

**Chrtc 390 Module 4 Slides by
Looy and Flaman:
Animal Status and AI**

Animal Status and Artificial Intelligence

Introduction

- We can consider the status of animals and machines in the light of human experience, science, philosophy (reason reflecting on experience ...) & beliefs / faith.
- Christian theology attempts to develop an integrated view in the light of all sources of knowledge including God's revelation.
- Does science including neuroscience pose real challenges to philosophy & religion in this area? What are the contributions of philosophy & theology? What model re science & religion is most appropriate?

Brief Historical Overview

- **Religions / Beliefs**
 - Indigenous' Religions (e.g., of Africa, Australia, America)
 - Belief not only in gods or God but also spirits including spirits of ancestors & animals (some also believed in spirits of plants, of the sun, etc.)
 - Some consider all life, including plant and animal, to be sacred

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Brief Historical Overview Continued

- **Religions / Beliefs**
 - Eastern Religions (from India, 20th-6th Cent. B.C.E.)
 - Belief in transmigration of souls (reincarnation) including into animals until perfected. Cf. Hindu 'sacred cow' & Buddhism.
 - Jainism: believes every living thing has a soul; even insects are considered persons; strict vegetarians; advocates non-violence.
- **Bible (about 1200 B.C. to 100 A.D.)**
 - see the related reading by Ashley re all creation as good, our role as stewards, using animals for human needs; concern for animals; ritual animal sacrifice-practised in the OT but done away with in the NT; God cares for birds but we are of much more value.
 - Consider Jesus (God incarnate) eating fish and lamb (Jewish Passover meal), and Peter's vision of seeing every sort of animal and bird and told to kill and eat. Peter responds that he has never eaten anything profane or unclean and is told, "What God has made clean, you have no right to call profane."(Acts 10:10-16).
 - Animals are used as symbols, e.g., of virtue (lamb-meekness, lion- courage) and vice / evil (wolf-greed, serpent-the devil).

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Brief Historical Overview Continued

■ **Philosophy and Christian Theology**

- Plato (426-347 BC): not only thinking but also sense powers require an immaterial soul; souls pre-exist the body, are immortal and transmigrate--an imperfect human soul could also be reincarnated in an animal.
- Aristotle (384-22 BC): the soul is the principle of life; spoke of vegetative, animal and human souls; animals have sense appetites; humans are rational animals with both sense and rational appetites.
- Early & Medieval Christian writers did not consider other animals to be persons, e.g., Boethius (480-524 AD): a person is an individual substance of a rational nature.
- Aquinas (1225-74 AD): adapted Aristotle re souls and appetites; the human soul subsists (exists in itself), and is incorporeal and immortal; animal souls do not subsist and are not immortal.
- Descartes (1596-1650): animals are machines without consciousness or feelings; humans alone have immaterial souls and consciousness.

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Brief Historical Overview Continued

- **Philosophy and Christian Theology continued**
 - Voltaire (1691-1778): deist, rationalist; challenged Descartes asking, has nature arranged all the means of feeling in this animal, so that it may not feel?
 - Kant (1724-1804): the human personal subject is to be treated as an end and never as a mere means. Even though animals are not persons, it is bad for us to be unkind to them. This degrades our moral character and makes us more likely to be unkind to humans.
 - J. Bentham (1748-1832): utilitarian; animals suffer and are objects of legitimate moral consideration even though they have no language.
 - A.N. Whitehead (1861-1947): process philosophy--emphasized becoming rather than being; novelty; interrelatedness of all things; panpsychism-- attributes experience (increasingly) to primary units (not aggregates): atoms, cells, lower organisms, animals & persons.

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Brief Historical Overview Continued

□ Recent Philosophy ... Christian Theology

- B. Ashley (1985): an Aristotelian / Thomist, incorporates some insights from process philosophy, aware of a lot of the scientific data, also re brains. Distinguishes sensation & perception (animals also have) from human self-consciousness and knowledge (transcend the body). Machines can not have awareness and perception unless they become living organisms.
- P. Singer: utilitarian; criticizes speciesism; a living entity which has present capacities for sentience & cognition has greater value than one that does not.
- A. Macintyre (1999): philosopher, discusses dolphins pursuing dolphin goods, having prelinguistic, prereflective reasoning abilities. Compares this to humans in the early infant stage before language and reflective abilities are operative.

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Recent Philosophy, Christian Theology, Law cont.

- M.A. Warren (2000): philosopher; capacities characteristic of persons include consciousness, thought, developed capacity to reason, intentional action, social and communicative abilities, self-awareness, moral agency; some sentient non-human animals (great apes, dolphins, elephants) either are persons or very close and deserve the benefit of the doubt.
- A. Primavesi (2000): Christian ecological theologian; we are interlinked with other members of the Earth's household; ecological consciousness requires a revolution away from anthropocentricity (cf. Protestants J. Moltmann & J. Gustafson's theocentric approaches); all life forms have dignity and can know God according to their kind (cf. Ps 19:3 & Job 12:7-10).
- Re views of Animal Rights see the related reading.
- Canadian House of Commons (June 2002): approved new legislation against animal cruelty changing their status from chattel to sentient beings with their own interests and worthy of protection as individuals regardless of ownership.

