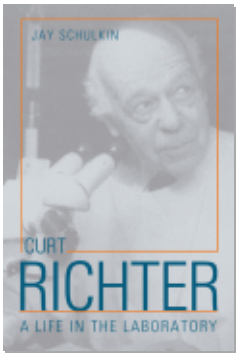
Curt Richter



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PREFACE

Curt Richter has been a presence in my life for thirty years. As an undergraduate in the early 1970s, I studied with George Wolf, who introduced me to Richter and his work. Wolf's appreciation for Richter led to my first project in science: a study of mineralocorticoid-induced sodium appetite. As I was about to embark on graduate school, I wrote to Richter about my research, informed him that I would be attending a conference in the Baltimore area, and asked him if I could visit with him. He wrote back and invited me to his laboratory for a visit.

When I moved to Penn as a graduate student, the combined presence of Alan Epstein, Paul Rozin, and Eliot Stellar only heightened my appreciation for Richter. They truly admired the man. Each had worked on the biological basis of specific hungers and had had much contact with Richter. During this period, I made several visits to Richter's laboratory. He was always gracious and would say, slightly seductively, "I want you to talk slowly so I can understand everything you are saying." He wanted you to know he was paying attention.

After Richter died, in 1988, I began to write about him. I wrote two pieces immediately after his death, one for the journal *Psychobiology* (Schulkin 1989) and the other, with my senior colleagues Paul Rozin and Eliot Stellar, for the National Academy of Sciences (Schulkin, Rozin, and Stellar 1994). Then came a piece on Richter with my colleague Timothy Moran for the *American Journal of Physiology* (Moran and Schulkin 2000).

A one-day conference held at Johns Hopkins in 1996 put me in touch with others who were interested in Richter's work. It was attended by Daniel Todes and F. L. Holmes (both historians of science), Paul McHugh (Richter's last

chairman), and other individuals interested in Richter or his laboratory material. Many of us gave small presentations. My talk placed Richter in the context of Benjamin Franklin, the American pragmatists, and the culture of invention and open-ended inquiry. Richter (1953f) pursued open-ended inquiry that was knotted to invention and experimentation and revealed diverse forms of self-regulatory behaviors that aided successful behavioral adaptation. Richter was an exemplar of a *laboratory state of mind.*

When Richter died, Paul McHugh and Eliot Stellar (see Stellar files, University of Pennsylvania Archives) ensured that the Richter material (e.g., charts, data, personal papers) would be preserved. It was decided that Hopkins would house the Richter archives.

Elliott Blass edited a volume of Richter's work that appeared in 1976. This is a very important book for anyone interested in Richter's work, and the only one in which many of Richter's papers are collected. The introductory essays by Derek Denton, Paul Rozin, and Eliot Stellar in that volume provide an orientation to Richter's scientific work and to Richter the scientist.

The resources used in the preparation of this book included collections of unpublished writings from scholarly archives, references to which appear throughout the text. These include the Alan Mason Chesney Medical Archives at the Johns Hopkins University School of Medicine (www.medicalarchives.jhmi.edu). The archives' holdings include a variety of material from Richter. Throughout I have referenced these materials with the notation "Chesney Archives." Medical archivists Nancy McCall and Marjorie Kehoe and their colleagues have played a vital role in preserving and cultivating the use of Richter's papers and research data and have been very helpful to me.

Other archival sources include interviews conducted by Anne Roe, who collected data on sixty-four scientists for her book *The Making of a Scientist* (Roe 1953). Roe collected transcripts of interviews, personal data, and letters from these scientists, including Richter. These materials, now included in the archives of the American Philosophical Society, are cited with the notation "Roe interviews, American Philosophical Society Archives." Finally, archives of the University of Pennsylvania also contain information pertaining to Richter. I refer to these papers with the notation "University of Pennsylvania Archives."

This book is intended to renew discussion of Richter's work and his orientation to research. Curt Richter is not well known. Why? He had no students. He was not in a psychology department; he was sequestered in a clinic in a

medical school. He avoided committees. And he was mainly someone who demonstrated phenomena and did little grand theorizing.

THE STRUCTURE OF THE BOOK

This book examines Richter's personal experience, his orientation to psychobiological research, the intellectual and personal influences in his life, his varied research topics (which form the bulk of the book), and his laboratory and methodological contributions to science. Chapter 1 provides a background account of Richter's personal history, his intellectual trajectory, and some primary influences on his experimental outlook. Chapter 2 discusses the research orientation that Richter maintained over sixty-some years—I refer to his research on biological clocks, their diverse forms, and their expression in both adaptation and disease. Amid the debates of whether psychology could be a science, Richter demonstrated a science of behavior, beginning with studies on the biological basis of behavioral activity and inactivity. Chapter 3 discusses the range of research findings on the role of behavior and physiology in serving the body's nutritional requirements. No concept was more important for Richter than that of homeostasis, or "the wisdom of the body" (Starling 1923; Cannon 1932/1966), in relation to the many systems he explored that help maintain nutritional balance. But behavioral regulation of the internal milieu is understood in relation to the concept of instinct, which played a vital role in organizing Richter's orientation to psychobiological adaptation.

Chapter 4 discusses a concern of primary interest since Darwin, the effect of domestication on end-organ systems. This was an important research theme for Richter. Equally important was his intriguing research on wild rats' bait shyness, poisoning, taste avoidance, and sudden death. Chapter 5 describes a trip Richter made to Panama that resulted in a set of long-term neurological investigations that had clinical implications. The study centered on the neurological control of motor reflexes, and the clinical tools that emerged would be used to discern neurological damage in humans.

Chapter 6 describes the social milieu in which Richter ran his laboratory and the loyalty of a number of people that worked for or with him over a long period. Richter prided himself on the creation of his laboratory culture, his scientific esthetic, and his surgical innovations. Science cannot exist separately from the individuals who participate in the production of knowledge, Richter included.

The conclusion focuses on the man, what he found, his style of research, and his standing in and contributions to the field of psychobiology. At an international conference on the concept of instinct, Richter presented many of his fundamental contributions. But in an intellectual milieu that was highly charged over the concept of instinct, Richter would remain, as he always seemed, close to the findings that emanated from his laboratory, not the intellectual issues that presupposed his framework.

The epilogue discusses Richter's uniqueness in American psychobiology. His personal legacy is linked to his laboratory sensibility, the richness of his experiments, and his admirable sense of exploration.

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Many individuals across diverse fields have been influenced, directly or indirectly, by Richter's work. The citations in this book to many investigators who have been affected by Richter are limited. I apologize to any who feel left out.

Many of Richter's friends, acquaintances, family members (including two of his children), and colleagues have conversed with me about him and about the fields in which Richter participated. So much in scholarship and experiment rests on mutual support among colleagues. Thank you. I also wish to express appreciation to James Wirth, for his telephone companionship throughout the duration of this project, and to Wendy Harris, of the Johns Hopkins University Press, for her encouragement, support, and suggestions.

CURT RICHTER

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