Module 1: Introduction to Pet Psychology

- What is animal psychology?
- A quick word on evolution
- Historical background of animal psychology
- Instinct

In this first module, you will learn the following concepts and how they can be applied for better interaction between you and your pet:

- What is animal psychology?
- Theory of Evolution
- History of animal psychology - Instinct, Learning, Teaching

1.1 What is Animal Psychology?

Animal psychology, as defined by the Merriam-Webster dictionary, is a branch of psychology concerned with the behaviour of animals other than humans (Merriam-Webster, 2017). Ethology is the scientific and objective study of animal behaviour with a focus on behavioural patterns that occur in natural environments.

The objective of animal psychology or ethology is to view animals in their natural habitat, in order to observe the behaviour at an evolutionary level. It can also include the behavioural study of animals in a lab or in an unnatural setting in order to assess instincts, learning, and training abilities. Naturalists such as Steve Irwin, Dian Fossey, Jane Goodall, John Muir, John Audubon, and Rachel Carson have all studied animals in their natural habitat, as a way to observe and learn about their environmental and evolutionary adaptations, as well as their behaviours.

Jane Goodall and Dian Fossey, both who have worked with primates in their natural habitat, studied these animals in order to help the world understand their unique attributes, behaviours and plight. Other studies include those conducted on lab animals, to determine their adaptation levels, evolutionary changes and the ability to learn through concept formation.

Ethology includes disciplines such as neuroanatomy, evolution and ecology.

Ethologists have studied specific behaviours, group behaviours, communication, emotions, sexuality and cultural elements. The goal of animal psychology is to not only understand the elements of animal behaviour, in order to improve training, but also to ensure the well-being and survival of different species. When attempting to train pets, it is essential to understand their natural behaviours, instincts and reflexes.

Having knowledge of animal psychology will prove to be a useful tool in understanding why animals behave in a certain way; which is important for pet-training. Ever notice a cat or a dog continuing to exhibit the same behavioural patterns over and over again? Well, there is a reason for this and we will discuss it in more detail in a later module.

1.2 Theory of Evolution

Charles Darwin, was an English naturalist best known for his studies of specimens from around the world, which eventually led to the scientific theory of evolution by natural selection.

Evolution is the process of continuous change from a lower, simpler state to a higher, more complex state (Merriam-Webster, 2017). This occurs over several generations. Through evolution, species, organisms and molecules adapt or become extinct. As a result of this process, new species are formed.

Evidence suggests that between 10,000 to 20,000 years ago - during the most recent ice age - humans focused mostly on hunting animals, rather than domesticating them since animals were a primary source of food. Furthermore, evolutionary evidence suggests that goats were among the very first animals to be domesticated approximately 11, 000 years ago (9,000 and 7,000 BC) for meat, milk and hides; followed closely by sheep.

1.3 Historical Background

Scala naturae, or the "Great Chain of Being" is a concept built on a strict hierarchal structure of all matter and life. This system was first proposed by Plato and Aristotle and was the most accepted concept of animal behaviour in the world until the 19th century. Aristotle classified living beings on a pyramid which represented animals at different levels.

The lower levels of the pyramid were filled with the simplest animals, increasing in ability, intellect and behaviour, all the way to the very top of the pyramid, which starts with God. The belief was that animals were created to fulfil a certain purpose. Even during ancient times, it was evident that animals could adapt and that there were many different behaviours associated with them.

Despite these early observations on animal behaviour, it would take many years before the concept of animal psychology or ethology would be put forward.

Initially, the world would first learn about evolution from French naturalist, Jean-Baptiste Lamarck. His theory stated that animal physiology and behaviour could change and those changes would be reflected in the next generation. Lamarck had some difficulty getting his theory known to the world.

It was not until Charles Darwin took Lamarck's theories forward that others started to make headway in understanding the behaviours of animals. George Romanes, Darwin's protégé, started researching animal intelligence, assessing anthropomorphic traits and cognitive functionality in animals. However, Romanes did not gain much support, even in the scientific community.

Other ethologists were looking at behaviour as natural or instinctive. Scientists began recording primary behaviours and the frequencies with which these behaviours occurred in an ethogram. It was an objective way to accumulate data. The 1970s marked another change for ethology. John H. Crook, an English ethologist, published a paper stating that there were two types of ethology: comparative and social.

He further stated that most of ethology had been comparative, with animals being examined against humans. He wanted ethologists to examine groups of animals based on social interactions and

structure. The social aspects of ethology led to new approaches such as animal cognition, comparative psychology, behavioural ecology, and sociobiology.

Most biologists, vets, primatologists, anthropologists and physicians now study animal psychology in order to study animal social groups, animal welfare and animal cognition, to apply it to their various fields of study, whether it is specifically a study of human or nonhuman animals.

