

Roger Whitson, *Steampunk and Nineteenth-Century Digital Humanities: Literary Retrofuturisms, Media Archaeologies, Alternate Histories*. New York and Oxford: Routledge, 2017. Pp. xiv + 229. £115.00. ISBN 9781138859500.

Departing from Veronica Alfano and Andrew Stauffer's *Virtual Victorians* (2015), Roger Whitson's book is a timely, conceptually ambitious, innovative study that stresses the usefulness of steampunk in exposing the natural and historical processes built into digital humanities. By employing steampunk both as an aesthetic and a methodology, the book shows 'how assemblages of nineteenth-century literature and history are repurposed into conjectural and artistic forms of digital humanities practice' (23). Whitson adopts non-human, posthuman and materialist approaches to media archaeology to argue that the nineteenth century is not just a historical period, but 'a digital system whose discrete elements are decontextualized, remixed, remade, appropriated, and otherwise transformed to serve various political, cultural, and technological purposes' (7). As this compound definition suggests, the steampunk mode is one of layering, negotiation and entanglement. Similarly, the book itself stratifies its contents in reordered configurations and dynamic juxtapositions, discussing an array of genres and media: fiction, essays, technical descriptions, painting, photography, graphic novels, exhibition items, emails, video recording, social media, and video games.

Whitson's approach gravitates towards a convergence between technology and the counterfactual. The opening chapter probes into historicist perspectives, focusing on William Gibson and Bruce Sterling's iconic steampunk novel *The Difference Engine* (1990), whose narrative suggests 'a form of alternate history that simulates computational time-criticality' (39). The novel's numerous iterations 'warp the historicity of the nineteenth and 'uncover the non-human disregard of human-centered history' (47). Gibson and Sterling, Whitson demonstrates, critique Charles Babbage's homogenous temporality, embodied in his difference engine, a project expounded in *Ninth Bridgewater Treatise* (1837).

Chapter 2 explores counter-factuality through a postcolonial lens, pitching into Chinese steampunk. In ekphrastic readings of images and designs by steampunk artist James Ng, and a meticulous analysis of Ken Liu's silkpunk novel *The Grace of Kings* (2016), Whitson reimagines counter-factual technologies, speculating how alternate steampunk histories might evolve had steampunk not originally been a European phenomenon. Whitson turns the 'what-if' perspective around by examining Isabella Bird's travel photography that depicts Imperial China in ruinous decay (1896), as it reflects anxiety about the demise of the British Empire. Informed by 'intersectionality', the chapter at its close considers Marjorie Liu and Sana Takeda's lush steampunk graphic novel *Monstress* (2015-) to showcase the 'complexities' of 'multicultural techniques' (96).

Whitson delves into ecocriticism and time criticality in Chapter 3 to challenge James Hutton's obsession with human centrality and superiority in his model of geological 'deep time' in *Theory of the Earth* (1788). Whitson reveals the latent nonhuman temporality that ruptures Hutton's narrative: the earth is a 'giant ancient corpse' whose crust is built from the accumulation of dead marine fauna, and thus it is 'a record of non-human experiences' (104). The planet then is perceived as a digital ecology, which is 'akin to a pixel on a computer screen computing a larger and larger picture' (106). In Whitson's razor-sharp analysis, China Miéville's fantasy novel *Iron Council* (2004) depicts the inaccessibility of this macro-picture. The novel is fascinated by the nexuses between deep time and how the earth is sculpted by human activity through golemetry, 'a counterfactual manipulation of deep time' (110). Whitson also gives critical attention to the Squint/Opera 'Flooded London' exhibition project (2008), which imagines nonhuman, post-apocalyptic ecological systems.

Chapter 4 juxtaposes the preceding chapter as it moves from non-human counterfactual geological temporality to post-human counterfactual human labour and industrialism. Whitson scrutinises Friedrich Engels's theory of labour as co-dependent with evolutionary processes, focusing on the human hand, which evolved to facilitate ever more efficient skilled, manual work. These large-scale invisible forces that drive labour are aptly explored in Neal Stephenson's layered novel *Diamond Age* (1995), in which nanotechnology is conducive to 'a giant network of global labor sustaining the illusion and privilege of immaterial labor' (140). Stephenson's dialectical nature of technological and ecological systems, Whitson adduces, finds fertile soil in the repurposed objects of the so-called Maker Culture, represented by steampunk engineer and YouTube persona Jake Von Slatt.

Lastly, Whitson turns to what he terms 'queer steampunk fandom' (159). Here he investigates the world of steampunk communities and subcultures through conversations with influential cosplayers and bloggers (such as Ashley Rogers and Diana Pho). These conversations reveal that steampunk fandom offers a liberating, fluid, utopian space that resists heteronormative models. They constitute an alternate practice to traditional methods of academic scholarship of Victorian culture, thus mirroring the book's central argument. But it makes us notice that, ironically, *Steampunk* itself is in the conservative academic genre of the monograph. Yet as Whitson claims '[o]ur lives exist in what seems to be a jigsaw puzzle of different [technological] forms of time' (63). This compositeness is traced in the very cavernous architecture of this study whose manifold assemblage of perspectives rehearses steampunk methodologies and enables reverse-engineering of steampunk temporalities. The book is a significant contribution to the field of Digital Humanities.

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