Hello students. This program is for Bachelor of Science Semester Two course title is animal behavior and course code ZOG-102. The title of the unit is introduction to animal behavior and the module name is brief profiles of Konrad Lorenz and Niko Tinbergen. I am Miss Golda Dcosta working as assistant professor in Zoology at Government College of Arts, Science and Commerce. Sanquelim. the outline of this module is contributions of Konrad Lorenz and Niko Tinbergen to the field of ethology. at the end of this module, the student will obtain knowledge of the observations. And experiments carried out by Konrad Lorenz and Niko tinbergen on Animals, Konrad Lorenz was an Austrian zoologist, ethologist and ornithologist. He is regarded as one of the

founders of modern ethology.

He was the recipient of the Nobel Prize in 1973.

His ideas contributed to an understanding

of how behavioral patterns may be

traced to an evolutionary past,

and he was also known for his

work on the roots of aggression.

In 1935,

Lorenz described learning behavior

in young ducklings and goslings.

He observed that at a certain

Critical stage,

soon after hatching,

they learned to follow real or

foster parents.

The process which he called imprinting

involves visual and auditory

stimuli from the parent object.

These elicit of following response

in the young that affects their

subsequent adult behavior.

Although Lorenz did not discover the topic,

he became widely known for his descriptions

of imprinting as an instinctive bond.

In 1936 he met Tinbergen and the two

collaborated in developing ethology as

a separate subdiscipline of biology.

Lorenz demonstrated the phenomenon by

appearing before newly hatched Mallard

ducklings, and imitating a mother

duck’s quacking sounds upon which the

young birds regarded him as their

mother and followed him accordingly.

He argued that animals have an inner drive.

To carry out instinctive behaviors,

and that if they do not encounter

the right stimulus,

they will eventually engage in the

behavior with an inappropriate stimuli,

Lorenz’s approach to ethology

derived from a skepticism towards

the studies of animal behavior.

Learning laboratory settings.

He considered that in order to understand

the mechanisms of animal behavior,

it was necessary to observe

The full range of behaviors in the

natural context Lorenz did not

carry out much traditional field work,

but observed animals near his home.

His method involved empathizing with animals.

Often using anthropomorphization

to imagine their mental states.

He believed that animals were

capable of experiencing many of

the same emotions as humans.

Lorenz’s concepts advanced,

the modern scientific understanding of how

behavioral patterns evolve in a species,

particularly with respect to the

role played by ecological factors

and the adaptive value of behavior

for species survival.

He proposed that animal species

are genetically constructed.

So as to learn specific kinds of

information that are important

for the survival of the species.

His ideas have also cast light on how

behavioral patterns develop and mature

during the life of an individual Organism.

In the latter part of his career,

Lawrence applied his ideas to the behavior

of humans as members of a social species.

An application with controversial.

Philosophical and social

logical implications.

In a popular book on aggression.

He argued that fighting an war like

behavior in men have an inborn basis,

but can be environmentally modified by the

proper understanding and provision for the

basic instinctual needs of human beings.

Fighting in lower animals has a positive

survival function, he observed.

Such as dispersion of competitors

and the maintenance of the territory.

War like tendencies in humans

may likewise be ritualized into

socially useful behavior patterns.

In another work behind the mirror: a search

for the Natural History of human knowledge.

He examined the nature of human thought

and intelligence and attributed the

problems of modern civilization,

largely to the limitations

His study revealed.

Nicholas Tinbergen.

Was a Dutch biologist and ornithologist

and is pioneer in the field

of ethology.

He Is most known for his studies of stimulus-

response processes in wasps, fishes and gulls.

he contributed to the

concept of sign-stimulus,

which is needed to elicit a

specific instinctive behavior.

In 1951, he published the study of Instinct,

an influential book on animal behavior.

In the 1960s,

he collaborated with filmmaker hugh

Falkus on a series of wildlife films,

including the Riddle of the

Rook and Signals for Survival,

which won the Italia prize.

In that year and the American

Blue Ribbon in 1971.

He shared the 1973 Nobel Prize in Physiology.

With Austrian zoologist Karl Von Frisch

and Konrad Lorenz for his work on

the organization and causes of social,

and individual patterns of behavior

in animals in particular.

He was interested in explaining

spontaneous behaviors,

those that occurred in their complete

form the first time they were performed,

and that seemed resistant to

the effects of learning.

Tinbergen described

All questions he believes should

be asked of any animal behavior

which were first Causation (mechanism).

What are the stimuli that elicit

the response and how has it been

modified by recent learning?

Second development or ontogeny

How does the behavior change with

age and what early experiences are

necessary for the behavior to be shown?

Third function or adaptation?

How does the behavior impact on the

animals chances of survival and reproduction?

fourth,

Evolution or phylogeny

How does the behavior compare with

similar behavior in related species and how

It might have arisen through the

process of phylogeny? In ethology

and social biology causation

And ontogeny,

are summarized as a proximate

mechanisms while adaptation and phylogeny

are the ultimate mechanisms. during 1936

Niko tinbergen and Lorenz

hypothesized that instinct,

as opposed to simply being a

response to environmental factors,

arises from an animal's impulses.

This idea is expressed by the

concept of fixed action pattern,

A repeated distinct set of

movements or behaviors.

Which Tinbergen and Lorenz

believed all animals have.

A fixed action pattern is triggered by

something in the animal’s environment.

In some species of gulls.

For instance, hungry chicks will pack at

the decoy with a red spot on its bill,

a characteristic of the gull. Tinbergen

showed that in some animals

learnt behavior is critical for survival.

The oystercatcher, for instance,

has to learn which objects to pack

at for food by watching its mother.

Tinbergen and Lorenz also demonstrated

that animal behavior can be the

result of contradictory impulses and

that a conflict between drives may

produce a reaction that is strangely

unsuited to the stimuli.

For example,

an animal defending its territory

against a formidable attacker caught

between the impulse to fight or

flee may begin grooming or eating.

These are the references for this module.

Thank you.