Classical Conditioning

Classical Conditioning-Pavlovian Conditioning-Associative Learning

-Bell signals delivery of food. Bell (previously a neutral stimulus) meant nothing but came to prompt the same response that the food did (Dogs began to salivate at the sound of the bell)

-we use it to condition our markers and to condition dogs to certain stimuli in the environment

-The neutral stimuli must be presented prior to the delivery of the primary reinforcer (food).

 Not at the same time or after the presentation of the primary reinforcer

-After the internal response is involuntary after the classical conditioning has been achieved

Example for Humans

-Click a clicker then blow a puff of air through a straw into someone’s eye

-Over time the sound of the clicker will cause the person to blink

Classical conditioning occurs in reward base training whether you are intentionally trying to or not

 Place, person, routine

The excitatory response a dog has is an involuntary response which is classical conditioning, The actual performance of the command is operant conditioning

Nervous dogs classically condition more easily than confident dogs-Nervous dogs pay attention to their environment more

Average # of pairing repetitions is 150 to 200 for classical conditioning to occur

Completed when the neutral stimulus causes the same response as the primary reinforce

Classical conditioning a response needs to be maintained

-charging a battery; every time you present a neutral stimulus prior to the reward, you increase the charge. .Every time you stop rewarding when you present the neutral stimulus, you drain a little bit of the battery

The dog does not need the reward every time but it will weaken the connection

Common errors when classically conditioning responses

-Deliver reward and neutral stimulus at the same time (wrong)

-Leave too big of an interval between the neutral stimulus and the reward

 Ideal is as close to the neutral stimulus as possible without doing it as the same time.

Operant Conditioning

Operant conditioning is choices the dog makes based on experiences of previous outcomes

Instrumental Learning – the cause and effect part of dog training

4 Quadrants – adding and removing inputs and how it affects behavior

* + Positive – We are adding something to the equations
	+ Negative – We are removing something from the equation
	+ Reinforcement – The behavior is more likely to occur in the future
	+ Punishment – The behavior is less likely to occur in the future
1. Positive Reinforcement – Your dog sits and you give your dog a reward
	* Positive – Added a hot dog to the equation
	* Reinforcement – Dog more likely to sit in the future
2. Negative Reinforcement – Dog stops something they don’t like with their behavior
	* Pull up on the choke chain and push down on the butt. When dog sits, the discomfort is removed so the sit behavior is more likely to occur in the future
	* It is the escape part of the escape and avoidance training.
3. Positive Punishment – The traditional correction in dog training, apply something the dog doesn’t like so the behavior is less likely to occur in the future
	* Dog jumps up on you. You knee the dog-you added something the dog didn’t like (the knee). The dog is less likely to jump up in the future
	* You can apply positive punishment to a behavior the dog is fluent in (correction). If you prompt them to sit and they don’t, you give a pop on the leash. This will cause them to less likely to not sit at the prompt in the future. This is the avoidance part of escape and avoidance. The dog learns to avoid this consequence by doing or not doing something based on their past experiences
4. Negative Punishment – Remove something the dog wants or removing the dog’s access to something the dog wants to make a behavior less likely to occur.
	* You have a piece of food in your hand and the dog wants to grab it. When the dog goes for the food, you simply close your hand. Pretty soon when you hold the food out the dog won’t go for it.
	* If the dog wants something and you can make them associate that their behavior is the reason they are not getting it.
	* A time-out is a negative punishment. The problem is making sure they associate the deprivation with the behavior they were doing.

Everything we do in dog training is a combination of the 4 quadrants

The Use of Food in Training

Size in important – The dog should not spend time chewing the pieces.

Hold the piece of food between the index and middle finger and use the thumb to hold it in place and slightly cup your hand. When the tries to get the food, their teeth press against the side of your thumb and the flat of your fingers. The dogs nose is pushing against the flat of your hand. Using this method give you control of the dog’s head. The dog can’t quite get the food. When you are ready to deliver the food, you just roll your thumb out of the way.

Please see the luring sheet for a picture of proper food placement in your hand.

