

Electric shock as a means of altering the behaviour of the dog has polarised opinion unlike any other training method. Manufacturers and users of shock collars and 'Freedom Fences' claim efficacy which justifies potential distress while those opposed to such devices are asked to provide 'scientific' evidence of pain and abuse. Gut feelings that shock is an exceptionally sad way of communicating with an animal already uniquely pre-adapted to the requirements of humans are not enough.

As a companion animal behavioural therapist I have treated many hundreds of dogs for behavioural problems. During that time, I have never used an electric shock collar and have not seen a case where I felt that its use would be appropriate or justified. However, on occasion, I have had to reverse the negative associations with a dog's environment that shock has created, in order to attempt to treat a behavioural problem. Arguably this may be viewed as no different (and admittedly far less common) than reversing the effect of choke chain use or that of human anger and physical punishment.

My experience of shock is mainly limited to anecdotal reports, both of efficacy and adverse effects, video recordings of collars used for routine training and in modification of unwanted behaviour. My thoughts are therefore coloured only by my subjective assessment of pain and distress inflicted by shock, whether my own or an observed animal's, not by the need to explain and justify previous use, which may both support and condemn the shock collar. Personally, I find static from the car door or an electric fence acutely unpleasant and I do not put my tongue on batteries for fun though I am fairly stoical when it comes to being trodden on, bitten or punched.

Whichever stance one takes on the issue, it is necessary to be realistic about the effect of shock upon the dog and to avoid confusing euphemism. In many discussions, it would seem that the learning process is being defined more by the use the human operator makes of the resultant behavioural change rather than by the internal effect the shock has on the dog. If a shock is used for training purposes, it is termed 'negative reinforcement' and if used in an attempt to prevent unwanted behaviours, it is termed 'punishment'. Although one term sounds 'nicer' than the other, the difference between the two is merely whether or not the operator has an end-behaviour in mind and of semantics rather than a true difference in the learning process of the dog. One mental state, the relief at cessation of punishment, cannot exist without the other, the effects of the punishment itself.

(See Fig 1 The relationship between punishment and negative reinforcement)

As can be seen from this diagram, all aversives when used to punish, including shock, may need to be delivered at greater intensities than when used to negatively reinforce a desired end-behaviour. The emotional state of a dog undergoing 'training' (Dog B) is likely to be very different to that of a dog in the throws of an internally-driven obsession, such as livestock chasing (Dog A), and is therefore more akin to a cow bumping against an electric fence while grazing rather than as part of a stampeding herd. The degree of unpleasantness required to alter choice of behaviour when a dog is in an emotionally neutral state will be less intense and therefore perceived to be 'kinder'. The basic

learning process involved however is unchanged. However much a self-justifying trainer will describe a shock as 'just a tingle', it must still present an adverse stimulus to the dog in question or it simply would not work.

For example, dog B decides to stand still if to move results in a shock. In training, the operator has a 'stand-stay' as a positive behavioural goal. If a shock is used to punish, particularly in uninformed hands, dog A can do anything else it likes as long as the unwanted behaviour ends and the dog's alternative choice of behaviour is convenient. In both cases, however, behaviour is changed by avoidance of punishment.

Although the level of shock is likely to need to be greater when used to punish than to negatively reinforce, what a punishment entails should be defined, not by our human perception of unpleasantness, but by that of the animal in question. This will vary hugely dependant on temperament, previous experience, pain threshold, and, not insignificantly, the clarity, consistency and trust the dog has in its relationship with its owner. Some relationships can tolerate degrees of punishment inconceivable in others. The assessment of degree and acceptability of a punishment cannot be made in a vacuum.

The debate seems to hinge upon two main factors. Firstly, the efficacy of the proposed aversive. People will, after all, use what appears to work. Reinforcement of all kinds, whether positive in the form of a hot dog or negative in the form of lack of shock, works best when the choice the dog is being asked to make is relatively simple and there is no significant conflict in motivation between opposing behaviours. The harder the decision is for the dog, however, and the greater the competition between motivators, the greater the reward on offer for the correct behaviour must be. To create a greater reward to negatively reinforce this behaviour, the level of initial punishment must be increased. The level of punishment will therefore be increased at the very time that the dog will have the hardest decision to make. If the decision is difficult, the chances of the dog making the right one diminish.

It therefore seems inevitable that those with experience in using the collar for training, when choices placed before the dog are easy and the intensity required therefore less, will find the collar not only effective but 'kinder' and extol its use. Those, whose experience is of its punishing role, on the other hand, will have observed dogs being subjected to high intensity and painful shock when strongly motivated to perform an alternative preferred behaviour. The decision facing such a dog may be either impossibly difficult or the resultant learning may be based on false premises. They will therefore report, on one hand, ineffectiveness and, ultimately, repetitive abuse as the dog overrides increasing levels of pain to perform its preferred behaviour. On the other, apparent initial effectiveness may be seen, but with superstitious negative associations made with features of the environment, such as passing children or dogs, and consequent deterioration of behaviour in similar subsequent situations.

Secondly, does the end justify the means? This perception will vary between individuals and their experience but electric shock seems most likely to be perceived as an extreme punishment and is therefore reserved for 'crimes' which seem to warrant it. To use a

shock to train a dog to walk to heel or to prevent bin raiding would seem unjustified and 'unkind' but to use a shock to prevent life-threatening behaviours, such as car chasing, seems justified because in our human eyes the 'crime' is that much worse. The means will also be more publicly acceptable if the punishment itself is remotely activated and an owner does not feel they are inflicting the punishment themselves. The 'Freedom Fence' may be apparently and reassuringly justified on all counts; effective as long as motivation to escape is minimal, 'kind' as intensity of shock required is low and acceptable as remotely activated and thereby divorced from the necessity of human action.

The true dilemma of shock collar use therefore is that efficacy will appear to be the best in situations where, to most people, the end least justifies the means and, conversely, may be deemed to be justified as a last resort in situations where it is least likely to be effective. There seems to me to be therefore no reasoned argument for its use in either case.

Personally, I have no intention of ever using a shock collar. At a basic level, I believe that owners should not become over-dependent upon gadgets of any kind, as they may create a false sense of security, and conversely, result in an owner bereft of means of communication with their dog if they are suddenly without them. I understand that in skilful hands, at low intensity and in emotionally stable dogs, the punishment/negative reinforcement contrast provided by a collar may be sufficient to result in effective training. However, in such circumstances, the end, that of an obedient and well-behaved dog, least justifies the means, the use of a device which will inevitably be abusive in many hands.

My concern is how the subtleties of definition of terms and usage of the device will be received and understood by the 'end-user'. Negative reinforcement sounds more acceptable than punishment and, if the accepted 'wisdom' is that in training, negative reinforcement only is happening, the apparent absence of the essential role of punishment may contribute to the justification of a shock collar's use. In the hands of the uninformed human whose default training technique is invariably to punish, the shock collar will inevitably be used at higher intensities to prevent unwanted behaviour, rather than to shape wanted behaviour.

In addition, I strongly believe that as veterinary surgeons we should lead by example. Whatever we say and do is recognised as acceptable practice in the eyes of the public. We therefore must demonstrate, in all our interactions with patients and their owners, compassion and kindness in the handling of the animal and a constant aim to improve the relationship and communication between a dog and its owner. I do not feel that this can ever be compatible with the use of shock in any form.