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978-0-521-02777-9 - Constructing Scientific Psychology: Karl Lashley's Mind-Brain Debates

Nadine M. Weidman

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Constructing Scientific Psychology

Karl Lashley's Mind-Brain Debates

Constructing Scientific Psychology is the first full-scale interpretation of the life and work of the major American neuropsychologist Karl Lashley that sets Lashley's creation of a laboratory-centered, decisively materialistic science of brain and behavior in its scientific and social contexts. The book sets Lashley's neuropsychology at the heart of two controversies that polarized the sciences of mind and brain in the U.S. in the first half of the twentieth century. The first concerned the place of "consciousness" and "free will" in the nervous system; the second concerned the relative roles of "nature" and "nurture" in shaping behavior and intelligence. Drawing on Lashley's extensive unpublished correspondence as well as his published scientific papers, the book argues that his neuropsychology and his experimental practice were both scientific and political tools. Despite his attempt to create a "pure," fact-driven science, free of social applications and theoretical presuppositions, Lashley's work was at once a scientific answer to the problem of brain and behavior, a hereditarian answer to the problem of intelligence, and a nativist and deeply conservative answer to the problem of racial integration in American society.

Nadine M. Weidman is a postdoctoral research scholar and tutorial assistant in the Department of the History of Science at Harvard University, and an instructor in the Harvard Extension School. She has previously taught history of science at Cornell, Harvard, and Worcester Polytechnic Institute. Dr. Weidman is editor of the *Cheiron Newsletter* and has contributed articles and book reviews to the *Journal of the History of the Behavioral Sciences*, *Journal of the History of Biology*, *History of Psychology*, *American National Biography*, and *Isis*.

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*For my family
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But who shall parcel out
His intellect by geometric rules,
Split like a province into round and square?
Who knows the individual hour in which
His habits were first sown, even as a seed?
Who that shall point as with a wand and say
“This portion of the river of my mind
Came from yon fountain?” Thou, my friend, art one
More deeply read in thy own thoughts; to thee
Science appears but what in truth she is,
Not as our glory and our absolute boast,
But as a succedaneum, and a prop
To our infirmity. No officious slave
Art thou of that false secondary power
By which we multiply distinctions, then
Deem that our puny boundaries are things
That we perceive, and not that we have made.
To thee, unblinded by these formal arts,
The unity of all hath been revealed,
And thou will doubt with me, less aptly skilled
Than many are to range the faculties
In scale and order, class the cabinet
Of their sensations, and in voluble phrase
Run through the history and birth of each
As of a single independent thing.
Hard task, vain hope to analyze the mind,
If each most obvious and particular thought,
Not in a mystical and idle sense,
But in the words of Reason deeply weighed,
Hath no beginning.

William Wordsworth
The Prelude, Book II,
lines 203–232

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Preface

This book began as my dissertation in the Department of Science and Technology Studies at Cornell University in the early 1990s. It was an exciting context in which to be studying the history of science: a radical skepticism toward scientific authority and scientific truth had begun to be taken as the *sine qua non* of serious historical scholarship. Science, my colleagues and I were taught, was thoroughly informed by society; scientific theories and practices were products of culture, not nature; laboratory experimentation was an elaborate ritual ripe for anthropological analysis. In our seminars and discussions, there was the pervasive sense that we were breaking with tradition, riding the wave of a revolutionary new approach to the field.

In part what made these new ideas so exciting was the debate that swirled around them. Not everyone at Cornell was a “social constructivist,” and the controversy about the relationship between science and culture was heated and ongoing. As a graduate student, I found it impossible not to define my work somehow in relation to the arguments I observed and participated in.

While I became persuaded of the usefulness of a social constructivist perspective in doing history of science, I was also acutely aware of the criticisms brought against it. I began to think that the most important contribution I could make to the debates would be to demonstrate the range and power of social constructivist ideas: to show how social constructivism could account for the hardest cases in the history of science. I did not intend to treat social constructivism as a scientific hypothesis, to be tried and tested on historical subjects and discarded if found lacking. Rather, I believed it was a way of looking at the world, a way of making sense of science, its history, and its relationship to society. I was not looking to test the “truthfulness” of social constructivism; rather, I planned to show how useful a tool it could be for the historian. It was with this deliberate purpose in mind that I chose the subject of this book.

One day, while I was casting about for a dissertation topic in the history of the brain and behavioral sciences, I happened, quite by accident, upon a description of the comparative psychologist Karl Lashley. A pure scientist, he was called; politically and socially neutral; dedicated to the facts that emerged from his painstaking laboratory work. A cursory review of his scientific papers revealed the accuracy

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of this description; and the more I became acquainted with his writings, the more amply it was confirmed. If anything was a reflection of nature, not a construction of culture, it was Lashley's science: surely here was one of those hard cases I was looking for. I therefore set myself a very conscious challenge: to show that the social constructivist methods and approaches I had adopted could make sense of Lashley's life and work.

I wrote this book with another purpose in mind as well, though this one emerged only gradually during the course of my research. I was a newcomer to the history of the mind, brain, and behavioral sciences, and I was always looking for books that would put it all together for me, that would draw the big picture. I was always looking for books that would discuss the relationships *between* scientific fields and specialties, so that I could understand Lashley's position with regard to the many disciplines on which his work drew. When I read something about the rise of behaviorism, for example, I wanted to know how it was situated not only with regard to the history of comparative psychology, but how it fit more broadly within psychology as a whole, including social psychology and psychoanalysis, as well as within the other social sciences, and how it was related to the history of the biological fields, physiology, neurology, evolution, genetics. I wanted books that would draw a cognitive map of the life and human sciences in the twentieth century. I did find some books and articles that did this, that did not remain firmly rooted in the rise of one discipline or professional specialty. My debts to their authors are recorded in the pages that follow. As my project developed, I wrote very much with the hope that my book too would be one of those that attempted to draw the big picture.

The structure of my argument should perhaps be made plain at the outset. This book constructs an image of Lashley and then, at the end, deconstructs it. It first builds up a case for the "neutrality" of Lashley's science, showing the resources and strategies that Lashley used to project an image of pure science: an opposition to theory as well as applications; a sole reliance on the "facts" of brain function; and a firm commitment to the hereditary determination of behavior. I will argue that Lashley used his hereditarianism to bolster his claim to purity and neutrality. At the end of the book, I will show that Lashley's very disinterestedness was itself a political standpoint, and, by relying on his private correspondence, reveal the specific political beliefs and social ideals bound up with his scientific work.

*Cambridge, Massachusetts**November 1997*

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Many people helped me to shape my ideas about Lashley. But the responsibility for the story told in these pages is mine alone.

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Abbreviations

| | |
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| AHAP | Archives of the History of American Psychology |
| APS | American Philosophical Society Library |
| JCN | <i>Journal of Comparative Neurology</i> |
| JHBS | <i>Journal of the History of the Behavioral Sciences</i> |
| JHU | Johns Hopkins Medical Institutions, Alan Mason Chesney Medical Archives |
| NRC | National Research Council |
| UFG | University of Florida at Gainesville |
| Yerkes | Yerkes Regional Primate Research Center |