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Published on H-Sci-Med-Tech (August, 2024)

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Lukas M. Verburght’s edited volume brings together many leading scholars, paired up to consider a few of the most exciting areas and subfields within the history of science. Some chapters offer a helpful chronological recapitulation. The majority, however, are more open-ended, focusing on future practice and grappling with thorny conceptual issues. As a whole, the volume demonstrates how profoundly entangled theory and methodology, ethics and empirical study are in the history of science. In a sense, the question of what the field under discussion even is, here, looms unresolved. Not all the chapters seem to be defining their subject within overlapping boundaries: the scope and terminology range from the “history of science” of the title to science and technology studies (STS), history and philosophy of science (HPS), and history of knowledge. This definitional plurality at times results in incompatible perspectives, but it also appears to be conjoined by deep undercurrents.

The opening section on the global history of science serves as an excellent entry point to many of the themes of the book. In it, James Poskett sets out three possible definitions of the subfield’s concerns: the “historical,” the “spatial,” and the “worldly.” The first two categories stand for approaches that, looking back in time and/or looking around in space, incorporate zoomed-out and multipolar perspectives on knowledge formation, often based on notions of connected situatedness, of “circulation” and “friction.” The third definition, instead, is concerned with recovering “emic” understandings of the globe as a unit: a view of the “global” as “planetary,” which, Poskett seemingly suggests, may be a recent development. In his response, Gianamar Giovannetti-Singh rejects this implicit claim of novelty, raising several apt examples of premodern “global” perspectives—of people who explicitly saw themselves within a global picture. As an alternative to Poskett’s model, he suggests that, if we are to search for a dis-
tinctiveness of modern approaches, perhaps we should look to the specific quality of the sources of historical scientific worldviews—sources that, in his opinion, are to be found in socioeconomic, political, and environmental crises. This suggestion is refreshing, because it integrates specificity and causality into the discussion of intellectual change. In his rejoinder, Poskett is then prompted to add a new dimension to the conversation, stressing “how the methodological relates to the political” and how his “case” for a tripartite but linked articulation of the topic is in fact “normative” rather than analytical (pp. 39, 41). This seems to bring into relief a key question that underlies his original categorization. One could argue that there is an important distinction between doing history of science through a global approach, which pertains to Poskett’s first two definitions and is a matter of methodology and program, and studying the history of how people have envisioned their reality in a global form (if at all), which defines a specific topic of research. In short, are we concerned with devising and deploying explanatory models of the past or with unearthing and understanding past explanatory models? Sociologist Rogers Brubaker and historian Frederick Cooper have insisted on the importance of this difference between “categories of analysis” and “categories of practice,” which echoes the related one between “etic” and “emic” approaches mobilized by Poskett (p. 25).[1] Perhaps the temptation to blur this distinction speaks to a fundamental epistemological issue, which pushes the history of knowledge to prioritize reflexivity and fold onto itself, merging subject and object, method and content. Or perhaps the crux of the question is ethical: how far do our analytical frameworks stem—or should stem—from normative principles, and vice versa?

Such concerns shape other sections, too. An example is the one focused on “multispecies” history of science. In a rich and articulate chapter, Raf de Bont sketches the outlines of the subfield and argues that “a multispecies history of science can be empirically challenging” (how do we recover genuine “animal agency”?) but is “not necessarily radical in terms of theoretical positioning” (p. 197). Sabina Leonelli’s comment strongly questions this assertion: definitions of “agency,” and the very structure of “historical narratives,” are inescapably human. How do we even write histories of animals and science that do not distort, silence, or fundamentally ignore the animals’ perspectives? Questions of method are questions of theory and ethics, and vice versa. This echoes across other chapters: for example, Johan Gärdebo and Libby Robin’s section on environmental history of science, where the tension between global climate models and local practical knowledge is neatly emphasized; or Marieke M. A. Hendriksen’s chapter on performative history of science (the material recovery of past scientific practice), which disputes the possibility of “perfect historical accuracy” in reconstructing and reliving “embodied experience” from the past; or, in fact, Jouni-Matti Kuukanen’s comment on the chapter “History of Scientific Ignorance,” problematizing the very notion of “ignorance” if the chosen framework is “a non-representational conception of historiographical knowledge” (pp. 223, 306). Somewhat surprisingly, this theme is not present in the section on computational history of science, which is entirely devoted to a description of institutional structures and practical barriers rather than epistemological questions: this is a slight shame, as the subfield is a prime battleground for discussions of the fitness and ethics of representational models.

Overall, we can rationally accept a distinction between “categories of practice” and “categories of analysis,” but what many of these contributions seem to say is that such a gap, the deploying of analysis that superimposes our own knowledge and values on the object of study, can sometimes be unethical, epistemologically problematic, and/or potentially violent. Erasing it requires us to align analysis with our object’s own perspective, turning her or him or it more properly into a sub-
ject. Yet where this leaves our sense of overview and small-scale understanding remains unclear. Here we witness a potential rift between the Kuhnian caricatures of history and philosophy of science—“history as a matter of stringing together particulars, and philosophy as a matter of abstracting from particulars to reach generalizations,” as Max Dresow summarizes them (p. 143). In their section on integrated history and philosophy of science, Dresow and Hasok Chang rightly reject this crude distinction, but we could say that, even if more variedly distributed across both disciplines, these two fundamental poles of intent persist. How far they can coexist seems to be what is most deeply at stake across this book.

