

# Epistemology

## Lecture 9: Naturalism

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# Chapter I: Naturalism in Epistemology

# Where things stand

- Last week we looked at the debate surrounding local and global versions of scepticism.
- This week we consider an entirely new way of doing epistemology, viz. naturalism or as it is sometimes called 'naturalised epistemology'.

# An alternative to foundationalism

- The expression ‘naturalised epistemology’ was coined by Quine (1969).
- Quine offers this view as an alternative to traditional epistemology and in particular to its preoccupation with (empiricist) foundationalism.
- What is empiricist foundationalism?

**Simple form:** Statements are inferentially justified by basic empirical statements, the latter being non-inferentially justified by experience.

**Embellished form:** Even the meaning of statements is determined by experience. This is the so-called ‘verificationist principle’:

- Quine thinks that, as a project, empiricist foundationalism has failed because it hasn’t lived up to its promise to reduce everything thus.

# Replacement naturalism

- Quine urges the abandonment of epistemology and the adopting of psychology (and other relevant sciences) in its stead:

“The stimulation of his sensory receptors is all the evidence anybody has had to go on, ultimately, in arriving at his picture of the world. Why not just see how this construction really proceeds? Why not settle for psychology?” (1969, p. 75).

“Epistemology, or something like it, simply falls into place as a chapter of psychology and hence of natural science. It studies a natural phenomenon, viz., a physical human subject.” (p. 82)

- This view has come to be known as ‘replacement naturalism’ or ‘eliminative naturalism’.

# Naturalism beyond Quine

- Quine's view is considered extreme in philosophical circles. There are at least two other, more moderate, strands of naturalism:
    - \* Cooperative naturalism
    - \* Substantive naturalism
  - Both of these claim that, when properly done, epistemology is (or at least should be) continuous with natural science.
- NB:** Quine (1995) also makes such overtures when he talks about the “blurring” of the boundaries between these disciplines.

# Cooperative naturalism

- Epistemologists must consult empirical results from psychology and beyond but need not give up on the pursuit of traditional questions.

“Cooperative Naturalism, holds that, while there are evaluative questions to pursue, empirical results from psychology concerning how we actually think and reason are essential or useful for making progress in addressing evaluative questions” (Feldman 2001, p. 4).

“How could our psychological and biological capacities and limitations fail to be relevant to the study of human knowledge?” (Kitcher 1992, p. 58).

# Examples of cooperation

- Results from empirical sciences nowadays litter philosophical discussions of knowledge, justification, rationality, inference, etc.

**Example:** Tversky and Kahneman showed how easily individuals commit all sorts of fallacies, e.g. the conjunction fallacy.

Linda is in her mid-thirties... single, intelligent and outspoken... studied philosophy and wrote her dissertation on social justice and discrimination... participating in anti-nuclear demonstrations.

What's more probable?

(a) Linda is a bank teller or (b) Linda is a bank teller and a feminist.

- These results have spawned follow-up studies. Some studies have been carried out by philosophers in collaboration with psychologists and other scientists, e.g. Tentori, Crupi and Russo (2013).

# The study of a natural phenomenon

- “The goal of a naturalistic theory of knowledge, as I see it, is not to provide an account of our concept of knowledge, but instead to provide an account of a certain natural phenomenon, namely, knowledge itself. Our concept of knowledge, like our concepts of various other natural phenomena, may be defective in important ways. Consider, for example, the concept of aluminum. Many people have a concept of aluminum which is little more than a reflection of their ignorance about that metal... Their concept does not include enough information to pick out aluminum from many other metals, and indeed, may include some misinformation as well. This is not merely true of laypeople; even experts, at various points in history... The same may be said of knowledge. What we seek is an adequate account of knowledge, and in order to develop such an account we must investigate the phenomenon of knowledge itself. We may do this by examining apparently clear cases of knowledge to see what it is that they have in common.” (Kornblith 2002, p. 161).



# What's the difference between replacement and co-operative naturalism?

# Chapter II: Naturalised Epistemology and Language

# Traditional epistemology

- Epistemology has a language of its own. That is, a special way of construing the meaning of certain terms.

**Example:** ‘A person  $S$  is justified in believing a proposition  $p$  if and only if  $S$  has good grounds for believing proposition  $p$ ’.

- Traditional epistemologists deem some such sentences true & others false. Their truth-value is presumably determined by (intuited) facts.

“In addition to facts about particular people being justified in believing particular propositions, [traditionalists] are committed to the existence of epistemic facts about what beliefs are supported by a particular body of evidence... Traditionalists often regard these facts as necessary truths...” (Feldman 2012, section 4).

# Substantive naturalism

- Substantive naturalists propose a naturalistic way to understand this language, viz. (natural) facts make such sentences true.
- According to this view, epistemic sentences have truth-values, i.e. they are meaningful, determined by natural facts.
- That is to say, all epistemic facts are natural facts.
- What kind of things are *natural* facts?
- In a sense, the adjective 'natural' is redundant. After all, the natural world is typically conceived of as being constituted by facts.
- But, whatever they are, the facts that make epistemic sentences true or false are not conceived of as logically necessary.

