Steampunk as a Postindustrial Aesthetic: "All that is solid melts in air"

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Abstract:
The poetic phrase "all that is solid melts in air" from the *Communist Manifesto* (Marx and Engels 1847) conveyed the sense that stable bonds of obligation were being replaced by the 'cash nexus' in the commodification of human relationships during nineteenth-century industrialisation. Steampunk is a postindustrial aesthetic born of a reaction against the social and cultural upheaval caused by new digital technologies that has much in common with nineteenth-century critiques of industrialisation, particularly those by proponents of the Arts and Crafts movement. Steampunk uses the weight and substance of Victorian industry as a protest against the increasing minimalism and 'weightlessness' of new technologies. It is an aesthetic that works by accretion, adding layers of cogs and clothing to objects and bodies to counter this 'weightlessness'. Rather than subvert what Karl Marx termed "commodity fetishism" however, steampunk replaces it with 'historical fetishism' and turns nineteenth-century industrial objects into symbols of play and leisure. In this it parallels the conversion of former industrial buildings into tourist sites as part of the heritage industry. However, like the Arts and Crafts movement before it, steampunk lacks a coherent political agenda., At least in part, it is an aesthetic more concerned with producing beautiful objects than advocating a clear programme of wider social reorganisation. In its reaction against "all that is solid melts in air", it romanticises nineteenth-century industrial production and uses its objects for postindustrial leisure consumption.

Keywords: Arts and Crafts, commodity fetishism, *The Communist Manifesto*, *Cyber-Marx*, *The Difference Engine*, industrial heritage, Industrial Revolution, postindustrial, steampunk, Nick Dyer-Witheford.

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The poetic phrase "all that is solid melts in air" from the *Communist Manifesto* conveyed the sense that stable bonds of social obligation were being replaced by the "cash nexus" in the rapid industrialisation and urbanisation of European countries like Britain in the nineteenth century (Marx and Engels 1847: n.p.).[1] The phrase encapsulates the disruption caused by new technologies that were "constantly revolutionizing the instruments of production" (Marx and Engels 1847: n.p.) as new forms of

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pp. 28-56

transportation and communication expanded the global commercial network. The *Manifesto* presented a reading of history in which "steam and machinery" were creating a world market that allowed the bourgeoisie to extend its power across the globe and to destroy the old feudal social system (Marx and Engels 1847: n.p.). The *Manifesto* also predicted a future in which the need to constantly revolutionise industrial production would lead to "everlasting uncertainty and agitation" (Marx and Engels: 1847: n.p.), resulting from the reconfiguration of social into monetary relationships. The *Manifesto* represented both a reaction against the Industrial Revolution as a disruptive force and a prediction that subsequent revolutions in material production would reproduce the same fearful reaction.

The phrase "all that is solid melts in air" also captures the fear behind steampunk that in a postindustrial society essential human values are threatened by digital technologies and the intensification of commodification in all aspects of life thanks to computer-mediated networks and virtual worlds. This should not be seen simply as a form of escapist postmodern or neo-Victorian nostalgia (see Gutleben 2001: 182-183, Hadley 2010: 3, Heilmann and Llewellyn 2010: 4), i.e. as a wistful longing for the pre-industrial and pre-technological past. Rather, I want to suggest that steampunk is an aesthetic response that potentially has much in common with nineteenth-century critiques of industrialisation by theorists such as Karl Marx and Friedrich Engels, and also movements like Arts and Crafts. In effect, what steampunk performs is a nostalgia for the kind of future that Marx and Engels's manifesto promised, namely one liberated from mindless, dehumanising and exploited labour. Put differently, steampunk is nostalgic for the resistance that *The Communist Manifesto* offered *then*, and which at least some steampunk works continue to offer *now*. This essay thus aims to use the notion of "all that is solid melt[ing] in air" as a heuristic approach to re-thinking and complicating our understanding of steampunk as an ambiguously, at once de-politicised *and* (re-)politicised phenomenon.

Where both the *Manifesto* and Arts and Crafts criticised industrial production, steampunk reacts against postindustrial digital technologies that de-materialise production per se. Fearing the monetisation of social bonds and the intensification of consumer capitalism thanks to new technologies, steampunk paradoxically turns to the Victorian era – the inception of this process, if you will – as a bulwark against the resulting disruption and

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uncertainty. Just as the Medieval period represented more authentic preindustrial social relations for Arts and Crafts practitioners, the Victorian era for steampunk symbolises solidity and permanence in contrast to postindustrial society.

In romanticising Victorian technology, however, steampunk replaces what Marx termed 'commodity fetishism' with what I term 'historical fetishism,' through a process in which cogs, wheels and dirigibles are severed from their original context and become symbols that in and of themselves are meant to counter the hegemony of digital technology Marx 1867: 165).[2] Steampunk takes these industrial objects, which in the Victorian era were symbols of work, and makes them part of leisure in a process that I will argue parallels the creation of a 'heritage industry' that turns the past into a commodity to be purchased as an experience. Unlike the heritage industry, however, steampunk also uses the past as a basis on which to resist the contemporary monetisation of leisure and thus stands in an ambiguous relationship to commodification, both representing a counter to consumer culture and itself available to exploitation by purely commercial interests.

Steampunk thus has much in common with the Arts and Crafts movement's rejection of new modes of mass production, especially in its emphasis on hand crafted objects. However, both steampunk and Arts and Crafts present challenges in defining themselves as coherent movements beyond a visceral rejection of contemporary industrialisation, represented by factories (as opposed to collaborative workshops) for the Arts and Crafts movement and by computer products (whether individually or collectively manufactured) for steampunk. In both cases a commitment to creating handcrafted objects is not necessarily linked to an articulated political cause, although some practitioners do attempt to establish a wider social agenda for the aesthetic. Neither represents a coherent 'movement' in the sense of a political organisation with explicit demands for social justice (Tilley and Wood 2009: 3-5), which I will argue in conclusion ultimately risks subverting steampunk's opposition to commodification and rendering its aesthetic liable to co-option by commercial interests.

