

he openly discusses his methodology, and he always provides the sources so that readers may form their own judgment on the author's conclusions. But as Wootton himself reminds us, "History has to be written from the documents that survive" (p. 4). I wholeheartedly agree.

IVANO DAL PRETE

■ Modern (Nineteenth Century to 1950)

Saulo de Freitas Araujo. *O projeto de uma psicologia científica em Wilhelm Wundt: Uma nova interpretação.* 243 pp., bibl., index. Juiz de Fora, Brazil: University Federal de Juiz de Fora Press, 2010. R\$ 38 (paper).

Wilhelm Wundt (1832–1920) has been—and remains—a key figure in the history of psychology. For more than a hundred years he was proclaimed the founder of modern psychology; in the 1970s psychologists began reassessing Wundt's contribution to psychology in order to gain a more accurate picture of their own intellectual roots. From the first investigations, undertaken by A. L. Blumenthal, Kurt Danziger, and D. K. Robinson, a new image emerged. Wundt's psychology was then seen as intimately linked to his philosophy, and attention was given to his voluntarism and social, or folk, psychology.

Saulo de Freitas Araujo's book, a doctoral thesis, follows this revived interest in and interpretation of the famous scholar from Leipzig. It deepens our understanding of the philosophical beginnings of what some consider the first attempt at scientific psychology. The author reviews Wundt's works chronologically, with an emphasis on his philosophy, particularly his reflections in epistemology and metaphysics. The result is a thorough philosophical analysis that sheds considerable light on Wundt's conceptual changes and the intellectual sources of his inspiration.

C. F. Graumann had already revealed the presence of two incompatible psychological projects in Wundt's work (in Wolfgang G. Bringmann and Ryan D. Tweney's edited volume *Wundt Studies* [Hogrefe, 1980]). Now Araujo shows how this change grew from an increased interest in the theory of science during a period of transition in Wundt's career, following the publication of his book on the axioms of physics. While the philosopher Wundt was analyzing axioms of physics, such as the relation between reason and consequence, he realized that logical concepts like these are not empirically given but, rather, a product of our own mental operations. Therefore it is necessary to

distinguish between causality as a concept and causality as empirical law. Returning to psychology, Wundt recognized that he had been mistaken in mixing these two levels. He had uncritically assumed the existence of an unconscious governed by logical reasoning (*unbewusster Schluss*) as the origin of mental activity. From that moment on he was much more careful in this respect, first questioning and then abandoning what had been the basic principle of his first project in psychology.

In response to this insight, Wundt's mature psychology is characterized by an antientological attitude and the rejection of his former pan-logicism and the unconscious as explanatory principles. All empirical science must be based on conscious experience. After abstracting experience from the subject that lives that experience, natural science deals with mediate experience, while psychology focuses on immediate experience. Wundt built his psychological science on his dual-aspect identity theory, which presupposes ontological monism but two different epistemological points of view.

But how is a science of subjective experience possible? Wundt opens a way with the help of two methodological approaches: on the one hand, by applying the experimental method to the study of mental processes; and, on the other, by developing a historical-anthropological analysis of these processes as they appear in human culture (his *Völkerpsychologie*). However, Araujo does not discuss Wundt's anthropological work in depth, nor does he consider recent secondary sources on the topic.

Wundt repeatedly endorsed inductivism: he held that psychology as a science could advance only if it committed itself to research, leaving metaphysical questions to be dealt with once empirical results have been achieved. *O projeto de uma psicologia científica em Wilhelm Wundt* explores the circular relation between Wundt's philosophy and his psychology. Araujo shows how Wundt's theory of knowledge guides his psychological conceptualization, which in turn contributes to his philosophy in the form of metaphysics and the development of a *Weltanschauung*.

Throughout the book Araujo corrects some historical misconceptions; he also discusses Wundt's relation to other philosophers like Kant (via Eduard Zeller) and Schopenhauer (via Adolph Cornill) in a way that has not been done before. It would perhaps have been better to shorten some of the citations and thoroughly discuss some pertinent historical research, like that of W. Van Hoorn and T. Verhave (see the

Bringmann and Tweney volume cited earlier). Nevertheless, the book presents serious research based on exhaustive consultation of secondary and previously unexplored primary sources. It is relevant for anyone interested in Wundt and the history of psychology—even philosophers of science.

