

# Module 4 : Concept Formation

Concept formation defines the process by which pets learn to form distinctions between objects, people, events and other pets. Below is what we will cover in this module:

- The definition of concept formation
- Types of concept learning
- What analogical reasoning means
- How concept formation is important to pets and your interaction
- Studying your pet for better training

## 4.1 Conceptual Behavior in Pets

**Scientists and psychologists believe the ability to form distinctions or conceptual classes of things, events and people is not unique to humans.**



There are non-human animals such as cats, dogs, birds, and other pets that can distinguish between “relations.” It is possible to examine the stimuli your pet receives and to see a behavioral reaction to it.

For example, take a dog that lives in a home with two people and each of them walks the dog. However, they never walk the dog together. In fact, the only time that both people head out the door with the dog, is when they are going drive to the vet. If this dog decides that he does not like the vet, then he may begin to resist going into the car every time the two people go out the front door with a leash in their hand.

Now say that after months and months of the dog walking with only one person at a time, both individuals decide to take him on a walk together. The dog will still associate the act of both people leaving with a leash in their hands, with going to the vet, because that is the only time that the three of them leave together.

The way an animal learns through perceptual, associative and relational concept formation is a factor in their comfort level, recognition of objects, people, places and things.

## 4.2 Perceptual Concept Learning

**Perceptual concept learning is the ability to sort stimuli into classes, such as toys for play and toys for training.**

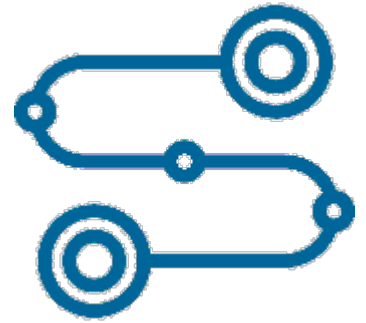
For example, a dog can examine the physical characteristics of objects and categorize the stimuli they are being shown. The dog uses discrimination and generalizations to determine the differences. A dog can be trained to grab a certain toy and put it in a certain location because of perceptual distinctions the dog can make between objects.

Studies by Smith and Medin, as well as Fetterman, have shown that an animal or pet's ability to discern items using vision is similar to humans to a degree. A human can look at an abstract picture of a cat and know it is a cat. An animal can see an outline, shadow, or other distinguishing characteristics and understand the same about certain stimuli in their life.

A good example of this perceptual class is an animal hunting at night. During the day we would find it easier to see defining characteristics. However, for animals like cats and owls, their vision is able to pick up enough characteristics of their prey and predators to understand which is which. To a degree, this makes perceptual concept learning about natural selection and the theory that the strongest survives versus the weakest.

## 4.3 Associative Concept Learning

Associative concept learning is about arbitrary stimuli.

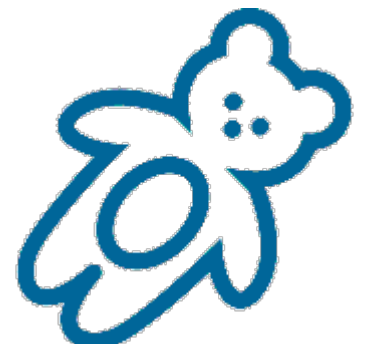


The reaction you see in your pet is associated with a common situation or outcome. You may have made a certain noise to keep your cat off the furniture, away from plants or off the table. This noise may occur at other times, but not associated with warning the cat. However, the cat will react when they hear it and react as though they are someplace they should not be.

Another example is taking your pet on the same walk each day. You request that your pet goes in one direction versus another during their walk. After a couple of walks, the pet naturally begins to go that way.

## 4.4 Relationship Concept Learning

Relationship concept learning takes perceptual concept learning a step further.



Similar to the example of a dog being able to distinguish between training and regular toys, there is an ability to examine the sameness or difference of an object, event or person. If you have two toys that are exactly the same, you

can see that your pet recognizes this. Similarly a pet can also recognize if there is any difference to the toy.

Perhaps you bought a toy six months ago which became the pet's favorite, but now needs to be replaced. You buy the exact same toy and rub the old toy against it to get your pet's old scent on it. However, you will notice that your pet still prefers the old toy. Although recognizing that the new toy serves the same purpose, there is a relationship established with the older toy, which the new one cannot replace.

## 4.5 Analogical Reasoning

**Analogical reasoning is considered a second order relational concept.**

Pets are able to make analogies between objects whether it is the same, identical object or one that has differences. In this case, holding up three objects, where two are the same and one is not, will allow your pet to show that they can identify when objects are the same or different.

## 4.6 Concept Formation, Pets and Your Interaction

**Starting training and observation of your pet early enough allows you to see the use of concept formation and implement it during their training.**



Any pet has the intelligence to be trained, although some have more of an aptitude than others. By understanding how your pet

learns, you can set a training regime that aids your pet's learning. Trial and error is one way to start training a pet but there is a better method, through the idea of concept formation.

