



## Commentary

# Watson: The thinking man's behaviourist

Geoffrey Hall\*

Department of Psychology, University of York, York, UK

The first World War disrupted the proposal to hold an international congress of philosophy in England in 1915. When the philosophers got together again it was at a meeting in Oxford in 1920 jointly organized by the Mind Association, the Aristotelian Society and the British Psychological Society; invitations were extended to delegates from America and France. The roll call of luminaries was impressive: it included Bertrand Russell (who, in fact, failed to appear) Henri Bergson, James Ward, Sir James Frazier, Frederic Bartlett, Henry Head, and even the philosopher-statesmen, A. J. Balfour and Lord Haldane (Hoernlé, 1921).

J. B. Watson, at that time a professor of psychology at Johns Hopkins in Baltimore, was greatly flattered to be invited to take part in a symposium on his behaviouristic theory of thinking and was determined to attend. When his university failed to come up with the fare he asserted (in jest, one supposes) that if necessary 'I am going to try to work my passage either as an engineer's assistant . . . or a husky freight mover' (Cohen, 1979). That he failed to make it in the end was for quite other reasons. The scandal surrounding his affair with a graduate student and the separation from his wife, events that came to a head in the spring and summer of 1920, put paid to his plans. None the less his views, as described in his 1919 book *Psychology from the standpoint of a behaviourist*, were discussed at the congress and criticized by Bartlett and his wife (E. M. Smith), by G. H. Thomson (subsequently renowned for his work in mental testing), by T. H. Pear (the first professor of psychology at Manchester), and by A. Robinson (professor of Logic and Psychology at Durham). Watson's response was published alongside the comments in this journal in 1920.

That Watson's theorizing should be the object of such sustained and serious attention may seem surprising to psychologists of later generations. In so far as he is discussed at all, it is almost as a figure of fun - a proponent of self-evidently absurd notions. As I recall, two of his proposals were held up for particular derision. One was the suggestion that perception should be studied by means of conditioning procedures (why do this when human subjects can be instructed to respond verbally with 'red', or 'green', or whatever?); the other was his suggestion that thinking consists of subvocal

\* Correspondence should be addressed to Dr Geoffrey Hall, Department of Psychology, University of York, York YO10 5DD, UK (e-mail: GHI@york.ac.uk).

laryngeal activity, the topic of the paper reproduced here. The attention given to his 1920 paper confirms the view that Watson's proposals are not, in fact, as absurd as all that when they are considered, not as isolated 'sound-bites', but in the context of his thinking about psychology generally. Watson's own paper, reprinted here, is an attempt to do that for his notion of thinking. But before turning to a direct examination of this topic, it will be well to stand back and look at the bigger picture.

Watson was brought up with the introspectionist psychology of the early 20th century, albeit with the 'functionalist' version of his mentor J. R. Angell (a devoted disciple of William James). This version was supportive of Watson's studies of animal behaviour – observations of behaviour could be used to infer the nature of the animal's consciousness and the investigator could then demonstrate how the processes so inferred functioned in determining the behaviour of the animal. Watson quickly came to see the redundancy inherent in this programme, and argued that the study of behaviour was of merit in its own right, without the need for speculation about the animal's consciousness. His behaviourism can be seen as the extension of this argument to psychology generally. For humans, as for nonhuman animals, psychology is seen as the study of behaviour, not of consciousness. Introspection should play no greater role for the psychologist than it does for a physicist who uses it merely to report the result of a meter reading (hence Watson's attitude to the role of introspective report in perception; see Watson, 1913, where the argument is developed in detail).

What place could the notions of thought or thinking, notions defined in terms of introspection, have in a psychological scheme of this sort? The answer, of course, is none – without introspection, to quote Watson's paraphrase of Titchener 'the behaviourist . . . does not know there is any such thing as thinking'. All he acknowledges is that organisms behave, that muscles contract and glands secrete. Such 'responses', as Watson called them, can be categorized as being either 'hereditary' or 'habits' (Watson, 1919). (As he explained in the paper reproduced here, the term 'habit' is not used to mean a fixed chain of responses; it simply means patterns of behaviour that are acquired, or are not 'hereditary'). Both types of response occur both in explicit (readily observable) and implicit forms. Examples of explicit hereditary responses are sneezing, blinking, and so on; implicit hereditary responses include the whole system of endocrine secretions, for which instrumentation is necessary for observations to be made. Explicit habit responses include 'tennis playing, violin playing, building houses, talking easily to people . . .' (Watson, 1919, p. 14).

What remains is the fourth category: implicit habit responses. The assumption here is that when a man is observed doing nothing (e.g. sitting with a book in front of him), appropriate instrumentation could reveal responses of the same general type as those involved in playing tennis (or reading aloud for that matter), just as instrumentation could reveal the occurrence of endocrine secretion in such a person. From this perspective, to say that thinking consists of subvocal laryngeal activity, is to get hold of the wrong end of the stick. Better for the behaviourist to say that this collection of difficult-to-observe behaviours equates to what others, of a different philosophical bent, like to call thinking. Watson assumed (and subsequent experimental studies confirmed) that subvocal laryngeal activity would be one of these behaviours, but he was clear in his view that this was just one component of 'thinking', and not an essential one. Thinking is, quite evidently, possible for people who have had the larynx surgically removed; but in these cases much of the neuromuscular system necessary for 'implicit habit responses' will remain. 'To destroy enough of the sensory motor mechanisms to make

language organization and hence thought impossible would in all probability bring about the death of the patient' (Watson, 1919, p. 316).

The thought-experiment implied by this last remark raises the question of what would be the case if an intervention were possible that prevented all effector activity but allowed the central nervous system to carry on doing its stuff. I imagine that most of us (Watson included) would accept that thinking would still be possible; it would be just that the 'implicit' motor responses would be blocked so that even sophisticated instrumentation could not detect them. The 21st century assumption, that thinking consists of neural activity, would be allowed, but Watson would perhaps be satisfied by the implied conclusion that thinking consists of *doing* something.

And yet I wonder. A person stripped of all effector systems would miss a lot (to put it mildly). The isolated 'brain in a vat' (to use Dennett's, 1991, phrase for this classic thought-experiment), even if it were supplied with an input down the auditory nerve to set it a problem to think about, might find the task difficult in the absence of an effector system. Effector activity produces feedback that may play a critical role in the activity we call thinking – we can detect what we say (even if we only mumble it to ourselves) and the feedback produced is likely to be influential in determining the next pattern of activity we emit. To this extent the peripheralist view of Watson that 'our whole body does the thinking' contains what may be an important truth.

## References

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