

Lincolnshire, and the first of both the ‘Steampunk World’s Fair’ and ‘Victoria Steam Exposition’ taking place in May 2010 in Piscataway, New Jersey, and Victoria, British Columbia, respectively.^v Media coverage of steampunk has proliferated as well: major articles on the subject appeared in *Time* (US), *The Guardian* (UK) and *The Ottawa Citizen* in December 2009, February 2010, and May 2010, respectively (see L. Grossman 2009; Barnett 2010; Petrescu 2010). The prominence of the movement was such that Oxford University’s Museum of the History of Science hosted ‘Steampunk Art and Design’ from October 2009 to February 2010; it became the “most popular exhibition” in the history of the museum, according to its curator.^{vi}

What this recent coverage of steampunk maker and fan culture often belies, however, is that the larger (sub-)cultural movement of steampunk grows out of a literary tradition that is at least thirty – rather than three – years old. As others writing about steampunk, including Steffen Hantke and Jess Nevins, have noted, steampunk novels first began appearing in the late 1960s and early 1970s with Ronald William Clark’s *Queen Victoria’s Bomb* (1967), Michael Moorcock’s *The Warlord of Air* (1971), Harry Harrison’s *A Transatlantic Tunnel, Hurrah!* (1973), and K.W. Jeter’s *Morlock Night* (1979), in which the Morlocks of Wells’s *The Time Machine* use the eponymous device to time-travel to and then menace Victorian England.^{vii} Other steampunk stories appeared throughout the 1980s, including Tim Powers’s *The Anubis Gates* (1983); James Blaylock’s “Lord Kelvin’s Machine” (1985, novelised in 1992) and *Homunculus* (1986); Bob Shaw’s *The Ragged Astronauts* (1986); and Jeter’s *Infernal Devices: A Mad Victorian Fantasy* (1987). Interestingly enough, these novels, which constitute the first decade or so of steampunk, were created *before* the moniker ‘steampunk’ itself was. By all accounts, including the *Oxford English Dictionary*, ‘steampunk’ was first used by Jeter in a 1987 letter to *Locus* magazine to describe the work that he, Blaylock, and Powers, who met one another at California State University, Fullerton, had been creating:

Personally, I think Victorian fantasies are going to be the next big thing, as long as we can come up with a fitting collective term [...]. Something based on the appropriate technology of the era; like ‘steampunks,’ perhaps... (Jeter 1987b: 57, original ellipses)^{viii}

In all likelihood, Jeter's neologism was a tongue-in-cheek reference to cyberpunk. Cyberpunk had emerged as a literary movement around the same time as steampunk, but it found its name – and audience – sooner. But there appeared to be more in common between cyberpunk and steampunk than simply the genres' etymologies when Gibson and Sterling – two authors who were arguably the most visible representatives of cyberpunk – co-wrote *The Difference Engine* in 1990, bringing steampunk to wider attention. Gibson and Sterling's steampunk novel made only more apparent what previous stories by Jeter, Blaylock, Powers, and others had already limned: steampunk, as Nevins puts it, “rebels against the system it portrays” (Nevins 2008: 10). Like cyberpunk, steampunk critiques this system's “lack of mercy” and how its “cutthroat capitalism” treats both the haves and have-nots (Nevins 2008: 10). Rather than focusing on a near future, however, steampunk echoed its Victorian cultural and scientific roots by examining the past that appeared to have produced the conditions of the present.

For most of the twenty years since Gibson and Sterling's novel was published, steampunk has continued largely as a literary endeavour. The 1990s saw many of whom Nevins calls the “first generation of steampunk writers” turn their attention elsewhere, although Blaylock published *Lord Kelvin's Machine* in 1992, a substantially reworked novelisation of his short story of the same name. New authors, however, began exploring neo-Victorian cultures and technologies. Paul Di Filippo's *The Steampunk Trilogy* (1995), the first book with ‘steampunk’ in its title, contained three novellas, the first of which places a humanoid newt on the throne, while its scientist-naturalist hero searches the London underworld for the missing Queen Victoria. Philip Pullman's trilogy, *His Dark Materials* (1995, 1997, 2000), takes place in alternate universes, where extrapolated versions of nineteenth-century transportation technologies exist alongside sorcery. And Neal Stephenson followed Gibson and Sterling's lead by transitioning from the cyberpunk of *Snow Crash* (1992) to the nanotech-driven steampunk of *The Diamond Age* (1995). The decade ended with the appearance of the first volume of Alan Moore and Kevin O'Neill's graphic novel *The League of Extraordinary Gentlemen* (1999), which combines characters and situations from H.G. Wells, Jules Verne, Bram Stoker, Rider Haggard, Louis Stevenson, Edgar Allen Poe, and more in a postmodern pastiche.

The production of steampunk literature increased exponentially in the most recent decade, as a glance at even Wikipedia's woefully

incomplete “list of steampunk works” will attest.^{ix} China Miéville’s *Perdido Street Station* (2000) is set in New Crobuzon, which incorporates both a grungy, gritty East-End London feel and technologies that resemble those of the Industrial Age. Subsequent Miéville novels *The Scar* (2002) and *Iron Council* (2004) are set in the same world. Philip Reeve’s *Mortal Engines Quartet* (2001, 2003, 2005, 2006, known as *The Hungry City Chronicles* in the United States) is set many millennia in the future, in a post-nuclear-apocalypse world, where most electrical technologies have been lost and London and other cities have been mounted on gigantic continuous tracks. The world is run by the principles of Municipal Darwinism, whereby stronger cities literally run down and devour smaller and slower towns and villages. Fittingly for a society that resurrects the science, technology, and class strata of the Victorian era, the first novel in the series, *Mortal Engines* (2001), opens in a favourite Victorian space – the natural history museum – and features those most Dickensian of protagonists: orphans. Moving from the future to the past, Reeve’s other steampunk novels – the *Larklight* trilogy (2006, 2007, 2008) – are set in a nineteenth century where Britons have been exploring space for more than a century.^x By the first novel’s end, the protagonists have travelled to Mars, befriended spies and pirates, and foiled interstellar spiders who, among other things, have turned the Crystal Palace at the 1851 Great Exhibition into a mechanical menace. As steampunk has become more broadly visible in popular culture, still more novels have appeared: Stephen Hunt’s *The Court of the Air* (2007) is the first of four novels (to date) in his Jackelian series; S.M. Peter’s *Whitechapel Gods* presents its titular London neighbourhood ruled by two mechanical deities; Cherie Priest’s *Boneshaker* (2009), nominated for the 2010 Hugo Award for Best Novel and winner of the 2010 Locus Award for Best SF Novel, moves the spatial location of much of steampunk to the American West in the 1880s, while the Civil War is still on-going; and Scott Westerfeld’s *Leviathan* (2009) moves the temporal location of the steampunk genre to 1914, where the First World War is about to commence.^{xi} At least one ‘high’ literary postmodernist appears to have been paying attention to steampunk during the new millennium: Thomas Pynchon opens his 2006 novel, *Against the Day*, with the so-called ‘Chums of Chance’ taking to the sky in their airship *Inconvenience* at the 1893 World’s Columbian Exposition. While novel-length texts have been dominant in steampunk literature through the last 30 years, they represent by no means

the only format. Two anthologies of shorter steampunk fiction published in 2008 sought to demonstrate this point, as well as to draw the public's attention to the literary roots of steampunk.^{xii} The Internet has provided other new venues for the publication of shorter and/or serialised steampunk fiction. *SteamPunk Magazine*, launched in April 2010, publishes several stories in each of its PDF-native issues, and *Steampunk Tales* makes short steampunk fiction mobile by offering its eight issues (to date) as iPhone apps, MobiReader eBooks, or formatted for Amazon.com's Kindle.^{xiii} Phil and Kaja Foglio's webcomic *Girl Genius*, which won the 2009 Hugo Award for Best Graphic Story, is published online three times a week, with books printed after every 100-150 comics, and is just one of several steampunk themed webcomics.^{xiv}

