Behavioural Approaches in Education: explanations in terms of science and in terms of personal justification

J. J. SCHWIESO
Bulmershe College of Higher Education, Woodlands Avenue, Earley, Reading, Berkshire RG6 1HY, United Kingdom

SUMMARY Behavioural approaches in education have achieved widespread acceptance in recent years yet they stand in an uneasy relationship to theories of learning. Behaviourism is widely regarded as an inadequate theoretical underpinning for behavioural pedagogy but no alternative explanation has taken its place. Moreover many of the criticisms levelled by philosophers at behaviourism still have force when applied to nominally atheoretical behavioural approaches. This has led some writers to call for the rejection of behavioural techniques by teachers. This article argues that behavioural educational practices are best placed within a 'rational' or 'justificatory' framework, rather than within a strictly 'scientific' account of human activity. Firstly, the distinction between these two explanatory frameworks is drawn. Secondly, the major criticisms levelled at behavioural accounts of human action are outlined. Thirdly, various aspects of behavioural education are discussed, in the light of a justificatory and rational perspective on human behaviour in order to show how such a viewpoint can both account for and enrich our understanding of behavioural practices.

1. Introduction

The behavioural approach to education has had a strange career over the last two decades. Behaviourism, its putative theoretical parent, has declined in the face of extensive psychological and philosophical criticisms from being a dominant paradigm to being one of many small, though still lively, traditions. At the same time behavioural approaches have burgeoned in mainstream teaching (e.g. Merrett, 1985) whilst retaining their powerful position in special education. Within education as a whole objective measures of progress and other behavioural practices have become common.

For the practising teacher the effectiveness of behavioural approaches is probably their key attribute. Educational theorists and psychologists, however, cannot rest content with a contradiction between inadequate theory and successful practices. In this article the challenge posed by this conundrum is taken up. It is suggested that, despite the antagonisms between behavioural practitioners and their 'humanist' philosopher critics, behavioural practices can be best understood, and
their effectiveness accounted for, within an explanatory framework which takes account of that 'rationality' which philosophers have regarded as uniquely human.

2. Philosophy, Behaviourism and Behavioural Approaches

Philosophical criticisms of behavioural approaches have focused on two distinct, though related, matters. The first is the claimed inadequacy of behaviourist psychology in actually explaining human action (e.g. Dearden, 1987), the second is the ethical implications of employing behavioural techniques (e.g. Clark, 1979).

Although the use of behavioural approaches in no way commits the teacher to a behaviourist model of children's (or teachers') activities (e.g. Hastings & Schwieso, 1987), it is hard to completely divorce the empirical (indeed even empiricist) characteristics of behavioural approaches, with their emphasis on the observable, from the more controversial aspects of behaviourism. Hence, although the dissociation of behavioural practice from behaviourism is valid, there is still a case for the proponents of behavioural approaches to answer.

This paper reviews certain criticisms levelled by philosophers of education at the use of behavioural approaches, explores the consequences of placing them within a 'rational' framework and suggests how such a perspective might inform classroom practice. Space does not permit ethical issues to be similarly addressed though it is arguable that the moral questions raised by behavioural educational practices become, given such a perspective, no different from those raised by any teaching strategies.

First a note on terminology. We shall follow current trends in using 'behavioural approaches', 'teaching' or 'techniques', to describe all that went under the heading of 'behaviour modification'. The theoretical bases of behavioural approaches are usually a form of 'behaviourism', especially the 'radical' behaviourism of Skinner (e.g. Skinner, 1974). Both practices and theories have been seen as examples of 'scientific', 'objective' or 'empirical' perspectives which seek to explain all observed phenomena according to lawful, and possibly causal, principles existing independently of human intentions and desires.

