OVERCORRECTION: A CRITIQUE

GLYNIS H. MURPHY

Institute of Psychiatry, University of London

Over the last decade numerous studies have appeared demonstrating behaviour change using a procedure called overcorrection. The target types of behaviour have without exception been undesirable behaviour, undesirable either to the clients or client's care agents, and the aim has invariably been to reduce the frequency and/or intensity of these forms of behaviour. The types of target behaviour have included inappropriate eating behaviour (Azrin and Armstrong, 1973), toileting behaviour (Azrin and Foxx, 1971; Foxx and Azrin, 1973b; Azrin, Sneed and Foxx, 1973; Doleys and Arnold, 1975; Crowley and Armstrong, 1977), disruptive and aggressive behaviour (Foxx and Azrin, 1972; Webster and Azrin, 1973; Klinge, Thrasher and Myers, 1975; Azrin and Powers, 1975), coprophagy and pica (Foxx and Martin, 1975), floor sprawling (Azrin and Wesolowski, 1975a), vomiting (Azrin and Wesolowski, 1975b; Duker and Seys, 1977), stripping (Foxx, 1976a), class avoidance (Foxx, 1976b), masturbation (Luiselli, Helfen, Pemberton and Reisman, 1977), thumb-sucking (Freeman, Moss, Somerset and Ritvo, 1977), eye-gaze avoidance (Foxx, 1977), stereotyped and self-injurious behaviour (Foxx and Azrin, 1973a; Azrin, Kaplan and Foxx, 1973; Epstein, Doke, Sajwaj, Sorrell and Rimmer, 1974; Azrin, Gottlieb, Hughart, Wesolowski and Rahn, 1975; Measel and Alfieri, 1976; Harris and Romanczyk, 1976; Rollings, Baumeister and Baumeister, 1977; Matson, Stephens and Smith, 1978; Zehr and Theobald, 1978) and theft (Azrin and Wesolowski, 1974). The clients trained have mostly been severely or profoundly retarded institutionalised adults and children or autistic children with varying degrees of retardation. Some clients, however, have been of normal intelligence with only minor behaviour problems (Foxx and Azrin, 1973b; Doleys and Arnold, 1975; Azrin and Powers, 1975; Crowley and Armstrong, 1977), or with psychiatric disorders (Klinge et al., 1975).

In most of the published reports the procedure has been astonishingly successful, with the rates of undesirable behaviour plummeting within a day (e.g. Foxx and Azrin, 1973; Azrin et al., 1973; Azrin et al., 1975; Foxx and Martin, 1975) or, at the most, ten days (e.g. Foxx and Azrin, 1972; Azrin and Wesolowski, 1974; Azrin and Wesolowski, 1975). In view of the variety of clients treated, the varieties of undesirable behaviour tackled and the extraordinary rapidity of behaviour change, it must be asked whether overcorrection is a major new technique in behaviour modification, generally applicable to the reduction of undesirable forms of behaviour in a large number of subjects.

The present concept and rationale of overcorrection

Azrin, Foxx and their colleagues have been most responsible for developing the techniques of overcorrection and therefore they must be considered to be the authori-

Received 28th April, 1978
tative voices in any discussion of the present concept and rationale of overcorrection. Reference to their recent work reveals that the overcorrection procedure can be seen as consisting of two components: restitution and positive practice. Restitution involves the setting to rights by the client of any environmental disturbances which have resulted from the undesirable (target) behaviour of the client* and normally includes the over-correcting of such disturbances (i.e. the client is required to set to rights more of the environment than he actually upset). Positive practice, on the other hand, requires the client to repeat behaviours which should have occurred instead of the undesirable behaviour and which can be seen as more appropriate (or desirable) than the target undesirable behaviour. When possible both restitutional and positive practice overcorrection are applied contingent on the occurrence of the undesirable behaviour. Sometimes only positive practice can be used (e.g. for stereotyped behaviours where no environmental disruption is caused and for treatment of basic agitated states by required relaxation). Normally the length of overcorrection training given is thirty minutes, although there are exceptions to this (for instance, the minimum length for required relaxation is two hours; the length of hand control positive practice for stereotyped and self-injurious behaviours can vary between five minutes and twenty minutes; the length of positive practice used in Azrin and Wesolowski, 1975a, was twelve minutes). No positive reinforcement is ever given during overcorrection training, though it may be given at other times of the day for remarkably similar types of behaviour (for instance, reinforcement of self-help skills practice in Foxx and Martin's (1975) treatment of coprophagy and pica). On occasions where the client does not respond to verbal instruction to engage in over-correction, "graduated guidance" is used; in other words, the client is manually guided through the required action and the guidance is faded as soon as possible.

