

12. Henry James, Preface to *The Novels and Tales of Henry James: New York Edition*, Vol. 11 (New York: Charles Scribner's Sons, 1908), xviii, xix.
13. For other examples, see Morgan, "Critical Empathy: Vernon Lee's Aesthetics and the Origins of Close Reading," *Victorian Studies* 55, no. 1 (2012): 31–56. See also Natalia Cecire, "Ways of Not Reading Gertrude Stein." *ELH* 82, no. 1 (2015): 281–315.
14. Natalie M. Houston, "Toward a Computational Analysis of Victorian Poetics," *Victorian Studies* 56, no. 3 (2014): 498–510, 498.
15. Ryan Cordell, "Taken Possession Of: The Reprinting and Reauthorship of Hawthorne's 'Celestial Railroad' in the Antebellum Religious Press," *Digital Humanities Quarterly* 7, no. 1 (2013).
16. Michael Witmore, "Text: A Massively Addressable Object," *Wine Dark Sea* (blog), December 31, 2010.



Science

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THE most interesting of recent developments in Victorian literary scholarship has been our obsession not with the Victorians but with ourselves. We have become fascinated by invoking the Victorians in order to consider our contemporary conditions. This self-interrogation has been both welcomed and contested. For literature and science scholars it has been puzzling, for Victorian literature and science has a long tradition of scholarly critique that takes account of both past and present. It has also been satisfying, since the turn towards our own historical moment has seen the study of literature and science take up a place at the very heart of Victorian literature and culture. This interest in our present moment and its attachments to Victorian cultures is important because it is making us think creatively about the future praxis of Victorian scholarship. It is enabling us to consider new ways of conceiving of the temporal gap between the Victorians and ourselves and what knowledge crossing that gap might generate.

This temporal turn is clear in the significant proportion of recent Victorian research that has focussed, for example, on ecological crises: from environmental violence and studies of the anthropocene

through energy security to animal welfare.¹ There is such impetus behind this work that its various specialisms often signal their intent to make interventions into debates about the value of the humanities by adding that term as their own suffix: environmental humanities and energy humanities have joined medical humanities and others as recognisable pairings.

In Victorian literature and science scholarship the temporal turn has not been sudden but rather an evolution (no pun intended). Harriet Ritvo's first book on Victorian animals, *The Animal Estate*, was published in 1989, and even before that, Gillian Beer's foundational research on, yes, evolution, was suffused with questions about the two cultures of science and literature that spoke equally well to the present day.² Victorian literature and science's extended interrogation of the inchoate power of the sciences through the nineteenth century has always been refracted through the relationships of the disciplines in the late-twentieth and twenty-first century. This has given us a scholarship that is alert to different forms of knowledge-making and their historical situatedness. It is probably the case that Victorian literature and science scholars look to the nineteenth century because it was here that so many of the relations between the sciences and humanities emerged and were worked out. In thinking about the value of our subject in the present day, then, it is natural to turn to those predecessors who might offer us ways of knowing where we are and what we might do about it.

However, one of the problems with this and with the other recent work in our temporal turn has been its inherent teleology. Only the present gains from strategic attempts to consider the relations between the Victorians and ourselves. As scholars of Victorian literature and culture, we would surely wish our understanding of the Victorians also to be enhanced?

In literature and science an important recalibration of methodological approach is underway, and since the work of its scholars has become so central to Victorian literature and culture it is worthy of wider account. Literature and science scholars are beginning to investigate anew some of the recursive relationships between the two disciplines and in turn how the past and the present might also be seen in similarly recurring and successive formations. Experiences of engagements with contemporary science have shown scholars of Victorian literature and science how valuable it is to take present knowledge back into the past and apply it there. One recent example of this is the Constructing Scientific Communities project, one arm of which is using contemporary citizen science and its

knowledge to reexamine histories of Victorian citizen science.³ There is a great deal to be gained from what Edward Bellamy called, in another context, looking backwards. Nor need thinking with present knowledge disrupt current methods if undertaken sensitively. Rather it adds to the kinds of questions that might be posed for, say, Victorian narratives and opens possibilities that the historical record itself does not easily reveal.

Some of this work is formal, on the role of actively mobile analogies moving both between the two disciplines of literature and science and also across time.⁴ Other work is thinking through new forms of conciliatory practice where literary study and the sciences might work more closely together in the present and the results of that be used also to inform how we interrogate and come to understand the past.⁵ The ScienceHumanities Initiative at my own institution, Cardiff University, is a fine example of this.⁶ What all of this work has in common is its temporal suppleness: the present and the Victorian past are both informed by its research. The emerging methodologies in Victorian literature and science might well offer fresh impetus to the temporal turn in literary studies. If we are to take this up, though, it requires the throwing off of certain disciplinary constraints. To think of temporality as unfettered is to accept movements that are, at least to literary scholars and historians, undisciplined, and perhaps unpromisingly so. As literature and science scholars would say, though, if we aim to understand our Victorian universe, and ourselves, we might want to accept a more unusual physics where knowledge in and of the present might enact change upon knowledge of the past.

NOTES

1. Good examples are Justine Pizzo, "Esther's Ether: Atmospheric Character in Charles Dickens's *Bleak House*," *Victorian Literature and Culture* 42, no. 1 (2014): 81–98; and, Allen MacDuffie, *Victorian Literature, Energy, and the Ecological Imagination* (Cambridge: Cambridge University Press, 2014).
2. Harriet Ritvo, *The Animal Estate: The English and Other Creatures in the Victorian Age* (Cambridge: Harvard University Press, 1989); Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction* (Cambridge: Cambridge University Press, 1984).

3. “Constructing Scientific Communities,” <https://conscicom.org>. (accessed 2 May 2018).
4. For example, the discussions and presentations of the AHRC-funded seminar on analogy led by Alice Jenkins in Cambridge in 2015 or Sally Shuttleworth’s recording of the movement of literary texts across works of psychology in *The Mind of the Child: Child Development in Literature, Science and Medicine, 1840–1900* (Oxford: Oxford University Press, 2010).
5. Jennifer Calkins’s article on reading *Moby Dick* in the light of current cetological research is an excellent example of such work: Jennifer Calkins, “How Is It Then with the Whale? Using Scientific Data to Explore Textual Embodiment,” *Configurations* 18, no. 1–2 (2010): 31–47. See also John Holmes, “Consilience Rebalanced: Edward O. Wilson on Science, the Humanities and the Meaning of Human Existence,” *Journal of Literature and Science* 10, no. 1 (2017): 5–10. My own forthcoming article on nineteenth-century sleep offers a further new methodology: Martin Willis, “Sleeping Science Fictionally: Nineteenth-Century Utopian Fictions and Sleep Research,” *Osiris* 34, no. 1 (2019).
6. James Castell, Keir Waddington, and Martin Willis, “Cardiff Science Humanities,” <https://cardiffsciencehumanities.org> (accessed 2 May 2018).



Science Fiction

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FOUR decades ago, Darko Suvin floated a scholarly approach to science fiction that largely still prevails, emphasizing the genre’s reliance, stretching back beyond Jules Verne to Mary Shelley and beyond, on a technological “novum.”¹ Suvin emphasized the capacity of science fiction to challenge readers’ conceptual norms by way of what (in a Shklovskyan vein) he called “cognitive estrangement.” Most critical debate in the intervening years has focused on his account of the “cognitive estrangement” itself: including Seo-Young Chu’s recent provocative notion that “science fiction is a representational technology powered by a combination of