Book review

Are more details better for deep histories?[1]

Armin Schulz: It's only human: The evolution of distinctively human cognition. Oxford: Oxford University Press, 2025, 272 pp, £64.00 HB

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An increasingly popular project in cognitive science is to assemble what have been called "deep histories" (Smail, 2008). While shallow histories are interested in the events reaching back to human antiquity, deep histories are interested in the events by which humans became so different from non-human animals. Armin Schulz develops a new deep history in *It's Only Human: The Evolution of Distinctively Human Cognition*. His core thesis is that distinctively human cognition emerged through positive feedback loops between three basic elements: cognitive representations, technology, and cultural learning.

Deep histories are fraught with methodological challenges. Schulz (p. 5) is especially interested in meeting the challenge that that "if done carefully, theories of distinctively human cognition result in insights that are minor and narrow only" (see, e.g., Kitcher 1985; Buller 2005). Schulz promises to "sketch an explanatory schema of sorts" for telling a deep history that is both careful and insightful. Thus, he characterises his project as "detail[ing] a *methodological framework* for approaching the question of the nature of human cognitive uniqueness" (4, emphasis in original).

There's much to like about the details of Schulz's deep history, but it's unclear how much of a methodological advance it represents. At the outset, he unambiguously denies that his account aims at completeness: "it is not a *full* account of *all* aspects of the nature and evolution of distinctively human cognition. This sort of account cannot be provided here or anywhere" (3–4, emphases added). As the book proceeds, though, most of the main argumentative moves that Schulz makes betray an aim at completeness. Consider, for example, the following two passages, criticising other deep histories:

> Both [accounts] struggle to make sense of the full gamut of features surrounding human mindreading—although [they] also seem to get important aspects of the evolution of human mindreading right. The obvious solution is thus to combine these accounts. (109)

> The present account shows that while the picture sketched by Zawidzki is compelling as far as it goes… it is not *all* that is going on here. Indeed, the present account expands Zawidzki's theory along two dimensions." (122–123)

The complaint with these alternative accounts is that they leave out details—they are incomplete. And the solution is to add more details—to make them more complete. For Schulz, it seems, more details are better (cf. Batterman & Rice 2014; Chirimuuta 2014).

Schulz characterises his methodology as "synthesizing work in many different fields… into a coherent overarching picture" (4). Syncretic projects often struggle with what we can call *unrestrained completionism.* After all, coherence is cheap: it isn't too difficult to make different explanations coherent with each other. Thus, adding more details tends to be relatively easy with a little ingenuity. This is a serious problem: it risks trivialising both critique (which becomes a matter of noting only that details are

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missing from the received views) and progress (which becomes a matter of adding in those missing details). A standard response to unrestrained completionism in the philosophy of science is to invoke some standard of relevance: more *relevant* details are better, not more details per se (cf., Craver & Kaplan 2020). Consistent with this response, Schulz seems to be assuming some kind of relevance, in that he argues for a big history that includes just three basic elements—cognitive representations, technological innovation, and cultural learning—with positive feedback loops between them. Surely, there are more details he could add to this picture, but he abstains from this, presumably because they strike him as irrelevant. Unfortunately, Schulz doesn't explicate his implicit standard for relevance. This makes his deep history difficult to evaluate, both in isolation and compared to other deep histories. Yes, his account incorporates more building blocks with more causal interactions than other deep histories. But are these additional details relevant? Also, why should we think the details left out of his account are irrelevant, but the details left out of rivals to his account are relevant? Without answers to these questions, it's possible that other deep histories are better than Schulz's because they leave out more irrelevant details.

Another standard response to unrestrained completionism is to invoke *contrastive* explanation. For example, countless details may be relevant to explaining the entire event of Socrates' death, from the amount of food Socrates ate that morning to the oxygen levels in his room. However, much fewer details will be relevant to explaining a specific contrast concerning that event: e.g., only the fact that Socrates drank hemlock rather than wine explains why Socrates died rather than lived (Craver & Kaplan 2020). Thus, it is an explanatory achievement to single out a contrastive explanandum that is (a) *narrow*, such that it's possible to cite all relevant details for a complete explanation of the explanandum, but (b) *interesting*, such that it is worth explaining. Schulz's account neglects the achievement of singling out an interesting but narrow contrastive explanandum. After all, Schulz takes up a broad contrastive explanandum in Chapter 1: why is human cognition capable of a certain inventory of uniquely human cognitive achievements, but non-human cognition isn't? He then fills this inventory in Chapter 2. It's telling that his inventory is *large* and *diverse*—not what we'd want if we were interested in restraining our completionist impulses with a restrictive standard of relevance. This is a set-up issue that I don't think his account can get past. Schulz's account isn't alone: this is a common problem for deep histories.

Completeness and relevance are both difficult issues for explanation. One effective way to sidestep these issues is to shift focus onto the *appropriateness* of an explanans to an explanandum. In other words, deep historians could focus their explanations on disagreements about the *right kinds of ways* to explain given facts. There are many points throughout Schulz's book where he pulls this kind of dialectical shift (only to return to his completionist, syncretic project later). In my view, these are some of the most insightful points in the book. One example is his insight in Chapter 2 that uniquely human cognitive traits such as possessing language have "multi-level" structure, exhibiting complex interactions between simpler cognitive traits at lower-levels (e.g., the depth and control of human attention) and higher-levels (e.g., the ability to represent abstract concepts). Thus, he convincingly argues, accounts that cite complex, multi-level cognitive traits are better suited to explaining uniquely human achievements than accounts that cite either low- or high-level cognitive traits alone. Note that this point is persuasive regardless of our views of explanatory completeness or relevance. It's a point about accuracy, about what actually explains what.

Perhaps the most important example is his insight in Chapter 4 that explaining most human differences just by appeal to differences in a few key capacities (e.g., our representational, technological, or cultural learning capacities) is the wrong kind of explanation. After all, such explanations also struggle with proportionality: the differences in each explanandum are so big that it would require big differences in each explanans. To bridge this proportionality gap, Schulz appeals to "positive feedback loops" between these capacities, which can eventually culminate in the large differences in the explanandum (his

uniquely human cognitive inventory). This is a good solution, but I'm not sure how novel it is: e.g., see Gaus (2021) for a more detailed account.

If Schulz had leaned into an analysis of these ideas, instead of just the synthesis of many ideas, I'm convinced he could have drawn out interesting differences and advantages of his insights compared to rival accounts (like Gaus'). But Schulz prefers synthesis to analysis. Of course, there's nothing wrong with synthesis, so long as we restrain our completionist impulses. To do this, we need to be explicit about our standards of relevance, so they make possible more ways of progressing than simply "adding more details" and more ways of critiquing than just noting that "details are missing." Schulz doesn't offer a standard of relevance (a common problem for deep histories), so the jury is out on how we should evaluate the deep history he tells.

References

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