The consequences, in fact, run even deeper, and they result in a fundamental question of communicability. In a sense, many of the contributions in the volume, including those I have just cited, grapple with the challenge of what Lydia Patton, in her chapter on neo-Kantian, post-Kuhnian approaches, terms “cross-framework” analysis (p. 108). Throughout, the question of ethics is never too far below the surface. When the guiding ethical paradigms of the historian transcend the internal tenets of the discipline, but attempt to rely on its established methodological frameworks, new, fruitful practices can be created, but the very edifice of the construction of meaning shakes and risks to crumble. This type of conundrum reaches its extreme conclusions in the call, coming from some areas of postcolonial and Indigenous studies, to set aside epistemological relativism in favor of “ontological relativism,” or “ontological symmetry”: this would avoid dismissing different cultural models of reality simply as “beliefs,” and lead us to envisage, instead, a “pluriverse” (pp. 50-53). As Suman Seth points out in his contribution, this suggestion comes from an admirable place, but it potentially mobilizes more intellectual problems than it solves. The most pointed one is an essentialization of “groups” that would have as its logical conclusion the fragmentation of humanity’s varied realities down to one per individual. For historians, studying a “pluriverse” would seem corrosive of the entire discipline—starting with its structures of empirical evidence and argument and ending with (literally) a lack of common referents that makes true conversations an impossible non-starter. As Naomi Oreskes puts it in her chapter on agnotology, historians, unlike science studies scholars, here are tempted to “sidestep epistemological morass,” partly because a total refusal to countenance notions of “truth” and “falsehood” also has its own set of ethical consequences (climate change denialism being, naturally, a key example), and “neutrality” “implicitly places us on the side of the status quo ante,” or, in other words, “the powerful and highly franchised” (p. 328). In a way, this is also a key point raised, from a different angle, by Meredith Alberta Palmer’s profound response essay to Seth’s, and by the two authors’ joint conclusion: coming from within established, hegemonic structures of academic thought, even relativism can be a silencing of other voices. This is particularly true if its function is reduced to satisfying an aspecific thirst for “unfamiliar” knowledge, sought merely because of its power to “make strange” someone’s reality, and broaden their horizons: the focus remains on inward transformation rather than genuine connection (pp. 67-68). Similarly, in her comment on neo-Kantian HPS, Katherina Kinzel acknowledges the fact that “a reconciliation between pluralism and progressivism,” in its most immediate form, would entail preserving a “hierarchy” in ethical terms (p. 113). But perhaps what this means is that ultimately, within the history of science as it stands, we lack both the predisposition and the intellectual tools to incorporate some important ethical insights and form solid, unproblematic conversations. Maybe we are, on some level, structurally talking past each other.

Optimists, like Joanna Wharton in her comment on gender history, may see opportunities in this— a transcending of the problematic “big turns” in favor of “the idea of an undisciplined or messy plurality of approaches” (p. 92). If we take
this to mean merely a wealth of perspectives within a similar paradigm, there is no doubt that the way is open. But if we dig deeper, and reach fundamental structural and epistemological questions, how one would retain the notion of a discipline (a profoundly Foucauldian term), while allowing undisciplined plurality the space it might ethically deserve, remains a conundrum that none of the excellent contributions in this book really begin to solve. This is not to say that it is unsolvable. The format of the book is innovative: each theme is structured as a chapter by a scholar, a brief commentary by a second scholar, and a rejoinder from the original author. While in journal issues such a pattern can often bespeak rather ugly, impromptu feuds, the collaborative nature of this project makes the debates in it a refreshing and inspiring exercise in professional and intellectual courtesy. Inevitably, some of the pairs write slightly past each other, or past everyone else, but the format avoids both the unified, unchallenged (and thus perhaps diluted) statements of the traditional textbook and a simple “roundtable” juxtaposition of voices that might have turned chaotic and confusing. It may be that the way forward across the theoretical thickets discussed above is ultimately practical and that the dialogic (rather than simply dialectic) format of the book lays down a good template for it. Seth and Palmer’s choice to cowrite the response to their two pieces on Indigenous/postcolonial history of science shows a heartening example of serious commitment in this direction.

While invaluable for scholars and students within HPS (or STS, or the sociology of scientific knowledge), this volume would also be a very useful read for researchers across the humanities and social sciences. The image that it conveys is one of a field (or potentially a multiplicity of fields) that takes ethics seriously, relies on deep dialogue among a concert of voices, and raises more questions than it answers: in short, a field that seems firmly oriented to—in fact, almost dependent on—the future.

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