

Animal clicker training: promoting positive pet obedience

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Clicker training is a methodology based on applied behaviour analysis. In companion animals, this technology may be used to teach manners and life skills, change problem behaviours, build relationships and confidence, and have fun.

It can also be applied in the veterinary and/or zoo setting to achieve husbandry tasks without using fear or force, and to allow the animal to be more compliant in its necessary procedures. It is a clear system of communication that creates a respectful and joyful dialogue between the teacher and the learner.

Animal learning

First, a little about how behaviour works – how do animals learn? It begins with an intricate balance between genetics and experience, but mostly it's about learning. Studies in more than 200 species, humans included, have shown animals learn in the same way – they do what works. Every action emitted by humans and animals is a never ending circle of:

performance ? feedback ? revision

Clicker training harnesses this to teach new behaviours, or improve fluency of existing ones. It is fast, clear and efficient. When behaviours are fluent, we no longer need to teach them – the clicker is no longer necessary. Each click is paired with a reinforcer of the animal's choice. Once the learner is clicker savvy, what is marked is what happens again, so good clicker timing is imperative.

What is a clicker?



Figure 1. Marker signals can come in many forms, including clickers, whistles, flashlights, bells and squeaks – anything clear and distinct for the learner.

A clicker is a communication device, also known as a marker signal. Many different types are available to suit all learners and trainer abilities. Generally, it is a small, hand held gadget that makes a “tic-tak” noise (**Figure 1**).

The click noise initially means: “Hear that? A treat is coming”. The animal comes to enjoy hearing the sound and anticipates something desirable too.

How does clicker training work?

Animals come to understand their behaviour can trigger clicks. This is where a conversation begins:

Trainers decide what they will mark (with a click), then watch and wait ? the animal offers natural behaviours ? any approximation is observed for ? the click is produced the instant it happens ? the animal receives the reinforcer ? it tries more behaviour ? the trainer clicks the action again ? reinforcer ? behaviour ? click/reinforcer ? repeat.

So, how would this look in practice? Take teaching a dog to lie down:

First, decide what a down looks like, then confine the environment enough to prevent the dog leaving and wait – ignoring the dog, but being ready to click just for downs ? the dog loses interest in the trainer – nothing’s happening ? it wanders off and lies down ? click ? a treat is quickly thrown away from the dog ? it gets up to go after it ? the trainer goes back to ignoring the dog ? the dog gets bored and lies down ? click ? the treat is thrown away ? dog gets up to get it ? revert to ignoring ? the dog gets bored and lies down ? click ? repeat ?

quickly, the dog lies down on purpose – an operant behaviour has begun (see further on).

The trainer is selecting and reinforcing the animal's own decisions and the animal chooses to repeat them for a learned reinforcer (the click), backed up by a primary reinforcer (for example, food). It is important to use the clicker well – only for things the trainer wants to see again and never for getting an animal's attention or to stop them doing something.

Does it have to be a click?

Any clear, distinct sound that happens only in a training scenario and is fast to deliver is appropriate as an event marker. When one of the founders of clicker training, Karen Pryor, first took this methodology out of laboratories to work with dolphins, she used a whistle. A pen top or a quiet mouth click may be used for noise-sensitive animals.

The author's pet sheep are marked with two different markers – one with a bicycle bell and the other with a squeaker toy. As long as the signal is clear enough to the animal that it marks a behaviour, a reinforcer always follows and no bad thing happens, it will work. Often, trainers have to think creatively to find the right device to physically use easily – for example, for those with mobility or dexterity problems. Visual (for example, a flash) and sensory (for example, a vibration) markers can also be used to teach animals with impaired hearing/vision.

Can I use my voice?

Regarding voice commands, the usual advice is “no for training, yes for maintaining”. Human voices are common for pet animals and are therefore not specific/distinct noises only heard in the training scenario. Humans talk all the time and voices change with mood or health state, so the voice carries emotional meaning – it's not neutral. It's often hard to be quick enough to mark behaviours accurately enough with the voice. Once behaviours are fluent, with a cue attached, saying “yes” or “good” will usually work fine to maintain behaviours, especially if backed up by some kind of reinforcement.

Rewards – learners get to choose



Figure 2. Reinforcement is in the eye of the beholder – ideas include food, toys, games, life rewards and attention.

Does a reward have to be food? Are trainers just stuffing dogs with food all the time? No – the animal is working for the click, known as a secondary, conditioned or learned reinforcer. There is an intrinsic feeling of success, “yes, I got it right”, which is then backed up by a primary reinforcer to maintain its value. A primary reinforcer is something a learner doesn’t need to be taught to enjoy – such as food, fun and freedoms – and many reinforcer types (colloquially termed rewards) may reinforce behaviour.

In the beginning, food tends to be a universal “pay scale” to get things started – all healthy living creatures eat, so trainers will find something the animal will work for and value. When determining an animal’s reinforcer, it is important to “interview” them – that is, individuals have preferences, so trainers endeavour to discover if one dog prefers play, if another prefers food, or social/physical interaction, or whether permission to go out of the door is the best reward for waiting at the door (**Figures 2 and 3**).

