Origins of Human Communication

Michael Tomasello May, 2006, Paris, Jean Nicod Lectures

Lecture 4. Language as Shared Intentionality

Human linguistic communication has same social-cognitive, social-motivational infrastructure as pointing and gestural communication - but attention-directing done with conventions.

- ⇒ NOT written, but spoken language. [Intuitions come from written.]
- ⇒ NOT meaning as thing, but use of linguistic forms for communicative functions
 - Direct att. in shared conceptual space like gestures (but w/conventions)
- ⇒ NOT grammatical rules, but patterns of use => schemas
 - o Constructions themselves as complex symbols "She sneezed him the ball"
 - NOT 'a grammar' but a structured inventory of constructions: continuum
 of regularity ⇒ idiomaticity → grammaticality = normativity
 - Many complexities = "unification" of constructions w/ incompatibilities
 - NOT innate UG, but "teeming modularity" (1) symbols, pred-arg structure,
 social intentions/speech acts, speech/phonology, categorization, etc. (2) diff. functions
 - not many language universals, but some due to universals of: human cognition, social cognition/attention, vocal-auditory processing.

4.1. Common Infrastructure of Pointing and Language

- JAF and Common Ground (Speech Situation) = same
- Assumption of Helpfulness = same
- Social Intention = same (also Indiv. Intentions) + some new?
- Communicative Intention = same
- Referential Intention = expressed differently
 - (1) Expression of Motive
 - basics in intonation (request, inform) = same; with some additional

- conventions (e.g., other intonations, speech act verbs, etc.)
- expression of attitude in expressives = same, but also modal/epistemic
- (2) Reference as attention directing
 - indeterminacy of reference => need JAF (def. ref.), just as in gestures
 - paradigmatic choice: perspective, construal, prag. inferences
 - syntagmatic combos: segmenting communicative act

4.2. Evolutionary/Historical Origins

- Primacy of the utterance: Holophrases reference + expr. of motive
 - o referents here & now = pointing => demonstratives (direct att. in space)
 - o referents *not* here & now = characterizing gestures => content words
 - ¬ noun = 'thing'; verb = 'event': categories

- Others outside CG/JAF (children) imitatively learn: convention > use
 - ¬ drift, arbitrariness => generalization of conventionality (money)
- Grammar: Two aspects of a situation symbolized
 - o "Eat" "Berries" => then mental combination under one contour
 - ¬ e.g., after non-comprehension? breakdown and repair
 - Utterance Semantics = Event (incl. state) + Participants (+ setting)
 - ¬ role of imitation in construction of event categories
 - ¬ also: topic introduction (w/ demonstratives)
 - Utterance Pragmatics = (i) speaker motives & attitudes
 - (ii) structuring of info for A's perspective/knowledge/expectations
 - ¬ referential choice for NPs and VPs (referential newness)
 - ¬ topic-focus for information structure of utterance (relational newness)

- Grammaticalization of constructions = pre-fab. packages for recurrent comm.
 situations constructions themselves as complex symbols "She sneezed him the ball"
 - o incl. both semantics & pragmatics
 - o incl. both utt.-level and phrase-level: NPs & VPs & PPs as modular
 - Emergence of second-order symbols (gramm. morphemes from Ns, Vs, demonstratives) via grammaticalization, as "relational glue" in constructions
 - (1) relating referents to one another or designating role in whole utterance
 - ¬ case marker or word order for semantic role
 - ¬ external agreement (e.g., subj-verb) for semantic role
 - ¬ internal agreement (e.g., determiner-adj-noun) for phrase grouping
 - (2) grounding referents in ongoing JAF [N = 'space'; V = 'time']
 - ¬ Nouns = determiners, possessives, relative clauses, etc.
 - \neg Verbs = tense-aspect-modality
 - ¬ Indefiniteness & Non-finiteness
 - o Example = car wreck: C motive = quest, inform; A perspct. = agent, patient
 - agent-focus inform: "Mary hit Jerry." [She hit Jerry] [Mary hit him]
 - patient-focus inform: "He got hit (by Mary)." [The guy in the hat got hit]
 - agent Q: "Who hit him?" "Whom did she hit?" [Whom was she hitting?]
 - patient Q: "Who got hit (by her)?" [Who ought to have gotten hit?]
 - agent cleft: "It was Mary that hit him" "It was Jerry whom she hit."
 - patient cleft: "It was Jerry who got hit (by her)"
 - agent cleft Q: "Was it Mary that hit him?" "Was it Jerry whom she hit?"
 - patient cleft Q: "Was it Jerry that got hit (by her)?"
 - Example of process:
 - *He pulled the door and it opened* => *He pulled the door open* (resultative construction)
 - I am going to see my bride => I'm gonna see the next century (go-future)
 - *I want it ... I buy it => I want to buy it* (infinitival complement)
 - I believe that!... Mary will wed John => I believe that Mary will wed John (S-complement)
 - My boyfriend ... He rides horses ... He bets on them =>
 My boyfriend, who rides horses, bets on them (relative clause)
 - o "Yesterday's discourse is today's syntax"; "Yesterday's syntax is today's

- morphology" (T. Givón): processing, predictability, prag. inferences
- o Many problems created by "unification" of constructions w/ incompatiblties
 - EG: extraction constraints (Goldberg, 2006)
- Discourse
 - o narratives as motivation for complex TAM marking
 - o noun classes for reference tracking in narratives
- Universals = universals of human cognition, communication, v-a processing
 - o no Universal Grammar (what is it, anyway?)