ANNETTE MÜLBERGER

Paul D. Brinkman. *The Second Jurassic Dinosaur Rush: Museums and Paleontology in America at the Turn of the Twentieth Century.* xiv + 345 pp., illus., app., bibl., index. Chicago/London: University of Chicago Press, 2010. \$49 (cloth).

Lowell Dingus; Mark A. Norell. *Barnum Brown: The Man Who Discovered Tyrannosaurus rex.* xiv + 368 pp., illus., table, apps., bibl., index. Berkeley/Los Angeles: University of California Press, 2010. £20.95, \$29.95 (cloth).

One great pleasure of researching the history of paleontology before the reach of instant telecommunications is the abundance of written materials—correspondence, reports, field journals—available for reconstructing in detail the activities of scientists and their collaborators in the field. Both Paul Brinkman's *The Second Jurassic Dinosaur Rush* and Lowell Dingus and Mark A. Norell's *Barnum Brown* make ample use of such sources in crafting narratives in the history of American paleontology that go beyond the much better known "fossil war" of the nineteenth century between Othniel Charles Cope and Edward Drinker Marsh. Despite some overlap, the two books take different slices of the past. While Brinkman's cross-section reconstructs in rich detail the dinosaur fossil collecting and display activities of the three urban museums most active in the fossil lands of the western United States during a fleeting but crucial period from 1895 to 1905, Dingus and Norell employ a longitudinal approach, examining the life and work of Barnum Brown, a participant in Brinkman's "dinosaur rush" whose life and career spanned from the late nineteenth century through the mid-twentieth century.

Although, as Brinkman notes, the term "second Jurassic dinosaur rush" was first applied to this period by John S. McIntosh, it is Brinkman's own thorough, deeply researched account that really brings it into full historical view. *The Second Jurassic Dinosaur Rush* provides eleven

chapters of finely crafted historical narrative detailing the field campaigns of the American Museum of New York, the Carnegie Museum of Pittsburgh, and the Field Museum of Chicago, followed by a single chapter explaining how the fossils were put on display inside those museums. Brinkman offers a historical account for this ten-year period that is unmatched in detail and texture for any similar period in the history of American paleontology. It also exemplifies an important historiographical shift from an earlier emphasis on how fieldwork intersected with theoretical and interpretive controversies to a more recent focus on field practices and strategies in their own right, contextualized within a museum-dominated culture of scientific display.

Indeed, it is Brinkman's focus on the structuring influence of the turn-of-the-century natural history museum that provides the book's dominant thematic framework—and an especially compelling one too. Competition between museums is a driving explanatory force throughout *The Second Jurassic Dinosaur Rush*. The three museums occupied distinct positions in vertebrate paleontology, ranging from the persistently dominant American Museum, to the assertive upstart Carnegie Museum, and finally to the chronically underfunded Field Museum. Simultaneously, within each museum, hierarchy prevailed. Powerful museum directors, especially the American Museum's Henry Fairfield Osborn and the Carnegie Museum's William J. Holland, supported by wealthy capitalist patrons in their enthusiasm for vertebrate paleontology, exerted tremendous influence. (The Field Museum's patrons and leadership were less invested in paleontology.) Directors organized teams of research paleontologists, who in turn supervised their own subordinates. As someone who has researched the fieldwork of these museums, I can attest that these structuring dynamics—and the rivalries and tensions they often entailed—ring true to the evidence I have seen, as well as to other vivid accounts of the status conflicts in this period, such as Tom Rea's lively and engaging *Bone Wars* (Pittsburgh, 2001). If at times Brinkman's key arguments are submergéd within chapters that are principally organized according to chronologically narrated seasonal field campaigns, alternating from one museum to another—much like successive military campaigns—a vivid, colorful cast of characters nonetheless comes to life in *The Second Jurassic Dinosaur Rush*.

While Brinkman offers the comprehensive, contextualized approach of a revised history of science Ph.D. dissertation, Dingus and Norell