

**Maja Bak Herrie (2025) *Thinking Through Data: How Outliers, Aggregates, and Patterns Shape Perception*. Stanford: Stanford University Press. 166 pages. ISBN: 9781503641891**

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Ronald Fisher, the instigator of modern statistical science, once wrote that “the statistician cannot excuse himself from the duty of getting his head clear on the principles of scientific inference, but equally no other thinking man can avoid an obligation like that” (Fisher, 1971[1935]: 1–2). Reflecting on the metaphysics of how knowledge is produced, Fisher, perhaps inadvertently, as such pointed to the existence of a heterogeneity between statistical modes of thought and ways of acting in the world. For calculating practice involves ordering uncertainty into form, while knowing, in the back of your head, that this world of ours exceeds ordering. This very tension has become a frequently revisited theme in STS, and in *Thinking Through Data* (2025) Maja Bak Herrie distills it on the very first page into the question: “What does it mean to see the world through a curve?”

As a monograph, *Thinking Through Data* does not assert its relevance through topical urgency, as of roughly the 300 references of the book, fewer than twenty have been published after 2019. Instead, it claims relevance by foregrounding an intellectual method for unfolding the historical building blocks of computational practices and data-driven knowledge, while maintaining sustained attentiveness to aesthetic perspectives. In doing so, at its best, the book takes on an almost timeless quality, combining technology, art, and philosophy over the ages. As each chapter, centered on statistical notions of

outliers, aggregates, and patterns, follows a genealogical rhythm, they trace historical trajectories, prevailing attitudes, and shared dispositions of data-centered knowledge production.

Each chapter of the book centers on artistic works as points of reference, ranging from textiles and CCTV images to conceptual data mappings. These works are then used as reference points that help the reader “think with and along art” (p.16). This is done by tracing a series of connections between the artworks’ function and intention, allowing the works to be placed in relation to different perspectives on outliers, aggregates, and patterns respectively. As a disposition, beyond creating a dynamic reading experience, this adds to the reader’s understanding of the components of computational practices and forms of knowledge from many different angles. Approaching what might be read as Fisher’s idea of ‘principles,’ that is, the production of knowledge in and through data, computation and statistical work, the book also advances a central premise. Building on the Foucauldian notion of the *dispositif*, data (or whatever is at the heart of each computational context) in our data-driven era can be conceptualized as a specific *digital object*, conceived as shifting within the frames that render it operative (pp. 4–5).

The use of artworks as references gives each chapter its own cadence. And though the use of artistic and visual projects to illuminate data practices is not new (see e.g., Loukissas, 2019), Bak



Herrie employs this strategy with notable narrative care. Artistic works, philosophy, and computation converge to create new spaces for thinking about statistical knowledge and practices – spaces that gesture toward how we have thought and how we might think otherwise. On that note the chapter on *patterns* stands out for me personally. Centered on Stéphanie Solinas' project *Dominique Lambert*, it develops a nuanced discussion on practice and thinking related to recurring sequences in data, mobilizing both the Deleuzian concept of virtuality, critical data studies, and selected works from the digital humanities. Ultimately, the convergence of artistic piece, the genealogy of computational practices, and philosophical elaboration on knowledge creates a very precise space for elaboration on knowledge creation.

However, viewing the book as a contribution to the scholarly literature on data, less precision is afforded to the book's central concept: the digital object. Although recurrent throughout the text, its analytical relevance is not always fully convincing. This may partly reflect editorial choices, as the rationale for using the contested term *object* appearing relatively late in the book (on p. 117). But also, although the book presents the concept as a necessary intervention, claiming that it "opens up" or "offers an entry point" (p. 118), and while each chapter concludes with a reflection on the digital objects disposition and use, a lingering lack of arguments regarding its specific analytical relevance remains. For one, the ambition to "investigate the heterogeneous digital field" (p. 4) does not clearly distinguish the digital object from already existing dispositif-oriented approaches, such as the data assemblages proposed by Kitchin and Lauriault (2018) or Boyd (2022), or Dourish's

(2017) notion of the multiple, mobile natures of information. Moreover, while considerable elaboration is devoted to 'the digital' in outlining the concept, the 'data' we are meant to think through remains comparatively underexplored with regards to approaches in pre-existing literature. By contrast, more data-centered theories drawing on heterogeneous dispositifs, such as Fussell's outline of assemblages and discursive definitions of data (2022), Koopman's (2019) or Isin and Ruppert's (2020) reflections on digital subject formations, or the literature on data domains and computational universalism (Ribes, 2019; Lee and Ribes, 2025), offer similarly motivated but more precise conceptualizations. Reflecting on this, it seems like the book's cultivated sense of timelessness occasionally comes at the expense of its potential timely relevance regarding the epistemological and ontological stakes of data in the mid-2020s.

Nevertheless, I would argue that in *Thinking Through Data*, Bak Herrie's principal contribution lies in the fusing of art piece, philosophical underpinning and reflection on data as a form of method. It offers readers, individually or collectively, an aesthetic-philosophical handbook for elaborating on spaces where computations unfold. As a collective reading, it would be particularly well suited to doctoral courses or reading seminars engaging critically with data. For the individual reader, it offers both a nuanced genealogy of data-thinking and an invitation to think through data in both familiar and new ways. Well-researched and generous, and with a keen eye for the narrative art, it does not resolve the tension Fisher alluded to. It rather leaves it open, as it should, asking what it means to see the world, and what must always remain beyond the curve.

## References

- Boyd C (2022) Data as assemblage. *Journal of Documentation* 78(6): 1338–1352.
- Dourish P (2017) *The Stuff of Bits: An Essay on the Materialities of Information*. Cambridge: MIT Press.
- Fisher R (1971) *The Design of Experiments. Ninth Edition*. First edition published in 1935. New York: Hafner Press.
- Fussell C (2023) Four data discourses and assemblage forms: a methodological framework. Working Paper 1. SocArXiv pre-print working paper version 3 (8 February 2023). <https://doi.org/10.31235/osf.io/jvcqw>
- Isin E and Ruppert E (2020) *Being Digital Citizens. Second Edition*. London and New York: Rowman & Littlefield.
- Kitchin R and Lauriault T (2018) 'Towards Critical Data Studies: Charting and Unpacking Data Assemblages and Their Work'. In: Thatcher J, Eckert J and Shears A (eds) *Thinking Big Data in Geography: New Regimes, New Research*. Lincoln and London: University of Nebraska Press, pp. 3–20.
- Koopman C (2019) *How We Became Our Data: A Genealogy of the Informational Person*. Chicago: University of Chicago Press.
- Lee F and Ribes D (2025) Computational universalism, or, Attending to relationalities at scale. *Social Studies of Science*. <https://doi.org/10.1177/03063127251345089>
- Loukissas YA (2019) *All Data Are Local: Thinking Critically in a Data-Driven Society*. Cambridge and London: The MIT Press.
- Ribes D (2019) How I Learned What a Domain Was. *Proceedings of the ACM on Human-Computer Interaction* 3(CSCW): 1–12.