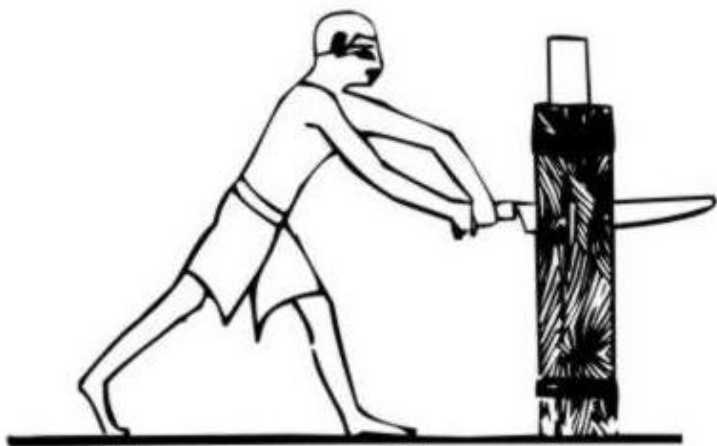




PHIL 204

Greek Philosophy

Lecture 8



Aristotle on the Kinds of Necessity

(a) Hypothetical Necessity

**(b) Simple (= Absolute = Material
= Accidental) Necessity**

**Other philosophers ignore FINAL causes
and try to explain everything with
MATERIAL causes.**

**For Aristotle final causes are the most
important.**

With respect to the final cause things come about with

HYPOTHETICAL NECESSITY

E.G. A wall is necessary *IF* (i.e. *given that*) there is to be a house.

Hypothesis: There is (to be) a house

Hypothetical necessity has the form:

***If* hypothesis,
then what is hypothetically necessary**

If there is a house, there is a wall

**If there is the power of sight, then there is
an eye**

If there is (to be) cutting, then there is a saw.

If there is a saw, then it is made of iron.

Material necessity

What follows from the properties of the matter from which something is made.

Iron is hard.

Iron is heavy.

So it is MATERIALLY (= ACCIDENTALLY etc.) necessary that a saw is hard and heavy.

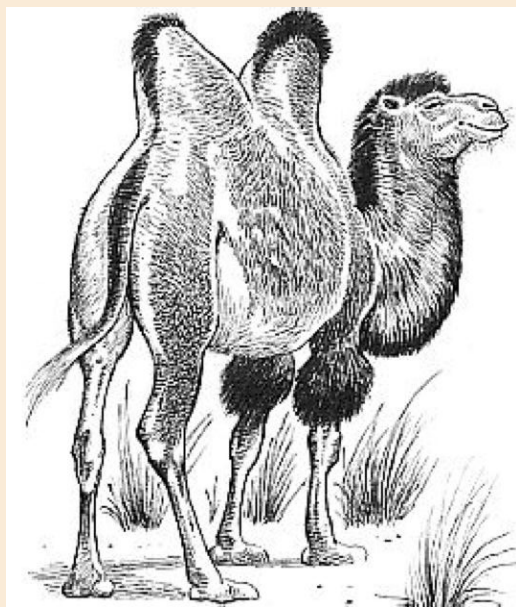
Biological Explanations:

If there is to be a living thing in a particular environment, then ...

**there will be a means (= organs of)
nourishment.**

there will be a means of (= organs of) defence.

**there will be a means of (= organs of)
reproduction. etc.**



The theory of camels and camel parts

[a] The final cause of horns:

Observations:

- (1) Horns are found only in animals that give birth live.**
- (2) No polydactylous animal has horns.**

Explanation: Polydactylous animals have other means of defence. e.g. claws, teeth.

(3) Most but not all cloven footed animals have horns

(4) there are horns where an animal has not been provided with another means of defence - eg claws

General Explanation:

Nature never provides more than one adequate means of defence to a given kind of animal.



Bonasus

[b] the material cause of horns

Consider properties of matter required by final cause.

Large animal has more earthy matter.

