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Review: Boddice on Strasser: 127-128

Bruno J. Strasser, "The Experimenter's Museum: GenBank, Natural History, and the Moral Economies of Biomedicine." *Isis* 102.1 (2011): 60-96.

In 2007, Lorraine Daston and Peter Galison observed that "epistemic virtues do not annihilate one another like rival armies. Rather, they accumulate." Moreover, "When epistemic virtues confront one another, so do scientific selves [. . .] Where one side sees a breach of scientific integrity, another may see loyalty to the discipline's highest standards" (*Objectivity*. Brooklyn: Zone Books, 2007: 363, 367). This analysis succinctly summarises the main argument of Bruno Strasser's article, which is a natural companion piece to the history of the scientific 'atlas' that Daston and Galison have so richly described. Strasser's article about the construction in the 1980s of GenBank, an open-access digital repository of nucleic acid sequences, weaves a narrative around a clash between the experimental and natural-historical scientific traditions. That narrative is compelling, and the argument intriguing. The article connects the rise of the computer database with the natural-historical collecting traditions, from early modern *Wunderkammer* to Victorian museums and botanic gardens. It carefully and thoroughly documents the intellectual, inter-personal struggle that resulted in the creation of GenBank and the emergence of what Strasser describes as a "hybrid culture" in which the experimental method that produced individual sequences was combined with the natural-historical method of collation (61, 96). This "hybrid culture" of practices, he argues, signalled the end of the "predominantly experimental tradition" in the life sciences (96). Its coming into being involved the sometimes fractious encounters of individual scientists and their respective institutions. This scientific cultural antagonism centred on differences of received opinion about the ethics of scientific credit, attribution, and rights of ownership. If a hundred scientists create a hundred DNA sequences, can the collector of all one hundred make a proprietary claim on the collection? What rights do the individual producers of those sequences retain?

Strasser engagingly describes this antagonism as a clash of "moral economies," (63) detailing the ultimate failure of the proprietary model and the emergence of a new model of scientific practice, wherein experimental and collecting methods are combined. If there is a major criticism, it concerns the depth of this analysis. Strasser overlooks Daston and Galison's seminal work, and relies on a theoretically incomplete or unclear notion of what a 'moral economy' is. Strasser's 'moral economy' has its provenance in E.P. Thompson's *Making of the English Working Class* (1963), via Robert E. Kohler's *Lords of the Fly* (1994). His definition of moral economy as "the system of values that underlies the exchange of scientific knowledge" (63n) never quite does justice to the extent to which value systems are affect-laden and manifested through practices. The distinction between an ethical culture and a moral one is rather ambiguous here. This results in a critical shortcoming in the conclusion, where Strasser misses an opportunity to unite the values of scientific disciplines with their respective practices, under the terms of *affect*. Instead, he sees two distinct and uncertainly related "major historical transformations," in "moral economies" and in "research practices" (90). The first, he argues, was caused by the rise of an open-access culture within academia; the second was caused by the development of electronic databases.

If Strasser had engaged with Daston's own development of the moral economy as a category of analysis it is doubtful that he could have maintained this separation of values and practices. Daston's *Osiris* article entitled "The Moral Economy of Science" (2nd ser. 10 (1995): 2-24), which is really the intellectual blueprint for *Objectivity*, invigorated the concept of a moral economy by tying scientific practices to collective psychology. 'Doing' science according to entrenched cultural norms is an affective and reflexive process bound to the scientific self. There is no distinction between moral prescriptions that are framed by disciplinary boundaries and the methods of practicing science within those disciplines. It would therefore be fruitful to combine Strasser's two historical transformations and recognise that "research practices" are an integral, affective, self-defining part of the moral economy of science. There are enough clues in Strasser's article to demonstrate the possibility of the argument's development. Throughout, Strasser refers to values (63n, 83), sentiments of injustice (63n), confidence (68), a "sense" of ownership (72), scientific satisfaction (83), and conceptions of legitimacy (96) without explicitly connecting these emotional cultures, through the word 'moral,' to the scientific activities that are both their cause and their effect. This missed opportunity aside, "The Experimenter's Museum" makes a valuable contribution to a growing awareness of cultural interpretations of scientific practices.

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