When teaching difficult behaviours, or those requiring emotional learning, trainers aim to use the highest value reinforcer possible. The rate of reinforcement is also kept high for difficult tasks and/or within formal training sessions – for example, in a class setting, within the hospital and so on – adept trainers aim to average 10 to 15 clicks/reinforcers per minute.



Figure 3. Permission to carry out a desired behaviour makes a good life reward – for example, waiting by an open door instead of barging, then being allowed to go out.

Behaviourist Kathy Sdao said: “The click pinpoints a behavioural instant – a moment of muscle movement (with clicker-savvy animals, the click may sometimes be used to mark instants of non-behaviour).” This level of precision and understanding just isn’t possible with simply handing over a reward (which often happens after the behaviour, thereby giving no information about what the animal did right); also, use of treats alone, can become a “crutch” for the animal and its trainer, as well as be an unnecessary distraction to the learner.

Why use marker training?

Marking the precise moment a desired behaviour happens gives the learner information about what works and focuses on what to do. It also allows learners to use their own behaviour to impact their environment. Historically, animal training has focused on “catching them in the act” and meting out punishment to shut down unwanted behaviour.

Using marker training encourages empowered animals to make good choices and creates teamwork, thereby building trust and cooperation. Punishment of any sort is undesirable – being unfair, damaging the human-animal bond and creating fearful (potentially dangerous) animals that don’t know what to do does not teach what is wanted. Clicker training is a powerful behaviour modification methodology. By marking what is wanted, skilled trainers can turn fear into relaxation; anxiety into happiness; aggression into trust; exuberance into great manners. Life skills can be taught – as well as sports, working tasks and so on – in a clear, consistent, kind and efficient way –

and it's fun.

Clicker training can be used to teach any animal or age/life stage anything it is physically or mentally capable of – with the right applied knowledge, the potential for increased welfare for animals and the carers is limitless (**Figure 4**).

Where did clicker training come from?

Table 1. Types of learning clicker trainers work with	
Classical conditioning	Operant learning
Described by Ivan Pavlov	Described by BF Skinner
Also called Pavlovian conditioning or respondent conditioning	Also called Skinnerian conditioning or instrumental conditioning
A type of learning in which a conditioned (or neutral) stimulus is paired with an unconditioned stimulus to elicit a reflexive response	A type of learning in which the frequency of occurrence of behaviour is modified by its consequences
For example: click = pupil dilation (excitement for impending treat)	For example: hear the click = turn to look to the trainer to get treat
Behaviour happens automatically	Learners make choices
Controlled by the antecedent – that is, what happens before the behaviour (the stage-setting event)	Controlled by the consequence – that is, what happens after the behaviour (the reinforcer/punisher)
Used to change emotional responses in the learner	Used to teach the learner what to do in place of the unwanted emotional behaviour

Table 1. Types of learning clicker trainers work with.

The methodology of event marker training came from the work of psychologist BF Skinner, who worked in the laboratory setting in the 1940s and 1950s. He described the four quadrants of operant conditioning. He and psychologist Edward Thorndike noted what now seems obvious – that animals behave for a reason. They can be operant – that is, they deliberately operate on their environment to gain reinforcement or escape punishment (as opposed to classical conditioning in which behaviour happens automatically; **Table 1**).

What is now called clicker training is an application of behaviour analysis that was initially developed in the 1950s and 1960s by Keller Breland, Marian Breland Bailey and Bob Bailey, who started to take it out of the lab. Karen Pryor then brought this technology to widespread practical use – first with dolphins, then becoming the “mother of modern dog training”.

Because of the work of these pioneers and many who have come after them, it is accepted all behaviour is for a reason and driven by its consequences. Animals are more likely to do/repeat behaviours that have a positive result for them, and less likely to do those that have no, or a negative, result (**Table 2**). The consequences are individually important – that is, reinforcers and punishment are in the eye of the beholder; what one thinks of as positive or negative may not be to another individual.

Moreover, animals learn by the immediate results of their actions – within just a second. The perceived positive consequence must be immediately associated with the behaviour for it to be connected. As animals try different behaviours, they learn from the results of those actions.

Whichever has a desired result is likely to be repeated and learned as a behaviour. This means learning happens all the time, whether humans intend it to or not.



Figure 4. Clicker training can teach any animal anything it is physically or mentally capable of. The author’s pet sheep enjoy learning husbandry behaviours and fun tricks.

Clicker trainers aim to set the environment so the animal can only be right and, therefore, the animal doesn’t have an opportunity to be wrong. Rather than using any form of aversion or punishment, the most effective way to deal with unwanted behaviour is to prevent reinforcement for it and then teach an alternative behaviour incompatible with the unwanted behaviour.

Psychology professor Susan Friedman said: “There are no problem behaviours, just problem situations.” Effective behaviour change involves establishing the motivation for unwanted behaviour, then making it irrelevant and ineffective for that animal, while teaching something more appropriate and rewarding in its place.

