Mark L. Greenberg and
Lance Schacterle, eds.
Literature and Technology.
Bethlehem: Lehigh University Press; London and Toronto: Associated University Presses, 1992. Pp. 322.
US $45.00 (paper: ISBN 0-934223-20-3).

This densely informative anthology (Volume 5 in the Research in Technology Studies series) presents a cross-section of issues and ideas that arise when approaches to the relationship between literature and science are applied to the literature-technology relationship. Attention to texts remains a constant, the texts in this instance being fairly well known, most but not all originally written in English, published from ancient times till today. Analyses of the status and function of technology in these texts are provided by eleven scholars most of whom are engaged professionally in print media (mainly literature) studies. The exceptions are Carl Mitcham and Timothy Casey, each of whom is a philosopher directing a Science Technology and Society program. Together they conduct an 'archeological' dig into ideas old and not so old that yields four 'approaches' to philosophy of technology: engineering-based pro-technology, as exemplified by Germans Kapp and Dessauer; humanities-based inquiries into the impact of technology on human affairs, e.g., the work of Mumford and Heidegger; social science-based studies, usually in the form of a critique of technology, e.g., the writings of Marx or Ellul; and a classics-based approach that looks especially to Plato and/or Aristotle for leads. Some authors of the more narrow-gauge studies that follow associate themselves with one or another of these approaches, but most are more intent on locating their texts of choice along the pre- to postmodern spectrum.

Six articles in this collection deal with technology in deliberately literary texts, but several explore how the genre of technical writing evolved in early modern texts. Kenneth Knoespel shows how Renaissance writers introduced new machines to their readers by inserting them graphically into stage settings or literally into descriptions of technologically landscaped gardens. Robert Markley discovers the birth of scientific objectivity in successive accounts of how to create a vacuum with an air pump. From Robert Boyle's original discovery-oriented accounts to a later market-oriented redaction, the explanatory text was purged of theological and epistemological concerns and came to present almost exclusively 'a transhistorical view of science' (151) that respected the then emerging canons of objectivity. The resulting science/humanities dichotomy can be transcended, according to David Porush, by shifting to an open systems model of reality as espoused by chemist Ilya Prigogine's theory of dissipative structure and Eric Auerbach's 'Olympian survey of stylistic change' (296). In retrospect, these studies suggest viewing the history of technical writing as a branch of the history of ideas, as exemplified by such works as Edwin A. Burtt's *The Metaphysical Foundations of Modern Science*. But they are also linked to culture studies, as are

even more self-consciously so the studies of how technology is treated in texts intended primarily as literature.

Authors of fiction whose treatment of technology is considered include writers of graphic books for children, writers of spy novels, poets Geoffrey Chaucer, William Blake, and Jules Romains, and contemporary novelist Thomas Pynchon. Though otherwise disparate, each account asks how and against what background the writer being studied assesses the impact of technology on culture. Thus they are contributions to culture studies; and, perhaps for this reason, view technology broadly as including human organizations and institutions. At issue throughout is what attitude humans should have towards the technologies they encounter in their lives.

Sylvia Tomasch, viewing cartography as a type of information technology, finds in Chaucer a case study of theologico-environmentalism. In the Middle Ages maps though presented as factual were 'tools of conquest' and 'technologies of control' (68), notably in their establishment of Jerusalem as the earth's center and thus of the spiritual Jerusalem, Christianity, as the political center of authority. With Canterbury serving as the equivalent of Jerusalem, such cartographical theologizing enables Chaucer in 'The Knight's Tale' to fault King Theseus for modeling an amphitheater after a map with no Jerusalem. No less theological in his view of the function of art, Blake, who was also a skilled printer, rejected the then new print technologies in favor of more primitive methods that still left the artist in control of the media. Thus does Mark Greenberg guide the reader through Blake's artist-directed production of *The Marriage of Heaven and Hell*. Rosalind Williams, by contrast, finds more technophilia a century later in Paris. Living in a very different world in which humans with no theological constraints were progressing towards technologically perfected environments, Victorian era poet Jules Romains, inspired by urban architect von Haussmann, touted the ability of incidental groups of people to bring out the organic best in a technologically transformed city and, in time perhaps, continent as a whole. His ultimate disillusionment is a microcosm of the ambiguity and ambivalence towards technology characteristic of serious writers today.

Though light years apart in subject matter, writers of picture books for children (as analyzed by Judith Yaross Lee) and writers of spy novels (as presented by Joseph Slade) share a common goal, namely, to salvage respect for and appreciation of humans in the face of technological onslaught. Writers of 'kid-pic' books do so by focusing on people-friendly machines; writers of spy novels, by focusing on human agents as information gatherers rather than on the sophisticated technologies that have reduced them, like cowboys romanticized in the western novel, to obsolescence. Thomas Pynchon, according to Lance Schacterle, reiterates Heidegger by showing in his novels that people need to be assessors as well as users of technologies, because these technologies are not only our context but in part our very selves. From the perspective of human choice, then, the real conflicts are not between humans and technology but among different technologies or between the same technology used well or badly. Useful but woefully inadequate advice, as we stand

on the threshold of sweeping new culturally transformative information technologies.

These word-bites taken from richly researched pieces barely convey the extent to which each study merits more attention to details, though each reader will find a favorite or two among them. The overall effect is a sense that culture studies has much to teach philosophers who take technology seriously.

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Lawrence E. Johnson
Focusing on Truth.
London & New York: Routledge, Chapman and Hall 1992. Pp. 279.
US $65.00 (cloth: ISBN 0-415-07252-2);
US $17.95 (paper: ISBN 0-415-07253-0).

Lawrence Johnson, who teaches at The Flinders University of South Australia, sets out a critical survey of correspondence, pragmatist, coherence and deflationary theories of truth, together with his own positive thoughts on the question. He includes a chapter on Tarski's 'Concept of Truth' paper which is quite detailed, considering his overall non-formal approach, and which may be a help to those unprepared to digest the genuine article. But Johnson rejects Tarski's claim that 'true' is a metalinguistic predicate applying to the sentences of some formalized object-language. He is disposed to doubt that the proper use of the word 'true' has been reserved for a handful of logicians. Instead he will conclude that statements, or sentences-as-used in natural language are the appropriate bearers or subjects of truth and falsehood (130ff, 167). His view is that such uses of language cannot be 'fixed' or 'frozen' into a formal system because they cannot be adequately understood without allowing for the changing intents and purposes of speakers (110ff). It is further observed that there are statements of many different sorts: for instance, tautologies, negatives, existentials, and general statements. An inference drawn is, that we must beware of adopting too robust or too strong an account of what it is for something to be true (14, 81, 224f, 252, 262, 265f). Nevertheless, the claim that we cannot find anything definitive of true statements if held to err in another direction, for we are told that there is a single concept of truth to be explained (13f, 260, 262).

Johnson spends a few pages on the prosentential theory of truth, which denies that 'true' reveals any universal common to truths. According to this