The stated rationale of overcorrection is that it is an "educative punishment" (Foxx, 1976). The procedure is often said to be educational in a way that other punishment techniques are not (e.g. Foxx and Azrin, 1972; Foxx and Martin, 1975) and to be a milder punishment than many other punishment techniques, such as time-out, contingent shock, physical restraint (Foxx and Azrin, 1973; Azrin et al., 1975) or to be a more humane treatment than other techniques (Azrin et al., 1975; Foxx and Martin, 1975; Foxx, 1976). Foxx (1976) sees the restitutional procedure as a way of "educating the misbehaver to accept responsibility for his/her inappropriate behaviour . . . requiring him/her to restore the disturbed situation to a vastly improved state". He sees positive practice as requiring "the misbehaver to practise appropriate responses in the situations in which the inappropriate behaviour occurred" (Foxx, 1976).

Several times the sub-processes involved in the overcorrection procedure are discussed (Foxx and Azrin, 1972; Foxx and Azrin, 1973; Azrin and Wesolowski, 1974; Foxx and Martin, 1975). One of the components is said to be time-out (Foxx and Azrin, 1972; Azrin and Wesolowski, 1974; Foxx and Martin, 1975) as the period of overcorrection contingent on the undesirable behaviour prevents repetition of the

*Where the correction is carried out by the trainer and not by the client (e.g. Smeets, Elson and Clement, 1975) the procedure cannot really be classified as restitutional over-correction.
behaviour (which may provide reinforcement) and is claimed to prevent delivery of positive reinforcement by external agents. Secondly, aversive or “negative” consequences are said to be involved (Foxx and Azrin, 1972; Foxx and Azrin, 1973; Azrin and Wesolowski, 1974; Foxx and Martin, 1975) in the efforts required of the patient in performing overcorrection and in the annoyance of graduated guidance where this is used. Thirdly, overcorrection is claimed to provide practice of positive actions appropriate to the situation (Azrin and Wesolowski, 1974; Foxx and Azrin, 1973), this part of the overcorrection procedure being “re-educative” (Azrin and Wesolowski, 1974).

The development of the overcorrection technique

During its development as a technique, overcorrection underwent many confusing expansions and alterations. Probably the first published reference to a procedure which later came under the category of overcorrection was in a study of toilet training in retarded institutionalised adults (Azrin and Foxx, 1971). When clients had “accidents” they were required to perform “cleanliness training”. This involved a tepid shower, a change of clothes, rinsing out of soiled clothes and, if necessary, mopping the floor and chair of the training room. Manual guidance of this behaviour was used if clients did not respond to the verbal instructions, the guidance being faded as appropriate. The authors concluded that the overall procedure had been effective largely because of the cleanliness training which provided “stronger than normal negative consequences” and thus, in their opinion, mirrored the negative consequences (or imagined consequences) experienced by normal adults for toileting accidents.