Finding a name for the 'other' perspective is less straightforward, perhaps because there is no single 'anti-behaviourist' position. Amongst the terms used are 'libertarian' (Burwood & Brady, 1984), 'hermeneutic' (Gauld & Shotter, 1977) and 'humanistic'. Whatever the label, the underlying assumptions seem to be the same; that accounting for human action involves not simply description (and it can be argued that all scientific explanations are descriptions at a more basic level) but understanding. Inorganic matter and (probably) most life forms are subject to deterministic cause-and-effect whereas at least some human actions spring from, but are not caused by, people's beliefs, intentions and reasons. These reasons serve as justifications and can be discussed, influenced by better reasons and so on. 'Justificatory' will be used to distinguish this perspective from the natural science model espoused by behaviourists, a usage which, it is hoped, will avoid the various unwanted philosophical overtones of expressions like hermeneutic, and the political ones of terms like libertarian and humanistic.
3. Problems in 'Objective' and Behavioural Accounts of Human Action

Critics of behavioural accounts of classroom activity (e.g. Clark, 1979; Dearden, 1987) have been particularly concerned with the problems created by taking a purely external, natural science view. This section concentrates on those challenges to behavioural teaching which retain their force even when it is disassociated from behaviourism.

Behaviours versus Actions

Firstly there is the difference between behaviours and actions. Behaviours are no more than movements made by a person's body. They are typically caused: a boy treads on ice in the playground; his feet go from under him and he becomes temporarily airborne before hitting the ice and emitting (as a behaviourist might say) groaning behaviour. Physical forces simply overcame him. For a while he is literally a piece of nature, whose movements are explicable according to known laws. This physical explanation can include the damage caused by the fall and even, perhaps, the groaning noises.

Actions on the other hand, are purposeful behaviours intended by the child, for which he can be held responsible. If the boy let down the tyres on another pupil's bicycle, observers would regard his actions as chosen and intended, things that he did rather than things that just happened to him. In everyday life all sorts of practical, legal and ethical consequences depend on the distinction between intended and unintended behaviours. Usually we have no trouble in making this distinction with respect to both our own, and others', acts. However, this crucial distinction is not available to a strict behaviourist.

Dearden (1987) points out that the same, or very similar, behaviours may actually mean different things and lead to different outcomes. Though the contexts in which behaviour occurs may distinguish one action from another, we usually base our discrimination of acts upon the purpose behind the contexts. Even if I drop dead whilst signing a cheque in a bank you will be pretty certain that I was drawing money out rather than, say, writing a letter. This is not primarily because empirical research has revealed a correlation between customers' writing behaviour in banks and money-emitting behaviour by clerks. Nor does the context determine my purpose although it may constrain what I can do. I could sit in a bank writing a letter to a friend on a cheque! Knowledge of what I was about derives from a shared understanding of the purpose of signing a cheque in a bank as opposed to the purpose of signing a letter. The same behaviour becomes different actions according to the actor's intent. It is only when faced with anomalous acts, for example carried out by persons who are members of unfamiliar cultures, that one would be reduced to describing them in terms of correlations between circumstances, behaviours and outcomes.

Educationally useful behavioural accounts are concerned as much with descriptions of action as of behaviour. An objective description of even the simplest action (a child putting up its hand, for example) generates pages of information. In most cases this material is superfluous since the real concern is not the 'topography' of a
behaviour but rather its intent and effect (descriptions of movements are appropriate when teaching or correcting behavioural skills like writing).

Some behaviourists, appreciating this, have distinguished 'molecular' (individual movement) from 'molar' (whole actions) descriptions of behaviours. Such a distinction cannot by itself solve the problem of how the observer is to divide the total flow of an individual's behaviour into meaningful chunks. Skinner's line is through functional definition of the term operant. Operants are classes of behaviour which lead to the same outcome (Skinner, 1938, p. 20). Thus typing is an operant, whether effected by fingers, toes, noses or whatever. However this seems to move the focus away from behaviour towards outcomes. Moreover it founders on failed actions. The distinction between typing ineffectively (the electric typewriter is turned off) and attacking the machine with one's fingers lies in one's intentions, not in the outcome of the action.

The key issue is: meaningful for what and to whom. Midgley (1978) points out that ordinary language provides a 'purpose-built' conceptual framework for describing actions in a manner which acknowledges the intent which they express. Even self-declared behaviourists do not really identify out-of-seat behaviour by measuring the gap between seat and buttocks as Poteet (1973, p. 7) recommends. Thus Barros (1988), in the third edition of a key text on behavioural assessment, describes how behaviour therapists in the United States have retreated from descriptions of single behaviours back to the use of non-observable concepts like 'syndrome'. Behavioural teachers, like any others, deal not with movements but with actions.