In Arts and Crafts there was no necessary connection between objects and ideology, as Imogen Hart has argued, in that practitioners, while they may have paid lip service to Morris as an inspiration, did not share his political agenda (Hart 2010: 8). The same is true for steampunk because

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adherents do not necessarily see a direct connection between their participation and politics. Within steampunk there are advocates who see it as having a definite political agenda, such as *SteamPunk Magazine* which asserts that steampunk is "fiercely anti-colonial, anti-racist, and pro-gender-diversity" (*SteamPunk Magazine* n.p.). The *Steampunk Anarchist* blog similarly laments that steampunk is too often seen as apolitical and vows to "put the punk back in steampunk" (*Steampunk Anarchist* n.p.). An ideological battle of sorts was joined when *The Gatehouse Gazette* was established in explicit opposition to the politics of *SteamPunk Magazine* (see Pho 2013: 186-188). On the other hand, the *Steampunk Empire* web site has categories for discussion of literature, music and fashion, but no explicit area for politics (see *Steampunk Empire* 2016: n.p.), implying that steampunk is purely aesthetic. There is clearly a lack of interest in or even resistance to seeing their involvement in political terms among some participants. Nonetheless, on a symbolic level, steampunk performs its resistance to contemporary industrial mass production by 'modding' its products and linking them to an earlier historical era, thus dramatising a protest against postindustrial technologies. As Christine Ferguson has argued, disputes within the steampunk subculture signify ideological tensions and suggest that a political discourse can underpin discussions of (neo-)Victorian technology and clothing (Ferguson 2011: 68). While protest or resistance are not always expressed in overtly political terms, steampunk performs its anxieties over the revolutionising of the means of production by digital technology through its insistent recourse to Victorian objects and fashion.

For steampunk, Victorian technology represents "slow capitalism" in opposition to what Ben Agger has termed "fast capitalism" (Agger 1988: 1). Akin to the Slow Food movements that protest against mass-produced and industrially processed meals,[3] steampunk seeks to reassert values that are seen as threatened by the speed and reach of new technologies; indeed, capitalism linked with digital technology has been called "hypercapitalism" given the speed of its information and exchange systems (Rifkin 2001: 7). The appeal of a slower form of capitalism for steampunk is symbolised by the dirigible, either referenced directly in literature, such as in Cherie Priest's *Boneshaker* (2009), Dexter Palmer's *The Dream of Perpetual Motion* (2010) or G. D. Falksen's *Blood in the Skies* (2011), which by its size and more leisurely movement implicitly opposes sleeker, faster forms

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of transport and by extension the expansion of hypercapitalism. The evocation of steam-driven technologies also evokes an earlier era of slower, more ponderous forms of transportation that contrast with the emphasis on speed and increased surveillance by computer-driven technologies.

The allure of the Victorian era lies partly in the sheer size and scale of its engineering projects. One of the most iconic photographs of massive Victorian engineering is Isambard Kingdom Brunel standing in front of the chains for the anchor of the Great Eastern steamer. (see Fig. 1). The photograph is striking because of the way in which the chains dwarf the human figure in front of them, as well as Brunel's insouciant pose that bespeaks a casual mastery of such enormous engineering projects as the SS Great Eastern, the largest ship of her kind when launched in 1858. The image evokes the scale, weight and ambition of Victorian industrial production.

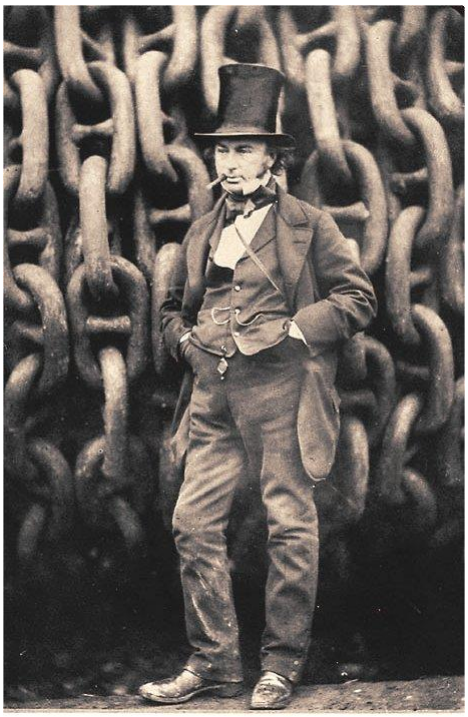

Figure 1. Brunel in front of the chains of the SS Great Eastern.
Photograph by Robert Howlett (1857).
Metropolitan Museum of Art Online Collection, Accession Number: 2005.100.11,
www.metmuseum.org.

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1. The "Weightless World" of Digital Technologies

Contemporary digital technology, by contrast with massive Victorian engineering projects, is celebrated for becoming ever smaller and lighter. Microchips highlight a key distinction between Victorian industrialisation in its size and mass and the contemporary technology rejected by steampunk. The goal of contemporary design is insubstantiality, not weightiness. Diane Coyle's *The Weightless World* (1997) was one of the earliest books to extol the possibilities of digital production that had no mass. Coyle quotes Laurie Andersen in *Speed of Darkness* saying that "where people once wanted bigger cars and bigger offices, now they want smaller tinier things. The aesthetics of the small is very interesting: the tiniest chip, the smallest watch or car phone" (Anderson qtd. in Coyle 1997: 7) As Coyle herself adds, "miniaturised desires are characteristics of a weightless world" (Coyle 1997: 8). Steampunk in its nostalgia for the nineteenth century deliberately rejects this move towards both miniaturisation and minimalism, seeking to weigh down the "weightless world" through the addition of layers and ornamentation. The steampunk aesthetic works by enlargement and accretion on objects and bodies; neo-Victorian elements are layered upon contemporary technology in an effort not only to make inner workings appear on the outside, but also to give them more mass, so that they will not "melt into air". Coyle argues that "weightless output is non-material" (Coyle 1997: 10), and steampunk embellishment reasserts materiality in the face of this digital dematerialisation. Coyle herself admits that this process of dematerialisation produces anxiety and insecurity as value is no longer tied to material existence (Coyle 1997: 10-11). Steampunk is one cultural index of the anxiety produced by this emphasis on 'weightlessness' and the immaterial. This anxiety corroborates the prediction in the *Communist Manifesto* that the constant revolutionising of the means of production would produce unsettling dislocations and disruptions of social organisation, and eventually resistance to such changes. Marx believed that this resistance would come from the working classes and eventually from revolution, adopting a future-orientated outlook, whereas steampunk expresses its resistance by not only trying to turn back the clock, but also rewrite history.

