

Mind to Mind: Human Communication and the Roles of Language

Robyn Carston
UCL Linguistics

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The human-specific capacity for ostensive communication:

I am at the front of the lecture hall, getting ready to give a lecture. A friend in the audience fiddles with her shirt button, frowning at me, and when I look down I see that mine is unbuttoned ... (Tomasello 2008)

‘Comprehension of the pantomime (iconic gesture) depends fundamentally on an understanding of the intention to communicate behind the gesture: without a recognition of my friend’s intention to communicate I will see her button fiddling as idle (or instrumental) behaviour on her part rather than an action designed to inform me of something.’

Ostensive stimuli: pointing, gesturing [vocally, manually, facially], pantomiming and demonstrating, speaking and signing ...

[weird actions if not understood as intended communicatively]

Tomasello, M. 2008. *Origins of Human Communication*. MIT Press.

Cf. I leave a broken cup in a prominent place on kitchen table
intending my partner to notice it and to realise that I'd like him to
fix it.

Intentionally informative, but not ostensive/overt; deniable - there are
other plausible reasons (non-communicative) for the cup having been
placed here ...

Ostensive Communication:

The communicator produces a stimulus with the *intention* to make
it mutually manifest to audience and communicator that the
communicator *intends*, by means of this stimulus, to make
manifest to the audience a set of propositions/thoughts.

Sperber, D. & Wilson, D. 1995. *Relevance: Communication and Cognition*.

Inferential Comprehension:

Grasping the communicatively intended content of the iconic gesture, a case of representation by resemblance, requires inferring what the relevant components of the gesture are: an action on a shirt button (the specific button is not relevant); and what the intended information is:

‘one of your shirt buttons is undone’, ‘you should do it up’.

Cf: Comprehending a *linguistic utterance*: ‘He’s finished now’

Pragmatic inferences to recover intended content: ‘he’, ‘now’, ‘finished’ in what sense?, implications [‘we can go home’; ‘his career is over’]

Acts of ostensive communication come with a presumption of ‘optimal relevance’, which constrains the inferential process.

Understanding human verbal communication is never a matter of mere decoding.

Carston, R. 2002. *Thoughts and Utterances: the Pragmatics of Explicit Communication*.

Ostension comprehension as a specialism of 'theory of mind' (ToM)

ToM: the metarepresentational ability to attribute contentful mental states to others (thoughts, beliefs, desires, intentions, expectations, ...) - one component of 'social cognition'.

Pragmatics (= understanding acts of ostensive communication) requires metarepresentational abilities of several orders – at least the ability to attribute a meaning to a speaker (i.e. to represent an intention of someone else about a representation of one's own) – a specific kind of 2nd order metarepresentation.

'Inferential comprehension of ostensive stimuli may be a submodule of the mind-reading module, an automatic application of a relevance-based procedure to ostensive stimuli, and in particular to linguistic utterances.'

Sperber & Wilson 2002. Pragmatics, modularity and mind-reading.
Mind & Language 17.

Language seems to be neither necessary nor sufficient for ostensive communication.

Common-sense assumption: *Language is for communication.*

Dan Sperber (2000):

Plausible evolutionary scenario: a metarepresentational ability developed for social reasons, having to do with co-operation and competition (ToM), then:

‘The metarepresentational ability made a form of inferential communication possible, initially as a side effect ... the beneficial character of this side effect turned it into a function of metarepresentations and created a favorable environment for the evolution of a new adaptation, a linguistic ability.’ (p. 127)

[He adds: ‘Once this linguistic ability develops, a co-evolutionary mutual enhancement of both abilities is easy enough to imagine.’]

Sperber, D. 2000. Metarepresentations in an Evolutionary Perspective.

Noam Chomsky:

Language isn't first and foremost for communication.
If it's 'for' anything, it's for thinking with.

It's quite poorly adapted for use in communication:

1. Who do you think John saw Bill with -- ?
2. * Who did John see Mary and -- ? [perfectly interpretable]
3. * Who does Sue believe the claim that – hit John?

Ambiguity created by silent elements (gaps):

4. What did John say that Mary believed?
 - a. What [John said that X and Mary believed X]
 - b. What [John said that Mary believed Y]

Grammatical sentences that create parsing problems:

Papers linguists psychologists respect write are hard to understand.
The horse raced past the barn fell.