The second reference to a procedure which would now be called overcorrection appeared in a report of an attempt to reduce the aggressive and disruptive behaviour of institutionalised, brain-damaged and retarded patients (Foxx and Azrin, 1972). The procedure was called restitution and was also referred to as overcorrection. It involved the client being put through a correction procedure, for a minimum of thirty minutes, relevant to the particular undesirable behaviour. If, for instance, he had thrown a chair or turned over a bed he was required to engage in “household orderliness training”, i.e. he would have to correct the items disturbed (bed/chair) and would also have to straighten up other items (beds/chairs) on the ward. Similarly, for annoying or frightening others a client would have to apologise to the victim and to all others present (“social reassurance training”); biting or chewing objects would result in the client undergoing “oral hygiene training” (cleansing the mouth with oral antiseptic); aggression would result in the rendering of medical assistance to the victim, and agitation of a disturbing nature led to “quiet training” (bed rest). Foxx and Azrin applied these five “restitution procedures” to the undesirable behaviour of three adult patients (two institutionalised retarded women and one hospitalised woman with severe brain-damage), using the five types of training in various combinations according to the undesirable behaviour shown. In all cases the restitution training was claimed to be effective in reducing the undesirable behaviour, and the procedure was claimed to be preferable to other types of punishment because it was “re-educative”, teaching the client to correct the disturbance he had himself
made. Staff were said to prefer restitution to other procedures such as time-out or contingent shock, mainly because of the re-educative elements. It is interesting to note that Foxx and Azrin cautioned that positive reinforcement should be kept to a minimum during restitution training and the procedure was seen by them as basically a punishment, involving time-out from positive reinforcement and expenditure of effort by the client. They also state, although it seems contradictory, that “the training period was not viewed as a means of inflicting discomfort but as a means of educating the desired pattern of behaviour”.

In 1973 five studies involving varieties of overcorrection appeared in the literature (Foxx and Azrin, 1973a; Azrin et al., 1973; Foxx and Azrin, 1973b; Azrin et al., 1973; Webster and Azrin, 1973) and one study appeared in which a similar but apparently distinct procedure was used (Azrin and Nunn, 1973). Two of the overcorrection studies were concerned with toilet training (one dry pants training in normal IQ children and the other dry bed training in the adult mentally retarded) and both involved cleanliness training as used by Azrin and Foxx (1971). In addition, the procedure of “positive practice” appeared in both studies. In the day-toilet training study positive practice consisted of a repeated running through of appropriate toilet behaviour (going to the toilet, pulling pants down, sitting down, standing up, pulling pants up and repeating); in the night-wetting study positive practice was similar in principle, involving rising from bed, going to the toilet, sitting on the toilet, returning to bed and repeating. In neither case was the client praised or reinforced in any way during positive practice. The treatment package was highly successful in both studies.

In the third 1973 overcorrection study (Foxx and Azrin, 1973a) the problem behaviour tackled was that of autistic self-stimulatory behaviour in retarded children. The rationale of overcorrection was clearly laid out: “(1) to overcorrect the environmental effects of an inappropriate act and (2) to require the disruptor intensively to practise overly correct forms of relevant behaviour”. The first part of the procedure was named restitutional overcorrection; the second part was named positive practice overcorrection. In the case of self-stimulatory behaviours no environmental disruption was held to occur so that overcorrection was said to consist only of positive practice. In this study the self-stimulatory behaviours treated included mouthing (overcorrection here consisted of oral hygiene training as used in Foxx and Azrin, 1972*), head-weaving (positive practice here consisted of repeated head exercises: head up, head down, head straight, done to the trainer’s command) and hand-clapping (positive practice consisted of repeated hand movements done to the trainer’s command: hands up, hands out, hands together, hands behind back and hands in pockets). The overcorrection exercises continued for five minutes contingent on each occurrence of the undesirable self-stimulation and as before (e.g. Foxx and Azrin, 1972) graduated manual guidance was used as necessary and no positive reinforcement was delivered during the overcorrection training. Again overcorrection was found to be an effective method of eliminating the undesirable

*It is interesting to note that in Foxx and Azrin, 1972, oral hygiene training was called restitution, not positive practice.
GLYNIS MURPHY

behaviour and it was claimed that it could be seen as working by reversing the "self-directed activities" of the children into "outward-directed activities". The fourth 1973 overcorrection study (Azrin et al., 1973) also concerned self-stimulatory behaviours but this time in the adult retarded. The procedure was very similar to that used for retarded children (apart from the necessary adaptations for different types of self-stimulatory behaviour, such as body-rocking) but the positive practice was continued for twenty minutes rather than five minutes. For some reason the procedure was renamed "autism reversal" (a rather optimistic label for any treatment) and it was combined with a positive reinforcement programme. The combined programme was found to be a very effective way of reducing self-stimulatory types of behaviour in the adult retarded patients treated and it was suggested that this was due to the "negative consequences" (overcorrection) reducing the "inward-directed" behaviour so that the positive reinforcement programme could increase "outward-directed" behaviour.