Hierarchy of rewards

* A misconception is that if you vary the type of reward in 1 training pouch and randomly give them out, people think the dog will like the variety
* Expectation of Rewards- If you give your dog a low value reward and then surprise the dog with a high value reward, it improve the dog’s motivation. If create and expectation of a high value reward and then give the dog a low value reward, it becomes demotivating to the dog.
	+ You can jump up in the quality of rewards but don’t jump back down.

Establishing a Communication System and Charging our Markers

One of the first things to do with your dog is to condition them to verbal markers. You can choose your own words but you should have 2 reward markers and 1 punishment marker

* Yes = releases the dog from the behavior, You like what the dog did. The dog can stop what they are doing to access the reward
* Good = Dog should continue doing the behavior and you deliver the reward to the dog
* No = The punishment marker becomes a form of positive punishment. Be careful about using too much. Do not correct the dog too much too early in training or you may demotivate your dog.

The reward markers are conditioned a little bit different,

Once the dog understands the reward markers, the use of them prompts an involuntary feeling inside the dog. The same response the dog would have to the food. The sound itself is now reinforcing.

Reward Marker (When you choose your words, do not mix them up)

* Yes – The dog is free to stop doing what they are doing
* Good – The dog continues what they are doing. This cannot be used in situations where the dog would need to break what they are doing in order to eat the reward.
	+ If the dog is holding a dumbbell you need to release the dog “Yes” to obtain the reward. The dog cannot eat a reward while still holding the dumbbell so it would not make sense to say “Good” in this situation

When first teaching a behavior, use Yes to isolate the behavior. The dog sits, say Yes and give the reward.

Start building duration by saying Good when the dog sits, deliver the reward while the dog is still sitting (only for a couple of seconds-do not start out too long if a duration.

If you condition the dog properly, you will be able to say the marker word and not need to give the reward every time.

When conditioning YES. Say yes and have the dog get up (move the reward away from the dog and have the dog come get the reward)

When conditioning GOOD. Say good and go to the dog to give the reward

When conditioning, it is important to say the word first, then move to deliver the reward. Do not move at the same time that you say the word.

Punishment Markers

No = The signal the dog is wrong.

Condition it as a consequence-Negative punishment-withholding something the dog wants.

* When the dog jumps up on you to get food- say “No” then remove food and put is behind your back

When the dog is conditioned to “No”, it becomes a form of positive punishment

Engagement

Engagement- dog that is focused on you for sustained periods of time and wants something from you

A prerequisite to teaching-DON’T try to teach your dog until you have his attention

It is difficult to teach a dog who isn’t giving you attention

A little extra effort on the engagement part makes teaching easy

Socialization through engagement

Most people shortcut this process- they want to get to a spot where they start doing something with their dogs

It is not uncommon to spend several weeks doing nothing but engagement-just to “pay attention to me” over and over

Take dog somewhere new -do a couple of minutes of engagement and put him away.

Socialization can just mean going to new places and rewarding them for paying attention to you in the new place

Once you have the dogs undivided attention in multiple locations then start working on the training

The more you can do it the better off you’ll be. All the rest of the stuff will fall into place

Some of the principles of Engagement

Movement is motivating

Vary Duration of the Reward event

* Little mini events- say yes and give dog 1 piece of reward or say yes and give 6 pieces. Important to remain unpredictable.
* Post reinforcement pause can occur if you are too predictable. The dog will check out after the reward if they know there will be 5 sec before the next reward. Keep it unpredictable

Move away from your dog

* If you dog checks out from you-move away from or dog not toward your dog

Contrast between what was happening before the reward event and the reward event itself

* Movement explosion upon delivering the reward. Start, Stop, Stand Still, and explode

Vary the quality of the reward

* Increase the quality of the reward (kibble vs. steak)
* Increase the intensity of the reward (have dog chase after food)

Principles around creating engagement

* Movement is motivating
* Move away from the dog to draw them toward you

When dog starts to pay attention, there is a transition to make the dogs attention make you move

When the dog is engaged then move to give the dog the reward. The dog likes it when you move so when the dog looks at you then move and it keeps them engaged

Movement needs to be part of the reward puzzle to increase engagement and focus

Rate of reinforcement

* If there is too much time between rewards the dog will check out

When it is going well, the rate of reinforcement is really high. In the early stages don’t give the dog a chance to check out.

