

FROM INFANT POINTING TO THE PHASE: GRAMMATICALIZING DEICTIC REFERENCE


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Colourless green ideas sleep furiously differs from *Furiously sleep ideas green colourless* not merely in grammaticality, but also in meaning. No grammatical expression is meaningless. How we should characterize the kind of meaning that necessarily goes with grammar is an open question. A novel foundational idea maintains that ‘UG primarily constrains the “language of thought” (Chomsky 2007:22), which entails that no independent generative system, like the ‘Language of Thought’ (LOT, Fodor, 2008) exists that could provide for the structure and content of thought. The evolution of language, therefore, is the evolution of a sapiens-specific mode of thought, an idea supported by evidence that no such mode pre-existed the arrival of full language and our species, and is absent in any other living species today (Penn et al., 2008). There is, then, no ‘semantic component’ located on the nonlinguistic side of an ‘interface’ to which the organization of grammar is ‘answerable’. Grammar transforms the space of meanings available, and pre-linguistic Conceptual-Intentional systems (C-I), confronted with the outputs of grammar, would simply not be able to ‘read’ them (Hinzen, 2009). Berwick & Chomsky (2011) even suggest that lexical atoms do not pre-exist our species. In short, the organization of grammar, intrinsically, is the organization of the meaning that corresponds to the contents of sapiens-specific thoughts. The ‘Strong Minimalist Thesis’ is thus true but trivially so: for there is no interface. A novel argument for innateness follows, too: it is conceptually coherent that languages are learned; but not that thought is. There is a field of language acquisition, but not of thought acquisition. If grammar is thought, grammar is not learned.

But how will grammar create a novel thought system: how could it, if it reduces to Merge? There has only been one solution so far: grammar makes thought productive and systematic by making it compositional. Yet semantic compositionality (Heim & Kratzer, 1998) precisely deprives grammar of playing an explanatory role in the genesis of propositional meaning: if meaning is compositional in the standard sense, all content is ultimately lexical content, and grammar/Merge merely combines it. Lexical content, however, makes no predictions for how such content will be used referentially: MAN, as a lexical concept, cannot refer to a particular man, several specific men, manhood, mankind, man-meat, etc. – leaving reference, aside from the lexical content that enters any act of reference, undecided. Nor does reference arise from composing lexical contents: man-hunter, stir-fry, etc., remain generic and incapable for objectual and specific reference (di Sciullo, 2005).

(Intentional) reference, rather, arises uniquely where grammar is involved, turning grammar into a unique device for reference that no other known device in either humans or non-humans matches. Ants performing computations over complex mental representations do not refer to objects as falling under some concept that, unlike percepts, these referents do not determine. They do not and need not think, forming beliefs about what path they compute, which are true or false (Davidson, 2004). This answers our initial question: the essence of grammatical meaning is not computation or representation, but reference, based on concepts. Grammar mediates the conversion of a lexical content into an act of reference, and no complete grammatical derivation is ever doing anything else.

Such a conversion is first manifest in declarative pointing, which is specific to humans that are genetically normal in regards to UG, disturbed in autism (Liebal et al., 2008) and schizophrenia (McKenna & Oh, 2003), both of which centrally involve language abnormalities, and not found among non-linguistic beings (Tomasello, 2008). Unlike any

non-human communication, which remains dyadic, declarative pointing is triadic even in pre-linguistic infants, communicating propositional information based on a shared concept: say, that there is an airplane there, which is seen jointly with the adult (Tomasello, 2008:114; Csibra & Gergely 2009). No speech act is ever free of pointing in this sense: speakers do not speak ‘in the abstract’, but point to objects, properties, facts, or propositions. Grammar not only regulates reference, but also this formal ontology of semantics. Specifically, the smallest meaningful units of grammatical organization is the cycle/phase, and the three phases commonly assumed carve out the basic formal-ontological triad of objects (first phase = ‘DP’), events (second phase = ‘vP’), and propositions (third phase = ‘CP’), with finer formal-ontological distinctions depending on the internal make-up of the phases. Each of these is thus a unit of referential-deictic significance (Arsenijevic & Hinzen, 2012), and they all instantiate a single template that is first visible in infant pointing: [EDGE  [INT AIRPLANE]].

Longobardi (2005) proposes that the forms of reference are mapped ‘topologically’ from this template: specifically, object-reference iff movement to the edge/expletive-associate CHAIN, as seen in overt N-to-D movement/CHAIN in Italian and its covert parallel in Germanic. Sheehan & Hinzen (2012) identify the topological principle as one of ‘moving towards the edge’ as referentiality and extensionality in the forms of reference increase, from purely predicative nominals that require no edge, to scope-taking nominals that require the edge filled, to rigid nominals (names) requiring movement by substitution of N to D/CHAIN. They then extend this topology to the reference of clauses, where the exact same forms of reference are found, governed by the same principle (T-to-C movement/ CHAIN): purely predicative (nonreferential) TPs denote propositions, referential ones denote facts, rigid ones in matrix positions denote truths. These two proposals cover the forms of reference up to the point of 3rd-person propositional reference, but do not cover the case of 1st and 2nd person reference – i.e. the ‘pure’ or ‘essential’ indexicals (Kaplan, 1977; Perry, 1993). Martin & Hinzen (2012) extend the extended topology by reference to the Romance clitic system, demonstrating that the source of essential indexicality is purely grammatical rather than lexical or semantic, and that the personal pronouns are the most grammaticalized and hence least lexical forms of reference to which the grammatical reference-system stretches. Our approach therefore shows how UG is or becomes a new ‘Language of Thought’. The grammaticalization of lexical content, first visible in infant pointing, leads to the world whose formal ontology, which is purely grammatical, standard semantic theory (mis-) describes in semantic or metaphysical terms. If the grammaticalization of our mind changes the mind’s metaphysics and reformats its representations, giving rise to an infinite deictic space marked by a novel formal ontology, talk of a ‘C-I-interface’ must give way in favor of a conception of grammar as a device of extended deixis.

SELECTED REFERENCES: Arsenijević, B. & W. Hinzen 2012 On the absence of X-within-X. *LI* 43:423-440; Berwick, R. & N. Chomsky 2011 *The Biolinguistic Program*. OUP; Chomsky, N. 2007 Of minds and language. *Biolinguistics* 1:1009–27; Davidson, D. 2004. *Problems of rationality*. OUP; Fodor, J. 2008 *LOT 2*. OUP; Hinzen, W. 2009 Hierarchy, Merge, and Truth. In Piattelli-Palmarini, M. et al, eds. *Of minds and language: A Dialogue with Noam Chomsky in the Basque Country*. OUP, 123-141; Longobardi, G. 2005 Toward a unified grammar of reference. *Z. f. Sprachwissenschaft* 24:5-44; Martin, T. & W. Hinzen 2012 The grammar of the essential indexical, Ms. Durham Univ.; McKenna, P. & T. Oh 2005 *Schizophrenic speech*. CUP; Penn, D. et al. 2008 Darwin’s mistake. *BBS* 31:109-130; Perry, J. 1993 The Problem of the Essential Indexical and Other Essays. OUP; Sheehan, M. & W. Hinzen 2011 Moving towards the edge. *Linguistic Analysis* 37:405-458; Tomasello, M. 2008 *Origins of Human Communication*. MIT Press.