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Catholic Teaching

- John Paul II
 - (1984): There is physical pain in the animal world; humans also suffer morally (e.g., fear of death, guilt); cf. his body/soul view; psychological pain accompanies both of these.
 - (1996): Re evolution speaks of both a physical continuity and an ontological leap (re the spiritual soul of human beings).
- Catechism of the Catholic Church (1997), nn. 2415-18:
 - Animals, plants and inanimate beings are destined for the common good of past, present and future humanity. Our dominion over these requires a religious respect for the integrity of creation. Animals are God's creatures and give God glory. We owe them kindness. It is legitimate to use animals for food & clothing. Medical & scientific experimentation on them is acceptable if it remains within reasonable limits & it contributes to caring for human lives. It is contrary to human dignity to cause animals to suffer or die needlessly. One can love animals but should not show them the affection due only to persons.

Animal Status & Artificial Intelligence:

Adapted from Dr. Looy's slides & notes

- Science can identify and describe traits and capacities in species & machines
- The relevance of these capacities for personhood is a philosophical/theological question
- Why is defining personhood important?
 - Consider how we treat each other and animals (ethics & law)
- Are humans only quantitatively different from animals or also qualitatively?
 - consider capacities such as learning, creativity, intelligence, culture, consciousness, self-awareness, communication, language, for social relationships, to relate to God ...

Animal Status & Artificial Intelligence

- Consciousness: awareness of things in the world around you, how they affect you
 - Subjective experiences; qualia
- Self-consciousness: awareness of one's self, aware of being aware
- Consciousness is foundational for:
 - Theory of mind: inferring intentional states, desires and perspectives of others
 - Abstract symbol manipulation
 - Free will, decision making, moral agency

Animal Status & Artificial Intelligence

- Several cautions in studying consciousness in animals:
 - Consciousness (subjective states) are difficult to study scientifically
 - Other animals cannot tell us about their internal states
 - We often project, anthropomorphize, “over-interpret” violating principle of parsimony
 - Are there any tests or predictions about behavior that would definitively demonstrate consciousness?
 - Why did consciousness evolve? What functions, advantages does it have for its possessors?
 - Other animals’ brains and perceptual systems differ more or less from those of humans

Animal / Human Brain Comparison

Paul Maclean's
Triune Brain;
Cf. John Eccles'
theory re mammals,
birds, reptiles ... &
consciousness

