

Bioinformational philosophy and postdigital knowledge ecologies, edited by Michael A. Peters, Petar Jandrić, & Sarah Hayes, Springer, 2022, 350 pp., USD109, ISBN: 978-3-030-95006-4 (e-book)

I volunteered to review this book as an act of self-discipline in order to ensure I read it with the sort of close attention that a review requires. This was not because I regarded myself as familiar with the leading concepts of the volume, quite the reverse. I was both intrigued and simultaneously slightly troubled by both the formulations ‘bioinformational philosophy’ and ‘postdigital knowledge ecologies.’ Having read the book, I remain so, but in a way that I think may be generative for my own thinking. However, of course, one doesn’t write a book review simply for oneself. As this journal’s book reviews editor, Sean Sturm, sets out (2022), it can be a form of a critical gift, so I hope I have succeeded in those terms, although I have not employed any of the more creative or extended approaches Sturm suggests in his piece.

Moving beyond the title, what is striking about the book is the sheer scope. It aims to provide ‘a cross-disciplinary overview of critical issues at the intersections of biology, information and society,’ focusing on the overarching questions of ‘Which new knowledge ecologies are emerging?’ and ‘Which philosophies and research approaches do they require?’ (back cover). On reading this, I was left wondering what fields of study were excluded from these huge categories and did fear that the project may be somewhat hubristic in its aspirations. However, the ambition of the piece also promised to provide a thought-provoking read. An important feature of this edited collection is that it is strongly guided by an editorial line provided by Peters, Jandrić and Hayes by means of the inclusion of four chapters published in advance of the book (Peters et al., 2021a, 2021b, 2021c, 2021d). This is presented as an experimental approach to an edited collection, with a chapter placed at the start of the three parts of the book, setting an agenda for each, with the fourth provided as a postscript. As this approach is foregrounded by the editors, and because these chapters provide the main set of arguments underpinning the volume, I have chosen to focus on these here. Returning to my misgivings about the title, I will discuss the core concepts presented by the editors throughout, as I regard them as open to contestation; this is of importance, given that these are being treated as a baseline for the rest of the volume. I cannot do justice to the large number of complex, rich and extended chapters in the space here, so I will highlight one from each section that I found of particular relevance to my work.

Chapter 1, ‘Biodigital Philosophy, Technological Convergence and Postdigital Knowledge Ecologies’ opens with a bold claim surrounding the emergence of two new paradigms, the first characterised as ‘bioinformationalism,’ defined as drawing ‘a close association between viral biology on the one hand and information science on the other to critically discuss the parallel structure of epidemics and infodemics and the nature of conspiracy in a post-truth world’ (Peters et al., 2022, p. 3). It is noteworthy that this contention is supported with reference to two other previous works led or authored by Peters; a sceptic might question whether this concept can really be referred to as an emerging paradigm, when so closely associated with the work of one theorist. The second paradigm is set out as ‘biodigitalism,’ which ‘also refers to the mutual interaction and integration of information and biology’ (Peters et al., 2022, p. 3), with reference to biodigital technologies such as DNA constructs. This is then linked to the concept of the *postdigital condition*, which

is described as ‘hard-to-define; messy; unpredictable; digital and analogue; technological and non-technological; biological and informational’ (Jandrić et al., 2018, p. 895, in Peters et al., 2022, p. 4). It was around this point that I noticed a further feature of the editorial line of this book, which can be described in one of two ways. It may be seen as highly coherent, in that the key concepts have been proposed and built on by the editors over several prior publications. However, it could also be criticised as being a somewhat self-referential academic echo chamber, restricted to a relatively small stable of authors. This, in my view, brings a potential problem of lack of critical distance on the central concepts, which are at times presented as uncontested, with some important lacunae regarding related literature from Science and Technology Studies, among other fields. Terms such as ‘knowledge ecologies’ are presented as given, without definition, which adds to the sense of a personal manifesto rather than an analysis. I would suggest, though, that if the reader accepts this, they will still find this a very thought-provoking volume, with rich and diverse pieces covering a range of perspectives. The rest of the first part includes Reader’s disquisition on ‘Biodigital Becoming,’ Johnson et al.’s ‘Reconceiving the Digital Network: From Cells to Selves,’ Bradley’s ‘On the Collective Algorithmic Unconscious,’ and Irwin and White’s ‘Techne and Indigenous Exosomatic Memory: Heidegger, Stiegler, and Cutting the Gordian Knot of Modernity.’ I found Johnson et al.’s interrogation of the notion of the ‘digital network’ particularly striking, drawing on the cybernetic roots of the contemporary concept of the network. Word limits prohibit a detailed review of this complex piece here, but, for me, the crucial contribution was their reinscription of the importance of boundary maintenance over connection with reference to cell biology, going on to discuss the implications for sociotechnical systems.

