

# On the Uses of Theory<sup>1</sup>

by Henderikus J. Stam - University of Calgary



Hank Stam

Division 24, now called the Society for Theoretical and Philosophical Psychology, came into existence in September of 1962 at the APA Convention in St. Louis. It was founded in response to a general belief that philosophical questions had a place in post-war psychology, particularly in the form of those issues raised by Humanistic Psychology and Phenomenological-Existential writings which had become available in translation after WWII (see Williams, 1999 for a history of Division 24). In addition, the early 1960s saw the arrival of the first information-processing metaphors in psychology, and the 1950s had also seen a broad-scale reevaluation of the behaviorist programs of mid-century, published in the six volume American Psychological Association/NSF-sponsored study of the status of psychology (Koch, 1959-1963). APA had invited renowned philosopher Herbert Feigl to address the convention in 1958, and hence interest in the question of philosophy and its relationship to psychology seemed both appropriate to the new developments in the discipline and to broader cultural changes in American society. Early presidents of the division included a broad spectrum of psychologists, such as Gardner Murphy, Sigmund Koch, David Bakan, Mary Henle, Karl Pribram and Virginia Staudt Sexton.

Division 24 has changed a great deal since this time but one purpose that it has not abandoned is its continuation of the conversation on foundational questions in the discipline. Recent volumes of the *Journal of Theoretical and Philosophical Psychology* as well as recent convention programs demonstrate an ongoing commitment to exploring both the philosophical foundations of contemporary psychology and the need for "epistemological diversity" as Scott Churchill recently noted. In addition, the division established a task force in 1995 to encourage the creation of theoretical psychology as an official subdiscipline (see the resulting *American Psychologist* paper published by Slife and Williams in 1997). It should be noted however that members of Division 24 are generally also members

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of other divisions and many have their primary affiliation elsewhere. Division 24 acts as a vehicle for dialogue and discussion with many areas and problems of psychology, including history, gender, ethics, minorities, clinical, counseling, humanistic, social, and more.

In what follows I will try to express some of the concerns that contemporary psychology throws in the way of philosophy and theory, although it is strictly my own view and does not reflect the multiple and varied views of members of the Division.

The use of the term *theory* in general psychological writing is rather ambiguous. It is often a placeholder for a variety of unknowns that serve to keep us from leaping to firm conclusions while otherwise formalizing hunches and guesses. We may have some "empirical evidence" for the case at hand, but the theory supported by that evidence is, of course, always underdetermined. This means only that no empirical results bring finality to our theoretical frames, a problem described in its clearest sense by Willard Quine (1951/1980) in his

well-known article "Two dogmas of Empiricism."<sup>2</sup> Among others, this marked the outset of a several decades long argument and historical reevaluation of the sciences that has demonstrated repeatedly that the distinction between *theory* and *fact* is a rather dubious and unhelpful one in evaluating science, its results, its methods, and its products.

In psychology there are various uses of the term theory, frequently derivative of other domains of knowledge. For example, theory in an older sense of a *learning theory* was deeply ingrained after mid-twentieth century attempts to formulate comprehensive theories for the phenomena we associated with behaviorism. Attempts to create an overall theory of learning were driven by hypothetico-deductive frameworks, such as developed in the work of Clark Hull, even as they were rejected by Skinner who famously asked in 1950, "Are theories of learning necessary?" (Skinner, 1950). His answer was negative while he disingenuously entered into an argument for theory of a different kind than was then dominant. But as Sigmund Koch long ago noted, this "age of theory" passed as a feature of the renewed commitment to alternative formulations associated with new practical areas such as clinical psychology, as well as the importation into psychology of information theory and the computer metaphor. Thus what passed for theory in psychology was transformed roughly 40 years ago, just at that point where Division 24 was formed.

What did not change, and what psychology inherited from the age of theory, was a standing commitment to the notion that theory is the end and aim of its labors. This view is an outcome of one understanding of logical-positivism even as it is simplistically viewed as the aim of all science. I will refer to this as a "received view on theory" that is still held as a standard view in some corners of the discipline. Briefly it consists of the claim that one does not do empirical work merely to discover something or test one's hunches, but rather that the most valued of empirical endeavors, those viewed as strictly experimental, are to test, validate, overturn or challenge theory. Indeed, the aim is to build generalizations that might become "laws." Hence theory-building and theory-testing are viewed as the most prestigious of activities in the science of psychology and are generally touted as superior for their abilities to test causal relations, as opposed to work conducted using correlational or other non-experimental designs.

Aspects of these features still exist in psychological notions of theory but in general the understanding of theory in philosophy of science is now much broader and less constrained. First of all, the picture I painted in the previous paragraph would be viewed by most philosophers of science as smacking of "scientism," (the exaggerated application of science to all areas of human endeavor). The sciences, or rather that family of approaches to the natural world that we, for the sake of convenience, categorize using the label of "science," does not adhere to a single method, nor do they seek to develop a single kind of "theory." The astronomer seeking to understand a pulsar or neutron star is now investigating a phenomenon that was, until Jocelyn Bell confirmed them in 1967, a "theoretician's fantasy" (Schutz, 2003).

