

Behaviourism

4.1 Language learning

No-one knows exactly how people learn language although a great deal of research has been done into the subject. Certain theories have, however, had a profound effect upon the practice of language teaching (and continue to do so) and it seems sensible, therefore, to consider them.

4.1.1 Behaviourism

In an article published in 1920², two psychologists, Watson and Raynor, reported the results of experiments they had carried out with a young baby called Albert. When Albert was nine months old they discovered that the easiest way to frighten him was to make a loud noise (by striking a steel bar with a hammer). At various intervals over the next three months they frightened Albert in this way while he was in the presence of various animals (a rat, a rabbit and a dog). The result of these experiments was that after three months Albert showed fear when confronted with these animals even when the noise was not made and even

showed unease when a fur coat was put in front of him. The psychologists suggested that they would be able to cure Albert's fear but were unable to do so because he was no longer available for experimentation, and they even discussed the possibility of Albert's fear of fur coats when he reached the age of twenty!

The ethics of this experiment are highly questionable, but Albert's experiences are an early example of the idea of *conditioning*. Watson and Raynor had managed to condition Albert to be afraid of the rat, rabbit, dog and fur coat where before he had a neutral emotional reaction to them.

The idea of conditioning is based on the theory that you can train an animal to do anything (within reason) if you follow a certain procedure which has three major stages, *stimulus*, *response*, and *reinforcement*. In the classic form of the theory a rat is placed in a box. A signal light is operated (*the stimulus*), the rat goes up to a bar in the cage and presses it (*the response*) and a tasty food pellet drops at its feet (*the reinforcement*). If the rat's behaviour is reinforced a sufficient number of times it will always press the bar when the light comes on.

Reinforcement in that example took the form of a reward and was therefore positive. But you could also train the same rat not to do something by giving him negative reinforcement, maybe in the form of a small electric shock.

In a book called *Verbal Behaviour*, the behavioural psychologist Skinner applied this theory of conditioning to the way humans acquire language. Language, he suggested, is a form of behaviour in much the same way as the rat pressing the bar exhibits a form of behaviour. (It is because we are concerned with behaviour that this theory of learning is referred to as *behaviourism*.) The same model of stimulus-response

reinforcement accounts for how a human baby learns a language. An internal stimulus such as hunger prompts crying as a response, and this crying is reinforced by the milk that is subsequently made available to the baby. Our performance as language users is largely the result of such positive (or negative) reinforcement.

Behaviourism, which was after all a psychological theory, was adapted for some time by the language teaching profession, particularly in America, and the result was the *audio-lingual method* still used in many parts of the world. This method used consistent and unending drilling of the students followed by positive or negative reinforcement. Of course the approach wasn't quite as crude as that, but the stimulus-response-reinforcement model formed the basis of the methodology. The language 'habit' was formed by this constant repetition and the reinforcement of the teacher. Mistakes were immediately criticised, and correct utterances were immediately praised.

The term *cognitivism* is often used loosely to describe methods in which students are asked to think rather than simply repeat. It stems to a large extent from Noam Chomsky's reaction to Skinner's book and is based on his theory of competence and performance that we have already discussed (in 2.2).

In 1959 Chomsky published a strong attack upon Skinner's *Verbal Behaviour* which has become rightly famous. In his review of the book he explained his rejection of the behaviourist model of language acquisition (how a baby learns a language) on the basis of his model of competence and performance.

The strength of the attack can largely be produced by the asking of questions: if all language is learnt behaviour, how is it that young children can say things they have never said before? How is it possible that adults all through their lives say