Chomsky: what language **is** for (its first function):

Language enabled humans to have new kinds of thought: thoughts with complex, recursive* structures. ... It is not hard to see why such a change might persist, once it has happened. It would have adaptive value to be able to think things like *He knows that I want the flint, but he doesn't know that I know where it is*, even without being able to say them. ... the idea is that natural language *is* the language of thought (or of much of our thought, given that we also think in images), ... (Smith & Allott 2016: 125)

Externalisation for use in communication is a later application.

[* *Recursion = the ability of a system or procedure to take what has been built by an operation and use it as an input for that same operation.*]

Chomsky, N. 2010. Some simple evo devo theses: how true might they be for language?
Smith, N. & Allott, N. 2016. *Chomsky: Ideas and Ideals*. 3rd ed. CUP.

Language: narrow and broad construals

Hauser, Chomsky & Fitch (2002): productive investigation requires (principled) fractionation of the broad notion of language into its parts (carving at nature's joints) ...

‘... it is important to distinguish between questions concerning language as a communicative system and questions concerning the computations underlying this system, such as those underlying recursion.’ (ibid:1569).

Narrow I-language (FLN: recursive syntax and its interface* mappings) vs. a particular **broader notion of language** (as public/social, vehicle of communication, includes FLN, and a system of meaning ‘conventions’).

* **Interfaces:** conceptual-intentional systems and sensorimotor systems (the latter enabling externalisation, hence use in communication).

Hauser, Chomsky, Fitch. 2002. The faculty of language: What is it, Who has it, and How did it Evolve? *Science* 298.

Another widely-held assumption about language:

‘Language’ is a **social competence**, and any particular language consists of a set of ‘conventions’, including the (often multiple) senses of words (e.g. ‘newspaper’, ‘mouth’), and usage conventions (e.g. how to make a polite request, e.g. ‘Can you lend me £10’).

Lepore, E. & Stone, M. 2014. *Imagination and Convention*

‘Languages are **cultural objects**, which are sets of conventions created in order to enhance the expressive capacity of ostensive communication.’

Scott-Phillips, T. 2015. *Speaking our Minds*

Conventionalisation of innovative uses of words:

e.g. ‘Sally houdini-ed her way out of the prison cell’

Phenomenon of ‘ad hoc meaning’ creation arising in the very process of linguistic communication (often ephemeral, but in some cases a meaning convention becomes established and the lexicon grows, e.g. ‘lynch’, ‘boycott’, ‘sandwich’).

Clark, E. & Clark, H. 1979. When nouns surface as verbs. *Language* 55: 767-811.

Language creation/emergence: the case of *Homesign*

Deaf children who are not exposed to a conventional sign language (so get essentially no linguistic input), nevertheless, develop a large set of words/idioms, consisting of discrete gestures paired with concepts/senses.

Although linguistically isolated, they are socially active and integrated. Their signs are negotiated and (re)calibrated *in the process of ostensive communicative interactions* and many then stabilise into lexical meaning conventions.

Homesign gestures are not only iconic (e.g. for actions 'kick', 'throw', 'roll') or deictic (pointing), but also show 'various degrees of arbitrariness' (like standard languages), e.g. a single clenched fist gesture for 'grasp' (no matter the object grasped: umbrella, kite, ball ...).

Goldin-Meadow, S. 2005. *The Resilience of Language*. Psych Press.

Begby, E. 2017. Language from the ground up: A study of Homesign communication. *Erkenntnis* 82: 693-714.

Moreover, the children combine these gestures into complex structures with many of the ***hallmarks of typical human syntax***: consistent word order, recursion and hierarchical phrase structure.

[Quite different from the ways in which co-speech (or co-sign) gestures manifest themselves – when these combine, it's into a flat structure.]

Strong evidence for both:

- **‘a human language faculty of the sort Chomsky describes’**
- **‘semantic conventions of the sort Lewis describes’.**

Both *emerge* within ostensive communicative interactions of the deaf children and their care-givers. Signs (form-meaning pairings) are *created* via coordination in communication; some of them become routine, and eventually conventionalise.

Armstrong, J. 2013. *Language Change in Context*. Rutgers PhD.

Overall picture: priorities and dependencies

1. *Language, narrowly construed*:
Internal recursive 'merging' of discrete symbolic components
2. Which enables new complexity of thought, including *metarepresentation*
3. Which is a key component of *theory of mind* (the ability to represent and attribute contentful mental states to others)
4. Which enables *ostensive-inferential communication* (Speaker: makes overt an intention to convey information/meaning; Audience: infers and attributes intended information/meaning to speaker)
5. Which provides a highly favourable environment for the use of *language, broadly construed*: i.e. the externalisation of recursive linguistic structures and establishing of a public lexicon of semantic conventions (stable form-meaning pairings).

