

Science and Medicine

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This chapter covers works concerned with critical studies of science and medicine in cultural, literary, anthropological and theoretical contexts published during 2016 and, in one case, 2015. It considers works from the history of science, philosophy of science, anthropology of science and medicine, and medical humanities. It is divided into four sections: 1. Materiality and Governmentality; 2. Representations of Scientific Discourses; 3. Embodiment and Agency; 4. Animals and Environment. Certain thematic preoccupations recur across these sections: resonances between scientific paradigms and philosophical questions about human agency; questions of the boundaries between human and other life, particularly colonial implications of these concepts; the influence of representational forms on knowledge production; and, most centrally, the ongoing crises of climate and other environmental change.

1. Materiality and Governmentality

Several works reviewed in this section use metaphors drawn from science to inform social critique, most strongly in rejection of the legacies of colonial appropriation. Drawing on scientific understandings of matter and the new philosophies of materialism they have inspired, these works look to science for a new vocabulary that allows us to imagine human and other being anew, informed by insights that have redefined our understanding of matter.

Neel Ahuja's *Bioinsecurities: Disease Interventions, Empire, and the Government of Species* is a fascinating extension of biopolitical theory and the history of contagious medicine. It reorients our understanding of the human body as always dependent on the inhuman: 'medical technologies to extend, optimize or end life; markets and institutions that unequally distribute resources for sustaining life; environmental processes that support, deprive, or injure bodies' (p. vii). Ahuja examines how politics thus become embedded within living systems, including the human body, exploring how interactions among

patterns are visible in the other case studies, tracing the emergence of a public culture of science that has always—as Preston also shows—been entwined with literary conventions, contra the assertion that these two cultures quickly separated. By his careful attention to rhetorical practices at the level of sentence structure, adjective choice, and narrative organization, Tattersdill reveals how much nineteenth-century science relied on expertise learned from the humanities to frame its questions and communicate its results. Like Preston, he urges us to recognize the ongoing influence of rhetorical practice on how science is understood and, indeed, made.

Grant Wythoff's anthology *The Perversity of Things: Hugo Gernsback on Media, Tinkering, and Scientifiction* addresses magazines of the early twentieth century, specifically the work of Hugo Gernsback, best known as the 'inventor' of science fiction through his establishment of a few genre-specific magazines, chiefly *Amazing Stories* (1926) and *Wonder Stories* (1929). This is a well-known story, and Gernsback's editorials in fiction magazines and proselytizing for the world-transforming powers of this new genre have been frequently discussed. Wythoff adds an important new context for understanding this legacy, collecting Gernsback's editorials and articles from before he turned to science fiction: commentary on new technologies of communication, especially radio (wireless, as it was then called), improving upon and patenting new devices related to communications technology. Most of this volume is reprints of Gernsback's writing, from 1905 through 1932; it is printed chronologically, allowing the reader to see the development of his interests and positions on topics but Wythoff also offers a thematic table of contents that show constellations of topics: tinkering, history and theory of media, broadcast regulation, wireless, television, sound, scientifiction, and selections of Gernsback's fiction. It would be a mistake to see this work merely as an anthology, however, because it is also a substantial work of scholarship that makes two central arguments via curation. First, Wythoff contends that 'before it was a particular kind of story or plot, science fiction was a way of thinking about and interacting with emerging media' (p. 3), a thesis that demonstrates the importance of form at the intersection of science and literature. Second, Wythoff argues that we should understand Gernsback's legacy beyond his role in genre, reading this work as a media theory developed at a moment when the idea of mass communication (a form) was only beginning to be disarticulated from the novel technologies of dissemination.