Practicalities

To implement clicker training, the following practicalities should be observed.

Become a great observer

Getting used to watching and pinpointing the minutiae is a crucial skill, as well as deciding on the morphology of the desired behaviour. Plan whether to click for an entire movement cycle – for example, the dog lying down as discussed earlier (a sphinx position, elbows to the floor, forelimbs straight ahead, back legs folded neatly under hips; straight dog; that is, nose in line with tail base) – or will any increment towards a final behaviour suffice to begin with?

Get the behaviour

Arrange the environment to make it likely for the target behaviour to occur spontaneously. Then, watch and wait, ready to click for the behaviour as soon as it starts happening (it's like snapping a photo). This is known as capturing – trainers take what the animal offers and say “yes” – for example, the dog lying down.

Table 2. Skinner's four quadrants of operant conditioning	
Thorndike's "law of effect" stated any behaviour followed by pleasant consequences is likely to be repeated and any behaviour followed by unpleasant consequences is likely to be stopped. Skinner followed on with this:	
Positive reinforcement (R⁺) Something GOOD is added to increase behaviour For example, a treat is given for a dog sitting when asked to Reward/reinforcement Always the first choice strategy for teaching	Positive punishment (P⁺) Something BAD is added to decrease behaviour For example, an electric collar is applied when a dog runs after deer Discipline/correction Usually poorly executed - P+ is unfair and has damaging fallout. It should never be a teaching choice
Negative reinforcement (R⁻) Something BAD is delayed/avoided to increase behaviour For example, when approaching a feral cat, if it doesn't run, the trainer moves away. This is repeated until the cat stays and R ⁻ can be used Escape Should be used with care only by those who understand it well and where positive reinforcement isn't an initial option	Negative punishment (P⁻) Something GOOD is removed to decrease behaviour For example, turning your back to a dog when it jumps up to greet you Fine/penalty While P ⁻ may happen inadvertently in life, no type of punishment should be chosen to teach
Clicker trainers always aim to use the most positive, least intrusive method possible	

Table 2. Skinner's four quadrants of operant conditioning.

Working in increments towards the desired behaviour is termed shaping – for example, to shape a down, trainers might initially click/treat a few times for the dog sitting, then for dog's head dipping, then the shoulders going lower, then the front legs coming forwards, then the elbows touching the floor and so on. Shaping entails clicking/treating any incremental progress toward the finished behaviour – the level and precision reached is limited only by imagination and time. Clicker trainers do not rely on physical moulding, luring with treats or aversives and so on, so for actions that may not initially happen naturally, targeting may be used – a nose, paw, hip, the whole body and so on – a target, usually taught first with capturing, helps kick-start a behaviour. With targeting, trainers are enabling a thinking animal, which is learning from the process (far better than with food-luring).

Once the behaviour of choice is being offered freely approximately eight or more times out of 10 in each training session, trainers will add a cue. Cues can be in many formats – visual/hand signal, verbal, olfactory, non-verbal auditory, environmental and so on. Cues should be treated with care and never abused. A well-taught cue is an opportunity for the animal to gain reinforcement of some kind. Modern trainers prefer this to the old-style nomenclature of a “command”, which implies a threat: “do it, or else”. Once the cue is added and the animals associates this signal with the new behaviour, a process of teaching it to wait for it is instigated – to give only the taught behaviour in response to the cue, to perform it instantly, to be able to respond to it in incrementally more difficult and distracting situations until it is completely fluent.

In the author's opinion, skilful use of clicker training could significantly improve the welfare of animals under the care of the veterinary team, both in the clinic and at home, as well as increasing efficiency and promoting health and safety for staff and owners.

Some simple uses could include: making restraint “fun” for the pet – for example, for nail trims; for shaping pets in/out of carriers/kennels; getting patients on/off weighing scales; and assisting with

minor procedures – for example, blood sampling, ultrasound and blood pressure monitoring.

References

- Bailey B (2007). Marian and Keller Breland: pioneers of applied animal psychology, *Supplemental presentation at 35th International Marine Animal Trainers' Association Conference*, Indianapolis, Indiana.
- Chance P (1999). *Learning and Behavior* (4th edn), Brookes/Cole Publishing Company, Pacific Grove, California.
- Friedman SG (2008). What's wrong with this picture? Effectiveness is not enough, *Good Bird Magazine* 4(4).
- Pryor K (1999). *Don't Shoot the Dog! The New Art of Teaching and Training*, Bantam Books, New York.
- Pryor K (2009). *Reaching the Animal Mind*, Scribner, New York.
- Ramirez K (1999). *Animal Training: Successful Animal Management Through Positive Reinforcement*, Shedd Aquarium Press, Chicago, Illinois.
- Sdao K (2006). *Are you clicker training, or training with a clicker?* www.clickertraining.com
- Shaw J and Martin D (2015). *Canine and Feline Behavior for Veterinary Technicians and Nurses*, Wiley-Blackwell, Danvers, Massachusetts.