**Theories and Reinforcement**

A second concern is with reinforcers. For Skinner "reinforcer" is preferable to "reward" since it involves no assumptions concerning the mental state of the subject. A reinforcer is defined solely by its impact on behaviour. Skinner certainly has a point, particularly as regards animals. The term reward (and punishment—a term which behaviourists notoriously should have replaced but didn't—see Harzem & Miles, 1978, pp. 113-121) implies a notion of fairness hard to attribute to an animal. Again a reward can be defined functionally or nominally. Hence we can say that receiving $x$ was rewarding to a child, whether or not intended to be so by the giver, or that the giving of $x$ was meant to be rewarding but may not have been so. In both instances behaviourist thinking only appeals to qualifying conditions already recognised in everyday discourse.

However, defining rewards objectively leads to problems. If a reinforcer is defined by its effect then strictly speaking we can only say that $x$ turned out to be a reinforcer—i.e. we recognise a reinforcer on a *post hoc* basis. When planning an intervention we can only talk of 'intended' reinforcers. Indeed Clark (1979, p. 75) points out that the term reinforcement may involve circular reasoning if the reinforcer is not distinguishable from its effect (Why do I read this book? Because it is reinforcing. How do you know that it is reinforcing? Because I keep reading it).

'Reinforcement' causes difficulties so long as we have no concept of what
things should be reinforcing and why. Skinners's radical behaviourism originally made a virtue of eschewing theories with their necessary appeal to the unobservable. More recently it has looked to ethology to locate reinforcement within an evolutionary perspective (e.g. Lea, 1984). In terms of the classroom, though, it is unclear how such a general perspective, even if it were a lot better developed than it is, could provide practical guidelines for choosing an appropriate reinforcer. In practice the teacher (or indeed anyone using a behavioural technique) uses a common-sense 'theory' of what might be reinforcing, based upon 'inside knowledge' of persons, and upon extrapolation from previous experiences. Hence the return of meanings rejected on 'scientific' grounds!

**Truth and Convenience**

A third philosophical complaint concerning behavioural techniques is that the approach is, quite literally, blind to the differing qualities of behaviours. I want my child to sleep through the night because, amongst other things, I need and want my sleep as much as, if not more than, she needs hers. However I want her to say that two and two is four because I believe that it is true not because it is convenient. The roots of behaviourism lie in late nineteenth century American pragmatist philosophy (see, e.g., Smith, 1986), which emphasised the usefulness of 'truth' as opposed to its correspondence with 'reality'. Hence Skinners's insistence that learning is controlled by its consequences rather than by its correspondence with some ultimate truth. From this perspective beliefs and behaviours that are in accord with how things are tend to lead to reinforcement whereas those that are incompatible with reality are less likely to do so. 'Truth' is what gets results.

Clark (1979, p. 74), in particular, is concerned with the dangers that he sees as arising from a theory with these implications. If agreeing with teacher is what is reinforced, then truth and what is politically or socially acceptable may be confused with one another. Education, in its classical sense, ceases to occur.

**Can One Compel Learning?**

Dearden (1987) offers a related criticism. His concern is with the unreality of the mechanistic assumptions which he discerns to be underlying many behavioural curricula; i.e. if the teacher sets up the situation correctly, learning is bound to occur. For Dearden education aims to produce understanding and, whilst it may be possible to compel a child to memorise something, it is most unlikely that he could be forced into an understanding. Active participation by the learner is called for. Interestingly behavioural psychologists have recently made a not dissimilar point concerning the attempt to produce 'teacher and child proof' curricula which are effective in spite of the learner (Wheldall & Glynn, 1988, p. 6).

**Objectivity and Alienation**

This point leads into a more general, related criticism which concerns the overall
view of education that would emerge if one takes a behaviourist viewpoint—or indeed any approach which makes man no more than another subject of scientific knowledge. Scruton (1980, p. 82) has expressed this criticism particularly clearly. A world restricted to scientific perspectives alone is a world literally void of human meaning. One could describe and respond to events in such a world but never understand them. Indeed education, as opposed to training, would be impossible; a meaningless enterprise in an alienated universe.

