

- (e) Where behavioural and emotional development have been severely neglected.
- (f) Sexual abuse.

If non accidental injury occurs in hospital or Local Authority residential accommodation, hospital management or Local Authority can investigate and deal with it, but if the adult with mental handicap lives at home the position is complicated. The law relating to children—the Place of Safety Law—is not applicable to adults even if they are mentally like children. Even the Guardianship Order under the Mental Health Act 1983 cannot be used, as according to the new Definition of Mental Impairment/Severe Mental Impairment, apart from the arrested or incomplete development of mind, impairment of social and intellectual functioning, there has to be seriously irresponsible and abnormally aggressive conduct by the person concerned. If the parents or carer do not co-operate the only way professionals can respond to the situation is by the Local Authority going to Court to take away the parental rights and assume parental responsibilities. This seems to be a rather drastic step.

I am writing this so that other members who have either dealt with cases of NAI to adults with mental handicap, or have suggestions for dealing with such difficult cases, may like to share their views.

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### ***Psychoanalysis: Science or nonscience***

DEAR SIRs

I read with great interest Carola Mathers' article 'Psychoanalysis: Science or Nonscience?' (*Bulletin*, May 1986, 10, 103–104).

She suggests that if we accept Popper's criterion for the demarcation of the empirical sciences, namely the production and testing of falsifiable theories, then we can exclude psychoanalysis from scientific status 'without further thought'. However, she raises a number of objections to Popper's philosophy of science, which cause her to reject it.

She says that falsifiability is not the same as testability since 'by testing a theory one can prove it to be correct or incorrect'. However, they are the same in the sense in which they are used by Popper: a theory is called falsifiable or testable if it divides the set of all conceivable statements of fact into those with which it is consistent and those which it contradicts or refutes. Perhaps Carola Mathers incorrectly equates falsifiability with *falsification* (which occurs when the results of a test contradict the predictions of a theory); theories do not have to undergo falsification in order to be considered empirical, but they do have to be falsifiable. Furthermore, it is an essential argument of Popper that by testing a theory one *cannot* prove it to be correct, since the proof of universal statements by singular statements relies

on inductive logic, whose own justification leads either to an infinite regress or the doctrine of *apriorism*.

Unlike Carola Mathers, I believe the examples she gives concerning the activities of scientists tend to support the idea that the practice of science is described by Popper's philosophy. Scientists do indeed spend much of their time experimentally finding that the results of their tests agree with the predictions of their theories—this is described by Popper as corroboration, and does not amount to *proving* the hypotheses (since this would require inductive logic). It is only when experimental results are inconsistent with a hypothesis, falsifying it, that a new hypothesis is likely to be formulated. The replacement of Newtonian theory by Einsteinian theory is an excellent example: the general theory of relatively made predictions which differed from classical theory, and in 1919 the total eclipse of the sun allowed measurements of the deflection of light-rays by a mass that corroborated general relativity and seemed to refute (or falsify) classical theory. Thus, classical theory was rejected in favour of general relativity.

The suggestion that scientists unwittingly distort their experiments or observations to generate the results they expect is described by Popper as a 'conventionalist stratagem' to avoid the replacement of old theories by new ones. He cautions: 'it must be left to the investigator... to guard constantly against the temptation to employ new conventionalist stratagems—a temptation to which psychoanalysis, for example, often succumb'. In this particular case he recommends that the results of inter-subjectively testable experiments are either to be accepted, or rejected in the light of counter-experiments.

In the analytic session, described by Carola Mathers as 'the laboratory of psychoanalysis', a correct interpretation by the analyst may promote a stream of new material from the patient. If an interpretation is derived by the patient, then this might suggest it was incorrect and falsified. However, if a new theory, 'resistance to treatment' is introduced to explain the 'phenomenon of denial' then by this *ad hoc* hypothesis, psychoanalytic interpretation becomes no longer falsifiable. Popper warns against the introduction of *ad hoc* hypotheses (another 'conventionalist stratagem') and recommends that auxiliary hypotheses are accepted only if they do not diminish the degree of falsifiability or testability of the system in question. If psychoanalysts have a theory to explain every and any response of their patient, then psychoanalytic theories are no longer falsifiable, and the world in which psychoanalytic theories are true, becomes empirically equivalent to the world in which psychoanalytic theories are false. This is the fate suffered by a discipline when it dispenses with a scientific basis; it raises the question, what use are psychoanalytic theories?

Even if psychoanalysis is considered as nonscientific, then there need not be a polarisation of views between those arguing that 'meaning is more important than scientific status' and those arguing that 'because psychoanalysis is unscientific it is meaningless'. Popper has stated that 'falsifiability is a criterion of demarcation... but *not of meaning*... It draws a line inside meaningful language not

around it'. Metaphysical ideas must be evaluated by value judgements rather than by empirical methods and psychiatrists should assess psychoanalysis by alternative criteria: intellectual, humanitarian, economic and others.

