

POSTPRINT

Michael Tomasello. 2008. *Origins of Human Communication*.
Cambridge, Mass.: The MIT Press, 400 pp. Cloth. ISBN: 978-0-262- 20177-3

Reviewed by Franziska Kretzschmar (University of Mainz, Germany)

A recent debate within the linguistic community has made crystal clear that in order to understand what the human ‘language faculty’ is and where it originates from we need an interdisciplinary approach, encompassing the description and explanation of the functions and structures of different linguistic devices across languages, the depiction of language usage of diverging linguistic communities across space and time, and the psychological and computational constraints for comprehending and producing linguistic utterances (Evans and Levinson 2009; Lee, Lee, Gordon and Hendrick 2010). In his excellent book on the origins of human communication, Michael Tomasello offers such an interdisciplinary framework that opens the way for systematic future research in each of the above-mentioned individual disciplines.

Tomasello sets out to give a uniform explanation of the phylogenetic, ontogenetic, and historical emergence and development of human communication, including pre-linguistic (i.e., non-conventionalized) gestures and language with its two modalities of speech and signing. In doing so, the author begins by identifying probable precursors of language in non-human primates (chap. 2). The main point here is to show that vocal displays as found in great apes and monkeys cannot be the true precursors of human language, simply because they are genetically inscribed, emotionally tied, and — most importantly — inflexible responses to external events. In stark contrast to this inflexible vocal system, nonhuman primates’ gestures already exhibit something that may be called the grounding of human language ability. In particular, these gestures are “individually learned and flexibly produced communicative acts, involving an understanding of important aspects of individual intentionality” (p. 54).

Especially the latter aspect — that non-human primates understand that others have goals and intentions (individual intentionality) — is highlighted as the major difference in cognitive abilities between non-human primates and humans (chap. 3). Only the human species goes beyond individual intentionality in developing shared intentionality between individuals, involving the creation (and mutual recognition) of joint attention and joint intentions (together forming the common ground between speech act participants) and social motivations for

cooperative activities. Shared intentionality is thus the essential foundation of any human inter-individual activity, which is therefore always prosocial and cooperative, and forms the basis from which cooperative communicative motives emerge in humans: besides requesting objects or actions (which is also seen in great apes and monkeys), humans provide information that they assume is helpful to the recipient (and via indirect reciprocity also to the communicator) and they share emotions and attitudes to extend the common ground in which cooperative activities and communication can take place.

This Cooperation Model (p.72) is then tested for its explanatory potential with respect to both the ontogenetic and phylogenetic origins of human communication (chap. 4 and 5). The focus here lies on (i) pointing and iconic gestures ('pantomiming') as sources for natural communication from which vocalizations and linguistic conventions were derived and (ii) the importance of a common ground or joint attentional framework for mutual understanding and cooperative communication — or in linguistic terms a context shared by both communicator and recipient. With regard to the claim that gestures naturally precede vocal language, Tomasello provides an impressive amount of empirical data from language acquisition studies supporting his hypothesis that children's first communicative acts are represented in gestures (with pointing preceding iconic gestures) once children have developed shared intentionality (around 9 to 12 months of age). Vocalizations step in later to accompany either of these gestures, until they begin to replace iconic and, somewhat later, also pointing gestures.

Importantly, there is a strict order in which communicative motives are acquired, with requesting as the first, informing as the second, and sharing as the final step. Regarding the phylogenetic origins of language, the author emphasizes that, similar to ontogeny, the entire process is determined by the existence of a common ground between communicator and recipient. As communication is essentially cooperative, general processes for cooperation are invoked to explain the emergence of the three communicative motives. First, individuals developed joint intentions via mutualism so that requests could be granted. Sharing information is assumed to result from indirect reciprocity, i.e., the assumption that helping the communicator will result in him or her being helpful in other contexts as well. Finally, cultural group selection is considered the hidden motivation for sharing attitudes and emotions, thereby creating group-related identities and social norms (e.g., social institutions, normativity of language). Importantly, the emergence of the two core motives of shared intentionality (informing and sharing) is only possible once individuals are capable of "recursive mindreading" (p.96), without which individuals cannot create a common ground.

