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# Review of Derek D. Turner, *Paleoaesthetics and the Practice of Paleontology*

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**PALEOAESTHETICS AND THE PRACTICE OF PALEONTOLOGY. Derek D. Turner.**

2019. Cambridge: Cambridge University Press. 83 pp. \$18.00 (Softcover).

In this volume of the Cambridge Elements in the Philosophy of Biology, Derek Turner brings to light the aesthetics embedded in the practice of paleontology. Turner's claim runs along two directions. The first one uncovers the intermixing of epistemic and aesthetic values occurring in the study of fossils, and how the acquired knowledge about the deep past eventually transforms one's aesthetic appreciation of fossils and landscapes. It is to this deepening of experience that Turner refers when using the neologism 'paleoaesthetics'. The second one focuses on the role of aesthetic judgments in the interpretation of fossil data and the solving of problems. From the epistemic to the aesthetic and back again, this essay forces the reader to critique the too often assumed incompatibility between the two dimensions. Turner makes the decision to explicitly address his peers in the philosophy of science community from the very first line, but historians of paleontology and geology have much to gain from this contribution as well.

Due to the synthetic nature of this essay, Turner's ambition is kept to a strict formula: "My primary goal is to show that the paleosciences have an aesthetic dimension" (Turner 2019, p. 5). This approach facilitates readers' task of exploring their own line of questioning about how paleontology is done and what it does. In the first part of his demonstration, Turner mentions a trip he took to Dinosaur Provincial Park in Alberta, Canada, where he came across a bed of fossilized freshwater clam shells. Drawing from contributions in environmental studies, Turner explains how the experience of these fossils in situ, enhanced by the scientific knowledge of their origins, completely reconfigured his sense of place within the park. Paleontology not only has epistemic outcomes, but it also reshapes the perception of landscapes by focusing on their fossil details.

The idea that paleontology can carve new perspectives within landscapes opens a promising field of historical inquiry. The philosophical nature of Turner's reasoning leads him to discuss such issues as the distinction between beauty and aesthetics and the identification of science with disenchantment; nonetheless, the historian is called upon to answer questions about when and how paleontology came to influence the appreciation of landscapes. Just as Turner highlights the fact that the philosophy of paleontology has traditionally favored epistemological approaches, the history of the interpretation of fossils has primarily been concerned with theoretical frameworks. Such a realization is not meant to diminish the importance of work that has already been done, but it merely suggests that other points of view remain. The complex historical career of fossils as

epistemological objects has been thoroughly addressed by scholars such as Martin Rudwick and David Sepkoski. The study of how the modern interpretation of fossils shapes our aesthetic appreciation of landscapes through an emphasis on their temporal nature can provide a valuable opportunity to revisit our current narrative of paleontology. To legitimize his own experience in Dinosaur Provincial Park, Turner alludes to the literary tendencies that paleontologists have deployed in their popular works to aesthetically engage with landscapes in reaction to the fossils they find. Just as with any other form of aesthetic engagement and appreciation, paleoaesthetics must have a history. Fossils, although observed and collected for centuries, were only recently recognized as constitutive parts of landscapes. Turner's newly coined term, 'paleoaesthetics', encourages a historical investigation into the interplay between scientific conceptions of fossils and the ways in which to experience the deep past. If one approaches classical texts in earth sciences by Georges Cuvier (1769–1832), Charles Lyell (1797–1875) or even Ferdinand Hayden (1829–1887) later in the nineteenth century while asking this question, the development of paleoaesthetic experiences might become more apparent. More than a

superficial byproduct of paleontological research, this kind of relation to landscapes and their fossil content could be recognized as a major cultural transformation in attitudes toward the earth and its history. If one is to investigate the history of the interpretation of fossils, the history of their aesthetic appreciation should also be taken into consideration, and the pertinence of paleoaesthetics should be tested.

The second contribution that Turner's essay makes to the history of paleontology touches on the subject of visual arts and their relation to scientific knowledge-making. After having demonstrated the mutual reinforcement of epistemic and aesthetic dimensions within the practice of paleontology, Turner addresses the problem of aesthetic biases potentially at play in the interpretation of paleontological data. The traditional representation of dinosaurs fighting each other in paleoart pieces is chosen as a revealing case study of this issue. By pointing out the obvious aesthetic biases and artistic conventions that can influence images of the deep past, Turner wants to push the limits of his hypothesis. The question is not whether we should try to banish any sort of aesthetics from the practice of paleontology. Having demonstrated how aesthetic experiences are inextricably connected to the study of fossils, the problem is where the balance lies between the aesthetic and the epistemic when investigating the deep past. This question paves the way toward a history of paleoart, strictly defined as the artistic depiction of extinct species and environments in a scientific setting, which would go beyond the biographies of predominant artists, such as Benjamin Hawkins (1807–1894) and Charles Knight (1874–1953). Recently, the richly illustrated volume *Paleoart: Visions of the Prehistoric Past* (2017), edited by Zoë Lescaze (reviewed in 2018 by Warren D. Allmon in *Earth Sciences History* 37(1): 218–222), offers the first visual map to undertake such a critical journey. The question raised by Turner's essay could help revive the historical project first initiated by Martin Rudwick in *Scenes from Deep Time* (1992) and more recently picked up by Ralph O'Connor in *The Earth on Show* (2007). The historical overlap and interactions between artistic practices and epistemic methods applied to the interpretation of fossils remains quasi terra incognita.

This short essay does not give Turner the opportunity to expand on the implications of his concept of paleoaesthetics, but it does provide enough insight for the historian to begin the search for clues about the development of paleoaesthetic postures and experiences. The historical elucidation of our connection with the deep past is especially relevant today as we face the challenge of harmonizing geological, political, and economic timescales.

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