In the fifth 1973 study (Webster and Azrin, 1973) the agitative-disruptive behaviour of adult retardates was rapidly reduced by a procedure called "required relaxation". This involved a minimum of two hours bed rest consequent on each agitative-disruptive act and Webster and Azrin considered the enforced relaxation period to be basically a type of overcorrection, one which corrected the fundamental agitated stage rather than the specific disruptive behaviour which followed or accompanied the agitated state. As in Foxx and Azrin (1972), staff were found to prefer the overcorrection procedure to that of time-out, judging by their responses to a brief questionnaire.

In order to differentiate overcorrection from other apparently similar procedures it is worth considering another 1973 study (Azrin and Nunn, 1973) which involves a procedure like overcorrection but distinct from it. Azrin and Nunn employed a technique which they called "habit reversal" to eliminate "nervous" tics and habits in adults and children. One component of the procedure, "competing response practice", bore a resemblance to positive practice overcorrection in that it required the client to practice in a corrective and preventive fashion a response more appropriate than (but similar to) his problem behaviour. Thus nail-biters were required to use a "fingernail care procedure" or, if this were inappropriate to the situation, they were required to grip a nearby object tightly for three minutes—either of these being a competing response to nail-biting. Azrin and Nunn stated that although this technique was similar to overcorrection "a major departure . . . [was] the attempt to minimise any aversiveness of the required practice" (Azrin and Nunn, 1973), thus highlighting the aversive nature of true overcorrection.

By 1973 the concept of overcorrection had become fairly clear. Studies published after this time will be summarised briefly therefore, noting only new points or alterations to the usual overcorrection procedure and the types of problem behaviour tackled. Azrin and Wesolowski (1974) applied overcorrection to the problem of minor theft in hospitalised retarded adults. As a result of overcorrection, which involved returning the stolen item plus another identical item (purchased by the client) to the victim, the number of stealing episodes on the ward rapidly fell. The
procedure was seen as effective because of its elimination of the positive reinforcement which normally followed stealing (although this is not peculiar to an overcorrection treatment of theft, of course), punishment* of the theft by the effort required to obtain an extra item, time-out from positive reinforcement during the time it took to obtain the extra item and positive practice in giving the stolen and extra item to the victim (this latter part was again seen as "re-educative").

In the following year overcorrection was applied to the problems of coprophagy and pica in retarded adults (Foxx and Martin, 1975) and to self-injurious behaviour in retarded adults and children (Azrin et al., 1975). In the former study four retarded adults were trained not to handle or ingest rubbish or faeces by applying restitutional overcorrection (prolonged hand and/or mouth washing much as in the oral hygiene procedure of Foxx and Azrin, 1972) and positive practice overcorrection (tidying up rubbish in appropriate ways, clearing up faeces, flushing toilets and so on). In discussing the merits of the overcorrection procedure Foxx and Martin comment that one of the side benefits was that clients were made to take better care of themselves (e.g. teeth cleaning in the oral hygiene procedure) and they comment that these self-help skills were incorporated into the residents' daily routine, "reinforcement in the form of edibles and praise [being] provided whenever the tooth brushing or hand washing were not part of the overcorrection training". The second 1975 study (Azrin et al., 1975) of the reduction of self-injurious behaviour in retarded adults and children also employed overcorrection, but this time in a complicated treatment package. The "educational procedures" used by Azrin et al. (1975) consisted of "autism reversal" (as used by Azrin et al., 1973), "required relaxation" (as used by Webster and Azrin, 1973) and "hand awareness training" (as used by Azrin and Nunn, 1973). Autism reversal consisted basically of positive practice overcorrection (usually hand control training) plus positive reinforcement of another type of behaviour; required relaxation, also an overcorrection technique, was aimed at correcting the fundamental agitated state of the client; hand awareness training was not based on overcorrection, but involved teaching clients, using positive reinforcement, to be aware of the position of the hand and to keep their hands in positions incompatible with head-banging. Treatment began with hand awareness training and positive reinforcement of "outward-directed" activities, and on the appearance of self-injurious behaviour either the hand control procedure was given (20 mins) or required relaxation (2 hrs). The treatment package was effective, reducing the rate of self-injury by 90 per cent by the first day, but not all of this success can be ascribed to the overcorrection procedures used, other techniques such as hand awareness training also having been involved.