Of course, the recent rise in steampunk literature parallels the material culture that has grown up around steampunk in the last few years. Determining which of the two phenomena began first would be complicated and, more importantly, would obscure a much more interesting question: why is steampunk in both its literary and fan-culture manifestations emerging into the mainstream *now*? After all, as our brief and necessarily incomplete history of steampunk literature shows, the hallmarks of the genre have been around for at least 30 years. What, then, in the last four or five years has led more authors to dress their characters in brass goggles, more craftsmen like Datamancer or Jake Von Slatt of The Steampunk Workshop to modify laptops, keyboards, or light switch plates, more artists such as Paul St. George or Tim Wetherell to create and install pieces such as *The Telectroscope* or *Clockwork Universe* in cities and museums around the world, and an increasing number of fans to attend an by a growing number of conventions dressed in their (neo-)Victorian finery?^{xv}

To understand the emergence of steampunk in the present moment, it is useful to return to Jeter's 1987 letter to *Locus*, in which the word itself is first used. In this document, he suggests that the term for the fiction that he and his friends had been writing should be "based on the appropriate *technology* of the era" (Jeter 1987b: 57, emphasis added). This statement suggests that it is perhaps the technology that matters most within steampunk. If, given the wide range of physical and temporal locations in which literary steampunk has been set, the easiest way to characterise steampunk is that one knows it when one sees it (*pace* US Supreme Court Justice Potter Stewart), then we recognise steampunk generally because of

the Victorian technologies – real or imagined – we see within it: dirigibles, steam engines, and difference engines built out of brass rods and cogs, cogs, cogs. Since, as Gibson suggests in a 2008 interview, “science fiction is necessarily always about the day in which it was written”, the emphasis on technology within steampunk suggests that the genre’s popularity says something about our experiences of, unease with, and desires for technology in the present (qtd. in Parker 2008).^{xvi} Indeed, steampunk’s preoccupation with technology echoes similar concerns in the larger neo-Victorian enterprise in which steampunk finds itself.

What has happened with technology in the last 30 years that we have been living with steampunk? A key technological innovation of the 1980s was the personal computer, which soon changed not only work places but also homes. In the 1990s, the public’s discovery of the Internet meant that wires began to be associated not only with electricity but also with information. (It is telling that the pre-eminent tech magazine of the 1990s was named *Wired*.) Since 2000, technological objects have tried to become invisible. Personal computers shrank from occupying an entire desktop and became portable or embedded within other objects: we could suddenly carry a computer on our backs and one in each pocket (mobile phone and mp3 player). The wires of the 1990s were disposed of as the world increasingly became wireless; the result was that we literally became surrounded by invisible information flows and the unseen technology that made possible these flows and their navigation. This drive toward an aesthetic of technological invisibility could perhaps most easily be represented by the designs of Apple Inc. For example, Apple’s MacBook Air is a computer that is less than an inch thick, that all but disappears when viewed head-on, and Apple’s ubiquitous iPod continues to shrink in size and weight while continuing to increase its capacity. Making objects as small and compact as the iPod and the MacBook Air necessitates compromises, such as batteries that users cannot replace because they are sealed within the device. Replacing the batteries on one’s own voids the device’s warranty. Therein perhaps lies one of the reasons for the contemporary fascination with steampunk: for while many of us desire the latest, shiniest gadgets (having come of age in a consumer culture that is itself a product of the Victorian era), we are equally aware that we are constrained by these objects of our desire. When a device like the iPad has only one button and is a sealed slab of glass and metal, we face becoming alienated from our technology.^{xvii} It is

no longer easy – if even possible – to modify the tools that we depend on, because we cannot get at the inner workings of the hardware, which may be sealed or even invisible to us (such as a wireless router placed out of sight).^{xviii} And this says nothing about the difficulties of working with either the software that enables such devices to run or the end-user licensing agreements (EULAs), to which users must agree before even beginning to use particular software. Ironically, personal computers have stopped being a technology that initially attracted garage hobbyists such as Apple founders Steve Jobs and Steve Wozniak, having been transformed into tools that can only be repaired by a guild of highly trained workers. While Apple's products certainly represent how we have become distanced from our everyday technology, this alienation is not unique to their products. Indeed, it is difficult to repair one's automobile these days, since problems may as easily occur with the car's onboard computer systems as with its mechanical parts.^{xix} Undoubtedly, computers – the *ne plus ultra* of 'technology' in our contemporary moment – have greatly improved our lives. Yet computer design and complexity have also made it all but impossible for most of us to interact effectively with the structural components of these basic and important building blocks of our globalised economy and culture.

If the technology of our present tends toward the invisible and the inaccessible, technology within steampunk is very different indeed. Where today's computers are as small and light as possible, difference engines in steampunk literature are extremely large and heavy. The ones in Gibson and Sterling's novel are each as "big as rail-cars set on end" and must be housed in a room with a thirty-foot ceiling "alive with spinning pulley-belts [and] lesser gears drawing power from tremendous spoked flywheels on socketed iron columns" (Gibson and Sterling 1992: 137). Where much of our technology today embraces a clean, glossy, or polished aesthetic, the technologies within steampunk are often dirty and have rough edges. In Blaylock's story, those helping to assemble the titular Lord Kelvin's Machine – a massive device the size of a barn that will hopefully reverse the earth's polarity and prevent its collision with a comet – are described as "grimied machinists" who are "grimied with oil" (Blaylock 2008: 31, 34). Where today's technologies tend to be electrical, steampunk technologies are mechanical. Because the tools of steampunk are so large, heavy, dirty, and mechanised, those using them are always at risk of injury, as opposed to enjoying the promise of technological transcendence that is offered by the

present's ever-revolving array of gadgets. In short, steampunk technologies aren't invisible; instead, they are eminently tangible – although getting touched by the machines themselves can be hazardous.

The danger of these neo-Victorian machines perhaps explains why goggles – more than any other object – appear so frequently within steampunk literature and fan culture.^{xx} Whether one is producing the “complicated alchemical reaction which can drive a ship through space far faster than the speed of tardy old light”, as the young girl Myrtle Mumby does in *Mothstorm* (2008), the third book of Reeve's Larklight trilogy, or simply piloting an airship as Agatha Clay does in *Girl Genius*, “smoked-glass goggles” work to keep the steampunk protagonist safe (Reeve 2008: 3, 2). But the ubiquity of goggles and mechanised danger within steampunk points to another important difference between our technologies and those of steampunk: the characters within steampunk are tinkerers. While today we are penalised by the makers of our gadgets if we open and modify them, protagonists like Myrtle or Agatha are *themselves* the makers of their gadgets. They build and adapt their tools to suit their own needs. Thus, if steampunk, as defined by Jeter, is broadly about the “appropriate technology of the era”, it appears that the characters who operate this “appropriate technology” are more often than not the *creators* of it rather than merely its beneficiaries.^{xxi}

One finds an excellent example of the tinkerer impulse in the opening moments of Katsuhiro Otomo's film *Steamboy* (2004). In his spare time from his job as a maintenance boy in a textile mill, Ray Steam works on perfecting a monowheel, a one-wheeled transportation device that he sits within rather than atop (see Figure 3). From contextual evidence in the opening montage, the viewer determines that Ray has been working on the monowheel for quite some time, trying to scrounge up the correctly sized parts for the vehicle. When he prevents a boiler at the mill from exploding, he gets “a bit scalded”, as he tells the foreman, but he also nicks the final brass valve that he needs to complete his project. He gets the monowheel running just in time to make his escape from a group of anonymous, menacing men (some of whom are naturally wearing goggles) that converge on his home and try to steal a mysterious package that has just arrived for him, propelling Ray into the film's central conflict. The protagonist's monowheel sputters at first, but it eventually fires to life as he pulls it into gear, allowing him to outrun those chasing him, his self-built, steam-

powered vehicle's technology being tested against (and visually compared to) the devices of his pursuers and of the train to whose tracks he runs parallel (see Figure 3).