Nick Dyer-Witheford has updated Marx for the information age in *Cyber-Marx* (1999), and his analysis provides a useful framework through which to interrogate the continuities and differences between nineteenth- and twenty-first-century modes of capitalism. Dyer-Witheford sees

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continuity between earlier battles between capital and workers and the current information age, arguing that, whilst the terrain of conflict has shifted, the underlying issues remain the same. Given intensified use of surveillance technology and application of Jeremy Bentham's Panopticon to factories and offices,[4] Dyer-Witheford sees "a return to the social conditions of the nineteenth century overseen by the technologies of the twenty-first" (Dyer-Witheford 199: 102). Steampunk is thus a retrofitted protest against contemporary technology that makes the complex double move of appropriating such modern technologies as cell phones and laptops and projecting them backward into steam-driven analogues. Dyer-Witheford himself begins his book with a reference to Gibson and Sterling's *The Difference Engine* (1990) as a "defamiliarized" version of the present that uses the past to critique contemporary digital technologies (Dyer-Witheford 1999: 2). As in the futures imagined in much Victorian science fiction, the reconfigured past in steampunk speaks to contemporary debates about new technologies, just as stories by H.G. Wells are now viewed as extrapolations of anxieties caused by advances in biology and geology.

While steampunk overtly rejects digital technology in its appeal to the Victorian era, it also registers the hegemony of new technology from the 1990s onward, either through computer industry hardware or via later more virtual forms such as internet surveillance and digitisation. In *The Difference Engine*, for instance, there are descriptions that wax poetic about the size of the Victorian computers, whose power is measured in yards and miles rather than bits and bytes (Gibson and Sterling 2010: 150). This celebration parodies contemporary technology's drive to miniaturisation and invokes images like that of Brunel in front of the Great Eastern in its emphasis on size, but does not dispute the centrality of such technology. The description of the Central Statistics Bureau, for instance, makes it sounds like both a monumental piece of Victorian architecture and the nexus of a vast surveillance system:

> The Central Statistics Bureau, vaguely pyramidal in form, and excessively Egyptianate in its ornamental detail, squatted solidly in the governmental heart of Westminster […]. The whole vast pile was riddled top to bottom with thick black telegraph-lines, as though individual streams of the Empire's information had bored through solid stone. A dense growth

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> of wiring swooped down, from conduits and brackets, to telegraph-poles crowded thick as rigging in a busy harbor. (Gibson and Sterling 2010: 144-145)

This passage recalls Victorian large-scale engineering projects in its evocation of the size and heft of the building. The telegraph lines create a Victorian information network, in a fictional parallel that was also explored in Tom Standage's nonfiction *The Victorian Internet* (1998). The Bureau is a nightmare vision of Marx's account of a global network's "annihilation of space by time" by the telegraph (Dyer-Witheford 1999: 131), as well as a visual embodiment of the Panopticon. However, while *The Difference Engine* has repeatedly been read in terms of surveillance and resistance (see Sussman 1994, Jagoda 2010), it also recalls Coyle in its figuration of information as an intangible asset and in its highlighting of the importance of the flow of information. Dandy Mick Radley's pronouncement is echoed by other characters throughout the novel: "It's what a cove knows that counts, ain't it, Sybil? More than land or money, more than birth. *Information*. Very flash" (Gibson and Sterling 2010: 11). Other versions of this statement appear, as when Disraeli says "Knowledge is power" (Gibson and Sterling 2010: 218). The quotations parallel celebrations of the late twentieth century as the dawn of the 'Information Age' in which the virtual and immaterial has as much, if not more, power than the real. In *Simulacra and Simulation*, Jean Baudrillard famously argued that simulations had replaced the "real" thanks to commodification and the power of multinational corporations such as Disney (Baudrillard 1995: 12). This weightless power of information is contrasted in *The Difference Engine* with the massive structure of the Central Statistics Bureau.

The Victorian period in *The Difference Engine* is thus turned into an Information Age where what flows through the telegraph lines is more powerful than the hardware itself. This technology in the alternative history of the novel has had such a profound effect on history that the map of the nineteenth century has been completely redrawn, with an ascendant British Empire in control of most of the globe, in cooperation with a French Empire headed by Napoleon. Thanks to its computational power the British have prevailed in Crimea through a combination of computer-controlled artillery and advanced camouflage, thus defeating the 'backward' Russian army (see Gibson and Sterling 2010: 306, 215). The novel is critical of surveillance,

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especially in the warnings of the "clacker" Wakefield on how the new technology can be used to scrub somebody out of existence and history: "They'll *erase* us […] we'll cease to exist. There'll be nothing left, nothing to prove either of us ever lived. Not a check-stub, not a mortgage in a City bank, nothing whatever" (Gibson and Sterling 2010: 433). However, the novel also normalises the power of computer technology to rewrite history and entrench the power of centralised empires like those of the British and French. In a sense, these empires become palimpsests for today's 'real-world' global corporations such as Microsoft or Apple that control global commerce through economic rather than military power.

Despite misgivings about surveillance in the novel, the narrative itself is told by a computer, one that bears out Ada Byron's contention that "an Engine lives, and could prove its own life" (Gibson and Sterling 2010: 478). Gibson and Sterling themselves claim that "the narrator is a computer" which they dub the "Narratron" (Gibson and Sterling 2010: 487, 488), so that computer technology not only reshapes the past but narrates its own history as well. The technology, whilst being critiqued on one level for its domination of human life, is also given consciousness and agency; it becomes an all-powerful, all-seeing, all-knowing "Eye" that is struggling into existence on the last page of the narrative (Gibson and Sterling 2010: 486).

Technology still remains a determining force in later iterations of steampunk fiction. In Mark Hodder's *The Return of the Discontinued Man* (2014) not one but multiplying alternative histories are spawned by the discovery of a scientist in the future who, in an effort to thwart his ancestor's assassination attempt on Queen Victoria in 1840 and erase his family's name from the historical record, ends up killing her instead. In Priest's *Boneshaker* (2009) a piece of drilling equipment releases a toxic gas that creates a plague or "rotters" or zombies in an alternative Seattle, and in Falksen's *Blood in the Skies* (2011) a renegade scientist uses a doomsday machine to disrupt the earth's gravity, creating general havoc and forming islands that float above the earth. In each case a particular technology reshapes history rather than social or economic forces being the determining factor. Steampunk plots focus on technology rather than political parties or mass social movements as driving historical change.