More recently overcorrection has been used by Foxx, Azrin and his colleagues to reduce stripping in institutionalised retarded women (Foxx, 1976a); to increase attendance at self-help classes in one retarded woman (Foxx, 1976b); to reduce "floor sprawling" in retarded adults (Azrin and Wesolowski, 1975a); to reduce vomiting in a retarded adult (Azrin and Wesolowski, 1975b); to reduce classroom disturbances in disruptive children (Azrin and Powers, 1975); and to reduce gaze

*Azrin and Wesolowski actually refer to this as negative reinforcement.
avoidance in autistic and retarded children (Foxx, 1977).

The vast majority of the work on overcorrection has been done by Foxx, Azrin and colleagues in Illinois. Some studies using overcorrection techniques have begun to appear from other centres, however. Some of these investigations will be discussed in relation to the evidence of the effectiveness and theoretical basis of overcorrection (for instance, Epstein et al., 1974 and Rollings et al., 1977). It is perhaps worth mentioning some of the remaining studies, however, if only to illustrate the rising popularity of overcorrection as a technique. Doleys and Arnold (1975) treated an encopretic eight-year-old boy, who showed a fear of sitting on the toilet, by modelling (of appropriate sitting) and overcorrection (cleanliness training) for soiling incidents. Crowley and Armstrong (1977) also employed overcorrection (with other techniques) in the successful treatment of three encopretic children. Duker and Seys (1977) eliminated persistent vomiting in a retarded woman by restitutional overcorrection plus differential reinforcement of other kinds of behaviour. There have also been several attempts to reduce stereotyped and self-injurious forms of behaviour using overcorrection (Epstein et al., 1974; Rollings et al., 1977; Harris and Romanczyk, 1975; Mease and Alfieri, 1976; Zehr and Theobald, 1978; Matson et al., 1978,)*

The effectiveness of overcorrection

Certainly there are numerous published studies showing overcorrection to be an apparently effective technique in reducing undesirable forms of behaviour. To be certain of a technique's effectiveness, however, it is necessary to do more than show that its application reduces the target behaviour; other general environmental and/or training effects must be ruled out. In the institutionalised retarded population such non-specific effects are particularly likely to occur because the patients and staff have often been neglected for long periods of time, so that any intervention may be welcomed and appear effective, if only through the increased motivation of nursing staff which interventions may produce.

Of the studies by Azrin, Foxx and colleagues, reporting data from three or fewer clients, several have involved individual case experimental designs of the reversal or multiple baseline type, but a few make no attempt to eliminate non-specific intervention effects (e.g. Foxx and Azrin, 1972; Azrin and Wesolowski, 1975b). Those involving reversal designs include studies of overcorrection for stereotyped behaviour (Foxx and Azrin, 1973a) and for stripping (Foxx, 1976a); those involving multiple baseline designs include studies of overcorrection for coprophagy and pica (Foxx and Martin, 1975) and for class avoidance (Foxx, 1976b). All four of these studies demonstrated that overcorrection was effective in reducing the target undesirable behaviour, both more effective than baseline conditions (Foxx and Martin, 1975; Foxx and Azrin, 1973a; Foxx, 1976b) and contingent physical restraint (Foxx and Martin, 1975; Foxx, 1976a) or time-out (Foxx, 1976a).

The majority of overcorrection studies from Illinois involve groups of subjects,}