In conclusion then behavioural approaches to education, as currently conceived, seem to have five major weaknesses:

(i) Actions are more than behaviours. An action calls as much for a description of the actor's intent as it does of his movements. Behavioural research tends to slip such descriptions in whilst notionally adhering to a totally external perspective.

(ii) Because of its avoidance of theories of reinforcement radical behaviourism should be limited to generalisations from previous research, direct questioning, or trial-and-error guesses as to which reinforcers to use. In practice shared understandings of people's preferences are often called upon.

(iii) The pragmatic, or objective, view professed by behavioural research would, if taken literally, collapse truth and current social practice into one another.

(iv) Behavioural theorising can become so doggedly environmentalist that it appears that a properly set up teaching programme cannot fail. This does not appear to be a realistic view of education.

(v) A totally external view of human affairs reduces people to things amongst other things, a totally alienating perspective within which to view children.

4. Behavioural Practice and Philosophical Criticism; some possible solutions

If these criticisms are valid, what implications do they have for behavioural approaches in education? There are four major possibilities:

(a) Continue with the attempt to develop a viable behaviourist psychology (Skinner, 1974). The general drift of the above arguments would suggest that this is, in principle, impossible.

(b) Totally reject behavioural practices per se (Clark, 1979). This would seem to be a truly pyrrhic solution, depriving teachers of some very valuable management strategies. Moreover, as advocates of behavioural teaching have pointed out (e.g. Hall et al., 1968, p. 321), much behavioural teaching consists in a systematic and (partially) scientifically underpinned version of what teachers do anyway. Thus the reinforcing aspects of teachers' social interactions with children will not just cease to be in the face of Clark's (Kantian?) purity.

(c) Restrict the use of behavioural techniques to reflex behaviours, the treatment of (non-rational) compulsions and addictions and work with students with severe learning difficulties who possess only rudimentary cognitive capacities (Clark, 1979, p. 79). The problem is that many everyday classroom misbehaviours, such as calling out, as well as many examples of appropriate learning, have habitual,
minimally premeditated components. There is no simple division between ‘thoughtful’ and ‘non-thoughtful’ behaviour in everyday life.

(d) Attempt to reconstrue behavioural approaches within a ‘justificatory’ framework. This strategy will be pursued since it has several advantages. It offers a solution to the conceptual problems of behavioural practice identified above, it holds out the prospect of a reconciliation between effective classroom management and non-reductionist views of human beings, and it advances the explanatory power of behavioural psychology in general.

5. Justifying Behavioural Interventions

Everyday actions range from the ‘thoughtful’ to the ‘thoughtless’ and can, following Schwieso & Hastings (1986) be divided into three ‘types’:

(a) Reflex behaviours, such as the knee jerk, which comprise a minor part of the human repertoire, and are of no concern in most educational contexts.

(b) Consciously chosen, voluntary behaviours, such as deciding to attend one university course rather than another.

(c) Habitual behaviours, such as calling out in a class, which are in principle amenable to voluntary control, but which in practice may seem, to the individual concerned, to happen ‘before I thought’. These, in particular, should be seen as amenable to behavioural interventions.

People possess a vast repertoire of skilled, and not so skilled, behaviours which can be performed ‘automatically’, with little or no conscious intervention (e.g. Dawson & Schell, 1987, p. 36) and behavioural techniques offer a highly effective approach to changing such behaviours. However such habits are often established through highly conscious (and self-conscious) practice. Recent research suggests that consciousness of the link between conditioned and unconditioned stimuli is necessary in Pavlovian conditioning (ibid., p. 33) and that awareness of the relationship between reinforcement and behaviour is necessary in operant conditioning (Davey, 1988, p. 10). Moreover not all the wide range of educational problems that have been ameliorated through behavioural means are rooted in habits nor is consciousness totally absent during the performance of habitual behaviours.