Keep the rate of reinforcement high so they don’t check out

Varying the duration of the reward event

After you give the dog the reward they should be right there waiting for another

If the check out right away you are predictable and it is called post reinforcement pause

Instead of looking at the reward as 1 piece of food, say yes and varying the amount of food, or amount of play (tug) before going back to work

The amount of time in an interaction is 1 reward event. They never know when the reward is over or when it will start again so the dog doesn’t check out

Hunger

Initially when you start, have your dog be hungry since we are using food for motivation

If possible, the best way to feed the dog it day’s worth of food short engagement session bursts

Contrast (Explode with movement)

Between what was happening before you reward the dog and the reward itself.

Go from not moving to reward with an explosive reward

Don’t drift for each reward-this movement becomes dull. You don’t have to move fast-a quick jerk in the first step is good

Value of reward

More dynamic rewards are more valuable

Item itself (kibble to steak), Quantity (small or large pieces), Dynamics (more movement)

Mixing Restrained recalls and engagement

Bring dog in on harness. During engagement sessions have the helper occasionally hold dog back (restrained recall) during your engagement session.

Add restrained recalls in the middle of static training (stay, stationary behaviors, etc..)

Engagement through restrained recalls

Builds dogs drive to get to the handler and increases the dogs focus on the handler which improves engagement.

Restrained Recalls are the first step in the recall progression

Creating a reward event

Reward event-making the reward sequence itself not something the dog is doing for a specific object but something the dog is doing with you

Make reward events through toys or food but make it and interaction between person and dog. Throwing a toy or piece of food for the dog does not create an interaction

What is a reward

Conceptualize – look at the reward as a mini-event (interactive play) between the dog and the person

Rate of reinforcement to build their attention span, if you wait too long between rewards in the beginning, they tune out

The mini-event becomes less about the food and more about the interaction

Move as much as you need to to keep the dog motivated

When food chase, do stop moving your feet until after the dog takes it out of your hand

Restrained Recalls

Importance of restrained recalls

A solid recall is the most useful behavior to teach

Start early in a very incremental way with the goal being a 100% reliable recall in the end

Restrained recall step 1

restrain dog with harness while the handler runs away from dog and encourages the dog to come from them

put the command on cue

Mechanics to delivering the reward

Assistant holds dog until the handler says the recall command. The assistant immediately releases the dog on the command

Important for the handler to not give the recall command if the dog is not paying attention to or does not look interested in coming. In this case the handler needs to come back to the dog and give it treats.

Keep in mind

As the dog runs towards the handler, the handler marks the behavior (yes) and then backs up so the dog doesn’t run into you

Be careful to make sure the dog doesn’t get nervous being restrained

The harness

Restrain on harness (tells dog they can move forward) not on collars so that it won’t conflict with obedience information

Creating frustration to get the dog to want the handler

Use food dynamically. When dogs are frustrated they usually want to use their mouth more so make the food move around more before giving it to them

Run away from the dog as you call.

Once the dog is playing well with the handler and bringing the toy back to the handler you can add the toy into the recall

Nervous or fearful dogs

Watch for dogs that are avoidant to the person who is holding them. Don’t do a restrained recall if they are fearful

If you try this with fearful dogs, they run from the person holding them with a flight response and then get rewarded when they reach the handler. This can make their coping response to fear to become flight and make the fearful behavior worse

Try to get the dog comfortable with the holder if possible. If not, DON’T do a restrained recall

Reward placement in restrained recalls

Over time reward the dog in a way that facilitates the terminal behavior. If you want the dog to come directly to the left side, reward the dog on the left side each time they come to you. If you want the dog to come front, reward the dog in front.