Figure 3: Frame from *Steamboy*, dir. Katsuhiro Otomo. © 2004 Katsuhiro Otomo, Toho, and Sony Pictures Entertainment. Reprinted in accordance with fair dealing guidelines.

In this opening sequence we see that Ray is a model tinkerer. The monowheel does not work correctly at first, but Ray keeps working on it, until it runs according to his design. He identifies problems with the device's functions and makes changes quickly. Additionally, there is no problem of access or voiding warranties, since all of the monowheel's parts – the gears, the steam engine and boiler, the shifting mechanisms – are always already visible and attainable, ready to be modified (see Figure 3). Ray proves adaptable throughout the rest of the film whenever he is confronted with a new tool or technology, quickly assimilating the new into what he already knows. The tinkering that Ray does is emblematic of what most steampunk heroes (and practitioners) do in one form or another.

In some ways, tinkering seems dependent upon technologies that are more mechanical than those of our present. With mechanical technologies, one may *see* what is wrong or what may be improved in a way that is much less possible with electrical devices. It is this principle of mechanical visibility that allows Anna Fang in *Mortal Engines* to build an airship out of

spare parts, while she is a slave in a town's airship yards, "sneak[ing] an engine here, a steering vane there, until she built herself the *Jenny [Haniver]* and escaped" (Reeve 2003: 95). It is merely by observation of the mechanical objects around her that the enslaved Anna learns not only how to build an airship but also how to pilot it to safety, since slaves were not taught how to fly. The same principles of tinkering and observation come into play later in the novel, when Anna has been killed and Tom Natsworthy, the protagonist of the story, decides to pilot the *Jenny Haniver*. When asked if he knows what he's doing, the teenager, who has only flown *in* an airship twice and a balloon once, nods and replies, "I used to build model airships when I was little, so I understand the principle" (Reeve 2003: 251). Tom learns all he needs to know from models, since the models operate on the same simple, mechanical principles as the real device.

Steampunk makes heroes not only of those who build their own devices, but also those who discover and develop the science behind them. Accordingly, Thomas Edison or Nikola Tesla are not unusual characters to include in steampunk texts, such as Matt Fraction and Steven Sanders's graphic novel *The Five Fists of Science* (2006) or Christopher Priest's *The Prestige*. And it is no accident that the only person in Di Filippo's 'Victoria' who can save England in her moment of crisis proves to be Cosmo Cowperthwait, the scientist-naturalist, who not only understands how to grow humanoid newts but also develops a uranium-powered steam engine, which runs on "only a few ounces of fuel" and renders obsolete Robert Stephenson's *Rocket* – the most advanced locomotive of its day and the one which provided the model for all steam engines throughout the Victorian age (Di Filippo 1995: 21).^{xxii}

With the regularity of the rotor, steampunk presents its audience with technologies that are open to modification or are literally being invented by its heroes. The recurrence of the trope only makes plainer the contrast between the relationships individuals have with technology in steampunk literature and in our real-world present. Steampunk presents us with a world in which individuals are masters of their tools, rather than being restrained by warranties, EULAs, and DRM.^{xxiii} The genre's appeal, in part, emerges from an individual's autonomy, from a science that does not require massive funding, and a world in which mass consumption exists but products themselves are still frequently built by hand. It is this DIY ethic, something that in today's climate of technology looks very much anti-

authoritarian, that earns steampunk its ‘punk’ stripes. In the early twenty-first century, then, steampunk stages a rejection of received notions about how technology should be treated and who should discover, make, or modify it. As Bruce Sterling described it for the 2008 GOGBOT festival, steampunk embraces “punk’s do-it-yourself aspects and its determination to take the means of production away from big, mind-deadening companies who want to package and sell shrink-wrapped cultural product” (Sterling 2008). Steampunk, like punk rock before it, works to shock the mainstream into questioning its behaviours and values, specifically around the notions of technology. Granted, steampunk tends to be a bit more genteel than punk rock. It doesn’t need mohawks or safety pins since, after all, it is shocking enough to drop a computer into the nineteenth century or to come face-to-face with someone wearing a topcoat and derby in 2010. Well-tailored clothes notwithstanding, steampunk’s rise in the last few decades – both within literature and as a broader cultural phenomenon – has everything to do with this punk sensibility regarding technology: a politics of taking back control.

In this interpretation of what is ‘punk’ about steampunk, we differ somewhat from Jess Nevins, who wrote an insightful introduction to the 2008 *Steampunk* anthology edited by Ann and Jeff VanderMeer. Nevins argues persuasively that one should locate the antecedents of steampunk even earlier than the 1970s. To this end, he points to the nineteenth-century genre of the Edisonade, American dime novels and serials, in which

a young American male invents a form of transportation and uses it to travel to uncivilized parts of the American frontier or the world, enrich himself, and punish the enemies of the United States, whether domestic (Native Americans) or foreign. (Nevins 2008: 3-4)

This genre had largely declined within the opening years of the twentieth century, but Nevins sees steampunk as a “reaction to and conversation with many of the assumptions and biases” of the Edisonades: the “technological optimism, exploitative capitalism [...], and the vicarious exercise of bigoted wish-fulfilment” (Nevins 2008: 7, 9). Steampunk writers, Nevins suggests, “are all too aware of the realities which the Edisonade writers were ignorant of or chose to dismiss” and produce worlds that are consequently “polluted,

cynical, and hard” (Nevins 2008: 10). Yet Nevins also recognises that recent steampunk does not operate exclusively along these lines, and as a result he draws generational lines. The first generation, he writes, begins in the late 1970s and culminates in 1990 with *The Difference Engine*. From that point on, he claims, steampunk entered its second generation, whose authors “changed steampunk from an argument to a style and a pose, even an affectation” (Nevins 2008: 8). What Nevins critiques in contemporary steampunk, then, is that it does not go beneath the surface details of tinkering with anachronistic technology. Second-generation steampunk, Nevins concludes, “is not true steampunk – there is little to nothing ‘punk’ about it”, because “[t]he politics of the punk position have largely disappeared” (Nevins 2008: 10). In our view, however, Nevins is somewhat short-sighted in claiming that contemporary steampunk has been “emasculat[ed]” by abandoning its ideology (Nevins 2008: 11). While recent steampunk might not critique imperialism, colonialism, class, race, or gender issues in quite the same way that 1980s steampunk did – and those who think it does none of these should read Stephenson’s *The Diamond Age*, Moore and O’Neill’s *The League of Extraordinary Gentlemen*, Reeve’s *Mortal Engines*, or Rachel E. Pollack’s ‘Reflected Light’ (2007) so as to redress their misconception – the contemporary fascination with steampunk technologies, style, and surfaces is not merely a re-inscription of the values of the Edisonade. Viewed in the light of today’s relationships with technology, tinkering or building your own devices, as we’ve claimed, *must* be read as ‘punk’. In fact, one might say that this emphasis on tinkering with technologies is even more ‘punk’ than Nevins’s first generation steampunk, since instead of “rebel[ling] against the system it portrays (Victorian London or something quite like it)” (Nevins 2008: 10), the technological tinkering within steampunk rebels against the system in which it *currently* finds itself, namely our present day. Remaking the technologies of the past, in other words, must be read as a politics of remaking our relationships with the tools of the present. This isn’t to say that Nevins’s generational divide isn’t useful; instead, it seems that he has too narrowly judged the usefulness of a steampunk imaginary and has, as a result, prematurely “mourned” its passing (Nevins 2008: 11).^{xxiv}

