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Answering the question: what is psychology ?

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> "Psychology became a subject of special study about a century ago, when scientists began to work full-time on psychological problems and tried to apply scientific methods to these problems. Although it is not always easy to study psychological problems scientifically, psychologists try to do so as far as possible."
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> (Wits CCU, 1980)

In February 1976, as a first-year student of the social sciences, I attended my first lecture on psychology. It was a lecture which wanted to say something about the "discipline of psychology as a whole", and in so doing to draw newcomers like myself into the discourse of mainstream psychological practice. In this paper I want to take up one thing that was said at that lecture (and it is a claim which I think most South African psychology students hear fairly early on in their careers) - I was told that "psychology is the science of behaviour".

I was provided, in other words, with a particular kind of answer to the question "what is psychology?". It seems to me that this kind of answer is very much part of mainstream psychology in South Africa, and it amounts to what might be termed the received view in the teaching of psychology in this country. My intention here is to focus on the notion of "science" taken for granted in the lecture, although I shall have something to say about the concept of behaviour contained in the definition. I want to argue that there is a better and more fruitful approach to answering the

question "what is psychology?" than the one offered to me in my first first-year lecture.

The paper proceeds as follows: firstly, I try to invoke the context in which beginners are initiated in South African psychology departments. Secondly, I argue that although there is a dominant research tradition within which this initiation takes place (positivism), it should not be taken for granted. The third section comments on the historical emergence of psychology, particularly in America, and seeks to show that the mainstream idea of a scientific method is extremely problematic. Finally, I say something about the way we might move out of the crisis which this examination throws up.

I. PSYCHOLOGY AS A SCIENCE OF A SORT

To learn or to be taught that psychology is the science of behaviour is to adopt a particular view about what science is. What I would like to do in this section is to examine the framework of thinking into which psychology students are drawn in their study of psychology, and which is faithfully reproduced by the practitioners of the "science of psychology" in this country. The way I propose to do this is to examine discussion and comments on "psychology as a science" in three introductory textbooks prescribed to Psychology I students at the University of the Witwatersrand in recent years, namely those known as Krech et al (1974), another Krech et al (1982) and Kendler (1974).[1]

Let me start with the third edition of Elements of Psychology

[1] I realise that I am, by focussing on Wits' textbooks only, opening myself up to the criticism that I concentrate on an anomaly rather than the mainstream in South African psychology. My impression, however, is that this is not the case and I would be interested in evidence to the contrary.

(Krech et al, 1974). The introduction to this book is remarkable for the way in which it takes "science" for granted. The task of psychology, it argues, is to lay to rest and to replace the "array of opinion" in common-sense interpretations of psychological matters. And then it simply assumes that science provides the basis on which this replacement must take place. We are not told why, or even what this might mean: it is merely introduced by the phrase "psychology, more than the other sciences,..." (p.xv). Further on we are informed that science is to be distinguished by its method of analysis: "Taking a whole, breaking it down into parts, and studying each part intensively constitute a common method of science" (p. xvii). Although not much else is said about this thing called "science", two things become clear: Krech et al (1974) see a unity of method between all the sciences, and they believe the way this method breaks the world up into bits and pieces is the proper way to study the world.

The fourth edition of the same book (Krech et al, 1982) echoes the third, although the authors are obviously beginning to feel a bit uneasy about failing to spell out the received view of science. We are still drawn uncritically into the notion that psychology is just like all the other sciences (and again on the criterion of method):

> "You may be surprised that psychology groups itself among the sciences. However, it is undeniable that psychologists regularly apply the same methods employed by other scientists and are bound by the same rules of evidence." (p. 3)[2]

To be fair, there is an acknowledgement that psychology doesn't

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[2] It is, of course, eminently deniable, on the grounds that it might not be possible to apply the same research methods to inanimate objects and to conscious people.

quite meet these exacting scientific standards, but this is ascribed to the youth of a psychological science which one day (obviously) will get there! This assumption about science (and psychologists) is hammered home again:

> "The claim by psychology to scientific status rests upon its use of basic methods of research characteristic of other sciences."
>
> (pp. 5-6)

And again: "Psychologists agree that when experimentation is possible, it provides the surest method of ruling out improper interpretations." (p. 6).