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That kind of theory is merely a distant cousin to, say, the theory of social evolution in microorganisms (e.g., West, Griffin, Gardner & Diggle, 2006). But theory in physics is a highly unusual game, driven by mathematics in a way that psychology neither approximates nor would perhaps wish to emulate. And it is a far cry from work in say, biochemistry, geophysics or neuroscience. The first question concerning theory then is, if the sciences do not have a single conception of theory, should psychology?

Given the lack of unanimity on the nature of theory in science generally, it is surprising that psychology has settled, in the main, for a highly restricted kind of theory. For theory has come to be defined, at least in the past 50 years of the discipline's human research endeavors, as a functional entity. By this I mean the notion that psychological objects and properties are not realistically but *heuristically* defined. These heuristic, functional accounts can be cognitive, behavioral or even psychodynamic and are frequently fused to various biological and neuropsychological accounts. Driven by the need to give a version of theoretical statements in the language of variables, these heuristically functional descriptions make no commitment to real entities but are functional descriptions of properties that are defined according to how they act rather than what they are. For example, modularity in cognition refers to a functional property, just as notions such as short-term memory do, despite their ubiquitousness in psychological literatures. They are functional insofar as their presence must be inferred from functions. The field of personality psychology is populated with thousands of functional entities (e.g., self-presentations, expectancies, self-definitions, self-verification, infra-humanization, and so on, being examples from the last several years of the *Journal of Personality and Social Psychology*.) The literature on clinical psychology, developmental psychology, and so on would generate equally long lists of "variables" or functionally defined entities that are almost wholly described by procedural fiat. (Perceptual and psychophysical cases are more complex and hence not included in this discussion.) These functional entities are largely invented anew at a high rate and their relationship to one another appears to be of little concern to the research community. On the one hand, their inherent flexibility and manner of reproduction allows even the neophyte to produce research topics and research studies with very little training or background. On the other hand, it encourages a proliferation of hypothetical entities such that there is little observable progress or concern for the ontological status of these entities. There is no limit to the kind and degree of functional entities that can be introduced and become a focus for research.

What I am not saying, however, is that the unlimited nature of functional descriptions is a kind of relativist merry-go round. It is not. For there is typically some empirical content that grounds such descriptions in any *individual* study or experiment. For example, we have descriptors for memory processes that are described empirically in any one study or research program. We do not have an empirical limit however to the extent and kinds of descriptors that can be generated; that is, the pool of functional entities to describe memory remains indefinite. A quick perusal of the literature informs us that we can use such functional descriptors as sensory, short, and long-term memory; autobiographical memory; recognition memory, as well as numerous models of memory and attendant processes such as encoding, maintenance, retrieval, and so on. Each of these terms is frequently associated with a particular research program and sets of methods that have come to define the content of the program. One might argue this is as it should be! Fine, save for the one question that remains for us to consider, namely, What is memory? Beyond individual acts of remembering, is there such an *object* as *memory*? This might in fact be the wrong question but I leave that for memory researchers to decide. I want to note

here that a response in terms of neuropsychology and the fundamental attributes of brains, while important in its own right, does not answer the irreducible *psychological* question of acts of remembrance that we have reified as memory.

The emergence of this functional strategy in psychology has a venerable history, too complex to recount here. In short, it derived from earlier forms of functionalism that existed at the turn of the 19<sup>th</sup> to 20<sup>th</sup> century. These were overshadowed for many years by behaviorism, which tended to concern itself with a mechanical thesis (at least in its Hullian variety) wherein internal states, such as they were, could be understood in terms of surface behavior. The assignment of intermediate causal roles to internal states, particularly mental states, in cognitive psychology was premised on the notion that mental states do interact with one another in such a way that reading their contents off behavior was not permissible. But functional states in the new cognitive psychology are "characterised extrinsically" (Ross & Spurrett, 2004) in as much as their importance is determined by the difference they make to observable states. That is, a functional state is characterised extrinsically when it is posited as an unobservable state between a stimulus and a response that counts only if it makes some difference observationally.

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It is here that functionalism is agnostic with respect to internal states; it is concerned with interactions of observable states and it does not matter what it is that plays the functional role in question (Ross & Spurrett, 2004). Explanatory expedience is more important than ontological sufficiency; how to account for observable events using the shortest possible route and the most parsimonious set of functional entities. Hence the claim that functionalism serves to propagate a form of neo-behaviorism.

This version of functionalism, which I have called "heuristic functionalism" after Margolis (1984), also referred to as "role functionalism" (Kim, 1998), is either in danger of sliding into dualism or reductionism. It slides into dualism because it does not commit itself to real properties, but it is in danger of sliding into reductionism because it carries a promissory note that eventually just those functional entities that remain imprecise will be known as science allows. That is, once properly understood, a functional account will one day be reduced to some version of neurophysiology. I don't intend to recap the arguments against versions of reductionism here (e.g., Garrett, 1998) save to add that any serious psychology would cease to exist and the original phenomena of psychology would be eliminated from the explanatory canons of science in favor of those of a neurophysiological nature.<sup>3</sup> Again, this is not to say that neurophysiological accounts of human functioning are not important or relevant to psychology: They are. It is just that a reductive language would find itself incapable of articulating the very phenomena of psychology that make those phenomena important and relevant to us.

