



Computing as Writing. By Daniel Punday. Minneapolis, MN: University of Minnesota Press, 2015. 179 pp. ISBN: 9780816697021.

In the final chapter of *Computing as Writing*, Daniel Punday acknowledges his interest “in the nature of creative writing in the computing age” (p. 127). This comes as no surprise. From understanding Mark Zuckerberg in terms of a great artist (p. 54) to rendering Harry Potter’s quill as a command-line interface (p. 147), each chapter threads together an engaging discourse analysis of computing culture. Along the way, Punday asserts, at times problematically, the natural association of authorship with writing. Beyond this critique, the book nonetheless provides a unique angle for revisiting the well-worn canon of computing history.

Chapter 1 begins with *As We May Think*, a work that established Vannevar Bush as “the father of hypertext avant la lettre” (p. xiii). Punday’s take on Bush’s memex machine diverges from the traditional lineage of hypertext and toward the unresolved tensions between writing, computing, and knowledge work. Accordingly, he illustrates how the memex is sometimes described as an archive of professional work used to assist scientists to combine sources. In other passages, Punday reveals how personal notes created new knowledge through trails of association (p. 7). Punday argues that these contradictions are not an idiosyncrasy of Bush’s speculative writing. They are the discursive engines that drive under-determined relationships with our personal, yet abstract, corporate machines.

To explore the fluidity of these meanings further, Punday frames personal and professional computing practices alongside George Steiner’s distinctions between invention and creation (p. 10). As such, Chapter 2 dissects the memex along its professional and inventive seams. Exemplified by Ted Nelson’s hypertextual understanding of Bush, Punday deploys Derridan theories of deconstruction to explore how computing in a corporate context facilitates “unoriginal genius” (p. 27). Such genius is then mobilized within Richard Florida’s creative class where professionalized workers spend more time “manipulating symbols” than “physical materials” (p. 34). But as Punday is quick to point out, here lies a contradiction. The creative class, like writers, are articulated as both trained professionals and innate creatives. This attitude is also commonly applied to writers who are imagined as part of a profession “based on inborn talent or drive rather than something learned” (p. 38). Punday strengthens the connection by tying this attitude back to the historical emergence of the professional novelist as artist.

Chapter 3 picks up on this creative thread by contrasting typical depictions of computing with the portrayal of Mark Zuckerberg in the film *The Social Network*. Through a film comparison with *Desk Set*, he convincingly describes how representations of programming have taken on a biographical turn normally reserved for artists. Instead of the usual hacker-as-corporate-outsider plot (e.g., *The Matrix* and *Office Space*), *The Social Network* narrates Zuckerberg’s personal history as the creative force behind Facebook’s rise to ubiquity. Here, Punday presents the process by which our associations with writers-as-creatives has been transferred to programmers.

Having spent the first half of the book considering the circulation of knowledge workers amongst the concepts of creativity/invention and personal/professional, the second half delves into the devices and archives that are worked upon. It becomes clear, at this point, that the primary thrust of Punday's book is to reveal the contemporary conditions of authorial control. In Chapter 4, he delves into a fascinating comparison of how libraries exist as both literary and computational spaces. But in outlining these differences, his intent is to illustrate the necessity for authors to maintain originality within standardized ebook formats. This authoritative bent is again revisited in Chapter 5, where he explores the paradox that software technology is better protected through the legal framework of copyright for authors than the protections afforded inventors through patents.

As this direction suggests, there is an uneasy assertion of the primacy of authorial intent in Punday's book. This is best illuminated by detailing his thoughts on the ontological status of writing. In Chapter 2, Punday distinguishes his research from claims that equate writing with orality and computation. First, he calls into question both the Bakhtinian position that writing functions in a conversational mode and Cox and McLean's claim that code needs to be treated as a form of speech. He attests that these speech-based approaches are ill-equipped to account for how literature "transcends the immediate conversational moment" (p. 45). On a different front, he purposefully avoids the database and narrative debates within the digital humanities. As such, his research sidesteps the ontological quandaries of asserting whether computing is, or is not, writing. As observed by his choice of case studies, his focus is squarely on the shifting discourses that ascribe computing and writing as one another.

But such maneuvers do not avoid the implicit relocation of the essence of writing into the slipstream between creativity and invention. While this aligns with his interest in creative writing, it raises a curious question about the status of "non-creative" writing done by secretaries and typists. For Friedrich Kittler, a secretary or stenographer exemplifies a type of writing that is automatic and "says nothing of ... intention or understanding; it speaks only of speech" (1990, p. 228). But Punday does not take this position. While he shows how secretaries code and "prepare typescripts" (p. 10) for the memex, Punday surprisingly frames them in terms of an orality that limits Bush's desire "to be a writer" (p. 11). This brief mention constitutes a denial of their status as writers. Considering the topic at hand, the writing of secretaries and calculations made by human computers during Bush's period should have been obvious discourses to analyze. This oversight is not only a missed opportunity, but also another example of how computing histories often write women of this period into the margins.

Even with this critique in mind, Punday is not wrong in arguing that the discourses he studies revolve around notions of creativity. To this point, he succeeds most when his true intent is clear: to understand how authors are articulated as programmers and vice versa. If the book is read under these conditions, and not presumed to be tackling the ontological dimensions of computing and writing, then Punday has staked out new ground to understand the complex relationship between two of the most mythologized occupations of modernity.

Reference

Kittler, Friedrich A. (1990). *Discourse Networks 1800/1900*. (Michael Metteer, Trans.). Redwood City, CA: Stanford University Press.

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