# Epistemic language: Other views

- Taking his cue from meta-ethical discussions, Feldman (2001) considers alternative naturalist views towards epistemic language.

*Examples:*

- \* error theory
  - \* non-cognitivism
  - \* expressivism
- **Error-theory:** Epistemic sentences are all false. Facts make scientific sentences true but no epistemic sentence could ever be true.

# Epistemic language: Other views

- **Non-cognitivism:**  
Epistemic sentences lack meaning and cannot be evaluated for truth. Natural facts exist but are irrelevant in determining their truth-value.
- **Expressivism:**  
Epistemic sentences have meaning but they merely express approval or disapproval towards certain norms.

*Examples: 'Unjustified boo!', 'Knows hurray!'.*



# An error theory with respect to the language of epistemology holds that epistemic sentences

don't have truth values

are all false

express only approval  
or disapproval

are sometimes false

# Chapter III: Naturalism Vs. Traditionalism

# Naturalism and normativity

- It should be clear that naturalists are not so fond of evaluative concepts. This is particularly the case with Quine.
- Kim accuses Quine of relying on notions like justification and evidence which have, according to Kim, an ineliminable normative dimension:

“... justification is what makes knowledge itself a normative concept... If a belief is justified for us, then it is *permissible* and *reasonable*... for us to hold it, and it would be *epistemically irresponsible* to hold beliefs that contradict it.” ([1988] 2000, p. 302).

“... the concept of evidence is inseparable from that of justification... one thing is ‘evidence’ for another just in case the first tends to enhance the reasonableness... [of the] second... such evidential relations hold in part because of the ‘contents’ of the items involved, not merely because of the causal or nomological connections between them” (306).

# Two kinds of concepts

- Epistemic concepts may or may not be given normative construals.

**Examples:** justification, rationality, reasonableness, truth-seeking, falsity-avoiding, evidence-increasing, etc.

- But there are also non-epistemic concepts that are definitely normative and are used in the context of epistemological discussions.

**Examples:** the right to be sure, intellectual duty, intellectual integrity, responsibility toward other epistemic agents, etc.

# What naturalists reject/question

- Some or all of the following:
  - \* First philosophy
  - \* Armchair (purely a-priori, a-priori + common sense) reasoning
  - \* Conceptual analysis and the strong evidential role of intuitions
  - \* Normative concepts
  - \* Infallibilism
  - \* Internalism

# What naturalists endorse

- Some or all of the following:
  - \* Knowledge needs to be examined (also) via the methods of science.
  - \* Epistemology, so pursued, must be made into a branch of science.
  - \* Empiricism: Evidence comes from sensory organs and instruments.
  - \* Scientific concepts
  - \* Fallibilism
  - \* Externalism/reliabilism about justification and knowledge



# Is epistemology irreducibly normative?



# Chapter IV (Special Topic): Evolutionary Epistemology

# Two kinds of approaches

- Evolutionary epistemology is a form of naturalism that takes off from the view that natural selection or something like it is responsible for:
  - (i) the reliability of sensory organs and cognitive abilities and
  - (ii) the development of knowledge, theories and epistemic norms.
- The first of these is sometimes called ‘EEM’ – the evolution of epistemic mechanisms.
- The second ‘EET’ – the evolutionary epistemology of theories.
- **Prominent advocates:** K. Lorenz, K. Popper and S. Toulmin.

# Examples

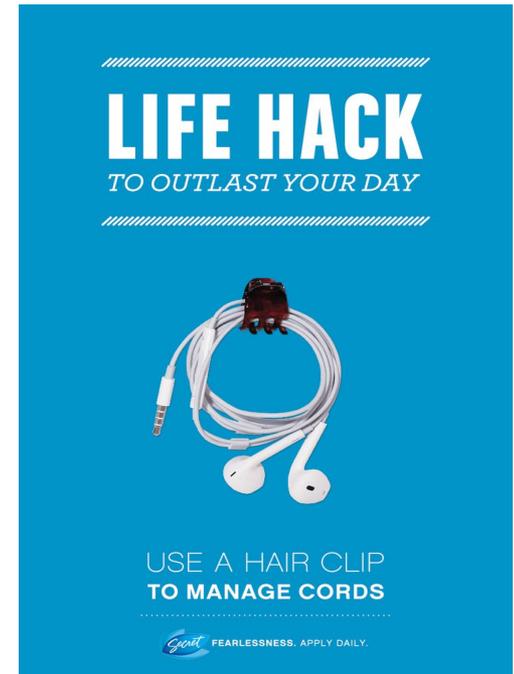
- **Lorenz**, a Nobel prize-winning zoologist and ethologist, makes such claims regarding our sensory organs and cognitive mechanisms:

“... just as the hoof of the horse is adapted to the ground of the steppe which it copes with, so our central nervous apparatus for organizing the image of the world is adapted to the real world with which man has to cope” ([1941] 2009, p. 233)
- **Van Fraassen**, an empiricist of sorts, tries to explain the success of scientific theories as follows:

“...the success of current scientific theories is no miracle. It is not even surprising to the scientific (Darwinist) mind. For any scientific theory is born into a life of fierce competition, a jungle red in tooth and claw. Only the successful theories survive — the ones which *in fact* latched on to actual regularities in nature.” (1980, p. 40) [original emphasis].