*The success rate of overcorrection alone for some cases of self-injury (Harris and Romanczyk, 1976; Matson et al., 1978; Zehr and Theobald, 1978) led Zehr and Theobald to suggest that this was the active ingredient in the educative procedures used by Azrin et al. (1975) to reduce self-injurious behaviour.
the effect of overcorrection being compared either to baseline conditions, involving unplanned effects like social disapproval (Foxx and Azrin, 1973b; Webster and Azrin, 1973; Azrin and Wesolowski, 1974; Azrin et al., 1975; Azrin and Wesolowski, 1975a) or to other behavioural treatments such as reinforcement of alternative kinds of behaviour (Azrin et al., 1973) or time-out (Azrin and Powers, 1975). All studies demonstrated that, overall, overcorrection was more effective than the baseline or other treatment conditions, although it was admitted that the procedure had no effect on some subjects (Azrin and Wesolowski, 1975a) and made the behaviour of one or two subjects worse (Azrin et al., 1975).* Unfortunately in these group studies overcorrection is always the last procedure used and the design never involves a between-subjects comparison of overcorrection with other procedures, but only within-subject comparisons. Apparently positive results could therefore be due to general environmental changes rather than specifically to overcorrection. Furthermore many of the studies are testing out a treatment package so that the results cannot be said to be a function of the overcorrection technique alone (Foxx and Azrin, 1973; Azrin et al., 1973; Azrin et al., 1975).

It must be concluded from these studies that overcorrection has been shown to be a genuinely effective technique for the reduction of some undesirable forms of behaviour in some subjects, that it can result in worsening behaviour on occasions, but that it may be more effective than other behavioural techniques at times. Studies from other centres tend to support these conclusions, though unfortunately many are too poorly designed to add to the evidence for or against the use of overcorrection alone (Klinge et al., 1975; Doleys and Arnold, 1975; Duker and Seys, 1977; Peniston, 1975; Measel and Alfieri, 1976; Luiselli et al., 1977; Crowley and Armstrong, 1977; Freeman et al., 1977). The technique has proved effective however in the treatment of self-injurious behaviour (Harris and Romanycz, 1976; Matson, 1978) and stereotyped behaviour (Epstein et al., 1974; Rollings et al., 1977). Overcorrection has occasionally been found to worsen the behaviour treated (when combined with positive reinforcement of other behaviour, in Measel and Alfieri, 1978†), to produce worrying side-effects on the rates of other types of behaviour (Epstein et al., 1974; Rollings et al., 1977) and to produce effects which are not enduring (Rollings et al., 1977).

The inevitable conclusion, that overcorrection works for some of the people some of the time, may seem disappointing, but it is important to note that an effective behavioural technique is not required to do more than work on some occasions when it is applied in a blanket manner: the efficacy of any behavioural technique depends on a correct functional analysis and it is this aspect of the design of treatment to reduce undesirable behaviour which has been greatly neglected in overcorrection research. It has led, for instance, to excessive claims for overcorrection as a "very effective and general method of eliminating self-stimulatory behaviour" (Foxx and

*Azrin et al. (1975) admitted that for the subjects whose behaviour worsened the overcorrection procedure used (required relaxation) was probably reinforcing.

†It is perhaps worth noting that the subject whose behaviour worsened (Measel and Alfieri, 1976) seemed to have developed the self-injurious behaviour as an avoidance response, avoiding training sessions and contact with staff.
Azrin, 1973a), a statement explicitly ignoring the importance of functional analysis. When overcorrection is applied in this "cookbook" fashion without full behavioural analysis it will be difficult to predict its effectiveness. Even after good pre-treatment observations, however, the decision to apply overcorrection to reduce an undesirable form of behaviour will be facilitated by a consideration of why overcorrection works at all. The next section examines this problem and expands on the importance of functional analysis in the use of overcorrection.

The basis of overcorrection

The technique of overcorrection is said to be an "educative punishment" by Foxx and his colleagues (see, for example, Foxx, 1976). This suggests that the application of overcorrection affects behaviour by both punishing it and by teaching new types of behaviour.