But this time the authors do spell out more clearly the received notion of science. In a detailed section on experimental method (real science, in the authors' terms), they stress the importance of formulating hypotheses linking discrete dependent variables to discrete independent variables. Even when psychologists must unhappily do correlational studies rather than experiments, the important thing is still "to describe the degree and direction of relationship between any two such measures (variables)" (p. 9). So the fourth edition echoes very well, and more loudly, the third edition's concern with breaking things up into bits and pieces for proper explanation to occur. Finally, Krech et al (1982) add another crucial element to this mainstream idea about what a science should be:

> "... a scientific explanation is a prediction that under certain conditions certain things will happen."
>
> (p. 9)
>
> "With the development of understanding and new knowledge may come increased power to control what happens."
>
> (p. 10)

In other words, what counts as valid scientific explanation is seen to be linked with increased power and control.

Kendler (1974) goes for pretty much the same kind of initiation as do the other two: "Psychology is the science of behavior. Science. Behavior. Each word is critical." (p. 3). The following paragraph from his book raises a number of important issues, so I record it in full:

> "It is the job of scientific inquiry to discover those conditions or factors that bring about, determine, or cause a particular event. Different scientists concern themselves with different kinds of events - for example: a physicist studies falling bodies; a chemist is concerned with explosions; an economist evaluates fluctuations in industrial productivity; a psychologist analyzes the development of fears. The events differ, but the basic task is the same: all scientists want to discover those factors or conditions - scientists usually call them variables - which are effective in bringing about the occurrence of an event. This task can be clearly and simply expressed by the following formula:
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> $$Y = f\ (X_1, X_2, X_3, \ldots, X_n).$$
>
> In this formula, Y represents an event or the conditions which the scientist wishes to discover; f represents the phrase "function of" in the sense of "is causally dependent upon"; while X's represent those factors or variables upon which the occurrence of the Y event depends.
>
> Once the scientist has decided to investigate a particular phenomenon, his task is to fill in the above formula - to discover those variables which cause that phenomenon."
>
> (p. 4)

Clearly, psychology is just like the "other sciences" for Kendler, and the reason that physics is similar is a point about its "basic task", or method. This scientific method breaks the world up into bits and pieces (a procedure I shall from now on call

atomism) in order to explain the world. Scientists seek out variables, that is, they (assume that they can) separate out those aspects of reality which they can force into their $Y = f(X)$ formula. Finally, prediction and control also feature strongly in Kendler's story: to say that "scientists ... discover those factors ... which are effective in bringing about the occurrence of an event" is to say that they discover the means to predict and, thus, to control the occurence of a particular event.[3]

Kendler, remember, also says that the notion of behaviour is "critical" to the self-definition of psychology. This only goes to reinforce my argument that a particular notion about science is being developed. If psychology is to be one of the "real" sciences, then it cannot concern itself with unverifiable, unobservable "nonsense" like the human mind! Behaviour is "clean", it is amenable to scientific enquiry, and the fact that crisis-ridden psychologists often allow stuff like emotion and thought to creep into the category only when they can be measured "scientifically" goes to show how much they work within the received view of what science is.

And so, the idea that psychology is some sort of "science" is carefully maintained and reproduced without really being considered. Each succeeding generation of "scientists" are taught to believe that they are doing psychological science, and an orthodoxy develops which can rightly be called psychology's "dominant framework".

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[3] Kendler says earlier that "the aims of science are often romanticized as ... [inter alia] control of the forces of nature" (p.4). But clearly, on the rest of his argument, science does aim to make control of phenomena possible. I find myself unable to make sense of this notion of "romanticization", unless he is hinting that he is a (scientific) romantic.

2. POSITIVISM

There are many more claims about science in this framework. I have touched on only some of the more important, but by now the ethos in which psychology is called the "science of behaviour" should be clear. A particular idea about what it is we do when we do science emerges as the dominant research tradition in South African psychology, and includes the following notions:

*that there is a unity of method between all sciences, so that psychology needs to be just like physics, chemistry and other natural sciences;

*that the scientific method involves refining laws linking discrete variables to one another in the form $\underline{Y} = \underline{f}(\underline{X})$;

*that this atomistic method produces an adequate explanation of the object of study of psychology;

*that science should make possible the prediction and control of the phenomena it studies.

Now it is important to keep in mind that these notions are all entailed within each other. The requirement that a valid scientific law take the form $\underline{Y} = \underline{f}\ (\underline{X})$ has its origins in 19th century physics, and it presupposes an atomistic world view. In addition, the $\underline{Y} = \underline{f}(\underline{X})$ formula makes prediction and control a real conceptual possibility, because it specifies exactly what needs to be done ($\underline{X}$) to bring about a required end ($\underline{Y}$). This homogeneity of concepts is what I mean by a "framework of thinking".

