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The Transformation of Psychology

Influences of 19th-Century Philosophy, Technology, and Natural Science
edited by Christopher D. Green, Marlene Shore, and Thomas Teo
American Psychological Association, 2001

The papers in this collection explore a wide variety of predominantly late 19th Century influences on the emerging discipline of psychology. Together they comprise a thoroughly engaging series of snapshots of an academic discipline in its infancy, drawing upon the influence of philosophy and science whilst simultaneously defining itself as distinct from both.

All of the articles are individually enlightening, and jointly they provide a good resource for anyone interested in the factors that shaped and continue to shape modern psychology. The collection does not, and is not intended to, amount to an exhaustive account of the origins of psychology; nevertheless it serves as a helpful guide to the ways in which a range of disciplines served to define the subject.

As might be expected given both the topic and the fact that the book developed from an interdisciplinary seminar series (at the University of Toronto), contributions cover a diverse range of topics. Subjects covered range from the influence and apparent success of phrenology in the latter half of the 19th Century, to the question of the extent to which Charles Babbage was an early cognitive scientist, to the place and status of the psychological exhibit in the 1893 World's Columbian Exposition in Chicago.

One major theme that runs through a number of the papers concerns the development of psychology as a professional science, standing in opposition to both religion and metaphysics, and the extent of the empiricist and verificationist influences upon it. The tendency to focus upon empirical evidence and reject any metaphysical underpinnings is seen emerging in Raymond E. Fancher's discussion of the development of Francis Galton's psychology and methodology in Chapter One, 'Eugenics and Other Victorian "Secular Religions"'. Galton and his contemporaries, including the likes of Herbert Spencer, T. H. Huxley and John Tyndall, challenged the claims of religion on the grounds of lack of verifiability, and emphasised the requirement of empirical testability so familiar today.

The specifically anti-metaphysical nature of the contemporary approach is more explicitly dealt with in Andrew S. Winston's paper focusing on Ernst Mach's influence on the subject (Chapter Six, 'Cause Into Function: Ernst Mach and the Reconstruction of Explanation in Psychology'). Mach rejected the metaphysical notion of cause, for broadly Humean reasons, preferring to replace it with the application of mathematical functions to psychological methodology. This use of the concept of function fitted neatly with the emphasis on experimentation, deriving from Bacon's work three centuries earlier, in that it allowed for experimentation to be described in terms of the manipulation of one variable in order to determine the effects on other dependent variables. Winston argues that Mach's strongly positivist philosophy of science was

an important influence upon psychology, notably through the behaviourism of Skinner and Watson.

In her paper, 'Instincts and Instruments' (Chapter Eight), Katharine Anderson notes the integration of the mind into the class of instruments, rendering it amenable to scientific investigation. This move allowed the mind to be studied as a causal mechanism, albeit one that was often seen at that time as a mechanism employed by some other conscious agency.

The consequences of the viewing psychology as a science can be seen in Chapter Three, 'Sealing Off the Discipline: Wilhelm Wundt and the Psychology of Memory'. Here, Kurt Danziger notes that Wundt failed to demonstrate that psychological experiments concerning memory had any relevance to everyday life precisely because he maintained a tight boundary between scientific concepts and discourse and their everyday counterparts. He claims that if psychology was to become successful, it would require

psychological categories that presented a Janus face, one turned outward to the ordinary world of lay psychological problems and concerns, the other turned inward to the shuttered world of disciplinary investigative practices (p. 60).

In other words, what psychologists have to maintain, Danziger thinks, is that an empiricist, investigative, *scientific* methodology can actually reveal truths about the mental states of individuals.

It is precisely this assumption that comes under attack in two later chapters, namely Charles W. Tolman's 'Philosophic Doubts About Psychology as a Natural Science' (Chapter Nine), and Thomas Teo's 'Karl Marx and Wilhelm Dilthey on the Socio-Historical Conceptualization of the Mind' (Chapter Ten).

Tolman raises a number of concerns about the scientific status and usefulness of modern psychology arising from the works of the philosophers Immanuel Kant and Georg Wilhelm Hegel. Kant claims that any psychology that neglects the place of *reasons* and focuses instead upon causal regularities will be inadequate for giving an account of human behaviour and mentality (a similar claim would be made against the Machian alternative). Similarly (if for very different reasons), Hegel claimed that explanations of human actions are to be found not in causal accounts but "mainly in the reasons embodied in Objective Spirit, that is, in social institutions" (p. 191).

In his chapter, Teo offers a sketch of two alternative approaches to the mind, both of which reject the individualistic conception of the mind found in contemporary psychology. This standard conception, traceable back to René Descartes, limits its concerns to the workings of the individual mind, isolated from its social context. Such a view is reflected in the methodology of using artificial experimental situations to confirm or disconfirm psychological theories. Against this approach, Teo provides the beginnings of two related alternatives, based in the writings of Karl Marx and Wilhelm Dilthey.

Marx, while not offering a developed psychology, does present an account of humans as essentially social animals (this falling squarely within the Aristotelian tradition). Dilthey, while not agreeing with Marx's views on society, history or economics,

likewise stressed the social context of the individual mind: "the human being as an object of a sound analytical science is the individual as part of society" (quoted on p. 205). This view led Dilthey to reject the inclusion of psychology in the class of natural sciences in favour of its assimilation into the class of socio-historical studies.

The insistence that the mind is essentially social challenges current psychological assumptions, in that it directly attacks the possibility of discovering general laws that hold over all cases. Furthermore, there is little point in attempting to use laboratory-based experiments if this neglects a fundamental, ineliminable aspect of human mentality.

While these papers provide grounds for questioning the underlying assumptions of psychology—something that every practising psychologist ought to be aware of—they fail to fully justify Tolman's attack on contemporary psychology:

What has scientific psychology got to show for itself? The faddish nature of experimental psychology in the 20th century is well-known... Is it all pretense and illusion? (p. 191)

One point worth making here is that, given the emphasis on empiricist science found in a number of the papers, the Introduction's emphasis on Kant's decidedly non-standard conception of science is rather unhelpful. Some introductory account of the standard empiricist picture, coming from the likes of Bacon and David Hume, would have been far more useful.

There are other exceptional papers that do not touch upon the issues discussed above. Michael M. Sokal's discussion of 'Practical Phrenology as Psychological Counseling' (Chapter Two) is thoroughly engaging and illuminating, as is Marlene Shore's account of psychology's place in the 1893 World Exposition (Chapter Four). John G. Benjafield's discussion of psychology's early interest in applying scientific experimental methods to subjects' appreciation of the 'Golden Section' in Chapter Five is an excellent illustration of the perceived scope of early psychology. Christopher D. Green provides an evaluation of the suggestion that Charles Babbage should be seen as an early advocate of cognitive science in Chapter Seven, focusing on Ada Lovelace's advocacy of Babbage's work. Finally, Fredric Weizmann discusses turn of the century views of the role of genetic and embryological influences on early development and psychology in Chapter Eleven.

All of the papers in this collection merit reading, and cast significant light both on the development of modern psychology and the philosophical assumptions that underlie it even today. As I hope the preceding discussion demonstrates, they can be read either as individually interesting articles in their own right or together as providing a variety of viewpoints on the putative scientific status of current psychology.