Finally, Tomasello attempts to account for phenomena like language change, language diversity, and — the controversially debated — language universals

(chap. 6). His functionally-motivated main point is that “the purpose for which one communicates determines how much and what kind of information needs to be ‘in’ the communicative signal, and therefore, in a very general way, what kind of grammatical structuring is needed” (p. 244). So, along with the acquisition of differently complex communicative motives (requesting, informing and sharing) goes the development of the grammar of language. While requesting requires only little syntax (in any modality) to transfer the intended meaning, syntactical devices (or ‘constructions’) need to be more complex for informing and even more for sharing purposes (including the generation of whole narratives). Finally, diversity and universals across languages are then interpreted as the result of “more general processes and constraints on human cognition, communication, and vocal-auditory processing” (p. 313), which all interact during the generation and inheritance or loss of linguistic codes. Thus, language change can be initiated depending on a) how much is omitted by the communicator in the linguistic signal, given a highly informative (i.e., predictive) context, and b) how the recipient — especially a native language learner — reanalyzes the reduced signal.

What does this book offer for linguists, considering, as the author himself points out, it contains a lot of (necessary) oversimplifications on language(s) (e.g., p. 292). First of all, we believe that the general framework sketched in the book can be seen as a first step towards a more interdisciplinary account of language, languages and the psychological imprint of comprehension and production by combining, for example, perspectives of philosophy of language and modern theories of language (though only functional ones) with theories on language evolution and with empirical-experimental research. Second, Tomasello makes a mainly positive case for his viewpoint by presenting largely supportive data and discussing contradictory alternatives or empirical counterevidence only when they touch the core of his argument. It is this rigor in his argument that makes the book readily accessible (including the useful preface in chap. 1 and summary in chap. 7) and allows experts, linguistics students of any level, and also the reader unfamiliar with the topic (or with linguistics in general) to easily follow his line of reasoning and to come up with specific counterarguments and questions at any time during reading. As for the expert reader, it is possible to generate specific hypotheses that can be tested in further research, which eventually should enable one to elaborate on this interdisciplinary framework. So, this book does not simply summarize the latest of Tomasello’s research, but is actually a book for every linguist to think about and discuss.

Part of the discussion is probably induced by some minor weaknesses. The two-page dismissal (pp. 312–313) of Generative Grammar tradition in general and recursion as the innate human-specific language faculty sounds a bit too harsh, thereby standing in stark contrast to the thoughtful analyses throughout the

remaining parts of the book. Indeed, it is misleading to anyone not very familiar with the generative tradition to what extent the generative notion of recursion (Hauser, Chomsky and Fitch 2002) differs from Tomasello's definition of recursive mindreading as the critical human ability to establish a deep common ground. Similarly, the claim that there is no theoretically uniform generative framework is unfair given the multitude of functionally-based theories of language (e.g., Tomasello's approach, Role and Reference Grammar, Lexical-functional Grammar). Another point deals with the relation between cooperative communication motives on the one hand and language change and diversity on the other. Although the necessary simplifications in the framework are warranted, and although general cognitive processes can surely be defined as language universals, it is unclear how language change is to be conceptualized here. Specifically, Tomasello claims that some diachronic (and probably also synchronic) language changes are triggered by children acquiring language and reanalyzing ambiguous input from mature speakers, and this should only be so "if there are many similar children, at some historical point" (p.305). How can language change — and consequently, language diversity — be conceived of differently from historical 'coincidence' then? And how else can the interaction of a few basic psychological constraints and predispositions with a limited number of different cultural contexts generate about 6,000 different languages?

Yet, these few critical remarks should not be regarded as severely affecting an overall positive impression. Tomasello's book is both entertaining and highly informative for everyone interested in broadening their perspective. In explaining the origins of human communication, Tomasello also offers an account on why humans are distinct from other species and thereby highlights that studying language is not just fascinating in and of itself, but also because it is a window into what constitutes human nature.

References

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Reviewer's address

Dr. Franziska Kretzschmar
Johannes Gutenberg University Mainz
General Linguistics, Department of English and Linguistics
Research Group: Neurocognition of Language Universals
Jakob-Welder-Weg 18
D-55099 Mainz, Germany
kretzsc@uni-mainz.de

About the reviewer

Franziska Kretzschmar obtained her PhD from the University of Marburg, Germany, doing research on event-related brain potentials (ERP) in natural reading situations. She is now a post-doctoral fellow in General Linguistics at the University of Mainz, where she is teaching and doing research in the fields of psycho-/neurolinguistics. Her current research focuses on word and sentence comprehension across different writing systems using psycholinguistic and neurocognitive techniques, i.e. the monitoring of eye movements in reading, recordings of ERPs and concurrent ERP-eye movement measures.