

Animal Behaviour - Introduction

Behaviour is the change in activity of an organism in response to a stimulus.

For example, your dog might start drooling—a change in activity—in response to the sight of food—a stimulus.

Animal behaviour, also known as ethology, is the scientific study of how animals interact with their environment, each other, and themselves. Ethology is comprised of two words “ethos” and “logos”, Ethos is Greek word meaning “character” and logos meaning “study”. It seeks to understand the reasons behind their actions and the underlying mechanisms that govern their behaviour. Animal behaviour encompasses a wide range of activities, from simple reflexes and innate behaviours to complex learning and problem-solving.

There are several types of animal behaviour, and here are some of the key categories with examples:

- A. **Innate Behaviour:** Innate behaviours are genetically programmed and do not require prior learning or experience. They are typically consistent within a species. Examples include:
 - A.1. **Fixed Action Patterns (FAPs):** These are stereotypical sequences of actions triggered by specific stimuli. For instance, a male stickleback fish displays aggressive FAPs when it sees a red-coloured intruder in its territory.
 - A.2. **Reflexes:** Simple, automatic responses to stimuli. An example is the knee-jerk reflex in humans.
- B. **Learned Behaviour:** Learned behaviours are acquired through experience and can vary within and between individuals of a species. They can be further divided into two main types:
 - B.1. **Associative Learning:** Involves linking two or more events. Examples include classical conditioning (Pavlov's dogs associating a bell with food) and operant conditioning (rats learning to press a lever for a food reward).
 - B.2. **Observational Learning:** Animals learn by observing and imitating the actions of others. For example, young chimpanzees learn how to use tools by watching older individuals.

Examples of Animal Behaviour:

Social Behaviour: Social behaviours involve interactions with other members of the same species. These behaviours can include:

- A. **Territoriality:** Animals defend and establish territories to access resources, such as nesting sites or food. Birds defending their nesting sites are a classic example.
- B. **Hierarchy and Dominance:** Many social animals establish hierarchies to determine access to resources and mating opportunities, like wolves or chimpanzees.
- C. **Cooperation:** Some species cooperate in hunting, raising offspring, or defending against predators, like African wild dogs hunting in packs.

- D. Communication: Animals often communicate with each other using a variety of signals, such as vocalizations, body language, and chemical cues:
- D.1. Vocal Communication: Birds singing to attract mates or warn of predators, or dolphins using clicks and whistles for social interaction.
 - D.2. Visual Communication: Peacock displays to attract mates or bees performing intricate dances to communicate the location of food sources.
 - D.3. Chemical Communication: Pheromones used by many animals to signal reproductive readiness or mark territory.
- E. Migration and Navigation: Many animals undertake long-distance migrations or have complex navigation abilities:
- E.1. Bird Migration: Birds like the Arctic Tern migrate thousands of miles between breeding and wintering grounds.
 - E.2. Navigation in Sea Turtles: Sea turtles can navigate across vast ocean distances to return to their nesting beaches.
- F. Problem-Solving and Tool Use: Some animals exhibit remarkable problem-solving abilities and tool use:
- F.1. Tool Use in Crows: New Caledonian crows are known to use sticks and leaves to extract insects from tree bark.
 - F.2. Problem-Solving in Dolphins: Dolphins have been observed using sponges to protect their rostrums (snouts) while foraging on the seafloor.

Understanding animal behaviour helps scientists gain insights into the evolutionary, ecological, and physiological processes that shape the lives of animals. It can also have practical applications in fields like animal welfare, conservation, and agriculture.

Importance of studying Animal behaviour:

1. Gain a deeper understanding of animal behaviour
2. Make a positive impact on animal welfare
3. A range of career opportunities
4. Contribute to scientific research
5. Animal behaviour and the environment, conservation and resource management