FACT

The oldest intact fossilized remains of a pet canine date back 33,000 years. It was discovered in Siberia in the 1970s.

Source:animalplanet.com

1.4 Components of Ethology

Dutch biologist and ornithologist Nikolaas "Niko" Tinbergen stated that there are four categories that ethologists must look at when studying a group of animals and learning about their behaviours: function, causation, development, and evolutionary history.

Ethologists need to ask:

- How the behaviours affect the animal's reproduction and chance of survival?
- Why does the animal respond with certain behaviours rather than in a different way?
- What stimuli create the response seen and how has this response changed due to recent learning?
- How will the behaviour of an animal change as it gets older and what experiences in early life were necessary for the animal to show such behaviour?
- Does evolutionary history explain how the behaviour compares with similar behaviours in closely related species, and how might the behaviour have appeared in new generations?

Tinbergen believed the answers to these questions to be complementary instead of being mutually exclusive. In other words, the answers to the behaviours shown must be found by looking at the four levels: function, causation, development, and evolutionary history. As a trainer, animal caretaker or pet owner, you can examine these same four areas about the animal's behaviour that you see. You will have responsibilities in assessing behaviour, helping the animal learn and teaching them with appropriate positive reinforcement.

The following are three areas that are important to animal psychology:

Instinct

Instinct is defined as "a largely inheritable and unalterable tendency of an organism to make a complex and specific response to environmental stimuli without involving reason," according to the Merriam-Webster dictionary (Merriam-Webster, 2017).

Instinct is a behaviour you see in any animal that is not learned or taught. It is a reaction to the environment, stimuli or situations that the animal cannot control. An example of instinct would be an animal defending itself from a perceived attack, because it feels threatened. Imagine a cat that scratches. Even if that cat is declawed, he or she would still make a scratching motion, because that is its natural reflex, or instinct.

German biologist, Oskar Heinroth, refers to instincts as a fixed action pattern. Konrad Lorenz, an Austrian zoologist and ethologist, who shares a Nobel Prize with Niko Tinbergen, took this concept even further and stated that "sign stimuli" create an instinctive response, which is a reliable response based on that specific stimuli.

Learning

Learning processes include habituation, associative learning, imprinting, cultural, observation and imitation. Habituation is one of the simplest forms of learning any pet or animal can undergo. Rather than responding to stimuli, the behaviour becomes innate. You can think of this as a routine the animal undertakes.

A good example of this is when a house pet or zoo animal knows that it is about to be fed. Although the food is yet to be given, the animal can associate familiar sounds or human actions with it and when the animal recognizes those familiar sounds or actions, it knows that food will soon follow.

Associative learning will be discussed further in concept formation. However, it is a learning process where new responses are associated with certain stimuli. Russian physiologist, Ivan Pavlov - known primarily for his studies on classical conditioning - is the discoverer of this concept. An example of

associative learning would be a dog showing excitement when it sees a lead, because it has come to associate the lead with a walk.

Imprinting is about discerning members of one species versus other species. It is the way a baby penguin knows its mother after it hatches. It is also the reason that unless an animal is going to be domesticated from the wild, a human should not interfere in its early days. By feeding a new baby, the animal could assume the human is its mother or relative versus the actual mother.

Young animals will learn about their culture and way of life through the community around them. It is different for various types of animals, but the environment plays a key role in the cultural learning an animal or pet receives. Observational learning is best when there are multiple pets in the home.

Let us take, for example, a well-trained house cat. If a new pet cat is introduced to a family, it may at first, purr and meow when it is about to be fed. The older cat, that has learned to quietly and patiently wait for its food, sees the new cat getting fed with the purr and meow and starts to follow suit. Through observation, the older cat will begin to beg for its food, rather than waiting patiently, because it associates meowing with getting food faster. Imitation is considered an advanced behaviour because it requires observation and then a replication of behaviour seen in another. This type of advanced behaviour is common among primates.

Teaching

Teaching occurs through other animals or humans, when training their pets. With teaching there is a need to adjust behaviour so the pupil or observer can learn the behaviour required.

For example, an orca whale may beach itself to catch a seal. She will help her offspring learn this lesson by altering her normal beaching behaviour in order to teach her child.

As a pet trainer and one who studies animal psychology, it will be important that your teaching methods are adjusted to the animal. Some animals will take longer to learn a skill or behaviour than others.

Summary

In this module, you have learned what animal psychology is, the theory of evolution and a brief history of animal psychology, as well as key elements to the field of study. Whether you intend to

own a pet and want to have a better understanding on how to train it, or if you plan on working with animals in any way, you now have an understanding of what this course entails.

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