Victorian technology also becomes animate in some steampunk imaginary universes, whether it be through cyborgs and the fusion of the

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human body with machinery, or in the much quoted 'Steampunk Manifesto':

> First and foremost, steampunk is a non-luddite critique of technology [….]. It revels in the reality of technology, its very beingness as oppossed (sic) the over analytical abstractness of cybernetics. Steam technology is the difference between the nerd and the mad scientist. Steampunk machines are real, breathing, coughing, struggling and rumbling parts of the world. They are not the airy intellectual fairies of alogorythmic (sic) mathematics but the hulking manifestations of muscle and mind. The progedy (sic) of sweat, blood, tears and delusions. The technology of steampunk is natural, it moves, lives, ages and even dies. (Professor Calamity 2004: n.p.)

This manifesto counters the "over analytical abstractness of cybernetics" of digital technology (a version of Coyle's "weightlessness") with one that is "natural", "lives" and "even dies". Just as Gibson and Sterling based their novel on the conceit that it was narrated by a Babbage Engine, which was in the process of achieving consciousness by narrating its story, this manifesto posits a steampunk technology that has been humanised. *The Difference Engine* introduces the human into the heart of its neo-Victorian technology by endowing it with the desire to narrate its own history, which would seem a very long-winded way for a computer to achieve consciousness. According to the 'Steampunk Manifesto', steampunk machines breathe and cough as if they too were alive and conscious; of course it is far more likely that humans around steam technology would breathe and cough, but thanks to the distance of time Victorian technology is now viewed as more accessible and even desirable than machines that don't produce smoke and steam.

While the 'Steampunk Manifesto' represents the perspective of only one commentator, it does capture the pervasive blurring of the boundaries between the human and machine in steampunk thanks largely to cyborgs that can also be found in songs like 'The Cog is Dead' (Death of the Cog 2010). In Hodder's *Burton and Swinburne* series (2010-15), Brunel himself is turned into a machine when his consciousness is transferred to an

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automaton, and in Falksen's *Blood in the Skies*, there are not one but two evil cyborgs, Lord Burkhalter and his evil henchman Hewes. In Priest's *Boneshaker*, Lucy O'Gorman has a mechanical arm in a fictional parallel to the many steampunk cosplayers who layer a mechanical arm over their costumes to make it appear that they are part machine. In Joe Benitez's *Lady Mechanika* (2015) graphic novel, the heroine is a woman who is given superpowers by her mechanical limbs. Steampunk fiction and cosplay imagine a seamless interface between flesh and steam-driven machinery that could either represent the mechanisation of the human body or the humanisation of the machine. Steampunk fiction does not imagine artificial intelligence but rather a cyborg body in that it makes the mechanisation visible rather than seamless and invisible. As in the case of the decoration of mobile phones where cogs and wheels are glued to the surface, the Victorian technology creates a bond between the human and a piece of machinery that is threatened by minimalist digital products. This adds another visible layer to the phone or the body, whereas with artificial intelligence the hardware is concealed so that the computer can pass as human. Steampunk objects are thus always recognisable as machines and as products of an earlier technology through such visible signs.

These recognisably 'human machines' and/or 'mechanised humans' become symbolic counters to 'inhuman' digital technology as they breathe and cough. In discussing this aspect of steampunk, Diana Pho recognises how steam-driven machines are anthropomorphised and argues that "steampunk mechanics" are based on "imperfections and mortality" which are "extremely human qualities." (Pho 2013: 188). This could be seen as an update of John Ruskin's argument that the imperfections in Gothic architecture showed the presence of human workmanship, as opposed to the cold, mechanical perfection represented by industrial production (Ruskin 1851-3: 159-160). Victorian machinery only appears humanised because, as Pho correctly points out, it is now juxtaposed with the minimalist design of objects like Apple products (Pho 2013: 188), but this is clearly a romanticisation of an earlier form of industrial production that simply transposes human values onto an older form of technology rather than Gothic architecture. Where steampunk finds human qualities in machines, for commentators such as John Ruskin, whose ideas helped inspire the Arts and Crafts movement, steam-driven machinery was the antithesis to the human and viewed as oppressive rather than liberating.

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2. Handicraft versus Machinery

Steampunk thus humanises machines in a way that would have been unthinkable to Victorians themselves. Indeed, for contemporary commentators like John Ruskin, the machine was seen as the very antithesis of the human:

> Men were not intended to work with the accuracy of tools, to be precise and perfect in all their actions. If you will have that precision out of them, and make their fingers measure degrees like cog-wheels, and their arms strike curves like compasses, you must unhumanize them. All the energy of their spirits must be given to make cogs and compasses of themselves. (Ruskin 1853: 162)

For Ruskin industrialisation turned humans into machines and thus made them industrial slaves. The workman's body in Ruskin's account was literally sacrificed to the machine, so that the working classes were "sent like fuel to feed the factory smoke, and the strength of them is given daily to be wasted into the fineness of a web, or racked into the exactness of a line" (Ruskin 1851-3: 163). Where Ruskin protested turning workers into machines, Professor Calamity humanises and romanticises machinery, and steampunk in general celebrates the cogs that Ruskin saw as symbolising the dehumanisation of labour. Rebecca Onion has discussed how "[s]teampunks fetishise cogs, springs, sprockets and wheels" (Onion 2008: 139), which turns what for Victorians was a sign of the dehumanisation of work into a symbol of resistance to technology. 'Fetishisation' is an apt term to use here, because the objects themselves are endowed with magical as well as human properties, as Marx suggested in his discussion of commodity fetishism.

In their reaction against industrialisation Ruskin and those who followed him in the Arts and Crafts movement emphasised hand-made objects and small-scale production. This insistence on the importance of handicraft was linked to an idealisation of the Medieval period as marked by real human bonds that they saw as threatened by industrialisation and mass production. For steampunk, by contrast, Victorian machinery is not linked to the oppression of factory work but seen as a sign of liberation. Even the

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Steampunk slogan "love the machine, hate the factory" (Huxtable 2012: 213) takes technology out of the realm of work and production by severing its connection to industrial production. Machines are lovable beings for steampunk rather than part of an industrial revolution that was creating oppressive working conditions in factories.