Having already discussed the differences between the technologies of steampunk and those of our present, it is worth pointing out that at least one commonality exists between the two. While the outward appearance of

the imagined technologies is radically opposed to those of our present day – large, heavy, rough, dirty, and mechanical as opposed to small, light, glossy, clean, and electrical – the *functions* of the devices tend to be identical. The characters in steampunk texts frequently employ computers, airplanes, automobiles, mobile phones, and more. It is only the name and the outward appearance of the objects that differ significantly from the present. Thus, the tools of steampunk are, as Paul J. McAuley and John Clute write in *The Encyclopedia of Fantasy*, “technological anachronism[s]” (McAuley and Clute 1997: 895).^{xxv} As the tinkerers of steampunk are in the process of inventing, building, and modifying devices that serve the same function as our own technologies, we are once again presented with an opportunity to consider what it would be like to be in control of technology – and not simply any technology, but the technologies that we are ourselves depend upon most heavily in the twenty-first century and yet seem so alienated from: technologies of communication, transportation, and computation. Encasing steampunk technologies in different exteriors signifies that they should be handled, played with, or worked on in ways that we do not or cannot use them in 2010.

Thus, the present turn to steampunk owes something to how we ‘other Victorians’ (as well as we neo-Victorians) understand our present-day relationships with technology, as well as our fantasies about human-machine interactions in the nineteenth century. It is important to remember in this context that steampunk is very much a *fantasy* about the past. Yet it is a fantasy that creates a ‘useable past’ (or ‘useable *alternative* past’) that proves potentially helpful in re-shaping the present. The tinkering and tinker-able technologies within steampunk invite us to roll up our sleeves and get to work re-shaping our contemporary world.

3. The Surfaces of Steampunk

This preoccupation with tinkering and tinker-able technologies suggests that there is a particular emphasis within steampunk culture on materiality writ large. Such a stress has of course made steampunk a rich site for DIY enthusiasts and scholars of material culture alike, but it is also among the genre’s more apparent connections to Victoriana. The Victorian period looms in our collective cultural imagination as one dominated by ornate surfaces, from the furnishings of drawing rooms to the layers of fabric in the fashions of the day, to even the surface register of social

conventions. These surfaces, in other words, do very particular cultural work. Our sense of how Victorian surfaces ‘work’ is supported by bestsellers like *Mrs. Beeton’s Book of Household Management* (1861), which instructed readers on the presentation of both domestic and bodily surfaces as aspects of ‘managing’ one’s place in the world, and by sites like The Crystal Palace, which made a glittering show of presenting England’s place in the world via the wonder of its manufactured objects. If, as Rebecca Onion has persuasively argued, steampunk enthusiasts attempt in the main to “re-access what they see as the affective value of the material world of the nineteenth century” (Onion 2008: 138), we can productively consider how literary scholarship has theorised the affective work of material surfaces as represented in the fiction of and about the period.

Paradoxically, while ornate surfaces litter our constructions of the Victorian period, figures of depth are most often attached to the literature of the period. The Victorian realist novel arguably established the dominant modes of the period, and its most significant innovation and aesthetic achievement, according to much scholarship, is depth of characterisation. These qualities are often connected to the representation of psychological interiority – the narration of emotional states and mental activities – which foundational scholars like Ian Watt and Georg Lukács have argued constitute the lynchpin of the novel form. Watt formulates this innovation as the reader’s opportunity to “get inside [the characters’] minds as well as their houses” (Watt 1964: 175).

More recent scholarship has read the representation of interiority in Victorian fiction as an ideological device that shores up the identity of the rising middle-class. In both *Desire and Domestic Fiction* and *How Novels Think*, for example, Nancy Armstrong has argued that this “deep characterization” of Victorian fiction enacts a socio-cultural shift, in which markers of identity ideally become dissociated from exteriority, such as material indicators of rank or the labouring capacity of the body, and more closely associated with the immaterial aspects of self, such as values, beliefs, and emotions. With a rising middle-class and attendant legislative attempts to establish a political voice for that class (here we are thinking, with Armstrong, primarily of the Reform Bills of 1832, 1867, and 1884, which gradually extended voting rights beyond the landed gentry), interiority competes with exterior markers for primacy in determining public identity as well as subjectivity.^{xxvi}

The recognition that underpins these and analogous arguments is that the representation of interiority does ideological work. Indeed, one could construe the deep characterisation of Victorian fiction as an attempt to make interiority visible, to bring the ‘depths’ of psychology to an observable surface. Critical readings have argued that the representation of material surfaces within Victorian fiction (objects, hair, clothes, etc.) often evidences the burden of representing depth, as well as the anxiety that depth and surface cannot be reliably separated (see Loesberg 1986; Badowska 2005; Bowser 2008). We might, in fact, take the popular phenomenon of Victorian sensation fiction, a genre that revolved around the representation of the sensuous surfaces of its heroines, and the contemporary critical reaction to it – one that may be summed up with the word ‘scandalised’ – as a useful body of proof texts for the notion that the fiction of the period is in part characterised by anxiety about the signification of surfaces. Interiority may comprise the real stuff of identity, but it requires a set of external signifiers for legibility.^{xxvii} Objects, fashion, and bodies can be asked to do the work of exteriorising identity, but when the signification of surfaces is so noticeable as to be totalising, surfaces end up obscuring depths or, worse yet, revealing depth as a construct.

Coincident with these literary phenomena, scientific discoveries and advancements also formulated surfaces in very particular epistemological ways. Lyell’s already discussed *Principles of Geology* and the even more famous texts it inspired – Darwin’s *On the Origin of Species* (1859) and *The Descent of Man* (1871) – are in many ways entirely about how invisible depths (of time, of species’ histories) can be made visible (via the earth’s surface and its fossil records). Darwin explicitly formulates deep evolutionary history as legible on man’s surface, closing *The Descent of Man* with the reminder that “[m]an still bears in his bodily frame the indelible stamp of his lowly origin” (Darwin 2004: 689). Of course, this version of ‘reading depths’ hardly functions to assuage anxieties about psychic wholeness or human experience. Rather, this formulation insists on the significance of the surface in evidencing identity but in a manner that evidences ignoble origins. The surface signifies, but it does not tell us what we want to know.

These complicated networks of material surfaces and their signification within Victorian culture and literature give us insight into the privileging of tinker-able surfaces and materiality within steampunk culture.