Gernsback speculated about improvements of the material technologies—'the affordances of and possibilities inherent in the smallest individual components: the selenium-coated plate, the tungsten lamp, the chromic

plunge battery' (p. 4)—as much as he celebrated new literary modes adequate to the rush of progress into the twentieth century. Echoing Tattersdill's observations (and to a degree Preston's), Wythoff shows how Gernsback cultivated a mode of popular science that 'blurred the lines between illusion and truth, skepticism and belief' (p. 6) in magazines such as *Modern Electrics* (1908), *Science and Invention* (1926), or *Everyday Mechanics* (1929). Situating these writings within the full context of Gernsback's enthusiasms, polemics and inventions (*Modern Electrics* began as a mail-order catalogue for his physical Electro Important Company, and Gernsback held several patents) provides a vibrant portrait of a culture in transformation as mass media emerged. Each entry is substantially annotated, and these go far beyond the expected contextualization within contemporary political and other contexts. Wythoff supplies a remarkable range of references that show how ongoing scholarship media and technology studies continues and amplifies many concerns Gernsback raised, from histories of then-new technologies such as the battery or vacuum tubes, to media theory about waste and dead technology, to intellectual histories of innovation, to literary histories of popular fiction. The breadth of Wythoff's secondary references, alongside his deep knowledge of Gernsback's entire output, make the notes an exceptional reference work. This rich volume shows how many of the conversations about establishing radio, especially the shift away from hand-built sets and individual broadcasters toward manufactured receivers and state regulation, echo more recent ones about democracy and the Internet. This is a comprehensive and important work that reshapes our understanding of media history.

3. Embodiment and Agency

Scientific interventions into the human body and their implications for how we think about identity, agency, gender, and species, are addressed by several books reviewed in this section. Such work ranges in historical and geographical context from Early Modern England to twenty-first century Brazil, demonstrating that the body is a potent intersection for scientific and literary cultures. Whereas this nexus in print culture history produces modes of knowledge, the focus the body creates ideas about the human: its malleability or lack thereof; its gendered, raced, and classed qualities; its distinct capacities such as agency and consciousness.

Sara D. Luttfiring, in *Bodies, Speech and Reproductive Knowledge in Early Modern England*, considers how bodies and especially issues of reproduction—virginity, pregnancy, and birthing—create a space for

about ways to respond to ongoing environmental change, taking this name not from H.P. Lovecraft's ancient beings but from the Greek, where the root means 'of, in, or under the earth and seas'—that is, not from the sky, not the transcendent view from nowhere she has elsewhere critiqued. From this she argues that we should conceptualize humans as humus, seeing humanity as part of an ongoing lifecycle that includes consumption and decay (a perspective similar to Povinelli's discussed above). This framework also rejects the teleological vision of the Anthropocene in favour of a Chthulucene that is sympoietic instead of autopoietic. The sympoietic expresses how life evolved through exchange of genes, incorporation of some species into others and the like, and points to a possible future in which we might all yet become something else and thrive in a new multi-species world of radically altered sociality.

The final chapter builds on this promise, theorizing in the mode of storytelling as Haraway writes her 'Camille Stories' about future generations who remake the world out of our current contradictions and apocalyptic anticipations. These 'children of compost', whom Haraway imagines through several generations, do not have an easy or innocent time of remaking the world, and there are losses and extinctions as much as victories and change. By the end, Camille 5, who lives from 2340–2425, thrives in a world of deliberately created symbionts, future humans who have taken on genetic qualities of their endangered animal kin. *Staying with the Trouble* is a hopeful book about life and the future, but it is not a future for humans as we currently understand ourselves. Life and the world can continue, but we cannot continue as before. Yet the Camille stories are hopeful, showing how we can stay with the trouble and emerge into a new world of 'becoming-with others for a habitable, flourishing world' (p. 168).