Human understanding is crucial to behavioural interventions at the following points:

— in the teacher–researcher's choice of what to change
— in their formulation of a strategy of intervention
— in making the child aware of the contingencies of reinforcement operative at the time
— in their convincing the subject that change is appropriate
— in the teaching of new skills
— in their (joint) choice of reinforcers
— in the function of reinforcement/punishment

Clearly the first two areas are to do with the teacher, the rest with the child. Let us look at these points in more detail.
Perhaps the most obvious starting point for demonstrating the role of rational understanding in behavioural practice is the teacher's own choices. Berger (1979) argued that teachers abandoning behaviourist models of learning risk applying the techniques without understanding, as 'mindless technology'. (Some may find a certain irony in behaviourism being perceived as an antidote to mindlessness!) Now a responsible use of behavioural techniques applies them as part of a logical sequence involving identification of the problem, establishment of a baseline of the problem behaviour, identification of antecedents and consequences, choice of appropriate techniques, their application and, finally, evaluation of their impact. Schwieso & Hastings (1986) refer to this sequence as the “guiding framework” of an intervention and argue that this method, rather than any linked explanatory theory, is what provides the “scientific” backbone of behavioural teaching and prevents its disintegration into a rag-bag of “tricks of the trade”. Indeed this scientific method is itself a rational human activity rather than an objective, and alien, reality revealed by empirical science. Incidentally such a view is concordant with Skinner’s claim that radical behaviourism is a philosophy of science rather than a science per se (Skinner, 1974, p. 8).

In passing it may be noted that whilst correct procedures should prevent the ineffective use of techniques, science does not prescribe to what end such techniques should be directed! Purposes are matters of understanding; behavioural techniques can only be misused (as opposed to ineffectively used) if the goals to which they are directed are educationally and/or morally inappropriate. The identification and choice of such goals requires justification not descriptive scientific theory.

Turning to the children's part in behavioural teaching, an obvious starting point is the issue of awareness in a behaviour change programme. Behaviourism minimises the place of consciousness in learning, whilst philosophy of education typically treats awareness as a crucial part of what it means to be being educated (as opposed to being 'merely' conditioned). However recent work on Pavlovian conditioning suggests that it rarely, if ever, occurs with people without their being conscious of the relationship between conditioned and unconditioned stimuli (Davey, 1987). Again Skinnerian research into schedules of reinforcement suggests that human response patterns are different from those of animals, a difference potentially attributable to the place of consciousness and understanding (Davey, 1988; Wearden, 1988). If this is so then behavioural teaching will (normally) best proceed by making sure that the children are aware of the contingencies of reinforcement and/or stimulus pairings, in operation.

A second issue concerns the exact nature of the change produced by reinforcement. A strictly behaviourist explanation requires that reinforcement somehow causes behaviour to occur. In practice Skinner recognises that this is not self-evidently true by adopting a cumulative, probabilistic model of learning. My subjective impression is that few behavioural educationalists actually adopt a causal model. Burwood & Brady (1984, p. 112) point out that if reinforcement has no one-to-one relationship with behaviour change, it may be better understood as providing some sort of reason to the child for repeating the behaviour. They go on to suggest
that reinforcers act as "prudential" reasons for action for many children and, inasmuch as the teacher will try to select or develop reinforcers that they know to be valued by the children, they could be said to be supplying just such prudential reasons.

In terms of the typology of forms of power developed by French & Raven (1968) such reasons are based upon "reward" and "coercive" power, i.e. involving pleasant or unpleasant physical consequences. Indeed this is what Skinner seems to assume though he prefers "reward" to "coercion" since the former does not provoke counter measures, resistance, etc., and is experienced as "freedom" (Skinner, 1953, p. 321). However it seems unlikely that many children would respond so positively to teacher control or influence if it did not also involve other forms of power. The pleasurable nature of social interaction with the teacher may be based on referent power, i.e. the identification of the child with the adult. Teachers' greater knowledge and ability gives them expert power with regard to the child. Perhaps most importantly pupils generally accept the legitimacy of the teacher–pupil relationship. One submits to coercion but (hopefully) accepts legitimate demands. Legitimacy rests upon a variety of understandings, involving notions such as rights and interests, and must, in education, be grounded in some publicly shared conceptions of what the purpose of schooling is. One might argue that it is because behavioural approaches are usually applied, and are recognised as being applied, to ends seen by children as legitimate educational goals that they are so successful (Lewis & Lovegrove, 1987, discuss some interesting research on children's views of classroom control).