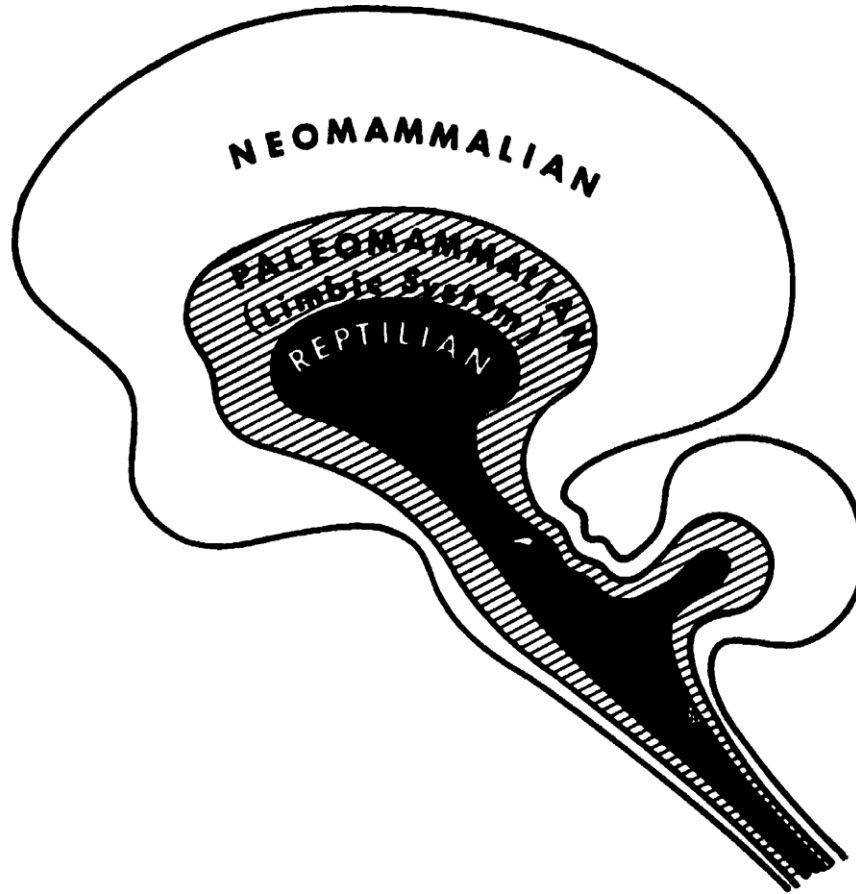
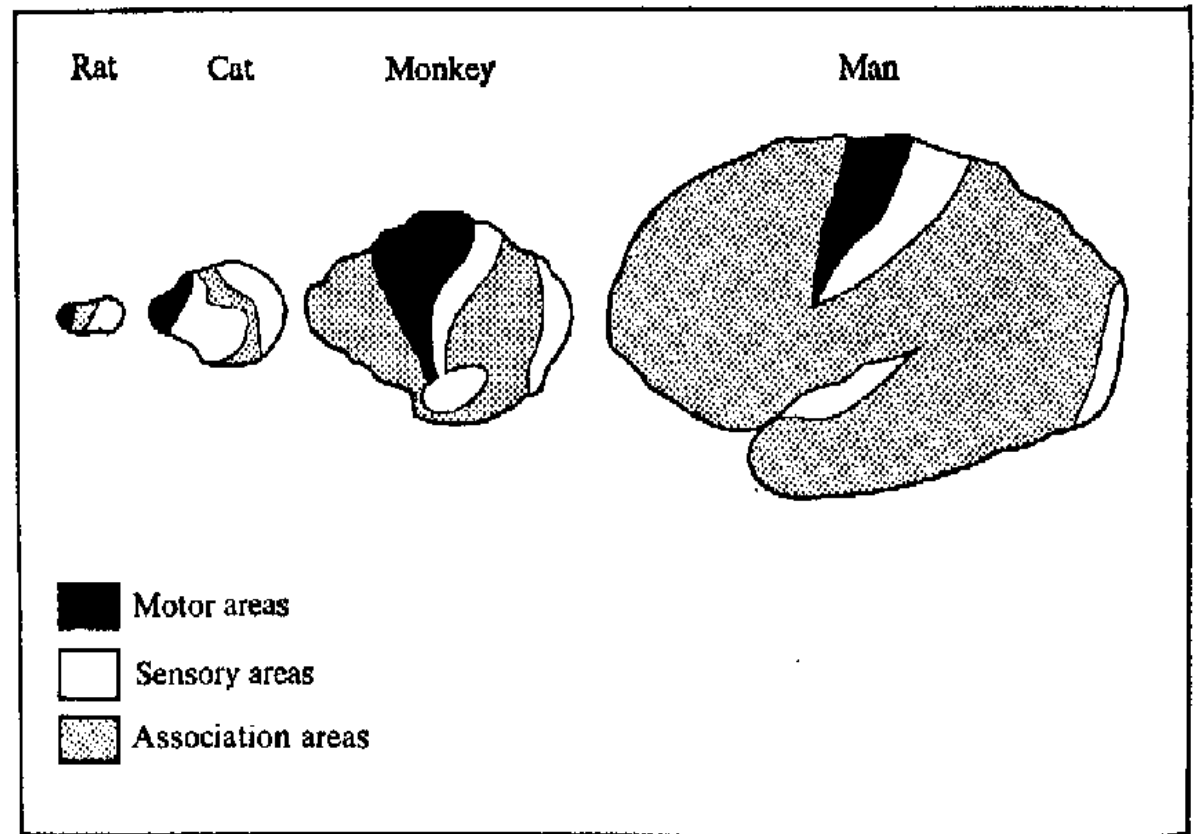


Figure 3.1— Three basic brain patterns. In evolution, the primate forebrain expands in hierarchic fashion along the lines of three basic patterns that may be characterized as reptilian, paleomammalian, and neomammalian. From Paul D. MacLean, "The Brain in Relation to Emotion and Medical Education," *Journal of Nervous and Mental Diseases* 144:374–82, 1967. Reprinted by permission of the author.

Animal / Human Brain Comparison

The Conscious Brain

By Steven Rose



31 The emergence of the association cortex. Approximate scale drawings of the cerebral hemispheres of four mammals. Note both the absolute and relative increase in size of the area of association cortex

Animal Behaviors / Capacities

- Dogs: respond to human words & pointing (Checkers)
- Parrots (video clips):
 - Einstein (mimicking sounds in response to words ...)
 - Alex (size, color, number, naming ...)
- Elephants (video clip):
 - memory, social; conscious? elephant/human brain comparison
- Chimpanzees:
 - Recognize themselves in a mirror (self-awareness?)
 - Use of tools / culture / tradition?
 - Theory of mind (cf. Gallup, Mind's Big Bang video)?
 - Language

Animal Status & Artificial Intelligence

- John Eccles & Karl Popper distinguish 4 levels of language:
 - expressive (of emotions); signal (attempt to bring about a reaction in the receiver, e.g., a warning); descriptive (statements re things..., are factually true or false); & argumentative (re critical argument, rational thinking). Among animals, only humans exhibit the last two. Chimpanzees, e.g., use sign language pragmatically but do not ask why as even a three-year-old human child does.
- Machines / Computers / Artificial Intelligence
 - Consider present capacities; future capacities? (video clip)
 - Will machines / robots ever be able to think, experience consciousness, emotions, be truly creative?
 - Consider also machine / animal / human hybrids?
- Should we consider any animals / machines to be persons / have rights? Is science helpful re such questions?