The second part is opened by Peters et al.’s ‘Biodigital Technologies and the Bio-Economy: The Global New Green Deal?’, which returns to the concept of biodigital convergence, discussing the emergence of the ‘bioeconomy.’ It is followed by Price’s discussion of ‘Agriculture 4.0: Bioinformationalism and Postdigital Hybrid Assemblages,’ Cope et al.’s ‘Maps of Medical Reason: Applying Knowledge Graphs and Artificial Intelligence in Medical Education and Practice,’ Royle’s ‘Cycling in the Time of the Biodigital: Small Acts Towards a Conscious Uncoupling from Non-Regenerative Digitised Economies’; and Neilson and Enright’s ‘From Dead Ecology to a Living Knowledge Ecology.’ I found Cope et al.’s chapter useful in their challenging from the outset the notion that the postdigital entails a full and undifferentiated merging of the digital and analogue; instead, they point out the fundamental difference between the two. With reference to three funded projects focused on healthcare, they elaborate the thesis that the biodigital is both ubiquitous in terms of the proliferation of computable information in contemporary medicine, but, importantly, is also oxymoronic as a concept due to the bio and the digital being irreducibly different in their nature.

The third part focuses on ‘Teaching and learning in postdigital knowledge ecologies’ and begins with Peters et al.’s ‘Postdigital-Biodigital: An Emerging Configuration.’ This chapter takes the form of a ‘dialogue’ between the editors in which they each discuss a different aspect of their theme, exploring ‘cracks and tensions’ between their positions. This is engaging, although the format arguably allows for a degree of polemicism as opposed to argument per se; I would have appreciated some balance, particularly in the discussion of the

biodigital, which read as implicitly transhumanist in its orientation. Posthuman theory is only lightly touched on, with a focus on Braidotti (2019); I would have brought in Hayles's technological posthumanism here (e.g., Hayles, 2005/1999). The discussion of postdigital education I found to be a strong element, with some thoughtful points raised about what that concept might mean. The rest of this section consists of Gennaro and Kellner's 'Digital Culture, Media and the Challenges of Contemporary Cyborg Youth'; Pappachen and Ford's 'Spreading Stupidity: Intellectual Disability and Anti-Imperialist Resistance to Bioinformation Capitalism'; Webb and Mikulan's 'Decolonising Racial Bioinformatics: Governing Education in Contagion and Dehiscence'; Sinclair's 'Competing Pedagogies for the Biodigital Imaginary: What Will Happen to Teachers?'; and Bennett and Jopling's 'The Global Pandemic Did Not Take Place: Cancellation, Denial and the Normal New.' I found Sinclair's consideration of educational and sociotechnical imaginaries surrounding teachers to be a very rich historical review, which examines the ways in which the agency of teachers has been undermined by appeals to technology. This meticulously researched piece also explores how the COVID-19 emergency allowed a particular algorithmic imaginary to infiltrate education at all levels.

Overall, this is a very thought-provoking, rich and diverse collection that provides multiple avenues for thought and response in terms of how these concepts might be used, challenged, and developed to provide theoretical purchase on a broad set of themes pertinent to contemporary life. Focusing particularly on education, part III is of particular interest as a series of critical and incisive responses to the contemporary predicament post pandemic, giving us important conceptual apparatus with which to resist the various 'discourses of inevitability' surrounding the relationship between the human, the algorithmic and the automated in education.

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