The foregone overview of scholarship on the relationship between material surfaces and more intangible aspects of Victorian cultural identity helps us understand steampunk as a uniquely neo-Victorian phenomenon. We might read the tinker-ability of steampunk technologies in particular as deriving from the deployment of Victorian surfaces to the end of doing cultural work: steampunk's DIY surfaces brush off the apparent decorative function of Victorian surfaces in order to overdetermine the significance of surface functionality in response to the contemporary sealing off of technological innards. We might read the ornate, quasi-functional, outmoded and forward-looking, heavy and malleable surfaces of steampunk as both exemplary and celebratory of the surface/depth collapse that preoccupies much Victorian fiction. The steampunk surface is used, then, as a salve for an ontological problem that originates in invisible depth.

4. Textual Cyborgs

These forays into temporality and materiality help us to theorise a particularly interesting aspect of steampunk and what is both 'neo' and Victorian about the genre, but they do not necessarily move us any closer to defining it. This hedging has much to do, of course, with the inherent hybridity of the genre's features. One part Victorian, one part science fiction, one part noir, steampunk tempts us to claim this blending *is* the definition, and in part we are going to give in to that temptation. Many definitions of steampunk have focused on its hybridity. Steffen Hantke, for example, has argued that steampunk literature is hybrid in nature but also preoccupied with troubling its own hybridity, suggesting that it concentrates on "its own hybrid nature as a fiction of many ingredients. In other words, its game is first and foremost ontology" (Hantke 1999: 248). One figure for hybridity that has much traction in both steampunk and wider academic scholarship is the cyborg. We find many examples of cyborgs within steampunk art, including the inventor father of the protagonist of Otomo's *Steamboy* and the central figure in an early Victorian music-hall song, 'The Steam Arm', which is discussed in a short piece by Kirstie Blair within this issue. In her analysis of steampunk, Onion also discusses the relevance of cyborgs (in relation to steampunk's revolt against the invisible and smooth aesthetics of contemporary technology, as epitomised by Apple):

Though steampunk cyborgs provoke the same kinds of questions about bodily modification as do more contemporary computerised cyborg objects, they tend, through their visual appearance, to remind the viewer of what used to be conceptualised as the mechanical nature of the human body. The moving parts of the machine are analogous to the moving parts of the body, making visible what, in the actual flesh, remains hidden behind a smooth, iPod-like surface. This visibility empowers the human mind, which seeks to be reassured that the functions of the body have a visible, comprehensible (and thus medically controllable) logic of their own. (Onion 2008: 149)

The kind of exteriorisation of interiority that Onion refers to here is similar to the earlier discussed phenomenon of Victorian fiction's deep characterisation that shores up psychological interiority. But a breaking down of boundaries is also invoked in this discussion, an acknowledgement that the gulf between body and machine, organic and inorganic, interiority and exteriority, is not actually that wide.

The cyborg's ability to break down dichotomies is what invests it with the radical feminist potential that Donna J. Haraway highlighted in her influential essay 'The Cyborg Manifesto' (1991). Haraway identifies three major dichotomies which, in the wake of scientific innovations, have begun to break down: human and animal; organism and machine; physical and non-physical. For Haraway, the violation of these dichotomies presents an opportunity to imagine modes of identity that are non-oppositional, non-hierarchical, non-essentialised: in a word, non-patriarchal. The ultimate example of this kind of identity is the cyborg, which blurs boundaries and refuses ontological wholeness, embraces partiality and un-intuitiveness in a way that presents radical feminist possibilities. The cyborg figure, precisely because it lacks a narrative that traffics in originary unity or fullness, authorises a myth that, Haraway contends, is about "transgressed boundaries, potent fusions, and dangerous possibilities" (Haraway 1991: 363). Appropriately, Haraway notes that the cyborg comes to us from early science fiction, noting that perhaps Frankenstein's monster is our first well-known example (Haraway 1991: 375).

As so many scholars have noted, cyborgs are figures for blending. Cyborgs refuse systemic categorisation and unsettle dichotomies; similarly, while steampunk objects may seem to strengthen the boundaries between the material and immaterial, they simultaneously perforate temporal and aesthetic boundaries. Steampunk invokes the nineteenth century and the future; it draws on Victorian realism and postmodern graphic novels; it incorporates Queen Victoria and the newt version of the same. Our earlier discussion of steampunk's temporality addressed this partly in the use of the uniformitarian paradigm. Possibly the fact of steampunk's emerging in part from the Victorian period specifically grounds it in an always-already hybridity. In *Dickens in Cyberspace*, Jay Clayton argues that, additionally, the Victorian period was defined by a peculiarly productive kind of intellectual and creative hybridity:

The largest common structure shared by the figures in this book is their similar investment in what I am calling "undisciplined culture." In looking at the fortunes of an early scientist such as Mary Somerville, I discovered that she thrived in an atmosphere that might be described as predisciplinary, a world in which the professional characteristics of science as a discipline had not yet been codified. The same was true, in different ways, of other hybrid scientists, engineers, and figures of general learning such as Charles Babbage and Joseph Paxton. These men and women had an irreverent attitude toward boundaries and an impatience with anything resembling intellectual restraint. They mixed science, engineering, and the arts as they pleased. (Clayton 2006: 9)

Few phrases are more aptly descriptive of the steampunk oeuvre than "an irreverent attitude towards boundaries". In a later chapter about *The Difference Engine*, Clayton discusses how Gibson and Sterling's "exuberant hacking of nineteenth-century science" is evocative of the blurred boundaries between science and entertainment in the Victorian period: "Their novel reflects the spirit of an age when the boundary between science and the rest of culture was not so firmly established" (Clayton 2006: 109). Perhaps the binary-perforating qualities of steampunk are uniquely informed

by its neo-Victorian-ness, its anachronistic invocation of a period with less rigidly defined intellectual boundaries.

We might also consider these perforated and looping boundaries with respect to the actual development of the steampunk phenomenon. The current resurgence in steampunk has been fuelled in the main by DIY steampunk makers and people drawn to the visuality of the culture. Those aesthetics are embodied and circulated more via the image-based media of film, graphic fiction, and the Internet than by steampunk literature (a point emphasised by Ann and Jeff VanderMeer and discussed at greater length in Mike Perschon's article in this issue). These films and graphic novels were in turn inspired by the original steampunk narratives of the 1970s and 1980s. Now new steampunk fiction is being developed not in response to these works of the 1980s but in response to the later subculture, which is obsessed with the material and physical nature of steampunk. These series of returns, revisions, and combinations destabilise the possibility of pinning down a precise origin or definition, or even a chain of influence, which may put us in mind of Haraway's observation that cyborgs are "illegitimate offspring of militarism and patriarchal capitalism" and as such are often "exceedingly unfaithful to their origins" (Haraway 1991: 363). What we have instead is a series of contingencies, definitions that reveal themselves to be dependent on other definitions, which are themselves rooted in a vision of the past that, like steampunk itself, often collapses the fictional and the real.

Steampunk as a genre and a paradigm resists definition. It is a cyborgic phenomenon because of that resistance, but also because of the instability the resistance reveals. For Haraway, the cyborg is a figure of liberation, because it is "resolutely committed to [its own] partiality", thereby exposing *all* identity categories as partial (Haraway 1991: 363). In this capacity, steampunk is a cyborg *par excellence*. It is no accident that all of the articles in this issue contain, early in their arguments, definitions of steampunk, nor is it a coincidence that the descriptions often differ widely. The only definition that seems adequate is one that pivots on partiality: steampunk is part this, part that. It makes no claims toward inhabiting the artistic or historical categories it draws on but rather straddles them all and, in so doing, perforates their boundaries. As Hantke has noted, steampunk "has no pretensions of passing itself off as either genuine or organic" (Hantke 1999: 250). As such, steampunk is more about instability than any

other single characteristic. It resists fixedness by unsettling the categories from which it cribs. Steampunk novels and steampunk art insist that the aesthetics of disparate time periods can be mashed together, that brass can be put on the outside of your iPod, that a key can be installed on your laptop, and that such hybridity can be functional. The creation of a new context for these signifiers reduces each to a component of a pastiche, thereby evacuating any claim to ontological wholeness.