Books Reviewed

- Ahuja, Neel. *Bioinsecurities: Disease Interventions, Empire, and the Government of Species*. DukeUP. [2016] pp. xvi + 262. \$22.46 ISBN 9 7808 2236 0636.
- Alaimo, Stacy. *Exposed: Environmental Politics and Pleasures in Posthuman Times*. UMinnesotaP. [2016] \$26.98 ISBN 9 7808 1662 8384.
- Capuano, Peter J. *Changing Hands: Industry, Evolution and the Reconfiguration of the Victorian Body*. UMichiganP. [2016] pp. 323. \$39.92 ISBN 9 7804 7205 2844.
- Cole, Lucinda. *Imperfect Creatures: Vermin, Literature, and the Sciences of Life, 1600–1740*. UMichiganP. [2016] pp. 240. \$39.95 ISBN 9 7804 7205 2950.

- Despret, Vinciane. *What Would Animals Say If We Asked the Right Questions?* Trans. Brett Buchanan. UMinnesotaP. [2016] pp. xix + 249. \$30 ISBN 9 7808 1669 2392.
- Frost, Samantha. *Biocultural Creatures: Toward a New Theory of the Human*. DukeUP. [2016] pp. 203 \$22.95 ISBN 9 7808 2236 1282.
- Haraway, Donna J. *Manifestly Haraway*. UMinnesotaP. [2016] pp. xiii + 336. \$10.50 ISBN 9 7808 1665 0484.
- Haraway, Donna J. *Staying with the Trouble: Making Kin in the Chthulucene*. DukeUP. [2016] \$26.95 ISBN 9 7808 2236 2241.
- Lutftring, Sara D. *Bodies, Speech, and Reproductive Knowledge in Early Modern England*. Routledge. [2016] pp. 231. \$148 ISBN 9 8711 3884 9426.
- Messeri, Lisa. *Placing Outer Space: An Earthly Ethnography of Other Worlds*. DukeUP. [2016] pp. 238. \$22.75 ISBN 9 7808 2236 2036.
- Moore, Jason W., ed. *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism*. PM Press. [2016] pp. 222. \$15.83 ISBN 9 7816 29631486.
- Nelson, Alondra. *The Social Life of DNA: Race, Reparations, and Reconciliation After the Genome*. Beacon Press. [2016] pp. 216. \$27.95 ISBN 9 7808 0702 7189.
- Povinelli, Elizabeth A. *Geontologies: A Requiem to Late Liberalism*. DukeUP. [2016] pp. 218. \$22.75 ISBN 9 7808 2236 2333.
- Preston, Claire. *The Poetics of Scientific Investigation in Seventeenth-Century England*. OxfordUP. [2016] pp. 273. \$67.45 ISBN 9 7801 9870 4805.
- Riskin, Jessica. *The Restless Clock: A History of the Centuries-Long Argument over What Makes Living Things Tick*. UChicagoP. [2016] pp. 548. \$32.21 ISBN 9 7802 2630 2928.
- Sanabria, Emilia. *Plastic Bodies: Sex Hormones and Menstrual Suppression in Brazil*. DukeUP. [2016] pp. 252. \$24.95 ISBN 9 7808 2236 1619.
- Shepherd-Barr, Kirsten E. *Theatre and Evolution from Ibsen to Beckett*. ColumbiaUP. [2015]. pp. xiii + 380. \$60 ISBN 9 7802 3116 4702.
- Tattersdill, Will. *Science, Fiction, and the Fin-de-Siècle* Periodical Press. CambridgeUP. [2016]. pp. 220. \$16.72 ISBN 9 7811 0714 4651.
- Vaage, Nora S., Rasmus T. Slaattelid, Trine Krigsvoll Haagensen, and Samantha L. Smith, eds. *Images of Knowledge: The Epistemic Lives of Pictures and Visualizations*. Peter Lang. [2016] pp. 237. \$66.95 ISBN 9 7836 3166 6647.
- Wythoff, Grant, ed. *The Perversity of Things: Hugo Gernsback on Media, Tinkering, and Scientifiction*. UMinnesotaP. [2016] pp. 358. \$34.98 ISBN 9 7815 1790 0854.