

# The 6<sup>th</sup> China International Forum on Cognitive Linguistics

*Language, Culture and Mind:*

10 lectures on development, evolution and cognitive linguistics

Chris Sinha, University of Portsmouth, UK  
chris.sinha@port.ac.uk

---

## Lecture 3

Meaning, Representation, Conceptualization



# Representation in cognitive science

---

- No concept has been more central nor more problematic in Cognitive Science
- In Classical Cognitivism, the mind is viewed as a system of language-like *mental representations*
- These representations consist of symbolic strings manipulated by algorithmic rules
- In strong formulations of the *computational mind*, such language-like representations (and the syntactic rules governing them) are *all there is* in the mind
- The computational system is somehow instantiated in the brain (*Mind-Body problem or Physical Symbol problem*)
- And it is somehow interfaced with the world outside the organism (*Grounding problem*)



# What about meaning?

---

- For Classical Cognitivism, meaning is an **objective, truth based relationship** between symbol (or symbol string) and states-of-affairs in the world.
- This is **model-theoretic, formal semantics**
  - From Carnap to Montague Grammar
- That means that all meaning is **symbolic**, in a special sense, consisting in a relationship between an internal symbol and an external object or state of affairs
- Cognition is the process of manipulation of symbol strings by algorithms



# Where do the meanings of “physical symbols” come from?

---

- If mental representation is structured like a language, under a formal description, then Chomsky's **Argument from the Poverty of the Stimulus** also applies to mental representational symbols
- Therefore, according to Fodor, the Language of Thought is **innate**



# But how can this be true?

---

- How could such a system emerge in biological evolution?
- Is there no “missing link” between the general purpose learning mechanisms of the behaviourists, and the dedicated processing modules of the nativists?
- If not, where did cognition begin in evolution?
- These psychological arguments add further force to the criticism that Formalism cannot adequately account for meaning in natural language, or for phenomena such as metaphor and polysemy



# Alternatives to Cognitivism

---

- Alternative 1 – Get rid of Representation altogether
- Ecological psychologists have argued against the need for an inferential account of perception—Direct Perception will do the job
- Dynamic Systems theorists emphasize that highly complex forms of behaviour can emerge in relatively simple organisms like insects, without any representational control (Emergentism)
- Maybe Non-Representational Embodied, Enactive theories (Direct Perception plus perception-action linkages) can be sufficient.



# Lakoff and Johnson (1999)

---

- Lakoff and Johnson's theory is non-Representational in this sense.
- They emphasize that image schemas are pre-conceptual not conceptual
- They ground the different senses of polysemous items in image-schemas, so suggesting that linguistic meaning is at base pre-conceptual
- They avoid the term Representation
- They derive abstract meanings from embodied, experiential, pre-conceptual meanings through domain-to-domain Conceptual Metaphoric mapping



# Problems with Lakoff and Johnson

---

- It is not clear whether there are any truly conceptual meanings at all in this theory, and if so how they differ from pre-conceptual image schematic meanings
- Perhaps it is simply the inter-domain mapping potential of the system that makes it conceptual
- Linguistic meaning in this theory is reduced to, and identical with, schematic and enactive meaning
- But in what way then are humans different, as symbol users, from other species?
- Is language a symbolic system at all for L&J, or is it just an expression of pre-symbolic schemas?





# Alternatives to Cognitivism

---

- Alternative 2: Rethinking representation
- **Agreements** with Alternative 1:
  - Meaning is not **only** linguistic
  - Meaning is not **primarily** linguistic
  - Meaning is in the **relationship** between the organism and its ecological niche (Umwelt)
  - Linguistic meanings are **continuous** with non-linguistic meanings



# Re-thinking representation 1

---

- **Disagreements** with Alternative 1
  - Linguistic meanings have a special representational and symbolic character
  - The human ecological niche is itself a symbolic one
  - Language is a communicative system permitting representational, symbolic communication
  - Language needs to be analyzed as one communication system amongst others, but one with very special characteristics
  - Language makes possible true conceptualization
  - Language permits virtual cognition, beyond the here and now



# Re-thinking representation 2

---

- Representation is not an Objective relationship between Symbol and Object (or State of Affairs)
- Representation is a **relationship established in the course of communication**, between Speaker, Hearer and Situation
- Linguistic representation is based in the **communicative use of the sign system of language**
- All other uses, including the use of language signs to represent the world *for oneself*, are secondary.



# The conditions on representation

---

- To **represent** something is to cause something (the signifier) to stand for something else (the signified) in such a way that
  - The relationship of standing for **and**
  - Whatever it is that is represented
- Are **recognizeable** to the listener

TENTONNISTELLING

KOLLEK 12 JAN - 9 FEB



MOOR DE KUNST

NOEELSTRO UTRECHT



# Clarifying the definition

---

- The representational relationship is independent of the medium of representation, which may be linguistic, gestural or pictorial
- Eg Maps combine iconic and symbolic representations to produce a single representational synthesis





# Language and Representation

---

- Language is a symbolic semiotic system
- The core symbolic function of language is **representation**
- Representation is both communicatively and cognitively complex
- Communicative representation was the key **functional attribute** driving the evolution of language (what was selected for)
- Linguistic representation **is the same as linguistic conceptualization**
- Language represents **by means of concepts**





# What does language represent?

---

- It is often said (including by cognitive linguists) that language **represents** ideas
  - (or concepts, image schemas etc.)
- This notion has a long history ...