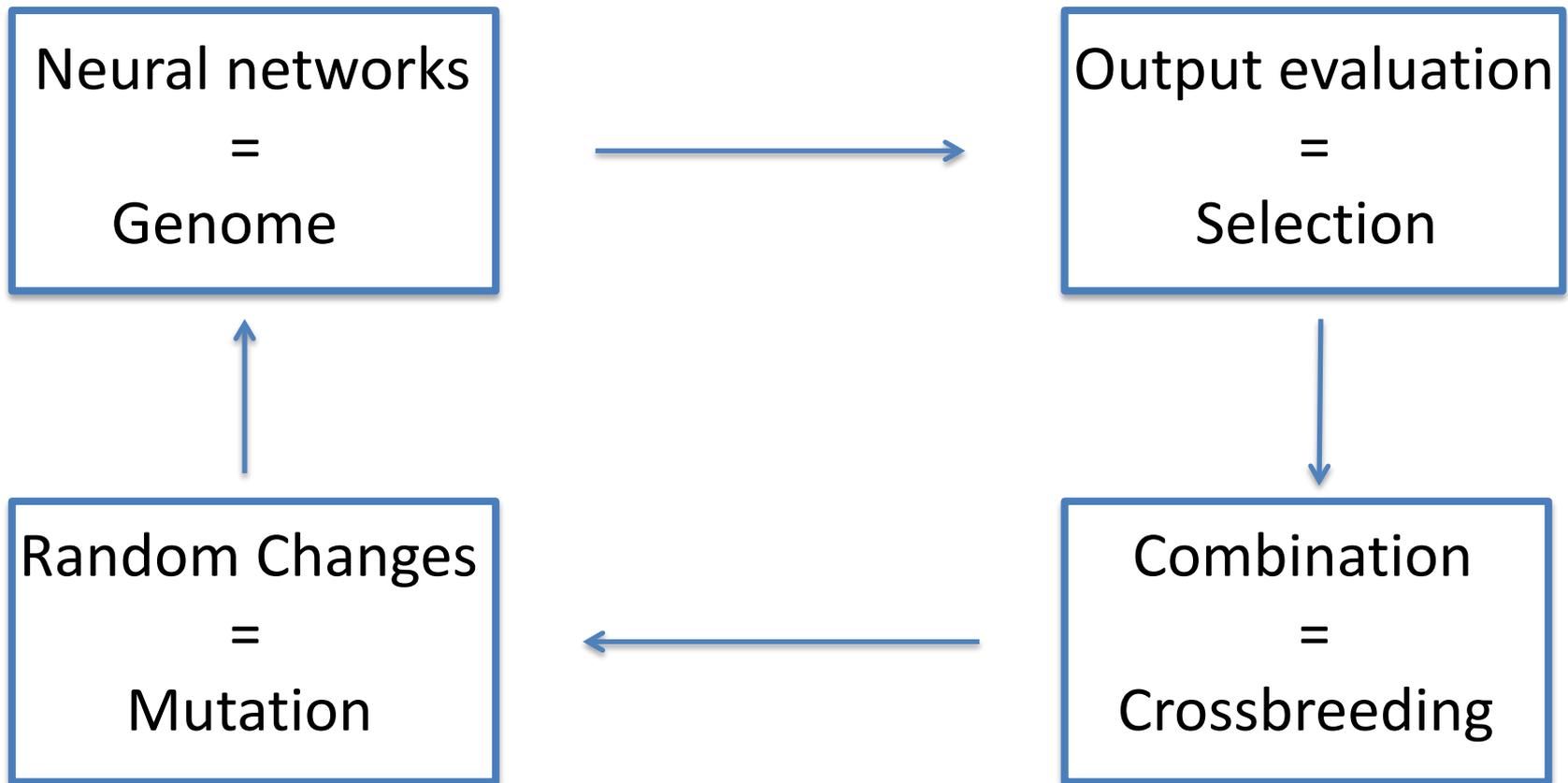
# How accurate are these metaphors?

- Widespread agreement that sensory organs & cognitive mechanisms, like other body parts, have evolved as a result of natural selection.
- What's more controversial is whether our knowledge, theories and epistemic norms can be accurately captured by these metaphors.
- Take the idea of a 'meme' – the cultural analogues of genes introduced by Dawkins (1976).
- These are meant to spread and to be subject to selection pressures.
- Genes appear to have clear identity conditions. The same cannot be said about memes.
- In short, the evolutionary metaphor has limits.



# Models and simulations

- Still, there might be genuine insight to be gained through the use of such evolutionary ideas in computer simulations.



The End