(a) Overcorrection as a punishment

The normal definition of a punishing stimulus is that, when applied contingently, the stimulus results in a reduction in the probability (frequency) of the behaviour it followed (see Kazdin, 1975, p. 33). It can be immediately concluded that overcorrection acts as a punishing stimulus for some individuals when contingent on certain kinds of their behaviour, in that the application of the technique contingent on these kinds of behaviour reduces their frequency. It can also be said, however, that overcorrection need not always act as a punishment: the contingent application of it may produce no change in the frequency of a type of behaviour (as in the subject whose behaviour did not improve in Azrin and Wesolowski, 1975a) or indeed the rate of behaviour may increase (as in two subjects studied by Azrin et al., 1975 and one subject in Mease and Alfieri, 1976). When an increase in the undesirable behaviour occurs it must be concluded that overcorrection is actually working as a reinforcer, i.e. it is a stimulus which results in an increase in the probability (frequency) of the behaviour it follows (see Kazdin, 1975, p. 26). Whether overcorrection will act as a neutral stimulus, a punishing stimulus or a reinforcing stimulus depends on the individual and his reinforcement history. If the individual finds the stimulus aversive (i.e. would escape from it if allowed to do so) then it is likely that it will act as a punishment if applied on an appropriate schedule.* If, on the other hand, when unrestricted, an individual shows a marked preference for a stimulus (as opposed to a dislike or avoidance of it) then it will probably act as a reinforcer and not as a punishment (Premack, 1959). A proper functional analysis before treatment begins may allow predictions to be made about the effect that overcorrection will have on the frequency of the target behaviour (for example, if during pre-treatment observations a client is observed to voluntarily spend a great deal of his time lying on his bed then it can be concluded that required relaxation overcorrection is likely to act as a reinforcer and not as a punishment). Frequently it will be difficult to be certain in

*It is important to note that aversive stimuli do not invariably result in a reduction in frequency of the episodes of behaviour they follow, i.e. do not always act as punishments (see, for example, Bender, 1969): it does depend on the schedule used.
advance that overcorrection will act as punishment, reinforcer or neutral stimulus because the functional analysis has been incomplete. In such cases the only answer is to try using overcorrection and observe its effect; suffice it to say that overcorrection should never be assumed to be a “general” method of reducing undesirable behaviour in the sense that it can be confidently applied to any client, contingent on any target behaviour.

(b) Overcorrection as an educative technique

The oft-asserted educational nature of overcorrection suggests that the technique teaches the client new forms of behaviour and the inclusion of a sub-procedure called “positive practice” in the overcorrection package reinforces this impression. Indeed, clients are often said to have learned new types of behaviour (for example, clients are claimed to have learned to make beds and respond socially to others in Foxx and Azrin, 1972, and to brush their teeth and wash their hands in Foxx and Martin, 1975). If overcorrection were indeed a treatment technique which acted both as a punishment (reducing undesirable behaviour) and at the same time as a training technique for new forms of behaviour then the preference which staff are claimed to feel for the technique (see, for instance, Foxx and Azrin, 1972; Webster and Azrin, 1973) would certainly be justified. Unfortunately there is almost no evidence that the kinds of behaviour required of the client during positive practice appear at other times, in appropriate contexts, as would be expected if these desirable forms of behaviour were actually being trained during overcorrection (see, for example, Epstein et al., 1974). It is only occasionally mentioned that clients have been observed performing the types of behaviour trained in positive practice (Foxx and Martin, 1975; Foxx, 1976a; Azrin et al., 1975*) and no study has produced formal data on this aspect of overcorrection. Moreover, some of the varieties of behaviour required of the client during positive practice are not of the kind that it would be desirable to train up (e.g. the hand exercises used for hand stereotypies in Foxx and Azrin, 1973a). It is interesting, then, that Foxx, Azrin and colleagues comment that the client should not be reinforced for the types of behaviour required during positive practice since it is supposed to be an aversive procedure (e.g. Foxx and Azrin, 1972) and that occasionally the client performs identical sorts of behaviour at times during overcorrection for which he does not receive reinforcement and at other times as part of a self-care programme in which he does receive reinforcement (Foxx and Martin, 1975). It is therefore not surprising, when positive reinforcement is not given for certain forms of behaviour, to discover that their rate of occurrence does not increase (unless additional positive programmes are used). The assertion that overcorrection is an educational technique seems, then, to be false (if “educational” procedure means one which trains up new appropriate behaviours). Furthermore, it seems misleading to name part of the package “positive practice” as the practice is by no means positive; it is forced, not reinforced, and does not lead to an

*Two of these studies (Azrin et al., 1975 and Foxx and Martin, 1975) in any case involved positive reinforcement of the “positive” behaviours observed (during “hand awareness” training and a self-care programme respectively).
increase in the kinds of behaviour practised. Indeed, Foxx and Martin themselves have taken pains to “enhance the aversiveness” of the positive practice training (Foxx and Martin, 1975).

