

## Animal Behaviour

Animal behaviour can be defined as a response of an organism, organisms of a species or a group of organisms to a stimulus or to some stimuli.

### Behaviour Patterns

A behaviour pattern is defined as a segment of behaviour which has specific adaptive function.

#### **Types of Behaviour Patterns**

The principal behaviour patterns observed in animals are :

##### **1. Ingestive Behaviour**

The activities of animals associated with eating or drinking represent **ingestive behaviour**. This includes taking solid food or drinking liquid food. Different animals approach their food in different patterns. Herbivorous animals feed on different type of plant food. They bite and chew food. Carnivorous animals exhibit different methods of attacking and capturing the prey. Filter feeders produce water currents which can drive food towards mouth. Those feeding on liquid food either lick or suck it or absorb it through body surface. Therefore, animals exhibit different strategies for obtaining food. The primary strategies include searching, hoarding, manipulation and predation.

##### **2. Agonistic Behaviour**

This behaviour pattern includes aggression, threat, appeasement and avoidance behaviour that takes place during encounters between individuals of the same species :

- Behavioural Patterns and Types of Behaviours
- (a) **Aggression** ... When an animal attacks another animal.
  - (b) **Threat** ... A form of communication, intentional movement of attack.
  - (c) **Appeasement** ... Act of reducing aggression in situations where escape is impossible or disadvantageous.
  - (d) **Avoidance** ... The reaction which allows animals to escape from actual or potential danger in the environment.

It is generally seen that the male birds on their return from the migration start fighting off intruders. The eventual result of the fight is that one of the birds escapes from the other. The behaviour of both the birds may be included under the general term **agonistic behaviour**. In the case of mice, one of them may simply hold up its paws in a defensive way or become completely passive.

### 3. Shelter Seeking Behaviour

This behaviour pattern is a tendency to seek out optimum environmental conditions and to avoid dangerous and injurious conditions. For example, *Paramecium* just moves around until it finds the spot which has most favourable conditions. As the water dries, the paramecia come close to each other resulting in aggregation. This is in fact a primitive type of social behaviour which may be called as **contractual behaviour**. Higher types of social behaviour have evolved from this type of adaptation.

### 4. Sexual Behaviour

This type of behaviour pattern includes courtship, mating and any other related behaviour.

### 5. Epimeletic Behaviour

This pattern applies to rearing the young. As a consequence of sexual behaviour young are born. Since the young ones are not able to take care of themselves, the care taking tendency is seen in the parents long before the young are born. For example, after mating, a nest is built by the birds, the eggs are laid and the female sits upon them until they hatch. Then the young ones are fed by the parents. This care-giving has been variously called as **attentive behaviour**, **maternal behaviour** or **parental behaviour**. But there are instances, where care and attention are frequently given by others and not by the parents. For example, in bees the care of young is done by the workers which are sterile females and not able to become parents.

### 6. Et-epimeletic Behaviour

This behaviour pattern involves calling or signalling for care and attention. After the young are hatched born, they show a behaviour pattern which is not characteristic of adults, as for example, young birds make chirping noise and hold head up in the air with gaping beak.

### 7. Eliminating Behaviour

The general effect of this behaviour is to clean the living place. For example, the young birds release the faeces and urine in pellets surrounded by a membrane and the parent birds throw them out of the nest. In many animals there is no special behaviour pattern associated with their own elimination. Certain young hawks have

the habit of flipping the tail at the time the faeces are released so that the material is thrown out of the nest. In case of cats holes are dug and the excreta is buried there in.

### 8. Allelomimetic Behaviour

In this pattern two or more animals do the same activity with some degree of mutual stimulation and coordination. For example, young birds fly together in flocks which are sometimes shaped like a great bird.

Movement of fishes in "schools" is the same sort of behaviour. It is often called 'contagious behaviour'. It is the tendency of animals to form social groups such as schooling of fish, flocking of birds, herding of mammals. **Mimetic behaviour** is the another term used. It is used to describe situations in which there is a model whose appearance is more or less independent of the mimic. For example, the "hawk moth" in its behaviour and appearance mimics humming bird. From flocks, schools and herds, it is clear that the animals are responding to each other rather than to a single model.

### 9. Investigative Behaviour

This behaviour pattern involves the sensory investigation of the environment. The birds or those animals which have better developed sense of vision can observe the surroundings at a glance. But a rat, dog or cat will use its nose and whiskers to know about strange objects, food, etc. These animals that manipulate things with hands (like raccoons, monkeys and man) may pick up a strange object, turn it over and over as they look at it and feel and may also smell or taste it.

### 10. Dominance

It is a feature of social organisation where certain animals acquire a higher status as a result of aggression and the others retain a low status. Dominance relationships were first seen in flocks of domestic fowl. Here the dominant individuals tend to peck subordinate individuals when they come in close vicinity. Dominant individuals use their status to gain priority in getting food, resting site etc.

Dominance is usually established after aggressive encounters. For example, if an animal wins a fight, the encounter may not be repeated on subsequent occasions and instead the defeated one shows submission. When a dominant animal comes, a subordinate moves away typically showing **appeasement behaviour**.

Dominance relationship is generally established by **learning** and dominant individuals may differ from subordinates both in appearance and behaviour, e.g. large size, prominent comb and wattle in male fowl. Male sex hormones contribute very much to the dominant behaviour of most of the males. The dominant status is advantageous in many ways, e.g. unchallenged access to limited resources of food, space, females, etc. For example, in elephant seal, most dominant 6% bulls inseminate 88% of the females.

### 11. Territoriality

This behaviour pattern is seen at the time of defence of home range from intruders. For example, pairs of tawny owls inhabit a fixed, exclusive area in a jungle for the whole of their life and defend it against all other tawny owls by loud calling and chases. In this way they identify and defend their territory.

Following benefits are derived from territoriality :

1. **Feeding territory** : Food requirements influence the territory size, as in many groups of animals like lizards, birds and primates. Territory size increases with increase in body weight.
2. **Mating territory** : In some animals defence of territory is seen only during breeding season. It is usually the male who defends areas where the females come for mating. Such territory has plenty of food, nests and good egg laying sites.
3. **Predator avoidance** : Territorial behaviour also helps in decreasing the predation by having the knowledge of the location of shelter.

## 12. Social Relations

In social relations there is always involvement of two or more members of the same species. In other words it may be said that in one way or the other they maintain social relations and exhibit the so called social behaviour.