Arts and Crafts had its own retrofuturist novel, paralleling steampunk fiction, in William Morris's *News from Nowhere* (1890). Ostensibly set in a future, post-revolutionary England, Morris's agrarian utopia is actually a vision of the country returned to a Medieval past. Industrialisation and urbanisation have both been banished thanks to an undefined new source of power that allows people to live in a decentralised society that has no need for money or a central government; indeed the Houses of Parliament are used to store manure. The novel also expresses the Arts and Crafts ideal of transforming the conditions of labour for the working classes, thus turning work into a source of pleasure rather than oppression.

The Arts and Crafts rejection of industrialised production made the establishment of small-scale workshops a goal for everyone in the movement. Morris was one of the founders of Morris, Marshall, Faulkner & Company in 1861, and later in 1881 his own business at Merton Abbey Mills. Morris rediscovered techniques for making stained glass and dying textiles that had been lost since the Medieval period, and in the first house that he was able to design to his specifications, Red House, tried to recapture what he called a "Medieval spirit" (Morris qtd. in MacCarthy 1994: 154-156) As its name implies, in its appeal to the past, the Arts and Crafts movement was primarily concerned with aesthetics, seeking to add beauty and ornament to everyday objects. Morris and his fellow Arts and Crafts practitioners also frequently incorporated decorative medieval scenes in their furniture and paintings, and in poetry deliberately used archaic diction that recalled earlier forms of poetry, as in Dante Gabriel Rossetti's 'The Blessed Damozel' (1850).

This emphasis on individual craftsmanship would seem to unite Arts and Crafts and steampunk. Indeed, an artisan like the late Richard Nagy (aka 'Datmancer') and his handcrafted objects would fit in well with the Arts and Crafts aesthetic (see Bowser and Croxall 2010: 6). Bowser and Croxall, for example, foreground the DIY aspect of the movement and its "determination to take the means of production away from big, mind-

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deadening companies that want to package and sell shrink-wrapped cultural product" (Bowser and Croxall 2010: 21). Huxtable makes this connection between steampunk and Victorian amateur home arts, espoused in such nineteenth-century books as *Artistic Amusements* (1882) and *Sylvia's Book of Knickknacks* () as well as articles in the periodical press of the time (Huxtable 2013: 223). Steampunk's DIY aesthetics does indeed align such 'makers' as Nagy with the Arts and Crafts movement, as Huxtable briefly notes (Huxtable 2013: 223), but with an important difference that she does not discuss: Arts and Crafts practitioners were interested in recovering and preserving the past through newly made objects, whereas steampunk DIY is focused on 'modding'," and repurposing real or simulated past objects. As a postmodern and postindustrial aesthetic, steampunk has a radically different attitude to history and historical preservation than Arts and Crafts.

3. Steampunk, Time and Space

Arts and Crafts practitioners' revivalist artistic practices extended to the preservation of buildings. Morris, for instance, founded the Society for the Protection of Ancient Buildings (SPAB) in 1877, because he was appalled at the attempt to 'restore' Medieval buildings in a faux Neo-Gothic style. For Morris, such 'restoration' erased important parts of the past that he saw as part of common cultural and historical heritage. In the *Manifesto* that he wrote for SPAB Morris complained that, in contrast to previous eras when people destroyed ancient structures in ignorance, Victorian 'restorers' were willfully subverting the authenticity of the architecture:

> But those who make the changes wrought in our day under the name of Restoration, while professing to bring back a building to the best time of its history, have no guide but each his own individual whim to point out to them what is admirable and what contemptible; while the very nature of their task compels them to destroy something and to supply the gap by imagining what the earlier builders should or might have done. Moreover, in the course of this double process of destruction and addition, the whole surface of the building is necessarily tampered with; so that the appearance of antiquity is taken away from such old parts of the fabric as are left, and there is no laying to rest in the spectator the

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> suspicion of what may have been lost; and in short, a feeble and lifeless forgery is the final result of all the wasted labour. (SPAB 1877: n.p.)

Morris criticised the use of whimsy and imagination in reconstructing buildings and saw this kind of restoration as creating a "forgery" –the very antithesis of preservation aimed at authenticity. In reconstructing buildings in this way Morris felt that history was being erased and a vital connection to the Medieval period was being lost. For Morris and others in the Arts and Crafts movement the past was a stable reference point that had to be preserved, because it embodied an alternative set of ideas on social organisation that contrasted favorably with debased conditions in the Victorian era. He also saw the buildings as part of a cultural legacy that would be "instructive and venerable to those that come after us" (SPAB 1877: n.p.).

In steampunk, history is radically contingent and alternate narratives are superimposed on the received outlines of the past, as is the case with the redrawn map of the world in 1855 in the 'Frontispiece' to *The Difference Engine*. Steampunk celebrates precisely what Morris decried, the use of imagination in re-creating and modifying the signs of the past. The radical instability of the past is another manifestation of "all that is solid melts in air", in that the past is no longer a stable referent and historical boundaries are deliberately erased. This can be seen particularly in steampunk costumes in which elements from the past and an imaginary future are mashed together. It can also be seen in the celebrated Datamancer laptop (see Bowser and Croxall 2010: 6), which was both retrospective in its use of brass and leather and functional as a modern-day computer. Jason B. Jones characterises this mixture of past and present as a "playful will-to-anachronism" in the historical "double consciousness" of steampunk that unites history and a rejection of modern culture in its deliberate fusion of historical periods (Jones 2010: 102-103). Rather than preserve historical artifacts against modification as advocated by Morris, practitioners refashion objects to deliberately juxtapose the past, the present and an imaginary future in an oxymoronic 'retrofuturism' that mashes together past, present and future without any attempt to blend them together. This amalgamative tendency also suggests that history is always provisional and unstable, and hence can be *legitimately* reconfigured in the image of

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contemporary technology. For steampunks, there *is* no 'authentic' Victorian period (nor an authentic Medieval age as celebrated by the Arts and Crafts movement). Steampunk therefore express a postmodern approach to history in which anachronistic references can be winsomely mixed together for an effect that is fueled by a desire to refashion the past by rewriting its texts and recycling its products. For Morris this would be destroying the past, whereas for steampunk it is an imaginary resistance to the revolutionising of the means of production.