Through its own instability, enacted via nonlinear temporality and blended surfaces, steampunk reminds us of the instability and constructedness of our concepts of periodisation and historical distance. Steampunk additionally reminds us of our conflicting desires as consumers, both of the Victorian period and of our own moment. The subversive and radical components of steampunk aesthetics, which revise historical gender relationships, imperial relationships, and the relationships between man and machine may seem like a fantastical correction of a conservative period, but the top hats and corsets simultaneously indulge our desires to experience the period. The instabilities of steampunk extend, then, to the question of whether it merely repeats the past and its problems or whether it subverts the past in a useful and legible manner. Negotiating such tension is at the heart of steampunk – and the whole neo-Victorian enterprise – as we reveal just how many similarities we find between that era and our own. This tension, the inevitable by-product of a genre that blurs the lines among fantasy, repetition, and subversion, makes steampunk both compelling and vexing, and presents us with a phenomenon in which we recognise what is familiar about the Victorians and what is ‘other’ about ourselves. We may well enjoy being neo-Victorians but simultaneously continue to be, as the argument goes, ‘we other Victorians’.

5. Further Adventures in Steampunk

We are pleased with the generically and topically ‘cyborgic’ nature of the contents of this special issue: some essays combine literary and cultural analysis, others interpret fashion and art objects, still others evaluate films and film legacy. This diversity evidences the pressing need for this very collection and for further scholarly analysis of steampunk in all its iterations.

Three of the articles in this collection focus on three of the most canonical texts of steampunk literature: *The Difference Engine*, *The*

Diamond Age, and *The League of Extraordinary Gentlemen*. Patrick Jagoda's essay examines how Gibson and Sterling's re-imagining of the nineteenth century makes use of the same interest in technology and the structures of control that populate their cyberpunk novels. But Jagoda claims that the novel goes beyond mere explication of the notions of power and control articulated by Michel Foucault, William S. Burroughs, Gilles Deleuze, and Alexander Galloway. Instead, the defamiliarising anachronisms of steampunk – both technological and textual – provide the reader with a chance to consider the contingency of both history and historiography – and these practices' reliance upon particular technologies, just as it “juxtaposes actual and fictive histories.”

Stefania Forlini's essay on *The Diamond Age* combines an analysis of steampunk material culture with a reading of a text that often seems to luxuriate in its own descriptions of the material culture of its world. Forlini finds that the artwork displayed at the Anachrotechnofetishism exhibition and the circulation of objects within Stephenson's novel both speak in similar ways to the relationships among ontology, mastery, technology and object relations. Forlini's argument invites us to read steampunk within a posthuman paradigm, one that offers insights and revisions about the impact of technology on the formation of community, for both Victorians and neo-Victorians.

Turning to graphic novels, Jason Jones establishes a productive paradigm for reading steampunk's engagement with temporality, history, and desire. Jones focuses on two of Alan Moore's most famous co-authored texts, *Lost Girls* (with Melinda Gebbie) and *The League of Extraordinary Gentleman* (with Kevin O'Neill). Using the former text to frame issues germane to Moore's and his co-writers' work and to steampunk writ large (in part, the dramatisation of the relationships among, storytelling, history, desire, and fiction), Jones applies his frame to *The League*, focusing more explicitly on the depicted networks of bodies and desires. Ultimately, Jones synthesises these psychoanalytically-informed readings with the particular aesthetics of steampunk fiction to make the case that, rather than merely revisiting the Victorian era, steampunk promotes a “redefin[ing] [of] our cultural spaces and identities.”

Shifting our focus to steampunk's iteration of popular cultural icons and recognising the difficulty of defining steampunk as one static thing at the outset of his essay, Mike Perschon suggests that we might instead focus

on identifying “an array of visual markers which, when combined, constitute the look popularly understood as steampunk.” Building his analysis on a group of images and models of characters from George Lucas’s *Star Wars* films that have been reinterpreted within a steampunk style, Perschon grapples with the paradoxes within that style, ultimately arguing that steampunk technologies are more linked to fantasy than to science fiction. Turning to history, he considers the problematic invocation of Orientalist stereotypes within this artwork and links the aesthetic of steampunk to a nostalgic view “of what the Victorian era represents, rather than how it actually *was*.” Perschon closes his analysis by investigating the many different ‘Steam Wars’ depictions of Princess Leia, many of which mix masculine and feminine clothing, brass goggles, and guns, as evidence of the license that the neo-Victorian imagination grants women, if not racial others.

In an analysis that is pointedly focused on the influence of steampunk on contemporary art, Caroline Cason Barratt examines the representation of the body moving through time in the work of Tim Hawkinson and Arthur Ganson. In her analysis of the artists’ ‘kinetic sculpture’, Barratt argues for the (previously unremarked on) resonance of steampunk in their work, largely by examining the paradigm of history that is advanced via the representation of highly mechanised bodies. Drawing on a philosophical framework from Jean-Francois Lyotard, Barratt examines the hybridised temporality of the steampunk aesthetic in connection with the hybridised bodies of Hawkinson’s and Ganson’s art to suggest that a kind of steampunk vision allows the artists to sound a warning about an increasingly technologically mediated future. While Barratt reads the artworks as embodying anxiety about a loss of humanity, she also finds steampunk’s influence in the promise of redemption within new ontological categories “between the human and inhuman.”

Lisa Yaszek contributes an interview with Paul Di Filippo, author of the groundbreaking *Steampunk Trilogy* (1995), conducted specifically for this special issue. In it, she raises questions about the timing of the steampunk literary explosion, the genealogy of the genre and its ability to weather the deluge of mainstream attentions. Filippo discusses the relationship between and definitions of cyberpunk and steampunk, but also reflects at length on the suitability of Victorian culture as a source of inspiration for science fiction and cultural pastiche, weaving in commentary

on William Morris, Victorian naturalism, and ribofunk in the nineteenth century.

Two briefer ‘Notes’ within the issue amplify the steampunk archive, providing a broader view for how we may consider the scope of steampunk’s heritage and influence. Kirstie Blair’s examination of ‘The Steam Arm’, a popular song from the early Victorian period, persuasively identifies many of the themes and tropes of contemporary steampunk texts – cyborgic subjectivity, the relationship between humans and technology, the seductiveness of tinker-able technologies – within a song that circulated widely in Victorian mass culture. In tracing the circulation history of the song, as well as its intertextual components and relationship to material culture, Blair’s analysis demonstrates the “contiguity of fantasy steampunk Victorian futures with popular Victorian fantasies.” Joseph Good’s consideration of the first steampunk graphic novel, Grant Morrison and Steve Yeowell’s *Sebastian O* (1993), finds (again in a previously un-theorised text) a blending of the modes of the Victorian and twentieth-century fin de siècles. Good reads the eponymous protagonist of the series as evocative of the Wildean oeuvre, making the case for a connection between the modes of the Victorian decadents and contemporary steampunks.