4.3. Ontogenetic Origins

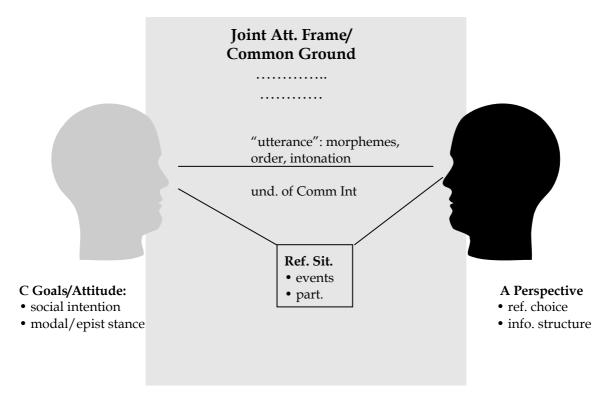
- Primacy of utterance; initial holophrases [often final word of adult utt.]
 - o request or indicate objects (e.g., by naming them with a requestive or neutral intonation);
 - o request or indicate the recurrence of objects or events (e.g., More, Again, Another-One);
 - o request or indicate dynamic events involving objects (e.g., Up, Down, Open, Close);
 - o request or indicate the actions of people (e.g., Eat, Kick, Ride, Draw);
 - o indicate the location of objects and people (e.g., Here, Outside);
 - o ask questions (e.g., Whats-that? or Where-go?);
 - o indicate a property of an object (e.g., *Pretty* or *Wet*);
 - o mark specific social events and situations (e.g., Hi, Bye, Thank-You, No).
- Cultural (imitative) learning of holophrase: form => function (role reversal)
- Extracting Words
 - o Child hears whole utterances; to extract word must:
 - ¬ comprehend overall comm. act
 - ¬ blame assignment of components: segment comm. act
 - o JAF + word learning studies (summarized in T 2001)
 - ¬ way Mom uses words inside JAF matters; outside no
 - ¬ experiments in hiding/finding JAF: (e.g., T & Barton, '94)
 - Known words in utterance (syntagmatics) => helps blame assignment
 - Known alternatives (paradigmatics) => construal (dog vs pet vs pest)
 - ¬ Referential choice exps: shared-new [C,B,T 2000; W&T, 2005
 - o Conventionality, imitation, normativity
 - ¬ Historically = conventions; developmentally = norms (laugh)
- Abstracting Constructional Patterns

- After holophrases => verb islands, item-based constructns (not a grammar)
 - ¬ abstract slots based on **function**
 - first without and then with syntactic marking
- Abstract constructions => grammaticality as normativity
 - ¬ syntagmatic categories: **analogy** based on function: Subj-Obj
 - ¬ paradigmatic categories: **distributional analysis**: Ns & Vs
 - ¬ constraint based on **entrenchment & pre-emption**

4.6. Summary: Linguistic Communication

- Same social-cognitive, social-motivational infrastructure as pointing [Fig. 2]
- Symbols = gestures, drift to arbitrary => conventions
 - o ontogeny: observe use (function) in utterances & imitate: normative
- Grammar = constructions and their creative combination [grammaticalization]
 - o ontogeny: find patterns (function) and generalize: normative
- Phylogeny + History in Ontogeny
 - Ontogeny = dual inheritance: genes and utterances

Figure 2



Some References

- Campbell, A., Brooks, P., & Tomasello, M. (2000). Factors affecting young children's use of pronouns as referring expressions. *Journal of Speech, Language, and Hearning Research*, 43, 1337 1349.
- Lohmann, H., Tomasello, M., & Meyer, S. (2005). Linguistic communication and social understanding. In J. Astington & J. Baird (Eds.), *Why Language Matters for Theory of Mind*. Oxford University Press.
- Tomasello, M. (1992). First Verbs: A Case Study of Early Grammatical Development. Cambridge University Press.
- Tomasello, M. (2003). Constructing a Language: A Usage-Based Theory of Language Acquisition. Harvard University Press.
- Tomasello, M. (1998). Cognitive linguistics. In W. Bechtel & G. Graham (Eds.), A Companion to Cognitive Science. Basil Blackwell
- Tomasello, M. (2000). Do young children have adult syntactic competence? Cognition, 74, 209-253.
- Tomasello, M. (2000). First steps in a usage based theory of language acquisition. *Cognitive Linguistics*, 11, 61-82
- Tomasello, M. (2000). The item based nature of children's early syntactic development. *Trends in Cognitive Sciences*, 4, 156-163.
- Tomasello, M. (2001). Bruner on language acquisition. In D. Bakhurst & S. Shanker (Eds.), *Jerome Bruner: Language, Culture, Self.* Sage Press.
- Tomasello, M. (2001). Perceiving intentions and learning words in the second year of life. In M. Bowerman & S. Levinson (Eds.), *Language Acquisition and Conceptual Development*. Cambridge University Press.
- Tomasello, M. (2004). What kind of evidence could refute the UG hypothesis? *Studies in Language*, 28, 642-44.
- Tomasello, M. (2005). Beyond formalites: The case of language acquisition. *The Linguistic Review*, 22, 167-181
- Tomasello, M. (2006). Acquiring linguistic constructions. In D. Kuhn & R. Siegler (Eds.), *Handbook of Child Psychology*. New York: Wiley.
- Tomasello, M. (2006). The social-cognitive bases of language development. In K. Brown (Ed.) *Encyclopedia of Language & Linguistics* (2nd ed.). Elsevier.
- Tomasello, M. (Ed.). (1998 = Volume 1; 2003 = Volume 2). *The New Psychology of Language: Cognitive and Functional Approaches to Lanuage Structure.* Lawrence Erlbaum.
- Wittek, A. & Tomasello, M. (2005). Young children's sensitivity to listener knowledge and perceptual context in choosing referring expressions. *Applied Psycholinguistics*, 26, 541-58.