In spite of seeming similarities, the steampunk aesthetic thus differs radically from that of the Arts and Crafts movement, because in the postindustrial era preservation has been eclipsed by the postmodern mashup of architectural styles. The rate of change in the urban environment has further accelerated since the nineteenth century, as communication technologies have sped up the flow of both capital and information. The annihilation of space by time thanks to technology, originally analysed by Marx, has been applied to the contemporary built environment by David Harvey in his classic essay 'Money, Time Space and the City' (1985). In his analysis of the effect of capital on the built environment, Harvey has traced the growth of the "chronological net" that began with the railway in the nineteenth century (Harvey 1985: 9). Combined with control over space through signals and deliberate architectural channelling of cars and pedestrians, this led to the reshaping of the cities such as London to maximise flow (Harvey 1985: 13). Harvey sees the "intersecting spatial, chronological and monetary nets" that control the urban environment – which arguably parallel the increasing control exercised by digital networks today –as rapidly reconstructing cities in the image of flows of capital (Harvey 1985: 16). The urban environment is also homogenised by these flows, creating what Marc Augé has termed "non-places" as products of "supermodernity", so that geographical markers are replaced by the uniformity of airport spaces, or by global franchises like Disney (Augé 1995: 79). The "weightlessness" of digital products finds an urban complement in the rapid transformation of the built environment and its pulverisation that makes even solid buildings seem like provisional, temporary structures that can be reconfigured – or evaporated – by the will of capital.[5]

In a shift from the spatial to the temporal axis, steampunk has extended this radical reshaping to the past, so that, like the urban landscape,

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history is transformed and reconfigured by technology. There is a curious mixture of revulsion and celebration in steampunk descriptions of London as an urban environment in *The Difference Engine* and in Hodder's *Burton & Swinburne* series. Victorian London in steampunk is both a reference point and a historical space that can be reshaped at will through imagination, in a fictional parallel to the 'creative destruction' of capital tearing down old buildings and erecting larger, more profitable structures in their place. In steampunk fiction's urban environments "all that is solid melts in air" thanks to these flows of capital, and to the resulting reshaping of London. By extension this reconfiguration of the urban landscape is applied to time, where familiar historical events and figures are brought into collision with one another in re-imagined chronologies reshaped by digital technologies.

Bowser and Croxall have described the transformation of attitudes to time in the Victorian era thanks to scientific discoveries in geology and the effect of technology in such things as "railway time", which introduced uniform measurement of time in response to the needs of this new form of transportation (Bowser and Croxall 2010: 3-6; also see Schivelbusch 1986: 33). Steampunk as a reaction against the changes brought about by new digital technology takes the Victorian regulation and control of time to its logical extreme by reconfiguring all historical chronological boundaries (i.e. not just those in the present), thanks to the flows of digital information. It is this double move that distinguishes steampunk from previous aesthetic movements like Arts and Crafts that looked to the past for lost values amidst the upheavals of the industrial revolution. For steampunk the past is malleable and can be re-imagined at will, with anachronistic elements introduced to plots and glued onto contemporary objects.

4. Playing with Steam

Historical preservation itself has also been commodified in postindustrial society as all aspects of life, not only the workplace, are subject to the processes of hypercapitalism. History has been turned into another commodity to be consumed in leisure time, as De Groot has argued. (De Groot 200) As part of the commodification of history, former industrial sites in Great Britain and North America have been repurposed as tourist attractions, shifting them from sites of production to ones of leisure and consumption. Lowell, Massachusetts, for example, was known as "the cradle of the American Industrial Revolution" and some of its remaining

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cotton mills and canals have been preserved as a National Historical Park (Lowell National Historical Park: n.p.). As the park's website proclaims, "Lowell was the Silicon Valley of the early 19th century – a center of innovation, invention, and technology" (Lowell National Historical Park: n.p.), and it would seem as odd to people living in the nineteenth century to think of a cotton mill as a tourist destination as it would now to think of touring a Microsoft or Apple office complex as such. Former Victorian industrial buildings, however, are being repurposed both as aesthetic sites and spaces of play and made part of a worldwide system of tourism, that turns local heritage into a global marketable commodity (Hurwitz 2012: 5).

The London Museum of Water and Steam is a perfect example of how the industrial past has been repackaged as a site of nostalgia and leisure in a move that parallels steampunk's repurposing of industrial objects for purposes of play and consumption. Originally a functioning water pumping station, the site is now a museum that advertises itself as a fun place to visit through images of parents and children enjoying themselves by looking at examples of Victorian water engineering. The exhibits and text emphasise the sheer size and horsepower of Victorian engineering such as the "90 inch engine", which was the "largest working beam engine in the world" (London Museum of Water and Steam n.p.). What were once functioning engines are now to be viewed as aesthetic objects, admirable because of their size, power, and intricacy. The museum makes some somewhat dubious attempts to make prosaic functions entertaining, such as the wall covered in toilets from different eras, water heaters and washing machines that greets the visitor at the entrance. Rather than symbolise bodily functions and housework, these objects are intended to represent the past as a simpler time when people used machines like hand-cranked clothes wringers.

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Figure 2. Fun at the Museum of Water and Steam.
Courtesy of the London Museum of Water and Steam, http://www.waterandsteam.org.uk/

The Museum of Water and Steam, like steampunk, extracts Victorian technology from its original context and redefines it as an aesthetic object. Simply contemplating machinery pumping water is advocated in the same terms as visiting a site like the Tate Modern in London, which is itself housed in the former Bankside Power Station; unlike the Tate Modern, however, the Museum of Water and Steam preserves Victorian technology within its buildings. The signature move in this case, as in steampunk, is to sever the objects from any connection to work and to repackage machinery in terms of leisure. The docent in workman's overalls in Figure 2 above underscores the redefinition of production as consumption and the commodification of leisure time as educational play, because in this image the 'worker' lectures his audience on the functions of the machine rather than actually operating machinery or producing goods or energy. The audience in this image is paying for a nonmaterial experience. For the Museum, education – or perhaps, more accurately, 'edutainment' – becomes a way of giving value to the experience of looking at Victorian machines, thus justifying the expense of admission.