The framework in question is that of positivism. It is not the intention of this paper to go into an exhaustive examination and critique of the epistemological foundations of positivism, but simply to make the point that positivist science is not common

cause amongst scientists, whether they be of the "natural" or the "social" variety.

The central idea in the positivist programme is that facts exist in the world "entirely independently of human understanding, and provide the only reliable check on human thought" (Morrow, 1983, p. 35). The idea is that scientific theory reports neutrally, or "objectively", on the world "out there", and this leads directly to an atomistic method. Facts must be observed and measured, and therefore come to be seen as independent entities which can legitimately be "parcelled out" as variables for "scientific study". Once this assumption is made, general laws which predict and make possible the control of phenomena come easily. And so, we might come to believe, psychology is just like all the other sciences!

Yet there are numerous (and, incidentally, eminently respectable) frameworks which fundamentally challenge positivism, and make it clear that the nature of science is not simply given. Each would contribute a particular idea about what psychological research is, both on the ground and with regard to what we should be striving for. I mention a few such frameworks below:

*R.S. Peters: Peters' (1958) argument is that positivism is, in most cases, unable to provide adequate explanations in the realm of psychology. Psychology, he shows, must necessarily be concerned with explaining human action in terms of its purpose:

> "... a proper understanding of what is meant by human action shows ... that human actions cannot be sufficiently explained in terms of causal concepts. ... Indeed, to claim that we are confronted with an action is ipso facto to rule out such mechanical [i.e., positivist - IM] explanations."
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> (Ibid, p. 7)

So Peters' challenge to positivism is that it cannot explain what is crucial to psychology, the actions of human beings.

*Kuhn's notion of paradigm: Kuhn (1970) has argued that "facts" are produced within particular theoretical systems, and do not exist in the world independently of theory. Different paradigms (sets of theoretical notions and practices) create their own frameworks of fact, so that positivism is just one paradigm alongside many others. Science, for Kuhn, is not given; rather paradigms give rise to "normal science":

> "... research firmly based upon one or more past scientific achievements that some particular scientific community acknowledges for a time as supplying the foundations for its further practice."
> (Ibid, p. 10; my emphasis)

Kuhn's challenge to positivism, then, is that it cannot prescribe itself as the correct view of science, because legitimate competing paradigms all produce different notions of science.

*Phenomenology: Starting with the work of Husserl, phenomenology identifies a particular "krisis" in positivist thought. Husserl recognises that positivism represents an important committment in the natural sciences to the "ideas, ideals, and norms of autonomous reason" (Gurwitsch, 1966, p. 339). But ironically, he says, it negates precisely that which reason shows to be crucial in the social sciences, namely, the structures in which human beings gain meaning and relevance (the lebenswelt, in Husserl's terms):

> "A universe of ideal mathematical entities related to one another by exact laws is substituted for the Lebenswelt, which is relegated with all its features to the status of a mere subjective phenomenon."
> (Ibid, p. 411)

So for phenomenology, the social sciences are of a different order to the natural sciences, and the notion of a positivist science of psychology misses completely what the central concerns of psychology should be, that is, the lebenswelt.

*Marxism: It seems to me that "the Marxists" (if such an homogeneous grouping exists) would all share a criticism of the atomistic, mechanical nature of positivism. For example, Politzer (1976) regards it as unscientific "because it considered the universe to be a complex of fixed and mechanical things" (p. 90). Marxists argue that positivism is not scientific precisely because it rests on the idea that the world can be isolated into bits and pieces (or "variables") in a manner sufficient to explain the world. Science, on the contrary, consists in the dialectical method, in which the world is viewed as a constantly changing totality of relations. For Marxism, science is characterised by its ability to explain "the concentration of many determinations" (Marx, 1973, p. 101), which make up the extremely complex whole of human society. For psychology, this means that we cannot explain by means of positivist "general laws" linking isolated variables to one another; a scientific psychology will explain the structures of human consciousness by locating them within social structures as a whole.

*Realism: Bhaskar (1979) and others like him have developed a realist critique of positivist philosophy of science. They reconsider naturalism (the idea that there is a unity of method between the natural and social sciences), and argue for an anti-positivist naturalism. The idea is that the natural sciences have changed so radically since the 19th century that their methods can no longer be termed "positivist"; likewise, the

social sciences have no basis in positivism. Thus, says Bhaskar, it is possible to talk about an essential unity of method between contemporary sciences which is fundamentally anti-positivist. Ironically, mainstream psychologists, in clinging to positivist notions of science, avoid the very debates that might lend some substance to their fervent desire to be scientists! Bhaskar's challenge to positivism is that it has outlived its usefulness in clarifying the nature of scientific activity.