If you understand how your pet sees, feels, reacts to noises, tastes and smells then you have the opportunity to train your pet on a higher level.

However, if you start training early, providing positive reinforcement and teach your pet through methods that they can understand, then you are creating a stronger bond.

## **4.7 Training Your Pet by Studying their Concept Formation**

**Assessing your pet's various behaviors and ability to understand concepts in their life will help you train your pet.**

There is more to training your pet, with regards to concept formation, than understanding the different types of learning your pet experiences.

### **Observation**

Animal behavior is often about observing your pet in their new habitat. You have already decided that there were qualities you enjoyed either about the breed or the individual pet; hence why you have brought them to your home. Now you need to give the animal a few weeks to adjust to their new environment. If you move to new homes often, say once a year because your leases are short, then you may need to observe your pet often. Simply changing their home can trigger new behaviors or bring back old ones.

Anytime you have a new pet or have been asked to train a new pet, it is important to observe for a few weeks. If you have other pets, how is this new pet interacting? Are there

behaviors you do not like? Do they show an aptitude for elements you are already trying to train them on?

For example, a new kitten after two weeks, would need their nails clipped. Do they enjoy the procedure because you are showing them love or are they trying to get away from you? What happens the next time you try to clip their nails?

Through observation, you can also see how they react to the elements you use to clip their nails. Perhaps you bring out treats and the nail clippers. They might try their hardest to receive a treat, but wriggle away when you try to pick them up. This is because they can recognize the objects or noises the objects make. Seeing the nail clippers can immediately bring on dislike, but the noise the treat bag makes ensures they come around.

## **Natural Traits**

During the observation phase, it is important for you to understand the breed of pet you have.

Even mixed breeds of dogs, cats and other pets can display a range of natural traits that fits one breed over another. Siamese cats enjoy being outdoors and can be trained on leashes. A mixed breed cat with Siamese characteristics may also enjoy this privilege.

German Shepherds typically show leading and rescuing tendencies, with a strong ability to be trained. They are also easy to get along with and enjoy children. A mixed breed with German Shepherd DNA as part of their whole DNA strand can also display these same qualities.

## **Personality**

Each breed has their own characteristics, both physically and behaviorally. Within these breeds, there are also going to be individual personalities. If you have multiple pets, you understand this concept. You may have two dogs from the same litter. Yet, one is extremely shy and clingy while the other is outgoing. Some personality traits will be overt and others

covert. It will take you longer to observe certain traits and to identify an appropriate reason for those traits.

Consider a middle child.

The older child may have been given all the attention until a second child comes along. At this point the attention becomes split, and then a third child is added to the mix. The middle child may feel like they are “invisible” now. The middle child can start to act out in a variety of ways that they did not before.

### **Your pets can be like this.**

If one dog was getting all the attention and then a new pet is added to the family, they may feel like there is a loss of proper care. The dog could start to act out to get your attention by reverting to behaviors you do not like. This is often seen when negative reinforcement is used versus positive reinforcement of certain personality traits.

If a dog knows he will be reprimanded, rather than ignored when doing something correct, the dog may decide to receive a reprimand. It is an association of behaviors. Through their learning they established what and how to get what they wanted.

## **Testing Skills**

Two pets from the same litter may also have different skill sets. It may depend on how early you start to teach a skill, their concept formation learning processes or their desire to learn. You can test for certain skills, likes and dislikes when you bring a new family member to your home.

What does your pet like the most in terms of toys, food, attention and walks? Are there certain things your pet seems to do that could be turned into a skill?

Most cats enjoy being indoors or free to roam outside, without the constraint of a leash. However, Siamese is one breed that

enjoys getting a lot of attention and will learn to walk on a leash. This aptitude is shown through their desire to go outside, but also feeling comfortable in the harness. Imagine what would happen if you put the harness on your kitten along with the leash and guided him/her through your home. Most cats do not like anything on their backs or the weight of the harness, but a cat that enjoys it will keep on playing and appreciate the attention they are getting from you.

The next step would be to take the cat outside. After a couple of trips outside, whenever the cat hears the sound of the harness or sees you pick it up, the cat will associate the object with a fun outdoor trip.

## **FACT**



Dog owners who took their puppy to a socialization class said it made training their dog much easier.

*Source: canidae.com*

## **Summary**

Above is just one part of animal psychology that will help you



train your pet better.

Understanding the main ways they learn through concept formation and the second class methodologies, plus how to apply it, will ensure you and your pet's interactions are worthwhile.

This module enabled you to start to deal with the "real" psychology of your pet and apply it analytically to ascertain the best way forward for you and the animal.

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