6. The Future of Steampunk

While this special issue covers a wide range of subjects – control, technology, sexuality, imperialism, the body – and several different formats – novels, sculpture, modified objects, fan art, film, and graphic novels – many aspects of steampunk have yet to be explored. For example, we have only briefly touched on the material culture associated with steampunk, that “object-based work of its fans” to which Onion has drawn attention (Onion 2008: 139). More work can be done to examine the correspondences between the work of someone like Datamancer and the Arts and Crafts Movement. To what extent do contemporary steampunks see themselves as participants in and adherents of this Victorian movement, again levelling the temporal boundaries between the present and the past? To what degree can we consider the modification of industrial objects (like Datamancer’s laptop) in tension with William Morris’s principles of self-made, agrarian objects?

Looking beyond the maker culture, other scholars might reasonably investigate steampunk fan communities. As mentioned, steampunk-themed conventions and gatherings are on the rise, and understanding how these self-staged neo-Victorians play out their hybrid roles can teach us much about how the Victorian period is understood, re-imagined, fantasised and put to use in the present. Live-action role-playing (LARP) events such as ‘Die Reise nach Tunguska’, held from 25-27 September 2009 in the Wolkenstein Train Hotel, Germany, represent an opportunity to revisit such constructions by way of player interactions, costume design, and narrative structure.^{xxviii} The game-like atmosphere of such conventions – whether they are cast explicitly as LARP or not – invites further questions as to what people are playing at when taking on anachronism. In other words, what does it take to ‘win the game’ of ‘being steampunk’? How do participants judge the authenticity of fellow participants when their performances are purely simulacra of a past that never was?

A third aspect of steampunk that has yet to be treated within a scholarly framework is its music. It is not uncommon for music to spawn subcultures, but in the case of steampunk the reverse seems to be true. In recent years, an increasing number of musicians and bands have aligned themselves and their music with the steampunk community. But it is not clear exactly what would make music ‘steampunk.’ Indeed, groups such as Abney Park and The Cog is Dead have vastly different sounds: the former’s roots in the goth/industrial scene are readily apparent and the latter sounds at times like barbershop ragtime, for instance on a song like ‘*Loverboy*’.^{xxix} While the website of Vernian Process states that they embrace “Deathrock, Trip-Hop, Dreampop, Cabaret”, and many more styles, The Clockwork Quartet sounds more like folk music (Vernian Process n.d.).^{xxx} This hybridity is part and parcel to the project of steampunk as we have discussed it. At least the lyrics of these groups often reflect concerns that are recognisably steampunk: problems of technology or fantasies of being air pirates. But the lyrics of The Extraordinary Contraptions are not informed by any concerns more Victorian (neo- or otherwise) than simple interpersonal relationships.^{xxxi} Primarily, the alignment of all these groups with steampunk seems to rely on their stage costumes and website design. The members of these groups all dress impeccably in what passes as steampunk fashion at conventions and other gatherings. Their websites are impressively decked out in sepia and brass. Barring any more coherent

connections than these, it initially appears that it is, once again, the (neo-) Victorian surfaces of steampunk that signify most crucially.

It seems very unlikely that modifying one's laptop will ever surpass watching football as a national pastime. It is equally unlikely that Philip Reeve or Abney Park will sell more books or CDs than Jonathan Franzen or U2, respectively. Yet steampunk appears even more firmly entrenched as a subculture than when we began work on this special issue in the autumn of 2008. Our own anecdotal experience observing the number of people engaged in steampunk cosplay at the annual Dragon*Con convention in Atlanta (see Figure 4) confirms that steampunk appeals to an increasing number of people each year.



Figure 4: Steampunk cosplay at the 2010 Dragon*Con parade. © 2010 Brian Croxall

In the image's playful costuming, we see steampunk's investment in reclaimed technology, blended temporality, and playful/politically-charged hybridity. In the essays that follow, the contributors to this special issue

consider these same concerns in different configurations, only occasionally overlapping. In other words, the analysis of steampunk within this issue of *Neo-Victorian Studies* performs the definition that we have argued for: its refusal to be – or be classified as – any one thing or another. This introduction itself might be said to partake of that same spirit in the course of our consideration of steampunk’s often divergent evolution, assessing the numerous springs it has come from and the manifold places it has been. Having concluded with a brief and speculative look forward, we now turn to the contributors’ individual takes on and responses to the phenomenon, helping us to further track what steampunk is in the process of becoming.

Notes

- i. See James P. Hogan, *The Two Faces of Tomorrow* (1979); Stanislaw Lem, *Golem XIV* (1981); William Gibson, *Neuromancer* (1984); Vernor Vinge, *Marooned in Realtime* (1986); and William Thomas Quick, *Dreams of Flesh and Sand* (1988). More recent singularity fiction includes Charles Stross, *Singularity Sky* (2004) and *Accelerando* (2005), and Rudy Rucker, *Postsingular* (2007).
- ii. Datamancer’s modifications to keyboards, monitors, scanners, and more can be seen at his website, <http://datamancer.net/>, accessed 8 July 2010.
- iii. For a larger version of this Google Trends search, see <http://www.flickr.com/photos/briancroxall/4777247999/>.
- iv. See ‘GGOBOT 2008 Steampunk’, (no date), accessed 31 August 2010, <http://2008.gogbot.nl/>; and ‘The Nova Albion Steampunk Exhibition’, (no date), accessed 8 July 2010, <http://steampunkexhibition.com/>.
- v. See ‘The Asylum’, (3 August 2010), accessed 27 August, <http://steampunk.synthasite.com/>; ‘The Steampunk World’s Fair’, (no date), accessed 8 July 2010, <http://steampunkworldsfair.com/>; and ‘Victoria Steam Exposition’, (no date), accessed 31 August 2010, <http://victoriasteamexpo.blogspot.com/>.
- vi. See ‘Steampunk Art @ Oxford’, (no date), accessed 31 August 2010, <http://www.steampunkmuseumexhibition.blogspot.com/>.
- vii. Nevins chooses to distinguish Clark’s and Moorcock’s novels as part of a “proto phase” to steampunk (Nevins 2008: 3). He does not specify what differentiates these novels from ‘real’ steampunk.
- viii. Ruth LaFerla’s 2008 article in *The New York Times* incorrectly attributes the origin of “steampunk” to “Paul Di Filippo, the author of *The Steampunk*

Trilogy [1995], the historical science fiction novellas that lent the culture its name” (La Ferla 2008) Instead, Di Filippo’s novel appears to be the first text to use ‘steampunk’ in its title.

- ix. See ‘List of steampunk works’, (13 Sept. 2010), accessed 24 Sept. 2010, http://en.wikipedia.org/w/index.php?title=List_of_steampunk_works&oldid=384576801.
- x. As Onion notes, space exploration “in Victorian times” constitutes “a common steampunk scenario” (Onion 2008: 141). This scenario is not only visible in Reeve’s *Larklight* trilogy but also in the role-playing game *Space: 1889* (1988) designed by Frank Chadwick.
- xi. One might debate whether or not Westerfeld’s *Leviathan* should be accepted as steampunk when it is set at the opening of an alternate version of the First World War. One of the principal reasons for making this connection is that the Central Powers use steam-powered battle machines, along with those powered by kerosene and diesel. Germany and the Austro-Hungarian Empire are consequently imagined as ‘Clanker’ nations, whose economies as well as their war machines depend upon the mechanisation of the Industrial Revolution. Strengthening the connections to steampunk and the Victorian period are the illustrations that, according to Cory Doctorow’s review on ‘Boing Boing’, are “lavishly illustrated [...] ink-drawings of the best scenes from the book, executed in high Victorian style by Keith Thompson” (Doctorow 2009). One may, of course, further observe that the First World War resulted from the expansion of Empires within the. Finally, it bears noting that the setting of the narrative has done nothing to prevent almost every review of the novel from asserting that it *is* steampunk; if the reviewers on Amazon.com are not authoritative enough (see ‘Amazon.com: Customer Reviews: Leviathan’, *Amazon.com*, [n.d]), one may refer to reviews in *The New York Times* or *Booklist* (A. Grossman 2009; Chipman 2009).
- xii. While Nick Gevers’ *Extraordinary Engines: The Definitive Steampunk Anthology* (2008) included all-original stories, Ann and Jeff VanderMeer’s *Steampunk* (2008) collects and reprints stories to show “the permutations of steampunk over the past thirty years” (VanderMeer and VanderMeer 2008: x). A second volume, *Steampunk II: Steampunk Reloaded*, edited by the VanderMeers will be published in November 2010.
- xiii. See *SteamPunk Magazine*, <http://www.steampunkmagazine.com/>; *Steampunk Tales*, <http://www.steampunktales.com/>.
- xiv. See *Girl Genius*, accessed 8 July 2010, <http://www.girlgeniusonline.com/>. See also Bill Baker, ‘The Essential Sequential Steampunk’, for recommendations of more steampunk comics and graphic novels.

