

[Place, U. T. (1984). Logic, reference and mentalism: a comment on B. F. Skinner, 'The operational analysis of psychological terms'. *Behavioral and Brain Sciences*, 7, 565-566. plus Response by B. F. Skinner, p.577 ]

## LOGIC, REFERENCE AND MENTALISM

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While there is much in this paper that seems to me entirely right, I shall confine my discussion to three points where in my view Skinner has got it wrong.

**Logic.** Skinner draws a distinction between "logical theories of reference" on the one hand and an account of reference based on a "scientific analysis of verbal behavior" on the other, and envisages that the latter will ultimately supersede the former.

Although it is difficult to be certain what Skinner is actually saying in these passages, he seems to think that the only arguments recognised as valid by logicians are those that conform to the explicitly stated rules of an existing logical calculus. In fact logicians are well aware that human beings who have never heard of logic or still less of a logical calculus have been giving valid arguments in support of their conclusions and detecting fallacies in the arguments of others long before the first treatise on logic was ever written.

Reasoning in accordance with the principles of logic, like all verbal skills, is, as Skinner himself (1969a, chap. 6) puts it, "contingency shaped" rather than "rule governed" behaviour. The principles of logic formulated by the logician are an abstraction from the intuitive contingency-shaped inferential practice of thinkers, not a set of verbally formulated rules which the thinker is obliged to follow if he is to reason correctly. [See also Cohen: "Can Human Irrationality Be Experimentally Demonstrated" BBS 4(3) 1981].

The logician's concern is to give formal expression to the principles whereby we relate the truth value of one statement to the truth value of another. It is therefore a reasonable criticism of the accounts of language and its meaning given by logicians that they concentrate on those aspects of an indicative sentence and its utterance that determine its truth value and ignore imperatives and interrogatives (Skinner's "mands") where the concept of "truth value" has no obvious application. However, to talk, as Skinner does, as if questions of truth value are irrelevant from the standpoint of an empirical science of verbal behaviour is equally unbalanced.

As I have suggested elsewhere (Place 1981b) Skinner's cavalier attitude towards truth in his account of verbal behaviour (Skinner 1957) stems from his preoccupation with verbal behaviour from the standpoint of the speaker whose interest, *qua* speaker, lies in the effectiveness of verbal behaviour as a device for manipulating the behaviour of the listener. He ignores the standpoint of the listener from whom the truth value and hence the reliability of what is communicated by others is of vital concern.

**Reference.** The effect of Skinner's preoccupation with verbal behaviour viewed from the standpoint of the speaker to the exclusion of that of the listener is also apparent in the account of reference which he offers as an empirical scientific alternative to "logical theories of reference". This leads him to concentrate on the case in which the speaker names an object when confronted by an instance of objects of that kind as his paradigm case of the referring function of verbal behaviour, whereas the problem of reference, when viewed from the standpoint of the listener, is the problem of how verbal behaviour emitted by the speaker can prepare a listener to encounter a situation that is not only *not* impinging on his sense organs at the time, but never has done in that precise form in the past. Reference is not, as Skinner supposes, a matter of the stimulus control exercised by non-verbal stimuli over the verbal behaviour of the speaker. It is a matter of the stimulus control exercised by verbal behaviour emitted by the speaker over the verbal and non-verbal behaviour of the listener.

**Mentalism.** As Skinner conceives it, the problem about our ordinary psychological vocabulary is that the controlling stimuli to which, on his account, these words refer are accessible only to the individual to whom the words in question apply. For him "being in pain" is the paradigm case of a psychological expression. What he fails to appreciate is that "being in pain" is one of a very small number of expressions in our very extensive psychological vocabulary whose primary use is indeed in the context of first-person sentences that report the occurrence of a private event of which the listener would not otherwise be aware. As Ryle (1949) points out, the majority of the psychological terms we use in everyday life occur primarily in the context of the third-person sentences that we use to describe, explain, and predict the public behaviour of other people, especially verbs like "knowing," "believing", "thinking", "wanting" and "intending" which comprise what behaviourists like Skinner dismiss as "mentalist" explanations. To say of someone that he knows, believes, or thinks that so and so is the case, that he wants or intends to do something is not to assert the occurrence of a private event or indeed the existence of a private mental state, it is simply to say something about what the individual in question could or would publicly say and do if certain broadly specifiable contingencies were to arise. More recent work (Place 1981a) on the intensionality of the grammatical objects of these psychological verbs suggests that what we are dealing with here is a device whereby the individual's behavioural dispositions are specified in terms of how he would describe the situation and his objectives with respect to it. This in turn suggests that the use of mentalistic terms in the explanation of behaviour involves the assumption that the behaviour in question is governed by a verbal formula or "rule" that "specifies" the contingencies involved (Skinner 1969a, pp.146-52) and hence that the use of such explanations for scientific purposes is not, as Skinner believes, objectionable in every case, but only insofar as this assumption of a consistent rational and causal connection between what is said and what is otherwise done fails to hold.

### References

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### Reply by B. F. Skinner, p. 577

I have not said, as **Place** claims, that reasoning in accordance with the rules of logic is “‘contingency shaped’ *rather than ‘rule governed’ behaviour*” (italics added). All behavior is, I believe, contingency shaped. We take advice and follow rules because of reinforcing consequences which have followed when we have done so in the past. But the behavior referred to by the advice or the rules has other consequences. Thus, if a friend advises me to take one route rather than another on a journey I do so because of what has happened in the past when I have taken advice from him or others like him. In addition, I enjoy a shorter, smoother, or pleasanter journey – the consequences specified in the advice. I obey the laws of government not because I have disobeyed them and been punished but because I was taught to obey them. In addition, I avoid the contingent punishments specified in the laws. One behaves logically by following rules which describe contingencies; at other times one might behave in the same way after having been exposed to the contingencies. The business of the logician is deriving new roles [rules?] from old and arriving at descriptions of contingencies to which no one has necessarily yet been exposed.

I don't believe my attitude toward “truth” is cavalier. I accept the tautological truth of logic, but I don't think that science, including behavioral science, can be true or false in the same sense – or in any useful sense. Some verbal responses are controlled by sharply defined stimuli which have acquired their power from the part they play in very consistent contingencies. They are as close as one can come to being true. Beyond that I do not think we can go.

Place's concern for the listener seems to me irrelevant. My book *Verbal Behavior* was different from most linguistic material of the time in emphasizing the behavior of the speaker. I did not think that the behavior of the listener called for any special treatment beyond the role played in reinforcing the behavior of speakers. The behavioral processes involved when a person responds to "It is raining" do not differ significantly from those involved in responding to a few drops of rain on the skin or a particular noise on the roof. All three "mean" rain. The "meaning" of a verbal response for the speaker is not the same as its "meaning" for the listener. That is what is wrong with "communication" as making something common to both parties.

Place speaks of "being in pain" when I speak of the stimuli generated by a carious tooth. I chose some such response as "My tooth aches" as a simple example, not as a "paradigm case of a psychological expression." I do not agree that "it is one of a very small number of expressions in our very extensive vocabulary." I agree we speak of knowing, believing, thinking, wanting, and intending (I would not be much of a behaviorist if I did not!), but that is not what the psychologists of 1945 were saying. The editor of the symposium (E. G. Boring), a student of Titchener and, through Titchener, Wundt, believed in a world of mental life in which mental events obeyed mental laws observed by "trained observers." These were the things of which I was offering an operational definition.