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

JOHN PLOTZ

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 Shklovskyian 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

lyrical and narrative forces that enable science fiction to generate mimetic accounts of cognitively estranging referents."[2]

However, recent taxonomic work points to ways that the genre's self-definitions and constituent elements have varied enormously over the past century—and helpfully highlights some of the problems entailed in Suvin's reliance on an explicitly or implicitly technological "novum" as the launching point for that estrangement.[3] Fredric Jameson's deceptively simple account of temporality in SF has implications that highlight the formal congruity, and the intertextual inheritance, that aligns science fiction with the various realist prose genres that it follows. Jameson even finds a compelling way to bridge the space between the Romantic-era historical novel and the "children of Wells" (that is, the early twentieth-century upsurge in technology-based "hard" science fiction that culminated in the largely American Golden Age of Asimov, Heinlein, and Clarke). Jameson astutely argues that "the late nineteenth-century invention of SF correlates to Walter Scott's invention of the modern historical novel in *Waverley* (1814), marking the emergence of a second—industrial—stage of historical consciousness after that first dawning sense of the historicity of society so rudely awakened by the French Revolution."[4] In other words, what Scott did for "historical time," science fiction did not only for the geological deep time of Lyell and Darwin (for those who doubt, Elie Berthet's 1876 Parisian caveman romance, *Romans Pré-Historiques*, is worth a gander) but also, by the early twentieth century, the cosmic vastness of Einsteinian time.

Jameson and Roger Luckhurst's work may be the spark for a needed paradigm shift. The birth of both science fiction and prose fantasy as new (or newly refashioned) genres in Britain in the 1890s—along with the virtually simultaneous rise of a new sort of Lovecraftian horror writing—should prompt some reflection on the speculative genres' Darwinian rather than Einsteinian roots: that is, the debt that fantasy and SF authors owe to the fin de siècle's vastly expanded conception of the interpenetration of the human and nonhuman realms. In the late nineteenth century, evolutionary theory and the emergent "epistemic virtue" of objectivity come to shape not only the deterministic logic of naturalism, but also the otherworldly permutations of fantasy and science fiction, which register a scalar shift in humanity's relationship to a more expansive space and time—and to human interiors suddenly accessible in a range of new ways.[5]

Science fiction (initially styled "scientific romance" at the time of Verne and Wells, later "scientifiction" by the trendsetting American

periodicals edited by Hugo Gernsback and turned into "science fiction" proper by successors like John W. Campbell) explores the nonhuman within human existence—it is a crucial bellwether of changing human relations to the object as well as the animal world. Like naturalism, fantasy and Lovecraft-era horror, science fiction offered one way to make sense of the chasm between *events*—nonhuman in origin, scale and duration—and human *experience*—i.e., meaning-making distinctively shaped by individual subjectivity. These post-Darwinian experiments are unified by their focus on the cognitive "contact zone" where nonhuman forces impinge on the limits of human reason or imagination. With their advent, a vernacular *thing theory* unfolded—the legacy of which persists even into the present day, subtly shaping various forms of "posthumanism" and "object-oriented ontology."[6]

Taken together, recent accounts of the rise of fantasy as a modern prose genre, of the early days of science fiction, and of naturalism's affective innovations and explicit inversion of Idealism suggest that each genre was grappling with the resistance of a nonhuman universe to prior anthropocentric mandates and ontological presumptions.[7] The science fiction of H. G. Wells ("Realist of the Fantastic" was Conrad's apt title for him) and his successors worldwide (but especially in Great Britain and the US) is a complex and subtly varied response to the uncomfortable late nineteenth-century realization that man can no longer be the proper measure, nor perhaps even the proper study, of mankind. Registering the immensity of alien space and time even within the putatively knowable human realm, sublimates or sublimely displaces ordinary human agency within a vaster cosmos.[8] Simultaneously, the new/old genre of prose fantasy (sparked by the strange world-making late romances of William Morris, and then theorized by J. R. R. Tolkien as "subcreation" or the making of "secondary worlds") offers the marvelous as an exemplary subset of human life, life as it might be lived without the impedances of material actuality.[9] Naturalism, fantasy, and science fiction seem intuitively to be wildly disparate from one another—yet the fin de siècle efflorescence of enchanted and speculative tales is fueled by the same concerns about the insistent actuality of the material world as is disenchanted and determinist naturalism.

