BEHAVIOUR MODIFICATION METHODS FOR DOGS THAT HAVE A DIFFICULT HISTORY.

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The origin of severe behavioural problems is multiple, usually a combination of circumstances such as the lack of maternal care, bad experiences or lack of experience during socialization, suddenly changes of environment or to environments where the basic needs are not covered. Often, these experiences are associated with inadequate learning of house rules or not learning some basic rules of coexistence. The result of this combination of circumstances is the lack of adaptation of the animal to the environment and, therefore, an behavioural intervention is required.

Treatments in behavioural medicine consist of the combination of one or more of the following strategies:
- Tips and actions about the day to day handling of the pet by the owners.
- Exercises of behaviour therapy in the usual environment of the dog...
- Exercises of behaviour therapy in a controlled environment.
- Biological therapies.
- Environmental enrichment protocols.

We’ll focus on behaviour therapy exercises aimed at favouring learning by the animal and therefore lead to lasting changes in the behaviour. These exercises are intended to:
- Change the perception of the environment by the animal.
- Provide adaptive behaviour alternatives to the environment.
- Reduce the degree of distress of the pet.
- Improve the relationship between the dog and the owner.
- Reduce the danger in the event of aggression.

There are multiple ideas and techniques in behaviour therapy intended to make the dog to show not only appropriate behaviours in relation to the environment but to improve the adaptation to the environment changing its motivations when facing the stimulus, the increase of control and the predictability. Some of them are:

- **Avoidance** of aversive stimuli following a signal, which intends that the dog displays an avoidance behaviour rather than a confrontation to the aversive stimulus.
- **Counterconditioning** to amend the emotional tags associated with a particular stimulus.
- **Differential reinforcement** reinforcing any behaviour that is not the unwanted one.
- **Discriminative stimuli** that allow that the dog associates a signal with a later event, increasing the predictability.
- **Distracting elements**, those that don't cause fear but divert the attention from certain stimuli.
- **Extinction**, which achieves stopping previously learned behaviours, and taking into account that this concept must not be related to emotions. For example, a dog can extinguish the behaviour of barking to request food when he does not receive food after barking, but will not extinguish its fear after the lack of exposure to this feeling.
- **Habituation**, the process by which animals learn to adapt to novelties in the absence of negative or positive reinforcements.
- **Shaping**, using the reinforcement of certain behaviours shown by the dog to generate more complex and adapted behaviours.
- **Overlearning**, seeking that dogs show previously learned behaviours in stressful situations through positive reinforcement, and taking longer to extinguish them when there is no reinforcement.
The combination of these techniques allows designing different behaviour therapy exercises based on a calm environment, clear communication between the owner and the dog, predictability and control of the situation by the dog thus reducing the chance of inadequate responses to different stimuli.

Those techniques that inhibit the responses, such as positive punishment, must be avoided because of the potential severe consequences, including:

- Development of a negative association with the person that is punishing or other persons sharing some features, e.g. if a child kicks a dog, it is probable that this dog feels fear in future interactions with children.
- Negative association with stimuli present during the punishment. It can happen that a dog, when being punished, does not associate the punishment with its behaviour but with any other element, such as the presence of other dogs, of a particular person, or of any other stimulus.
- Learned helplessness. It is a mechanism that makes that dogs undergoing unpredictable and uncontrollable punishments for some time do not try to avoid them afterwards and, thus, behavioural therapy is much more difficult.
- Punishment signal effect. This is quite common and consists of a dog learning to show the desired behaviour only if he feels he could be punished.
- Bond deterioration.

These techniques are often applied under supervision of an authoritarian person hired to re-educate the dog and, therefore, it is difficult that the owners oppose them. The same could be said for the flooding and submission techniques where the dog is exposed to the stimulus, reacting intensely, hoping that he will eventually relax and habituate to it. These are quite difficult to use due to the lack of communication with the animal, and often will cause the opposite response to that anticipated by the owner. Even assuming that a reduction or elimination of the responses is attained, there is an ethical problem in the application of both the positive punishment and flood and submission.

