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Editors

Handbook of Neurosociology

Springer

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Preface

In the late 1990s, I was asked by the Editor of the *Annual Review of Sociology*, Karen Cook, to write a short essay for the millennial issue of that journal in which I would reflect on “what I don’t know about my field but wish I did” (see Massey 2000). In the resulting article I wrote that “I have come to the reluctant conclusion that sociologists have gone too far in privileging the social over the biological,” and went on to conclude that “we need to educate ourselves in the exciting work now being done on brain functioning, cognition, the regulation of emotion, and the biological bases of behavior.” The hook line at the end of the essay was “I really wish I knew more about human beings as biological rather than social organisms and have begun reading to catch up.”

Over the next several years I did a lot of reading on the subjects of behavioral ecology, evolutionary anthropology, genetics, neuroscience, and the emotional brain, all of which only reinforced my belief that sociologists needed to achieve a firmer understanding of human beings as biological and not just social beings. My goal then became to convince other sociologists of this need. I endeavored to accomplish this goal in my Presidential Address to the American Sociological Association, which was entitled “A Brief History of Human Society: The Origin and Role of Emotions in Social Life” (Massey 2002), which I later expanded into a book-length treatise on the evolution of urbanism (Massey 2005). The main point of my address was “to illustrate the creation and workings of the emotional brain and show how it operates independently of and strongly influences the rational brain.” I argued that if sociology were to advance, “research and theory must grapple with both rational and emotional intelligence and focus particularly on the interplay between them.”

I have been told by candid informants that in the wake of my ASA address, some colleagues were overheard muttering that I had “gone off the deep end” as they left the auditorium; and in the ensuing years, sociologists have charged me with being “reductionist,” “eugenic,” and even “racist.” I have also discovered, however, that other colleagues in the field have come to the same conclusion as me and are pursuing parallel intellectual agendas. Many of these people came together in 2004 to form the ASA’s Section on Evolution, Biology, and Society, with the stated goal of improving “dialogue between sociology and the biological sciences.” The section is now well-established and offers a regular forum to consider the interface between the social and the biological.

The current volume is the fruition of efforts by many of those responsible for creating the new section. The *Handbook of Neurosociology* brings together work by leading social scientists who have been thinking about and studying the neurological bases of human sociality. The chapters offer a roll call of topics in which neurosociology has gained traction in understanding the dynamic interplay between the brain and the environment, covering such subjects as identity, rationality, interaction, sociality, prejudice, stereotyping, status, emotions, health, attachment, conformity, and the mind.

In my view, coming advancements in neuroscience to do to the social sciences what DNA did for the biological sciences: break down traditional boundaries between disciplines and promote

work across sub-fields. It will do this by firmly establishing the neural bases for cognition, emotion, and behavior. Whereas models of sociality, rationality, and behavior in the past were grounded in convenient but unsubstantiated assumptions about the nature of human beings, in the future our theories increasingly will be based on actual knowledge not only of how human cognition works to shape behavior but also of how the environment works to shape cognition. It is essential that sociologists be a part of the larger intellectual conversation now going on among neuroscientists because the critical environment forces shaping the expression of human proclivities is social and not physical.

The social environment is especially important in understanding human outcomes given the complexity of their genome and the importance of learning in shaping behavior. Human beings do not interact directly with the physical environment, but through the intervening filters of culture and society; and since cultural practices and social categories are transmitted through interaction with others, understanding the effects of the social settings that we inhabit on gene expression and human development becomes critical in comprehending the human condition. It is within specific social contexts that learning occurs and human proclivities play out, and to explain human outcomes one therefore must consider the series of social environments that people inhabit at different stages of the life cycle and at different historical stages of societal development.

The imperative for sociological and biological scientists to work together has assumed new urgency with the rise of epigenetics, the study of how the environment influences gene expression (Allis et al. 2007). For many years scientists had a rather static view of genetic inheritance in which specific genes were passed on by parents and duly inherited and expressed by progeny, irrespective of environmental conditions. Genes were thought invariably to be revealed biologically and the principal debate was over which was more important – genes or the environment – in accounting for observed traits and behaviors in the phenotypes of living organisms (Ceci and Williams 2000).

In recent years, however, this static view of gene expression has given way to a more dynamic model in which the environment itself determines whether and how specific genes are expressed (Ridley 2004). As a result, scientific debates now tend not to be over which is more important – genes or the environment – but about how genes and the environment interact to bring about the expression of certain inherited traits. The focus of current work in both the biological and behavioral sciences has thus shifted to gene–environment interactions (Rutter 2006). It is now understood that the environment – and for humans this means the social environment – not only shapes behavior through learning and conditioning, but also by determining which certain genes get turned on or off, and hence, expressed or not (Costa and Eaton 2006).

By exploring the dynamic interrelation between human brains, behavior, and the social environment, the *Handbook of Neurosociology* provides a welcome and very timely addition to the biosocial research literature. Its chapters offer a compelling introduction to basic precepts and pressing questions in the nascent field of neurosociology and lays the groundwork for future thinking and research. I am honored and pleased to commend it to all sociologists, for as I said in my essay for the *Annual Review*, “the beginning point in coming to terms with our situation must be the realization that we are indeed biological organisms.... We need to give up our historical resistance to the idea that social behavior has biological roots and accept the fact that we, as human beings, have inherited certain predispositions to thought and behavior that influence and constrain the social structures that we unconsciously evolve and rationally select.” The publication of the *Handbook of Neurosociology* provides concrete evidence that the field of sociology is definitely moving in this direction.

Douglas S. Massey

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