Where steam and smoke were seen as pollution in such texts as John Ruskin's *The Storm-Cloud of the Nineteenth Century* (1884), for both steampunk and the Museum of Water and Steam, 'steam' has become a

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signifier for large-scale feats of engineering like that symbolised by Brunel's Thames Tunnel (1843) project or Joseph Bazelgette's creation of a sewage system for London (1865). For Victorian commentators, cogs and wheels were associated with industrial production and the working classes (with the latter metonymically identified with the former), along with protests against the dehumanising effects of this industrialisation on the workers. Yet these same objects in steampunk are adopted to be worn at conventions and festivals and no longer have any direct relationship with work; they are instead part of a leisure activity. In both steampunk and the Museum 'steam' has been redefined in terms of play and fun.

The Museum of Water and Steam is a small part of a wider heritage industry that turns historical buildings into educational sites with gift shops attached, combining education and profit. The creation of a heritage industry represents a commodification of the past like that described by Miriam Bailin in the context of objects marketed as "collectibles" in contemporary Victorian-related magazines:

> Disinterred from contexts that once marked people according to hierarchies of taste and privilege, of nationality and class, the miscellaneous 'things' – a doorknob, a piece of lace, old playing cards – that circulate from auction to thrift shop to website are 'collectibles' not commodities. (Bailin 2002: 44)

For Bailin such "collectibles" have no real reference to the past; in Arjun Appadurai's terms this would be "nostalgia without memory" (Appadurai 1993: 272-273), where a hazy idea of a long ago era replaces lived social history. Bailin's analysis of the way in which the collectibles lose their connection with their historical context can equally be applied both to steampunk objects and to the Museum of Water and Steam. The Museum, for instance, does not address the working conditions of those who operated the pumping machinery. In the case of both "collectibles" and the heritage industry, the past itself (rather than the objects of the past) has been made into a commodity to be consumed as/at leisure. This is a form of historical fetishism that, like commodity fetishism, erases the signs of the work that went into the creation of the object. While Cory Gross has argued that such objects should be viewed as "kitsch" and a "failed commodity" (Gross 2007:61), they are in fact displaced objects that have been dislocated from

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history and any connection to material production, made simply into consumables as part of a growing leisure industry. Fredric Jameson has analysed this erasure of boundaries in terms of postmodernism and consumer society in which the past is obliterated through pastiche and incorporated into a continuous present (Jameson 1985: 111-125), in a process that can be found across multiple media. In her analysis of the *Heritage 1881* site in Hong Kong, for instance, Ho has described the use of "hyperreality and simulacra to hide and then expose the labour of reproducing the Victorians for consumption" (Ho 2015: 341). The erasure of labour and its repackaging as play is a strategy common to postmodern movements such as steampunk and the contemporary heritage industry.

The term 'industry' itself is suspect in this context because, while Christina Goulding and others argue that "tourism replicates the essentials of the industrial process in that it has become just another commodity" (Goulding 200: 836), this ignores the shift in meaning from production of material goods to the consumption of immaterial experiences, which are another "weightless" commodity. The emergence of the term 'heritage industry', and associated terms like 'culture industry', registers the shift in the meaning of 'industry' in the transition from an industrial to a postindustrial society, in which the emphasis is on service industries and the commodification of leisure activities rather than factory production. As Goulding says, "one form of escape from the anxieties of contemporary life is the experience of the past, packaged and sold as authentic" at such sites as Lowell and the London Water and Steam Museum (Goulding 2000: 837). Attending a steampunk convention can be seen as fulfilling the same purpose. The past has therefore been turned into yet another commodity by an ever expanding entertainment industry. Marx and Engels lamented the subversion of family relationships by the "cash nexus" where money replaced emotional ties (Marx and Engels 1847: n.p.), and the same process can be seen in the commodification of leisure where play is itself a profit center. Play becomes a commodity to be sold like a consumer object. In this commodification of the past, history can be consumed as an experience and as yet another "weightless" product in Coyle's terms.

5. The Politics of History

Steampunk could be accused of being conservative because it appeals to a previous period in history as the basis for a call to restructure society. It is,

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after all, usually movements labeled ‘conservative’ that wish to preserve the past, whereas radical calls for overturning the social order are more usually linked to utopian ideals of a transformed future. The same ambiguity haunted Arts and Crafts in that its appeal to the Medieval period meant recalling an era of aristocracy and class privilege, although proponents such as Morris claimed that the movement was aimed at improving the living and working conditions of the lower classes. The movement actually produced objects mainly for the well-to-do, as C.R. Ashbee complained, and “had made of a great social movement a narrow and tiresome little aristocracy working with great skill for the very rich” (Naylor 1971: 9). Arts and Crafts produced many beautiful objects, but did not succeed in transforming society. Steampunk objects like the Datamancer laptop can equally be seen as beautiful but expensive products that will hardly lead to wide-scale social reform. Steampunk cannot subvert commodification but can be subsumed within it, as shown by the Michaels store “industrial chic” line of products.

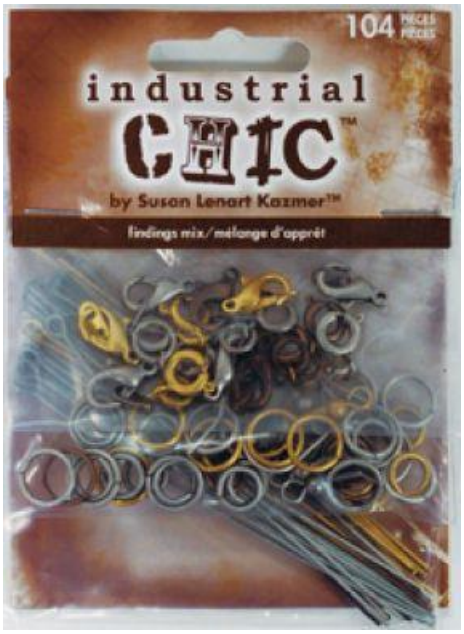

Figure 3. Michaels “Industrial Chic” jewelry by Susan Lenart Kazmer.
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Michaels is an ‘arts and crafts’ store, but not in the nineteenth-century sense but rather in the contemporary usage as a place for hobbyist

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amateurs to buy materials to make their own objects. The adoption of a steampunk-like line of products in this store shows how aesthetic-based movements like Arts and Crafts or steampunk can themselves be commodified and 'cleansed' of any implicit political ideology. The "industrial chic" line does not reference a particular historical era but turns industrial machinery into ornament. The combination of "industrial" and "chic" underscores the transformation of industrial signifiers into fashion accessories, in a move that inadvertently parodies the steampunk aesthetic. Rather than represent a reaction against hypercapitalism, Michaels stores are obviously in the business of selling as many mass produced objects as possible.