It is clear, then, that there are a number of different lines of opposition to the mainstream notion of "science". The above mentioned frameworks each offer a particular, sustained critique of positivist psychological science, although they are not necessarily mutually exclusive.[4] It is quite absurd to think that all scientists take the positivist ideal for granted; clearly, they often engage in a great deal of debate about what it is they do.

Yet, as we have seen, there is a real tendency for mainstream psychology to cling, dogmatically and uncritically, to positivism. In the absence of a widespread defence of positivist theory and methodology amongst psychologists, we need to seek the determinants of mainstream practice elsewhere.

3. THE HISTORY OF A SYSTEM OF PSYCHOLOGY

In this section, I suggest a reason for the positivist hegemony in psychology. I will argue that the history of mainstream psychology shows that this reason has to do with the social role

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[4] Indeed, my position is that a careful synthesis of the main epistemological tenets of the latter two "frameworks" provides a basis for a rigorous psychological science which would incorporate, and reread, the major insights of the other anti-positivist positions.

of positivist psychology.

Foucault (1970) offers an important insight into the nature of the search for the determinants of positivist psychology:

> "There can be no doubt ... that the historical emergence of each one of the human sciences was occasioned by a problem, a requirement, an obstacle of a theoretical or practical order: the new norms imposed by industrial society upon individuals were certainly necessary before psychology, slowly, in the course of the nineteenth century, could constitute itself as a science."
>
> (p. 345)

The suggestion here is that social forces gave rise to the mainstream idea of "the science of psychology" at a particular point in history. Foucault in fact argues that psychology has more to do with the maintenance of dominant interests in industrial society then it has to do with rational academic debate. He is, I think, correct about the emergence of positivist psychology.

An examination of the emergence of positivism in American psychology will make this point clear. Danziger (1979) points out that the development of psychology in the USA was a direct outcome of the social role of the discipline:

> "[psychology] depended on legitimization in terms of the norms and interests of established power groups controlling the distribution of those material resources on which the production of knowledge depends ... their norms and interests reflect the basic political and economic realities of the society in which they flourish."
>
> (p. 34)

In the United States at the turn of the century, control of research and the new universities was in the hands of businessmen and politicians whose interest was in tangible performance and

social control. Danziger shows clearly that there was an immense pressure on psychology to produce a technology of behaviour control which could serve the interests of a rapidly emerging capitalist economy. "A huge system of secondary and professional education had to be built practically from scratch; the human fallout from widescale migration and urbanization had to be dealt with; man had to be made to adapt to a rapidly rationalized industrial system; products had to be sold." (Danziger, 1979, p. 35).

In the face of these problems, positivism quickly became dominant in American psychology. Its concern with the prediction and control of human behaviour made it the ideal means for achieving the aims of American businessmen, and the $\underline{Y} = \underline{f}(\underline{X})$ form of explanation specified exactly those factors which had to be manipulated in order to control peoples' lives. The dominance of positivism in psychology was founded on its ability to provide the competent behavioural technology demanded of those early American psychologists:

> "American psychologists responded to this opportunity with a promise that was totally innovative. This promise involved nothing less than the claim that experimental psychology would supply the fundamental laws governing all human activity. ... It must therefore be considered the 'master science' of human affairs, guiding all efforts to control people."
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> (Ibid, p. 36)[5]

Various aspects of the history of American psychology support this thesis: the incredibly rapid development and influence of

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[5] Consider for example the views of Thorndike, writing in 1907: "Psychology supplies or should supply the fundamental principles upon which sociology, history, anthropology, linguistics and the other sciences dealing with human thought and action should be based." (Danziger, 1979, p. 35).

Skinnerian behaviourism on the basis of its ability to produce specified behavioural objectives;[6] the emergence of the vast technology of industrial psychology on the basis of its ability to combat the threat posed to management by organised labour from the 1940s on; and, more recently, the influence of humanistic psychology on the basis of its ability to locate the sources of social control within people themselves.

So it is clear that a positivist mode of thought established dominance in mainstream American psychology because of the social role it fulfilled, rather than because psychologists seriously understood the philosophy of science they were embracing. But what of European psychology?