In short pupils consider it right (rational, appropriate) that they should usually do what the teacher asks. Moreover they see it as natural that 'good' and 'bad' acts should be acknowledged in specific ways. In effective schools the classroom ethos not only utilises but also attempts to develop just such a perspective. Indeed any approach to education, not just a behavioural one, needs a well thought out rationale that can be articulated and used to justify teachers' demands of pupils, where this is necessary.

Reinforcements also provide feedback or knowledge of results. According to Wearden (1988, p. 200) even consumable reinforcers serve a primarily informational role with people. They inform the child that what they do is of value to the teacher, they provide tangible reminders that the child can master the particular problem and, no doubt, the slight interruption of activity that occurs when the reward is delivered (or in many cases when the reward is signalled—e.g. when a token is awarded) serves as a cue to the child that this particular action is appropriate. Token economies can also help in the crucial task of developing that 'delay of gratification' which numerous studies have suggested is necessary to a child in developing a long-term perspective on their own career (Morrison & McIntyre, 1971, p. 41; Vargas, 1977, p. 283).

Brophy (1981) and Withey (1981) suggest that teacher approval can have a number of functions in addition to that of reinforcement. It is not necessary to go into these other functions in detail here (they are reviewed in Schwieso & Hastings, 1987) though many of them fit quite neatly into a justificatory model of classroom
practice. Thus, for example, the phrase 'well done John, you are keeping your work tidy' may be primarily intended to remind other children of the value of tidy work, whilst not directly criticising their untidiness, rather than to reinforce tidy work by John.

Returning to an earlier point, the guiding framework of a behavioural intervention provides the children with an instance of rationality in action. Commentators from a variety of backgrounds have noted that the carefully structured nature of such interventions allows the child to 'know where he is' as regards receiving adult approval. In particular the notion that every child should have the opportunity of receiving reinforcement for progress in their particular area of weakness can be regarded as a prime example of equitable and rational practice rather than, as Burwood & Brady (1984, p. 112) seem to imply, a potentially unfair act. (Of course a child may see it as unfair that Jimmy gets a reinforcer for staying in his seat whereas Johnny does not: this is precisely where the teacher's rational explanation for using reinforcement comes in together, of course, with a reminder that Johnny also has opportunities for his particular learning achievement to be overtly acknowledged and reinforced.) This demand that no child should miss out on reinforcement points towards a systematic use of behavioural approaches throughout a school rather than a restricting of them to the problem few.

The lack of precision of behavioural psychologies as to what will prove reinforcing may actually prove beneficial. It allows discussion and negotiation between teacher and pupil concerning the sorts of reinforcement that the pupil prefers and allows the teacher to explore the range of activities that children find reinforcing. Interestingly behavioural analyses of reinforcers and those concerned with ethics often come to similar conclusions as to which reinforcers ought to be preferred by teachers. Edible reinforcers, for instance, are impractical in most classrooms since they create a mess, create distractions, and satiation rapidly occurs. Social reinforcers such as touch and praise, which can be said to promote the growth of the child as a person, are also the most dependable (and perhaps the most widely used) behaviourally.

If we choose to emphasise the rational aspects of behavioural educational interventions we have to consider far more carefully the role of language in behavioural programmes. Some case studies of classroom interventions do provide very detailed protocols of what the pupils were actually told concerning what was going on. It is far more common, however, simply to give the gist of the message (another example of how behavioural approaches assume, in practice, that 'common-sense' accounts, which are not scientifically exact descriptions of the teachers' or researchers' actions, are perfectly adequate). Yet these verbal 'scene setters' may be as important as the particular schedule of reinforcement and reinforcers. They, together with the actual intervention, provide the children with the rationale for behaviour change. Interestingly a parallel interest in the role of instructions has developed in the experimental study of operant conditioning in the psychological laboratory (Wearden, 1988, p. 210).