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#### REFERENCE

POPPER, K. R. (1959) *The Logic of Scientific Discovery*. Tenth Impression (Revised) 1980. London: Hutchinson.

#### DEAR SIRs

Dr Mathers, (*Bulletin*, May 1986, 10, 103–104) goes to some length to attack Karl Popper's philosophy of science. I am not sure that this is done accurately and am not convinced, in any case, that it strengthens the position of psycho-analytical theory.

In the opening paragraph Dr Mathers draws the parallel between science and non-science, sense and nonsense. Karl Popper went to great lengths to avoid this comparison and was amongst those who accepted that much of our scientific knowledge has emerged from superstitious, mythical and religious concepts.

It was a consideration of psycho-analytical theory, amongst other theories popular in the Vienna of his youth, which led Popper to his demarcation of science and non-science and his rejection of inductive reasoning. He noted that no conceivable observations could contradict this theory. It was claimed that it could explain whatever happened and Popper saw that this ability to explain everything, which so convinced and excited its followers, was precisely what was most wrong with it. (Dr Mathers, too, seems critical of attempts at reductionism and trying to explain all phenomena in terms of one theory.) However, Popper never dismissed such theories as valueless, still less as nonsense:

"This does not mean that Freud and Adler were not seeing certain things correctly: I personally do not doubt that much of what they say is of considerable importance and may well play its part one day in a psychological science which is testable. But it does mean that those 'clinical observations' which analysts naively believe confirms their theory cannot do this any more than the daily confirmations which astrologers find in their practice. And as for Freud's epic Ego, the Super Ego, and the Id, no substantially stronger claims to scientific status can be made for it than for Homers collected stories of Olympus".<sup>1</sup>

and later:

"If a theory is found to be non-scientific or metaphysical (as we might say), it is not thereby found to be unimportant, or insignificant, or meaningless, or nonsensical. But it cannot claim to be backed by empirical evidence in the scientific sense—although it may, easily be, in some genetic sense, the 'result of observation'".

In an attempt to defend psycho-analysis by trying to discredit Popper's theory, Dr Mathers makes three criticisms

in paragraph four. In reply: firstly, Popper stated that the demarcation between science and non-science was falsifiability. That scientific laws are testable in spite of being unprovable: they can be tested by systematic attempts to refute them. That scientific law is conclusively falsifiable but not conclusively verifiable and simply by seeking repeated confirming instances we can never prove a theory. At any time the best our hypotheses are the most probable explanations of situations within the bounds of our knowledge. This means that all knowledge is provisional and to prove a theory is logically impossible.

Secondly, Popper suggests that knowledge is always advancing by the process of scientific refutation, as the refutation of each hypothesis provides us with a new hypothesis to test. He cautioned against abandoning theories lightly as they may not be tested rigorously enough. With reference to the theories of Newton and Einstein, Popper agrees with Dr Mathers:

"We cannot identify science with truth, for we think that both Newton's and Einstein's theories belong to science, but they cannot both be true, and they may well both be false".<sup>2</sup>

I think with both these points there is need to distinguish between Popperian theory and some 'scientific' practices, for the two may not be the same and the latter may not necessarily discredit the former.

Thirdly, Popper agrees that theory precedes observation and was aware of the bias this could create in methodology.

"The belief that science proceeds from observation to theory is still so widely and so firmly held that my denial of it is often met with incredulity. . . . But in fact the belief that we start from pure observations alone, without anything in the nature of theory is absurd".<sup>1</sup>

"Observations and even more so observation statements and statements of experimental results are always interpretations of the facts observed; that they are interpretations in the light of theories".<sup>3</sup>

From the beginning he drew the distinction between the logic and the implied methodology of his philosophy. He acknowledged that though the logic was straightforward, methodologically it was always possible to doubt a statement. He suggests that we therefore formulate our theories as unambiguously as we can so as to expose them as clearly as possible by refutation and accepts inherent difficulties in this methodology as in any other. It is a misconception to believe that Popper proposed the idea of falsifiability as a solution to the problem of experimental bias.

I have tried to show that Popper did not set out to discredit psycho-analysis but simply proposed a philosophy of science which showed psycho-analytical theory to be a non-science because it was untestable. This does not imply it is nonsense, nor that there will never be a time when it may become testable. Neither does it mean it is not true. The central point is that if all possible states of affairs fit in with a theory, then no actual states of affairs, no observations, no experimental results, can be claimed as supporting evidence for it. That is, there is no observable difference between its being true or false so it conveys no scientific information.