Victorian Literature and Science: Introduction

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This special issue of *Critical Survey* explores the reciprocal relationships between Victorian literature and Victorian science – both the representation of science in literature, and the appearance of the literary within scientific discourse. Recent trends in historicism inspire this collection to contextualise Victorian literature and culture through Victorian understandings of bodies. These critics rightfully begin from the assumption that only once we understand Victorian bodies as Victorians might have understood them can we theorise historical bodies as sites integral to the legitimisation of flows of cultural power: capitalism, imperialism, heteronormativity, and beyond.

Here, we extend this impetus to consider the influence of a multiplicity of scientific discourses: psychology, medicine, bacteriology, sleep studies, mathematics, and eco-criticism. In these articles, as in many of the Victorian texts they investigate, science and literature offer insight into the cultural uses and implications of one another. The articles recover the historical sciences that informed the literary texts – and vice versa – and then explore the depth of critical analysis that these historical sciences offer. At their core, these articles are invested in twin critical trajectories: first, the nineteenth-century conversation between culture, science, and literature; and second, the ways twenty-first-century scholars can use these conversations to reflect on our own historicism and cultural criticism.

Victorian science offers fruitful investigations of the emergence and legitimisation of scientific fields of study. Natalie Mera Ford's 'Placing Literature in Nineteenth-Century British Psychology' explores the consolidation of psychology as a scientific field. Ford traces psychology's ambivalence regarding the use of literary allusion as evidence or example. While literary citation was a long-standing convention in studies of mind, mid-century psychology began to

distance itself from the literary. To strengthen claims to their own scientific expertise, theorists of psychology came to disavow literary authority.

Literary representations of science also enabled science to critique itself on emotional as well as rational grounds. Lorenzo Servitje's 'Birthed from the Clinic' works through this tension in an 1880s novel concerned with the human cost of medical advancement. Literary representations of medical students bolster author and medical doctor Edward Berdoo's disparaging analysis of his own field and the cost of medicine's progress. Servitje unpacks Berdoo's criticism of medicine's unethical exploitation of working-class bodies, and the simultaneous reiteration of that exploitation in Berdoo's own literary works.

Berdoo's dual role as both scientist and novelist typifies the role of the fin-de-siècle novel as both promulgator and critic of scientific principles. Popular understandings of scientific concepts appear in Victorian literature as mechanisms to consider both the science in question and adjacent elements of culture – or even those that appear disparate from science, but bear its traces beneath the surface. At times, science offered reactionary models, as in Jens Lohfert Jørgensen's 'Bacillophobia', which traces literary representations of bacteria through fin-de-siècle novels. In these texts, the science of contamination subordinates to cultural conceptions of contamination; this appears through a spectrum of concerns, from the permeability of individual interiors, to national contamination through the Empire more broadly. Bacteriology provides narrative material for the Victorians to think through the exterior dangers – from monsters, to aliens, to dangerous men – that threaten the cohesion of the self and of society. These monsters often embodied scientific explanations for the cultural shifts science itself inspired, as Karen Beth Strovas's 'The Vampire's Night Light' demonstrates. Strovas uses *Dracula* to bring together the proliferation of artificial light at night with changes in sleep habits. Victorians' scientific understandings of the body's progress from wakefulness to sleep become a cypher for *Dracula*'s vampirism, and lighting technology a vampire that sucks the vitality from the Victorian man even as it enables him to be more productive.

Other texts used the narratives of science to destabilise cultural convention. Wolfgang Funk's 'The Mathematics of Evolution' explores the intersection of mathematics and Darwinian evolution in 1880s texts. Through mathematical challenges to the stability of

Euclidean geometry, these texts call into question the stability of linear narratives of progress. The deconstruction of linear geometry affords the deconstruction of linear understandings of class and biology, so that mathematics undercuts late century theories of eugenics and progress. Ailise Bulfin's 'The Natural Catastrophe in Late Victorian Popular Fiction' reads the cultural politics of apocalyptic imagery. Through both fiction and non-fiction, Bulfin uncovers an emerging ecological conscientiousness in the *fin de siècle*: an awareness that produces narratives of both uncontrollable and self-inflicted calamities that might end the human species. In these extinctions via comet, climate change, or pollution, science offers a catalyst for cultural changes in practices of production and consumption.

The articles featured in this issue demonstrate the importance of thinking about Victorian science and literature through one another. Narrative instantiations of scientific discourse provide historical windows into the ways Victorians conceptualised the broader cultural conversations that permeate these narratives. Threats to interior security take the form of communicative disease; to move beyond traditional geometry is to call into question traditional social hierarchies. The articles of this special issue trace complex genealogies of literary and scientific history, and illuminate the mutually constitutive – if frequently combative – relationship between Victorian literature and science.

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