It might be objected that habit or conditioning are appropriate to training but not to education. Such a view seems unrealistic. Critical thinking, often seen as the
intrinsic end of education, overlies and has to be built upon a whole set of taken-for-granted skills such as the use of language. Habit has a place in the education of the person and the formation of character. “People are created by their habits and good habits cannot be acquired without constant exposure to praise and blame. Education divorced from the acquisition of acceptable habits, has no intrinsic value, either to the individual or to society” (Scruton, 1987, p. 44).

6. An Application of the Justificatory Approach in Education

It may help in illustrating the value of a justificatory approach to look at the hypothetical classroom situation offered by Burwood & Brady (1984); that of a child calling out in class without putting up his hand, despite requests to do so. How can we understand this action in the light of the three categories of human behaviour mentioned above, reflexes, habits and voluntary actions, and with reference to our justificatory framework?

If calling out is a reflex, which seems most improbable, then behavioural treatment using a Pavlovian technique will be called for. The individual will be, for the moment, a subject for scientific manipulation. They will report, if they report anything, that they ‘could not help calling out’.

If calling out is a chosen action, a possible but unlikely contingency in the circumstances, then the behavioural intervention will involve persuasion, involving appeals to the good of other children, the legitimacy of the request, the functional need for classroom order if learning is to occur and so on. Reinforcement, deprivation of attention and punishment will serve as additional, prudential reasons for the individuals restraining themselves.

If, as Schwieso & Hastings (1986) argue, calling out is a habit then some interesting issues arise. Behavioural intervention here serves not to prevent the action in any causal manner, but to interrupt or pre-empt the routinised action so that voluntary control can be re-asserted and the appropriate action performed. The child will accept the intervention because he sees that the teacher’s request is legitimate. The reinforcers, setting events such as reminders of the classroom rules, attention paid to other children emphasising that they did put their hands up, all serve to cue and motivate raising of the hand. Of course persuasion may still be required in order that the child should be motivated to change his habits.

These examples suggest ethical guidelines, rising out of the justificatory perspective, for behavioural interventions. If some misbehaviour is involuntary and some voluntary then we might suggest a progression from the use of reasoning alone to the use of reasoning plus behavioural techniques. The aim must be to avoid treating the child as an object if his behaviour is that of a person. If his behaviour is deliberate then the behavioural components will form prudential reasons; if involuntary then the same component will play a more causal part.

For both ethical and practical reasons we would expect to tell the child what form the intervention was going to take. We can neither persuade him nor expect him to respond effectively to the intervention if he does not know, say, how to earn
a reinforcer. However, in a very few cases, such as when we are withholding attention in order to extinguish a behaviour, we may need to conceal our strategy.

Actually, no teacher would commence a formal behavioural intervention before she had tried the infinitely simpler, and often equally effective, strategy of requesting co-operation. It could be, however, that teachers do occasionally omit to explain precisely what constitutes acceptable behaviour. This is where behavioural approaches, such as 'rules, praise and ignoring' may actually be seen as more rational than some taken-for-granted classroom practices. Indeed this notion that one should employ the minimum effort necessary to achieve one's ends has been a commonplace of behavioural educational psychology for some years. Wheldall (1982), warning of "behavioural overkill", argued that educators should prefer the "lightest" behavioural techniques that proved to be effective in class. Current behavioural thinking advises starting from verbal commands, using more intrusive strategies only if words are ineffective.

7. Conclusions

It has been claimed that philosophical arguments against behaviourist views of human activities lead to the conclusion that the teacher cannot avoid viewing themselves, and their pupils, from a 'justificatory' perspective. However it is arguable that this does not disqualify behavioural teaching but rather allows it to be understood as a set of rationally justifiable and empirically supported practices. Far from diminishing the power of behavioural teaching the adoption of a justificatory perspective enhances and complements behavioural approaches, providing deep understandings of why current techniques work, as well as pointing to the importance of the role of language in behavioural work. Rather than diluting the proven worth of behavioural practices with a 'warm and wet' humanism, the explicit recognition of the place of rationality in behaviour change allows this most powerful of human attributes to be enlisted on the side of the (behavioural) angels.

REFERENCES

of conscious cognitive factors, in: G. Davey (Ed.) *Cognitive Processes and Pavlovian Conditioning in Humans* (Chichester, Wiley).