As I have argued elsewhere, there are many reasons for this restriction of theory (Stam, 1996, 2004). Methodological prescriptions along with a heuristic functional framework have allowed psychology to constitute psychological theory, method, research and results in a way that clearly demarcates the discipline from other disciplines and acts as a gatekeeper to alternative theory. The capacity to multiply functional entities indefinitely makes the process open-ended without seeming anarchic. Furthermore, without a commitment to the kinds of processes that are psychological, the discipline moves between the Scylla of dualism and the Charybdis of reductionism. At the same, time the extrinsically characterized, neo-behavioral con-

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ception of entities ensures that fields of enquiry continue to be pre-occupied with the search for mechanistic like properties that can be multiplied across research studies. Hence, for these and other reasons this restriction of theory works to maintain a certain unified sense of what constitutes a psychological object or property and how is it to be explained. Needless to say there are many other versions of psychological theory that do not fit into this rough schema I have outlined. Let me briefly note a few consequences for epistemological diversity in the discipline.

**W**hat makes our insistence on “theory” important in Division 24 and in other organizations devoted to broadly conceived theoretical problems in psychology (such as the International Society for Theoretical Psychology) is that human activity is not captured solely under the guise of functional descriptions. The characteristic features of human psychology exist only within shared human linguistic and cultural practices, even as some of those features may be given a causal account from the perspective of say, neurophysiology or neurobiology. Those features of our existence most relevant to our daily existence, such as human relationships, status, meaning, striving and the like, are inherently tied up with a moral and social world and as such have characteristics not accounted for solely by infra-psychological attributes. This means that there are a great many problems in psychology that are not immediately empirical problems. They concern the broader problems of the nature of the self, the place of language as a constitutional factor of the self, the social nature of that self-in-language, the human quest for meaning and understanding, the ethical dimension of social existence, the nature of a therapeutic relationship, and so on. While there are inevitably empirical programs that can bring aspects of these questions to light, it is also the case that misguided empiricism can obscure such questions. Hence these foundational and philosophical issues remain of general importance to the discipline as a whole.

It should be obvious that this use of the notion of theory is removed from that developed in the established sciences, such as the biological sciences, physics and so on. There is no single use of the term theory to be found here. Sometimes theory is equated with the mathematical expression of a problem that has at least some limited observational support but at other times it is merely the reflection of the limits of knowledge. The wide variety of uses of theory in the social sciences, and their proliferation

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into realms such as literature (e.g., witness the wide usage of the term theory in Cultural Studies and Literary Theory) means that the domain of theory should be carefully qualified.

**O**n a final note, I would add that the so-called “theory wars” (or more broadly, the “culture wars”) in humanities faculties of the past decade or more<sup>4</sup> have led committed empirically minded social scientists to view with skepticism all attempts to “teach and preach” theory as a separate domain of inquiry. Some of this skepticism is warranted, no doubt, given the excesses of theory that characterized some of the debates, even in psychology. For example, note that the political commitments of institutional psychology (decidedly “liberal”) as well as the sheer size of institutional psychology make it possible for a determined critical counter-voice to exist at the edges of the discipline. A self-professed Critical Psychology with its own conferences and own journals now exists within psychology and has formulated important alternatives to what is viewed as the hegemony of mainstream theory (see, for example, Fox & Prilleltensky, 1997). At the same time it remains a loyal opposition by virtue of

the fact that its content is often formulated just *as* opposition. Theory is indeed, in the words of Gary Genosko, unstable, ambivalent, and “undisciplined” (Genosko, 1998). On this view, theory is troublesome for extant disciplines. Not surprisingly much theoretical work is then also marginal with respect to the discipline of psychology proper. The historically changing, socially organized activities that we call “psychology” are themselves open to constant reinterpretation and, not surprisingly, so are its theoretical activities.

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## Notes

- 1 Several aspects of this brief contribution are discussed in my article in the *History and Philosophy of Psychology Bulletin*, 16(2), December 2004, 3-9. I am aware that most of the topics in this piece require much more by way of argument and example; I plead rhetorical convenience by virtue of the nature of the publication and invite reader's comments, which should be directed to me at [stam@ucalgary.ca](mailto:stam@ucalgary.ca).
- 2 These are *the dogma of the distinction between analytic and synthetic truths and the dogma of reductionism*. It would take me too far afield to discuss the full implications of Quine's refutation of these two dogmas.
- 3 The treatment of functionalism has been too short to indicate the widespread use of functional accounts in all of the human sciences as well as the natural sciences. The presence of certain functional terms (e.g., gamete cells) in biology, for example, is well established even though these are frequently more precisely delimited.
- 4 The predictable backlash has been the “end of theory” movement that, in its worst moments, is little more than the practice of theory under another name.