One of the strengths of steampunk is its implicit critique of hypercapitalism in its recourse to a specific earlier period in history as a way to draw a contrast with contemporary products. Its weakness, like that of the Arts and Crafts movement, is that its aesthetic can easily be rebranded and sold simply as fashion, with no ideological content. Steampunk becomes a "look" that can be employed in a Justin Bieber video, an episode of America's Next Top Model, or a staging of a Shakespeare play;[6] in other words, it becomes a surface to layer over existing products and does not destabilise the cycle of production and consumption that it critiques. As Pho has argued, steampunk itself is implicated in consumerism thanks to the proliferation of online vendors selling objects that "pits the community's anticonsumerist manifesto with the reification of the financially successful independent artist" (Pho 2013: 200). A mass consumer product from Michaels stores is in this view no different from a steampunked object offered online by an independent artisan.

However, the major difference here is one of scale in that an individually crafted object is pitted against a mass produced object. Like the Arts and Crafts movement, steampunk practitioners see the individually crafted item as being superior and functioning as an implicit critique of mass produced, homogenised objects. The problem for both Arts and Crafts and steampunk lies in translating an aesthetically based reaction to contemporary consumerism into a wider political movement.[7] With Arts and Crafts it was not clear how a return to small-scale, hand-crafted artefacts and furnishings would lead to wider reform of capitalist production, nor how such expensive objects could compete with mass produced copies. The Arts and Crafts movement had only tangential connections to political

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organisations like the Labour Party through figures like Walter Crane and so was not allied with the working classes per se. Steampunk similarly has no direct connections with any particular political organisation and no collective agenda beyond a general hostility to contemporary consumer culture among some of its practitioners. Steampunk is rhizomic in structure, which makes it a pervasive aesthetic across multiple media, but a fractured site of political resistance.

The use of cogs and other signs of nineteenth-century industrialisation are thus not accompanied by any sustained political critique; rather the symbols of an earlier period become talismans to ward off what can admittedly seem like overwhelming forces of globalisation and commodification. Steampunk substitutes history fetishism for commodity fetishism through its repurposed historical object, but this is displacement rather than (political) resistance. While the DIY culture that Onion, Bowser and Croxall and others have described is laudable, it is not associated with a sustained critique of the economic conditions it wishes to transform. As a result, as also in the case of the earlier Arts and Crafts movement, steampunk produces aesthetically pleasing objects that are not directly connected with any sustained political agenda. For Arts and Crafts it was never clear how exactly handicraft was going to transform the Victorian social hierarchy (see Danahay 2015: 3-4), and for steampunk it is not clear how an appeal to earlier forms of industrial production will subvert the "weightless world" of digital technologies. As Ferguson points out, it is difficult to see the practical application of "exhortations to fight real social injustice with individual acts of imagination" (Ferguson 2011: 72), with the problem here being not imagination itself, but rather individual acts of resistance that do not coordinate with a collective political agenda.

Without a coherent political critique and an affiliation to a wider social movement, steampunk will, again like the Arts and Crafts movement, perform a rejection of the forces of capitalism, while remaining at the purely symbolic level. Steampunk has conventions, discussion groups and Facebook pages, but like the physical Arts and Crafts communities in Britain and the United States, these will prove ephemeral in the long term. Steampunk needs what Dyer-Witheford offered in *Cyber-Marx*, namely an updating of Marx's theories to analyse capital's unrelenting push through digital technology to colonise human relationships and feed the endless "circle of consumption to match the growing volume of goods produced"

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(Dyer-Witheford 1999: 116). Steampunk seeks to disrupt this circle of consumption, but does so in an ambiguous and contradictory way. The emphasis on tinkering and DIY reasserts consumer control over the production of goods by repurposing objects or adorning them with signifiers of Victorian industry. However, this recuperation of Victorian technology also opens up steampunk to the charge that it rehabilitates the less desirable aspects of the era such as colonialism, class oppression and sexism. Pho and Goh point out the dangers of recuperating colonialism through steampunk celebrations of imperial power (Pho and Goh: 2012: 104), and writers such as Charles Stross and Ho emphasise the "dark side" of the Victorian era Stross 2010 n.p., Ho 2012: 9). In a postindustrial environment where relationships are being monetised in online social media like Facebook, steampunk *could* provide a literary and visual vocabulary with which to resist such commodification of everyday interactions. As it currently stands, however, steampunk only performs an aesthetic reaction against the fear that "everything solid melts in air". Cogs, steam and dirigibles alone do not yet represent a significant and sustained resistance to the endless cycle of production and consumption to which we are all connected, online and offline, as consuming subjects.

Notes

1. For a complete text of the Communist Manifesto see the Marxist Archive at https://www.marxists.org/archive/marx/works/1848/communist-manifesto. Marx derived the term 'cash nexus' from the writing of Thomas Carlyle, who also saw social values being corroded by commodification in the nineteenth century and regarded the Medieval period, especially its monasteries, as ideal communities in such books as *Past and Present* (1843).
2. Marx compares this process to religious belief, underscoring the magical thinking behind both kinds of fetishism.
3. See, e.g. http://www.slowfood.com/, https://www.slowfoodusa.org/ and https://www.slowfood.org.uk/. These interlinked networks work at grassroots level and emphasise their commitments to environmental respect and local communities.
4. In *Discipline and Punish*, Michel Foucault linked contemporary surveillance and Jeremy Bentham's designs for a prison Panopticon, which was of course never built (Foucault 1995: 201).

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5. In the imperial context, Elizabeth Ho has argued in her study of the *Heritage 1881* site in Hong Kong that the urban environment previously reflected the "coloniser's consciousness" but is now reshaped as "postcolonial Neo-Victorianism" (Ho 2015: 339, 331).
6. For the Justin Bieber video see 'Santa Claus is coming to Town (Arthur Christmas Version)', https://www.youtube.com/watch?v=nAI_xI9wQnE; for 'America's Top Model 19.06 Photos: Steampunk Chic', see http://www.tvovermind.com/americas-next-top-model/top-model-photos-steampunk-chic; for 'Shakespeare's *The Tempest*: A New Steampunk Vision of Shakespeare's Masterpiece', see http://www.thetempest.com.au/.

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