Wilhelm Wundt's "first psychology laboratory" in 1879 is usually cited as evidence that it was European psychology which broke with the "horrors" of speculation in philosophy. We are led to believe that Wundt was the brilliant 19th century philosopher who, in his brilliance, established psychology as a science for once and for all. But Wundt has been seriously misrepresented in this way. He was in fact a strong opponent of the separation of psychology from philosophy, and there is no reason to believe that he argued for a distinct science of psychology. He held that "the most important problems in psychology were so closely connected with philosophical problems that a separation of the two would reduce the psychologist to the level of an artisan imprisoned by a covert and naive metaphysics." (Danziger, 1979, p. 31; quoting Wundt) (my emphasis). In fact, it was only the generation succeeding Wundt, and particularly the Americans, who

[6] This despite the fact that Skinner's system has been shown to make no logical sense whatsoever. See Chomsky (1959).

first conceived a distinct scientific and professional identity for psychology. For example, Wundt in 1913 attacked a group of emerging German "scientific" psychologists for wanting to follow a distorted "American model not appropriate in Germany" (Ibid, p. 32). German psychology tended to be opposed to positivism, despite the fact that experimentation formed part of its philosophical endeavours.

In fact, the extreme positivist stance has not been as dominant in continental European psychology. This is not to say that French or German psychology is not determined by its social role, but rather that it is much more conscious of its philosophical origins, much less inclined to fall into the traps of positivism, and therefore much more likely to understand which interests in society it serves. All of this stems from the fact that psychology in Europe had to answer much more to a philosophical establishment than to rampant big business at the turn of the century. Nevertheless, it should not be assumed that the more sophisticated European traditions in psychology inevitably do not have a social control function. Obviously a great deal of knowledge produced in any society will serve the interests that control the resources in that society.

For the purposes of my argument, however, the American "model" is crucial, not least because the South African psychological establishment has modelled itself on that of the USA. I have pointed out elsewhere that this is no historical accident (Moll, 1982): the political and social conflict that marks 20th century South African history provides the backdrop for the development of a psychology that had to legitimate itself in much the same way as it did in the America of the early part of

the century. Trends in psychological research in this country show positivism dominating more and more in response to the demands of particular social interests (see Andor, 1966):

*The social background of the 1920s and 1930s was characterised by developing institutionalised segregation. Significantly, social psychological research at the time was dominated by attempts to establish laws showing the nature of differences between blacks and whites.

*The 1940s saw the emergence of apartheid, with its crucial emphasis on separate education. Positivist psychological research received a boost from an increasing concern to correlate the educational aptitudes and abilities of blacks with their position in society.

*In the 1950s, South African capitalists were faced with increasing productivity constraints, and increasingly militant trade union activity. Biesheuvel, probably the most prolific industrial psychologist in South African history, makes it clear that the development of psychology was determined by these dominant capitalist interests:

> "For short term educational and occupational purposes we are not concerned with what could have been made of a man ... the teacher and the employer merely want to know how he can best be trained and utilised within the limits set by his cultural antecedents."
>
> (Ibid, p. 27)

The positivist language is clear, and the social interests which determine it, and which it serves, are equally clear.

Although this sketch of the history of psychology in this country has been brief, there is no reason to think that Danziger's (1979) analysis of the emergence of positivist psychology in America

cannot be applied usefully to the South African case.

The mainstream idea of what constitutes psychological research, then, is extremely problematic. Positivism holds sway not because it has been demonstrated to be a sound basis for psychological knowledge, but because it serves particular social interests in helping to prop up a social status quo.

4. SHADES OF A CRISIS

Let me now once again bring into focus the question "what is psychology?".

It should be clear by now that this question throws up an enormously complex set of issues, ranging from the epistemological grounds on which we might develop knowledge of matters psychological to the problem of exactly how it is that this knowledge relates to social structures as a whole. It points too, to the thorny question of the role that psychologists have played in the maintenance of an apartheid capitalist society, and on the other hand, to the possibility of developing an emancipatory psychological practice in this country.

Yet mainstream psychology seems to want to avoid answering the question. To be told that psychology is "the science of behaviour" simply closes down the possibilities for meaningful debate, and ignores the complexity of the question. One might be forgiven for gaining the impression that psychology is more concerned with mutual back-slapping self-preservation than with seriously addressing the real problems of the psychological domain. I think that an awareness of this has meant a real crisis in the lives of many psychology students.

The way out of this crisis is not to capitulate to the psychological establishment, nor to get out of psychology forever. It is in fact to work to establish psychology as a serious contribution, both theoretically and practically, to South African life, and to refuse to allow it to be dismissed as "the science of behaviour".

Part of the process is to take seriously the question "what is psychology?". The answer required is not an easy one to arrive at: it would be very difficult simply to define psychology on a piece of paper and believe that that was the end of the story. To break out of mainstream psychology, both theoretically and politically, is to engage in a struggle for an emancipatory psychology in South Africa. The answer to the question "what is psychology?" lies in this activity.

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