It must be concluded that overcorrection, when it results in a reduction in the target behaviour, is merely a punishment technique: it is not educational, except in the sense of teaching the client (like all punishment techniques) what not to do. Moreover, overcorrection will not be punishing for all clients or all kinds of behaviour and it should be no surprise to find that overcorrection is sometimes an ineffective technique if it is applied, without proper functional analyses, in a “cookbook” manner. Precisely which part of overcorrection acts as the punishing stimulus is, as yet not known and may vary with the client. Several delineations of the possibilities have appeared (Foxx and Azrin, 1972; Foxx and Azrin, 1973a; Azrin and Wesolowski, 1974; Epstein, 1974; Measel and Alfieri, 1976) but it is not yet possible to draw definite conclusions.

It is easy to see that a technique like overcorrection could seem to staff to be particularly appropriate in dealing with undesirable types of behaviour in that it is a punishment designed to “fit the crime” and, in requiring practice of desirable behaviour, it takes on the appearance of a positive training technique, as Azrin and Powers (1975) comment. These are presumably two of the reasons why staff prefer overcorrection to other common techniques (Foxx and Azrin, 1972; Webster and Azrin, 1973) but if overcorrection is merely a punishment technique then its attractiveness would be reduced accordingly. Moreover, Epstein et al. (1974) have shown that overcorrection-type training is effective even where the punishment does not “fit the crime” precisely (hand overcorrection procedures reduced topographically dissimilar undesirable forms of behaviour such as inappropriate foot movements and inappropriate vocalisations), as would be expected of a true punishment technique. A further possible reason for the preference of staff for overcorrection is that, compared to other techniques (shock, physical blows, and so on), it seems a milder punishment (Foxx and Azrin, 1973; Luiselli et al., 1977). The speed with which overcorrection takes effect, however (often within several days), does nothing to support the suggestion that it is a mild punishment. It may merely be that it has been labelled as mild on an introspective basis; in other words, that because most normal adults feel they would prefer an overcorrection programme to a contingent shock programme, the former is labelled as a milder technique. It must be concluded that the attractiveness of overcorrection to training staff may be a function of misunderstanding: the technique does not need to “fit the crime” in order to be effective, it does not involve genuine positive training and it may not be any milder than other punishment techniques. The appeal of overcorrection to training staff may thus be worrying rather than encouraging and claims that overcorrection is a more humane procedure than other procedures (Azrin et al., 1975; Foxx and Martin, 1975; Foxx, 1976) must be discounted.

Conclusions and recommendations

It has been seen that overcorrection, in the sense established by Foxx, Azrin and colleagues, can be an effective technique in the treatment of undesirable forms of
behaviour. The literature shows, however, that there is some confusion over the meaning of the term, its general applicability and its mode of action. The following recommendations are therefore made concerning the future use of the term:

(a) "Overcorrection" should be reserved to describe a technique, applied contingently to reduce undesirable forms of behaviour, involving overcorrecting any upsets of the environment produced by the undesirable behaviour and/or the unreinforced practice of types of behaviour similar to but directly incompatible with, or more appropriate than, the undesirable ones. The former could still be called restitution but it is recommended that the latter be called required practice instead of positive practice. Both parts would classify as overcorrection only if carried out by the client (whether or not physical prompting is needed).

(b) It be accepted that overcorrection is a punishment technique requiring careful ethical consideration before use and, preferably, concurrent positive Reinforce- ment programmes when in general clinical use.*

(c) That claims of the positive educational nature of overcorrection be dropped at least until formal data appears to support the contention.

(d) That overcorrection should not be applied in a general "cookbook" fashion to certain undesirable forms of behaviour (self-injury, stereotypies, stripping, disruptive behaviour, etc.) in any client but should be used only after due con- sideration of the stimuli already eliciting and maintaining clients' behaviour and of possible effects that overcorrection training may have on their behaviour—in other words, after proper functional analysis.

REFERENCES


*It may be necessary to use overcorrection without positive reinforcement on occasions when considerations of experimental design make it impossible to do otherwise.


This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.