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- xv. See *Datamancer.net*, accessed 8 July 2010, <http://datamancer.net/>; *The Steampunk Workshop*, accessed 8 July 2010, <http://www.steampunkworkshop.com/>; *The Telectroscope*, accessed 8 July 2010, <http://www.talktalk.co.uk/telectroscope/>; *Tim Wetherell: clockwork Universe*, accessed 8 July 2010, http://www.platypusart.com/wetherell/sculpture_clockwork.html. The reach of steampunk is much broader than the contents of this introduction – or this issue as a whole – can encapsulate. We consider only briefly the material practices of the steampunk subculture, including crafting, fashion, and performance. For more on “steampunk in everyday practice”, see Onion 2008.
- xvi. Brian McHale, building on the work of Frederic Jameson, suggests that *The Difference Engine*, in particular, “helps us historicize our present by reimagining it as *an alternative future for a past that never actually happened*; it makes us aware of our historical situation by imagining the historical past otherwise” (McHale 1992: 223, original emphasis).
- xvii. Of course, the interface of the iPad and its predecessor, the iPhone, complicate the notion of the intangibility of contemporary technology because it is designed to be used *by touch*. The completely smooth and reflective surface of these devices might suggest that one *not* touch them, yet this is the only way to use the tool. That being said, the iPad and iPhone remain sealed devices, and what one touches is not their inner workings but rather the interface that Apple has designed for the user. Changing that interface in any way other than the options that Apple has already provided for the user voids the EULA and warranty.
- xviii. For more on the problematic design and impermeability of contemporary technology, see Onion 2008: 143-145.
- xix. See, for example, the recall of “approximately 133,000 2010 Model Year Prius vehicles to update software in the vehicle’s antilock brake system (ABS)” (Toyota 2010).
- xx. For more on the fascination with dangerous technologies within steampunk and the connection of danger with the concept of the sublime, see Onion 2008: 149-151 and 153-155.
- xxi. The tinkering ethic of steampunk is perhaps best seen in the DIY/maker culture where enthusiasts like Datamancer or Von Slatt modify computers (see <http://www.datamancer.net/steampunklaptop/steampunklaptop.htm>, accessed 8 July 2010, and <http://steampunkworkshop.com/daveveloz.shtml>, accessed 8 July 2010) or even motorbikes (see <http://steampunkworkshop.com/steampunk-motorbike.shtml>, accessed 8 July 2010) to have them run differently than they had previously.

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- xxii. Di Filippo's insertion of an actual and famous steam engine into his narrative as a foil to the uranium-powered engine Cowperthwait designs is reflective of a common trend in steampunk (and postmodernism more broadly) of a pastiche of historical and fictional elements. Di Filippo's historical borrowing in connection with the *Rocket* does not end at this comparison, however. The maiden journey of Stephenson's *Rocket* at the Liverpool and Manchester Railway in 1830 "was marred by the death of William Huskisson, the Member of Parliament for Liverpool, who was struck and killed by *Rocket*" ('Stephenson's Rocket' 2010). Similarly, Cowperthwait's fission engine's first journey results in a nuclear explosion that levels an entire town.
- xxiii. As Onion writes about steampunk crafting practice, "[a] large component of the steampunk project of human reintegration with the machine lies in the ability of the bystander or self-taught tinkerer to master important pieces of machinery that, in the current technological landscape, would be the exclusive province of specialists" (Onion 2008: 151).
- xxiv. It bears noting, of course, that cogs alone do not a steam-punk make. Covering one's iPod with a steampunk skin or using a steampunk rotary dialler on one's iPhone (see http://www.gelaskins.com/store/skins/ipod_and_mp3/iPod_Nano_5th_Gen/Steampunk) and <http://itunes.apple.com/us/app/steampunk-rotary-dial/id316967667?mt=8&uo=6> respectively) may very well, as Onion puts it, strip steampunk "of its meaning" (Onion 2008: 156). At the same time, such customisation of one's slick devices – even if only a surface-level transformation – points to the desire for a different relationship between us and the technology of the present.
- xxv. When distinguishing steampunk from gaslight romance, Roz Kaveny and John Clute write that the "principal plot-driver" in the former "is technological anachronism" (Kaveny and Clute 1997: 391). It seems significant that in this definition, as well as Jeter's 1987 letter, technology acts as the defining characteristic of steampunk.
- xxvi. Similarly, in *The Novel and the Police*, D.A. Miller argues that the exposure of characters' interiority (enacted through generic conventions of realism, detective fiction, sensation fiction, and gothic fiction) worked to confirm the existence and inviolability of the reader's own interiority.
- xxvii. This is an interpretive angle that has extended well into the Victorian canon. To take one example, Eva Badowska's work on Charlotte Brontë's fiction finds that a subject's interiority is sustained, more tenuously, through an engagement with objects: "The novel suggests that the bourgeois subject, though it comes into being through its relations with things, is defined by the

nostalgic notion that its true interiority has been lost under the pressure of things” (Badowska 2005: 1510). She goes on to conclude that the lesson of *Villette* (1853) is that “[p]sychological interiority is always a lost object, something one imagines one used to have in a more pristine, less object-ridden, form” (Badowska 2005: 1518).

- xxviii. See the blog dedicated to the ‘Reise nach Tunguska’ event, <http://tunguska.clockworker.de/>, accessed 9 Sept. 2010. For English-language information about the event, see ‘First German Steampunk Con “Die Reise nach Tunguska”’, (28 Sept. 2009), *Clockworker*, accessed 9 Sept. 2010, <http://clockworker.de/cw/2009/09/28/first-german-steampunk-con-die-reise-nach-tunguska/>.
- xxix. See ‘Abney Park | Steampunk Band’, (no date), accessed 10 Sept. 2010, <http://www.abneypark.com/flash.html>; ‘The Cog Is Dead on Myspace Music’, (no date), accessed 10 Sept. 2010, <http://www.myspace.com/thecogisdead>.
- xxx. See ‘Vernian Process | www.vernianprocess.com’, (no date), accessed 10 Sept. 2010, <http://www.vernianprocess.com/>; ‘The Clockwork Quartet | Home’, (no date), accessed 10 Sept. 2010, <http://www.clockworkquartet.com/>.
- xxxi. The lyrics to each of The Extraordinary Contraptions’ songs are available when clicking on individual song titles at ‘The Extraordinary Contraptions | Music’, (no date), accessed 10 Sept. 2010, <http://www.theextraordinarycontraptions.com/#/music>.

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