Notes

1. Darko Suvin, "On the Poetics of the Science Fiction Genre," *College English* 34, no. 3 (1972): 372–82.

2. Seo-Young Chu, *Do Metaphors Dream of Literal Sleep?: A Science-Fictional Theory of Representation* (Cambridge: Harvard University Press, 2010).
3. Cf. Roger Luckhurst, *Science Fiction* (Cambridge: Polity, 2005) and John Rieder, *Science Fiction and the Mass Cultural Genre System* (Middletown: Wesleyan University Press, 2017).
4. Fredric Jameson, "In Hyperspace," *London Review of Books,* 37, no. 17 (2015): 17–22.
5. The term "epistemic virtue" comes from Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007).
6. See Graham Harman, "The Well-Wrought Broken Hammer: Object-Oriented Literary Criticism," *New Literary History* 43, no. 2 (2012): 183–203; Eugene Thacker, *In the Dust of This Planet* (Ropley: Zero, 2011); Matthew A. Taylor, *Universes Without Us* (Minneapolis: University of Minnesota Press, 2013).
7. On fantasy as a modern prose genre, see Michael Saler, *As If: Modern Enchantment and the Literary Prehistory of Virtual Reality* (New York: Oxford University Press, 2012), and Jamie Williamson, *The Evolution of Modern Fantasy: From Antiquarianism to the Ballantine Adult Fantasy Series* (New York: Palgrave Macmillan, 2015). On the early days of science fiction, see David Wittenberg, *Time Travel: the Popular Philosophy of Narrative* (New York: Fordham University Press, 2013), as well as Luckhurst and Rieder. On naturalism's innovations, see Fredric Jameson, *The Antinomies of Realism* (London: Verso, 2013), and Toril Moi, *Henrik Ibsen and the Birth of Modernism: Art, Theater, Philosophy* (Oxford: Oxford University Press, 2006).
8. Matthew Beaumont's effort to link the rise of speculative, scientific, and utopic fictions to the way that at the fin de siècle time itself seems to be "off course, beside itself" sells short the complex apparatus that both science fiction and fantasy offer for managing human temporality within a temporally and spatially vast cosmos. In fact, early twentieth-century speculative fiction of Wells and his ilk may be linked to the experimental, off-kilter realism of late George Eliot and Henry James. Wells's half-departures from the actual suggest a new way of understanding modernism's debt to that fin de siècle moment, when speculative fiction of various kinds flourished not in distinction from realism but alongside it, borrowing its form and its tropes. Matthew Beaumont, *The Spectre of Utopia: Utopian and Science Fictions at the Fin de Siècle* (Bern: Peter Lang, 2012).

9. J. R. R. Tolkien, "On Fairy-Stories," *Tree and Leaf* (Boston: Houghton Mifflin, 1964), 3–84; Mark J. P Wolf, *Building Imaginary Worlds: The Theory and History of Subcreation* (New York: Routledge, 2012).

Sensation Fiction

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IN spite of our recognition of the blurriness of generic boundaries, we tend to reassert them where sensation fiction is concerned. There is value in understanding sensation in new ways—and potential political consequences when we do not. This is especially significant now that our critical study of sensation fiction has matured to the point that it is possible to offer reviews of the critical field, like those by Anne-Marie Beller and Mark Knight.[1] Even the most important work in the field on sensation has often reinforced the binary between sensation and realism.[2] The boldest moves have been made by scholars like Richard Nemesvari, who argues that Hardy understands and deploys melodrama and sensation in order to offer cultural and ideological critiques.[3] While challenging our sense of the genre's impact and engagement with realist fiction, it distinguishes sensation as a distinct mode. Emily Steinlight offers a similar analysis of Eliot's fiction and realist fiction more broadly (as I did in *The Private Rod*).[4]

In spite of the careful way in which critics seek to navigate the complex terrains of generic meaning, even these studies have persisted in treating sensation fiction as an excessive hyper-genre of the "not real"—a bit of flash and dazzle that emerged (or could be consciously deployed) in relation to or *in* realist fiction for effect. This seems striking given the fact that we have learned to explore real cultural phenomena like marital violence, the body, property law, and science in new ways from sensation fiction. While sensation often supplies the leverage to read against the grain, we often (perhaps unconsciously) return it to its generic box when we have completed the task.

One of the early critical treatments of sensation sought to blur the borders between genres. In his 1982 essay on sensation fiction, Patrick Brantlinger makes a Derridean argument that it is "impossible not to