

Language & Cognition – lecture 13

Metatheory
of Cognitive Grammar

Doubts about the mind

“[A definition of a phoneme as a mental entity] is invalid because (1) we have no right to guess about the linguistic workings of an inaccessible ‘mind’, and (2) we can secure no advantage from such guesses. The linguistic processes of the ‘mind’ as such are quite simply unobservable; and introspection about linguistic processes is notoriously a fire in a wooden stove. Our only information about the ‘mind’ is derived from the behavior of the individual whom it inhabits. To interpret that behavior in terms of ‘mind’ is to commit the logical fallacy of ‘explaining’ a fact of unknown cause by giving that unknown cause a name, and then citing the name x as the cause of the fact. ‘Mind’ is indeed a summation of such x’s, unknown causes of human behavior.” (Twaddell 1958 [1935], 57)

Observables vs. unobservables

- Scientific theories propose unobservables entities in order to account for observable phenomena.
- For example, in physics atoms are not observable, but their existence explains a great number of observable facts.
- In linguistics the entities like nouns, verbs, domains, and constructional schemas are unobservable.

Realism vs. instrumentalism

- (Epistemological) realism is a philosophical position claiming that concepts postulated by science are literal (i.e. they have counterparts in the real world) and the goal of science is to propose true theories.
 - A theory is true when it correctly describes both unobservable and observable phenomena.
- Instrumentalism is a philosophical position claiming that unobservables postulated by science are not literal (i.e. they don't have counterparts in the real world) and the goal of science is to propose empirically adequate theories.
 - A theory is empirically adequate when it correctly describes observable phenomena.

Structural empiricism

	Literal concepts?	Goal of science
(Epistemological) realism	yes	truth
Instrumentalism	no	empirical adequacy
Structural empiricism	yes	empirical adequacy

Cloud chamber (α -particles)

https://commons.wikimedia.org/wiki/File:Wilson_chamber.webm

Constructional schemas...

- A realist: “...may be real or not. If they are real, we need a theory that says something true about them.”
- An instrumentalist: “...are not real. We only need an empirically adequate theory of grammar.”
- An empiricist: “...may or may not be real. We only need an empirically adequate theory of grammar.”

Constructed expressions

- One complaint against Cognitive Grammar is that it is “armchair linguistics” and uses made-up expressions instead of data from actual usage events.
 - For example, * *Another startling development was seen by Thursday.*
- The complaint ignores the fact that natural sciences investigate “artificial” situations created under carefully controlled conditions in laboratories rather than the data collected in “natural” circumstances.
 - Such deliberate arrangements of conditions under which phenomena occur are called **nomonological machines**.

Nomological machines

“[A nomological machine is] a fixed (enough) arrangement of components, or factors, with stable (enough) capacities that in the right sort of stable (enough) environment will, with repeated operation, give rise to the kind of regular behaviour that we represent in our scientific laws.” (Cartwright 1999, 50)

Example: grammaticality judgments

- Comparing the grammaticality of constructed sentences can help us learn something about the mechanisms of language production.
- For instance, why (1a) is resistant to passivization?
(1)(a) *Thursday saw another startling development.*
 (b) **Another startling development was seen by Thursday.*
- Answer: there is not energy flow between the participants in (1a).

The role of typologies

- Traditionally, scientific typologies are meant to classify objects in accordance with their natural kinds.
 - This approach presupposes that there is some absolute correct or preferred way of classifying objects.
- An alternative approach is **promiscuous realism**, which claims that the similarities are differences between entities are real, but how we choose to classify entities depends on theoretical preconceptions.
 - For instance, oaks, daisies, and pines would be grouped together differently depending on whether we are interested in their evolutionary history (oaks+daisies, pines) or suitability for furniture making (oaks+pines, daisies).

Grammatical classes

- Traditional approach: grammatical classes exist independently of linguists and linguistics; linguist's task is to discover the boundaries of the classes.
- Promiscuous approach: the differences between words exist, but which of them linguists choose as a basis for classification depends on the theory they want to have.
 - For instance, instead of the class 'noun' a linguist could propose the class 'words starting with *m*,' but this class is not theoretically interesting.

References

Realism, instrumentalism, and empiricism

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Nomological machines

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Promiscuous realism

- Dupré, John. 1993. *The Disorder of Things: Metaphysical Foundations of the Disunity of Science*. Cambridge: Harvard University Press.