Homework

Demonstrate restrained recalls and a short engagement session

Luring

Manipulating the dog to perform behaviors

Markers need to be conditioned to markers before luring

Teach them that following our hand is productive

Handler needs self body awareness to lure properly.

Basic Luring

Conditioned reward markers “Yes” and “Good”

Know how to hold food

Take a piece of food, put it in front of their face, when they push on your hand, say Yes, and deliver the piece of food. You wouldn’t need to say yes, the dog will understand how to be lured without you having to say anything, but it is good practice for the handler

See behavior, Mark behavior, Reward behavior

DON’T give food at the same time you mark, DON’T give the food and then mark

Lots of people are oblivious to how their motions affect their dog’s behavior

* If you can’t walk in a straight line, the dog can either
* If you unconsciously bring your hand across your body, the dog will begin heading across your body instead of where you may be expecting the dog to go

Lure the dog in straight lines

Principles of Luring

Try to lure in straight lines

* Be able to control your body-body awareness

Control the dogs head (controlling the dogs body by controlling their nose)

* Whatever the dogs nose is doing, the body does the opposite

How to hold food review



Make sure you don’t hide the food with your thumb-the dog will try to go in for the food from the side so you lose control of the dog’s head.

You want the dog to push their nose into your hand, you can control when the dog can get the food. The dog feels like they can get it though

Luring without a dog

String a line between 2 cones or chairs. The line should be about the same height of the dogs nose.

Important to make sure to bend your knees and wrist to keep the dog going in a straight line.

Muscle memory drills.

Assisted vs. Freeshaping

Shaping behaviors-creating a behavior incrementally through successive approximation. You don’t get the finished behavior immediately.

* Free shaping- using a conditioned reinforce and with no input from the handler. The dog would wander near or toward the target-you would mark and reward. The dog would begin to learn that they get a reward when being near the target they get a treat and the dog would eventually put its feet on the target. In free shaping, there is no help to fade out. With a free shaped behavior once a dog consistently offers the behavior, you put a verbal cue to it and there is no help to fade out.
	+ Problem -it is less efficient, have to be more patient, timing is very important, dog needs to be very persistent. Ignore the wrong behavior and reward the correct behavior but it make it difficult to add duration to the behavior. If the dog goes for awhile without a reward, a free-shaped dog has a tendency to keep trying new behaviors
	+ Changing the picture (generalizing) the dog struggles with the concept. So you don’t have a way to help the dog in a new situation.
* Assisted shaping – allows you to have a tool in place to assist the dog if they struggle in a new place. The dog won’t constantly try new behaviors as you work on duration
* Purely lured behaviors – sit and foot target
	+ Use elevated targets -straight lure them on it
* It is important to create a behavior without putting commands to the behaviors. Once a dog fluently performs then you put a command to it.
	+ If you tell them a command and they don’t do it, it becomes learned irrelevance so don’t’ give the command until you are realtively sure the dog will perform the command. This way also helps you to perfect the behavior before you put a word to it
	+ Don’t name it until you love it

Foot Targets

* Purely with luring. The dog is following your hand and not looking where they are going, by using and elevated target, the dog can pay attention to youf hand and feel when they are on the target.
* Evolution of the foot target
	+ Teaches dog to move rear end, teaching object guard, teaching stays, directional stuff
		- They figure it out fast, get lots of rewards, and like it.

The Sit

* Stick food in front of dogs face, back away from the dog, and lift up and away from the dog with our hands. The dog lifts their nose up and ends up dropping their rear. Release (yes) the dog forward for the reward to encourage the dog to sit upright. Once the dog gets fluent then use the good marker to reward in place.
* Pull your hands up and toward your body and lean back to help the dog sit upright

Spatial Pressure

Is your dog ready for spatial pressure?

* Dog needs to lure well (push into your hand) – not be hesitant to push your hand to get the food
* Physical coordination-puppies may fold up and flop over (they need to be physically developed)
	+ Some breeds need to be older puppies before starting this (german shepherd)
	+ Determine how spatially sensitive your dog is – example = border collies are spatially aware; they need less work on this. Other breeds may be oblivious to spatial pressure and need more work.