Other techniques are also commonly used, such as counter-response, which is based on asking the dog to show a response that is incompatible with the undesired response, for example to sit down when greeting a person so that he doesn't jump on. This technique is used occasionally in behaviour modification sessions, but must be corrected later with other types of learning. If we base the behaviour modification in this technique we do not allow the dog to learn the right choice without being guided by the owners, and the responses tend to be unnatural for the animal in that context and therefore has a tendency to extinguish them if not working continuously with it. Another common problem of behaviour modification therapy is that the dog becomes fixed to a highly motivating stimulus and there is the development of a habituation effect to the environment, so that the dog shows the same behaviour even after withdrawing the stimulus.

Therefore, when designing a protocol of behaviour modification, the most important elements are the individual animal and attainable and clear goals taking into account the learning processes that are activated and how we'll modify the environment to allow the expression of the appropriate behaviour. Hence, we might:

- Avoid conflicting situations. Avoid exposing your dog to situations where you know that the experience is going to be negative, because it is highly unlikely that there is a proper learning and an improvement of the behaviour in the following exposures.
- Offer adaptive strategies in conflicting situations. Avoiding every conflicting situation is unrealistic, so we must define how to react in case it happens. The general rule is to remove the animal from the situation or to minimize the perception of the dog, for example, if we are working with a dog fearing other dogs and a dog appears unexpectedly, we will try to push ours as aside as possible and will try to establish barriers such as going to the opposite sidewalk or getting into a hallway while the other dog passes by.
- Standardize behaviours in the presence of conflict situations. Facing situations that we know we won’t be able to avoid, we must teach the dog how to behave and, most importantly, offer predictability, for example, warning whenever we meet someone if we have a dog with fear aggression to people.

With the aforementioned guidelines we will improve the relationship between dog and the owner because the owner is providing control and predictability instead of unpredictability and uncontrolled exposure,
reducing the risk of inappropriate learning, reducing the chances of a process chronic stress and showing alternative approaches to the conflict.

Before the controlled exposure to the stimulus, some time is devoted to the following:
- Relaxation exercises: Used in virtually all dogs, especially in those with severe problems. This exercise aims to improve communication between the owner and the dog, increases the likelihood of showing calmed behaviours, prepares the exposure to the stimulus to encourage the display of appropriate behaviours and habituation, and normalizes the behaviour, relaxing as soon as possible after the controlled exposure to stimuli.

The exercise involves providing a signal that the dog has not associated previously to anything, typically a hand signal, and a towel on the floor, and stroking the dog very smoothly and using a relaxed and friendly voice. Initially, these 2-3 minute sessions are carried out in a very quiet environment and will subsequently be performed in more complex environments and/or just after stressful situations. Relaxation exercises must never be performed during exposure, and the signal will only be present during the exercises.

- Sniffing exercises. They are usually introduced into a series of recommendations for a right walk, such as rewarding the animal with caresses and food when the dog is not pulling on the leash, using secondary reinforcers to mark adequate behaviours such as looking spontaneously at the owners, and encouraging sniffing behaviours distributing rewards in places where the dog can not see them and therefore has to use his nose to find them.

- Bonding exercises. These exercises may adopt very different formats, but they usually aim establishing a good communication between the owner and the dog so that the owner becomes a secure base for the dog (reduces fears and provides exploratory behaviour and game).

After working with these exercises, one can start with controlled exposures, that only require a calm environment and the necessary security elements. The stimulus is placed at a great distance and is progressively getting closer until you perceive the dog is showing the slightest warning signs. Then, the stimulus is moved some meters away and the appropriate behaviours, e.g. not paying attention to the stimulus, looking at the owner, playing, are reinforced and encouraged if the animal has some trouble to display them, e.g. scattering some rewards on the working field, playing in a relaxed manner, or simply walking. Each individual will need tailored details or adding specific elements according to its particularities and requirements, but this depends on each animal.

Repetition of the exercises make the dog decreasing unwanted reactions in the controlled environment, and this environment should gradually look more like the typical environment of the animal, until he shows the appropriate behaviours in the usual environment, either during regular walks, in the house or in an animal shelter.

A very important factor to take into account in the design of behavioural therapies is trying to encourage adherence to treatment by the owners.

If this process is successful, it will enable us to improve the quality of life of the animal, and the owners will perceive lower costs of ownership and, therefore, will want to keep the animal at home. In animals living in shelters, this will facilitate the adoption.

REFERENCES