# Words as signs of ideas

---

- Words ... are signs or symbols of the affections of the soul ... whereas the affections of the soul are *not* signs or symbols of things in the real world, but *copies* of them (although *natural* copies and therefore identical for the whole human race). (Aristotle, 3rd century BCE)
- That then which Words are the Marks of, are the *Ideas* of the Speaker: Nor can anyone apply them, as Marks, immediately to anything else, but the *Ideas*, that he himself hath. (John Locke, 1690)
- The linguistic sign unites, not a thing and a name, but a concept and a sound-image. (Ferdinand de Saussure, 1919?)



# What is wrong with the above?

---

- Despite its antiquity, this proposal is misleading, though not entirely wrong
- Words perhaps may be said to **signify** concepts, but they **represent** what is conceptualized
- An alternative formulation:  
**Linguistic expressions represent linguistically conceptualized situations**



# Representation as an Act of Meaning

---

- *Linguistic expressions represent linguistically conceptualized situations*
- This formulation emphasizes
  - the contextuality of meaning
  - representation as based in communication
  - the nature of meaning as conventional mapping from conceptualization to expression
  - The distinction between linguistic conceptualization (Kant's "**discursive concepts**") and pre-conceptual schemas



# Representational meaning

---

- The representational meaning of a term or expression can be considered as equivalent to the traditional notion of *sense*
- The term's signified content as a **discursive concept**, enabling it to fulfil, in discourse, the **Conditions on Representation**



# The conditions on representation

---

- To **represent** something is to cause something (the signifier) to stand for something else (the signified) in such a way that
  - The relationship of standing for **and**
  - Whatever it is that is represented
- Are **recognizeable** to the listener



# The socio-cultural variant of Fregean sense

---

- “Plato called objects that manifest similarities [to linguistic meanings] *Ideas* ... That we have transformed the ‘eternal and immutable’ into ‘intersubjective’...only needs to be said in order to exclude misunderstandings.”
  - Karl Bühler, 1939.



# Sense as mapping pattern

---

- Instead of seeing senses as mental objects, schemas, or nodes in semantic networks, we should view them as *relatively stable or entrenched patterns of mapping*, from contextualized conceptualization to linguistic expression, in the course of the dynamic construction of acts of meaning, in which the goal of the action is to successfully achieve (through linguistic means) joint reference in an intersubjectively shared universe of discourse.





# Reference

---

- Many cognitive linguists also seem to believe that words **refer**, not to the world, but to conceptualizations
- This is also erroneous; words and expressions refer to the world, in the ecological sense of the reality of the *Umwelt*, but they do so in a **mediating** fashion.
- Words mediate **reference by speakers**
- We can only refer linguistically to the world using the representational meanings available in our language
  - Whereof we cannot speak, we must remain silent (Wittgenstein)



# Against solipsism – including its neural variety

---

- However, we do not therefore refer to a merely linguistically constructed reality
- We refer to a directly perceived or symbolically mediated world in which we are engaged as embodied and discursive actors
- This world is schematized linguistically, conceptually, and pre-conceptually
- But it is the world that we speak *about*, not the contents of a “mind/brain”.



# This is not Objectivism

---

- *Linguistic expressions represent linguistically conceptualized situations*
- This semiotic relationship is not the same as saying that linguistic expressions represent objective “states of affairs”
- Because linguistic representation also implies *conceptual construal or schematization*



# Discursive Concepts

---

- Discursive concepts are
  - Public
  - Normative
  - intersubjectively shared
- They are the “property” of the language community, and only “loaned” by the language user (Bakhtin)
- They develop and change over historical time



# Psychological concepts

---

- Psychological concepts are
  - Subjective
  - individual
  - variable
- They need not be shared by the whole community
  - (Putnam: cognitive authority, social division of linguistic labour)
- They develop and change over ontogenetic time



# Symbol Grounding

---

- The grounding problem: the traditional formulation
  - How do symbols “hook up” with the world?
- This is cast as a *theoretical* problem
- In fact, there is no such problem, since symbols *emerge in communicative practice in contexts of participatory sense-making*



# Dual Grounding

---

- Symbol grounding develops through the **coordination** of
  - **psychological meanings** (grounded in functional image schemas and perception-action linkages) with
  - **discursive meanings** (grounded in the conventions of the language system of the community)
- Sensori-motor + discursive grounding



# The socio-naturalistic approach

---

- Bases itself in both the evolutionary biological and the socio-cultural ecology of the human mind
- In which language is a *part* of the human ecology (symbolic ecology)
- And a product of biological/cultural co-evolution





---

- Thank you