Variety of ways to use both luring and spatial pressure at a tool to manipulate and communicate with the dog during the teaching process.

Hold the food directly in front of the dogs face (with your hands closed-You want your dog to start in a stand) and walk forward into your dog.

* If you hold the food too high, you will cause the dog to sit
* Make sure you step with your feet wide so you don’t step on the dogs feet.

Use spatial pressure to teach down and stand.

Also use to help teach “stay” or holding a dog in place

Work on spatial pressure and have the dog be able to move off of your body pressure before trying to teach the down and the stand

Teaching the Down:

* To teach the down you want use the combination of both luring and spatial pressure.
* Luring with our hands to control the dogs head and spatial pressure by pushing towards the dog to keep the dog from creeping forward while trying to get them to down
* Start by teaching the down from a stand. This is called a “folding down”.
* If your hands are in the wrong position, the dogs rear end may stay up, just raise your hands up a little bit.
* Alternate releasing the dog with “yes”-have them get out of position for the reward and “good”-have them remain in position for the reward
	+ Initially you will release your dog more often. Releasing them is more motivating that remaining in place.
	+ You may want to reward highly motivated dogs more often in place with “good” to promote stability
* If you teach the dog from a sit, they have a tendency to flop forward into the down which isn’t desirable

Shaping the down through spatial pressure

* Press your hands and body towards the dog and straight down (keep your hands at your dogs nose level. Do not lower your hands all the way to the ground-this will cause the dogs rear end or elbows will to stay up because the dog’s nose is above the food.
* Push your dog into a ground, “yes” (have them move out of the down position), reward

Teaching the Stand:

* Have the dog start in a sit. Your body pressure is what makes the dog stand up.
* Your hands control the dogs head. If they are too high, your dog will sit. If they are too high you will cause your dog to lay down.
	+ Your hands need to be just above the dogs withers but beneath the dog’s chin. It should be at the collar and then move straight toward the dog.
	+ Some dogs need help bringing up their rear end. You can do this by tucking the food under their chin so the dogs nose is down. If the dog’s nose is down, the rear end will pop up.
	+ This will take practice. Most of the time when you start, your hands are either too high or too low. If you aren’t getting the results you want, adjust the level of your hands

Pre-Heeling

Luring along a barrier

Muscle memory drills to teach a dog to walk with its head up

Walk along a barrier holding a treat a above the dogs head. While the dog is in the act of walking with its head up, say Yes, stop and feed the treat

* Using the wall will keep the dog in the correct position which will help keep the dogs body straight and will keep the dog from moving in front of you
* You may have to reward them right away when they lift their head up when you are standing still if they struggle to bring their head up (successive approximation). Reward the small steps and progressively ask for more

Keep the palm of your hand parallel to the floor-the dog will follow your hand with its head up working to get the food (the dog should be able to touch your hand)

Say Yes while you are still moving with the dog in the correct position.

Saying Yes gives the dog permission to move out of position because the dog cannot eat the food with the dogs head up

A frequent problem when starting the luring on the left side is that the dog will attempt to move into in front of you because all of the rewards up to this point have been given to the dog with the dog in front of you. The barrier helps the dog remain at your side. If the dog moves in front, just lure them back to your side

Muscle Memory – pivoting on the food target – This is a coordination drill for the dog

Use luring to have the dog keep their front feet on the target and swing their rear end around.

Stand in front of your dog. You want the dog press his nose against your hand. Put yourself at the distance you need to be so that when the dog’s feet are in the middle of the bucket and its nose will touch your hand. You should move around the bucket as if there is a chalk line circle drawn around the bucket.

You may need to shape this. Reward the smallest progression.