Earthy matter is used to form bone.

Excess earthy matter in large animals is used by nature as weapons.

Some becomes teeth and/or tusks and/or horns

This explains why no animal with horns has front teeth in both jaws

Nature by subtracting from the teeth adds to the horns

Where bony matter does not become horns, it becomes teeth or tusks.

The theory of stomachs:

[a] Why are there stomachs?:

Intake and discharge cannot take place at the same point.

Stomachs connect the intake and discharge points.

[b] Varieties of stomachs:

A single stomach in animals with teeth in the front of both jaws.

Large animal which feeds on thorny and ligneous food may have several stomachs.

Example: the camel has no horns and no upper front teeth.

Explanation: It is more essential for the camel to have multiple stomachs than to have upper front teeth.

Its food is thorny and its tongue is necessarily made of a fleshy substance.

Therefore nature uses the earthy matter saved from teeth to give hardness to the palate.

The Theory of Sexual Differentiation

Problem 1: (a) Why are males and females distinct?

(b) Why do they not constitute different species?

Problem 2: Where does sexual differentiation occur and what causes it?

Observation - Differentiation is found in the embryo.

Aristotle rejects some theories:

- (1) Sex depends on the location of the embryo.**
- (2) Sex depends on the temperature of the uterus.**

Thought experiment:

Put male embryo into a cold uterus and the female into a warm uterus.

Empedocles: The male should be female and the female male.

Aristotle: Impossible!

Another Proof: Male and female twins are found in the same uterus.

Sex difference cannot be explained by temperature difference.

The explanation of the difference between male and female should explain the difference between reproductive organs

Aristotle's account of differences of sexes and sex organs:

Male and female are distinguished by a capacity.

Male can concoct & discharge semen - carrying with it the FORM.

Male provides FORMAL and MOVING cause for development.

Female receives but cannot form & discharge semen

Females are colder - so blood is more abundant in certain regions of her body

Contrary to usual belief - quantity of blood in menstruation indicates females are cooler than males

Female provides MATERIAL cause for development.

Female is not able to cook up and concentrate the blood as much as male.

Male is able to reduce residue from nutrition to its most concentrated form.

Sex organs differ because of the differing abilities to concentrate blood.

Male is PRINCIPLE and CAUSE in virtue of capacity, female in virtue of incapacity.

Male is active in reproduction (providing FINAL, FORMAL, and MOVING cause).

Female is passive in reproduction (providing the MATERIAL cause).

The crucial capacity is the capacity to concoct blood.

So the first principle of differentiation of male and female is the heart.

The Reason that offspring are male or female:

**Semen is the final residue of nutrition
- it is carried to every part of the body**

**It picks up information about each part of the
body**

**Semen from male carries form and principle of
movement**

Menstrual blood of female provides the matter.

Observations:

More females are produced by the young and the old.

More feminine males produce daughters rather than sons.

More liquid semen results in a daughter rather than a son.

More males are born when the wind is blowing from the north.

Menstruation occurs with the waning of the moon when the month is cooler/moister

Shepherds say that it makes a difference which way the animal is facing in copulation.

The Reason offspring resemble their parents and ancestors more or less:

Males resemble their fathers and females their mothers

Some offspring who do not even resemble human beings.

‘For even he who does not resemble his parents is already in a certain sense a monstrosity; for in these cases nature has in a way departed from the type. The first departure indeed is that the offspring should become female instead of male; this, however, is a natural necessity.’

Females are **ACCIDENTALLY necessary**

Properly concocted menstrual fluid will be moved by the male principle of the father to produce a likeness of the father.

Goal is to reproduce the individual male parent.

Male form prevails but not form of the father = male like mother

Where the individual cannot prevail, the more remote prevails

Sometimes all that prevails is being human

Sex of embryo and degree of resemblance to parents or more distant ancestors depends on the ability of the activity of the form contributed by the male to overcome the passivity of the matter contributed by the female.