* Bend the head – reward, repeat
* Bend head – will get uncomfortable and slightly move a step – reward, repeat
* Side step – reward, repeat until movement in smooth

As the dog gets better have it take 2 or 3 steps before rewarding

Stay straight in front of the dog with your hands directly in front of your body. Move your whole body

Homework

Luring along a barrier

Pivoting on the foot target

Recall Progression

Distraction Free Recalls

* After the dog knows the restrained recall – Must meet the following requirements
	+ Is highly motivated to get to the handler
	+ Knows what the recall signal is -verbal, signal, whistle, etc…
	+ Has done it over a period of time
* Release the dog in a distraction free environment
	+ Make sure you don’t recall the dog if you don’t think your dog will come
	+ You want them doing nothing, engaged in nothing, just wandering around in a distraction free environment to work on this phase of the recall
* Recall Progression
	+ No distractions (at this stage don’t have your dog in an area with distractions)
		- Dog wanders away from owner (free and unfocused).
		- Owner recalls at a moment of inattention - call the dog and reward the dog with a big reward and a prolonged engagement with the dog.
			* This makes the dog want to be with you
	+ If you have done a good job with the restrained recalls this is almost always successful.
	+ Stay distraction free so your dog doesn’t find something else to get engaged with at this point in the training.

Retrieve

* Pre-Retrieving Games for Retrieve (Food)
	+ Roll a piece of food away from the dog, immediately back up and head the opposite direction, as the dog get the food, call the dog, the dog comes to the front of you and gets a treat.
		- Repeat over and over so the dog learns to go out and come straight back
		- Only play on a surface where the food is visible when thrown to the dog
* Toy – dog needs to come to you with the toy and have a solid out
	+ Drop the toy and run away from the dog so the dog will pick it up and chase after you. The drop turns into a short toss, and a further throw.

Pre-Hold work

* Teach dog to tolerate handling of their muzzle while stationary and moving
	+ Start holding muzzle with hands, when dog doesn’t resist, mark and reward
		- Make sure you can pull the lips up
	+ When starting to have the dog move with your hands on the muzzle use the leash so you don’t squeeze the muzzle
	+ Then work on the dog going from a stand to a sit with your hands on the muzzle.

The Chair

* Get the dog comfortable being by the chair. Reward dog for getting between your knees
	+ Feed the dog as you begin rolling
	+ Once the dog is comfortable with the chair start bringing the dog to between your legs from different positions around the chair.
		- Move from the side back to in front between your legs

Hold (stationary, moving, stand to sit)-If the dog is highly play motivated, teach the hold first

* Slide pvc into mouth just behind the canine teeth. Tell the dog to hold. Hold the dogs muzzle gently with both hands. When the dog doesn’t resist, mark and reward
	+ It doesn’t matter if the dog drops the pipe when you say yes
	+ Make sure you don’t block the nose
* After a little while remove the top hand and only have your hand under the chin
* Do not have your dog try to take it from you
* Eventually break contact with both hands
	+ If the dog starts to chew say hold and immediately touch the muzzle with your fingers
* Once you can do a stationary hold and are able to remove your hands, you can begin moving. Mark and reward.
* Once you can move, without your hands, then work on the stand to a sit with the pipe in their mouth
* Dogs are resistant to this when you first start, but as they get more comfortable and get more reward they begin to enjoy it and will actually try to grab it from you.
* If the dog starts chewing, tell dog hold and touch their muzzle

Take it (Teach this first if your dog is not play motivated)

* If the dog reaches out to sniff or touch it, mark and reward
* As soon as the dogs mouth touches it, mark and reward
* Once the dog start grabbing the item, start using the Take it command
* As the dog gets better, then add a little bit of duration

As you add duration, don’t let the dog chew, also don’t let the dog tug on the pipe, or grab it before you are ready

Bring it to the floor

* Initially hold the pipe in front of the dogs face when asking them to take
* Eventually go lower and lower when asking the dog to take it
* Use the dumbbell when the dog is ready to take it from the floor

Advancing to the dumbbell

* Transfer hold, moving hold, and bringing it to the floor progression just like what was done with the pvc.
* Once the dog is picking it up from the floor, hold the dog back and set it on the floor to create a delay from the dog take it and then give the take it command.

Don’t throw retrieve item to begin with

Turn Back to Handler

Return to front

If dog wants to hit the item with its feet when retrieving, place the item against a barrier or on an elevated surface