

SHORT COMMUNICATIONS

Book review:

N.J. Enfield, *Natural Causes of Language: Frames, Biases and Cultural Transmission* (Conceptual Foundations of Language Science 1). Berlin: Language Science Press 2014, 84 pp.

“The truth is that we need both: processes and events, relationships and entities, development and structure. We need both, we can study both, and we can study the relationships between both.”

N.J. Enfield, *Relationship Thinking*, p. xv

Nick Enfield is a professor of ethnolinguistics, with a theoretical background in linguistics and anthropology. The scope of the author’s scientific investigations encompasses language, cognition, culture and interaction. Enfield’s earlier work was conducted in the domain of linguistics, and concerned Southeast Asian languages. It included studies not only on the structure of language, but also on the use of it in interaction. At that time he was already interested in processes such as language contact and language change (*Linguistic Epidemiology*, 2003). Focusing from the beginning on the links between languages (semantics and grammars) and cultures (*Ethnosyntax*, 2002), Enfield entered into the debate between linguists and anthropologists and situated himself between these two disciplines, creatively drawing from both. The results of his work include the analysis of the associations between language and human sociality (*The Relationship Thinking*, 2013) and the study of processes of human linguistic and cultural diversification.

The natural causes of language is a summary of ideas that Enfield has developed so far. He takes into account conclusions from extensive fieldwork on Southeast Asian languages, brings together concepts and theoretical thoughts elaborated

in previous publications, and “puts them to work” in explaining why languages are the way they are.

The main goal of the book under review, as the author sees it, is the construction of ‘a natural, causal framework for understanding the foundations of language’ (p. 64). To put it in a slightly different way, Enfield tries to develop a foundational conceptual framework for further language studies, departing from the question: How does it happen that language as a cultural artifact exists and circulates – namely is maintained, changed and transmitted? For Enfield this is a question about causal processes in the history of languages.

The book consists of five, well organized chapters. Although the first two are dedicated to the issue of causality, the following one to transmission biases, and the last two to the item/system problem and a proposed solution to it, these issues are interwoven in the author’s argument throughout the book. Such a structure facilitates understanding the author’s line of reasoning.

The first chapter deals with the problem of causality in thinking about language as a historically evolved system. The author indicates two candidates for a unit of causal analysis, i.e. linguistic systems and linguistic items, and points to weaknesses of the former. Enfield does it by referring to mechanisms of language transmission, and by accentuating an underestimation of the horizontal diffusion. The latter is of special interest to the author and constitutes a vital part of argumentation on why “tree diagrams” representing history of language diversification are a methodological simplification. Inspired by the Darwinian theory of biological evolution of life forms (basically vertebrates), those diagrams were adapted to reflect the history of diversification within the family of languages. In the author’s view, they are harmful to our understanding of language transmission because of the concentration on vertical transmission and the assumption that languages are coherent units subjected to causal events of inheritance (similarly to the genome).

The second chapter is complementary to the first one. The aim of it is to show that understanding language requires looking into a multitude of different processes. The author makes it possible by introducing a set of causal frames within which chosen units of language enter the dynamics of causal processes. Enfield refers to Tinbergen’s (1963) distinction of causal/temporal frames, as well as to distinctions offered by researchers of the last century (de Saussure) and many of today (e.g. MacWhinney, 2005; Rączaszek-Leonardi, 2010). Six frames proposed by the author (microgenetic, ontogenetic, phylogenetic, enchronic, diachronic and synchronic) are described in detail, with a special emphasis on different types of underlying processes and the sets of causal mechanisms they entail. These causality processes reflect the biological, psychological and cultural dimensions of language. It is underlined that although the frames are distinct, they are interrelated. At the end of this chapter the author, using the example of Zipf’s length-frequency rule, attempts to demonstrate this interrelatedness and

its explanatory power. Thus, in the framework proposed by Enfield the particular dependency between the frequency and length of words is a result of a cognitive preference to minimize effort (bias in microgenetic frame), which has an effect as a transmission bias in diachronic processes of language diffusion (ontogenetic and enchronic frames) and as a result can explain synchronic facts about the linguistic system's structure.

The third chapter is dedicated to the issue of transmission biases that regulate linguistic and cultural transmission operating on items. The biased transmission model which follows a general framework of cultural epidemiology (Sperber, 1985; Enfield, 2003) is presented, and some chosen biases are described. The proposed model is distinct from the iterated learning model developed by Kirby and colleagues (Kirby et al., 2004, 2008). The crucial part of this chapter constitutes a description of a basic scheme for grounding the biases. This basic scheme represents a causal chain for iterated practice. Four loci (elements) of the social-cognitive causal chain are distinguished: exposure, representation, reproduction and material, and the biases operating on them are described. One of the major points made by the author is that specific biases are not confined to a single locus but may have effects on more. For instance, material-related biases can affect exposure-related biases. It means that reproduction of language in the form of writing influences the dynamics of transmission and chances of exposure. The author does not answer the question about why we observe the chosen biases, and not others. He just points to the direction of where an answer to this question might be sought.

In the fourth chapter Enfield returns to the item/system problem signaled at the beginning, in the context of a proper unit of analysis, and proposes his answer. He argues that it is possible to deduce system transmission from item transmission under the condition that the definition of item would be changed. Giving thought to what is *the glue* that holds items together in the system of language leads him to a redefinition of the linguistic/cultural item subjected to transmission. The relation to context is what defines such an item. The author elaborates on this idea by specifying the properties of cultural systems and then describing semiotic systems in terms of functional relations and relations between relations (following Darwin and after Kockelman, 2006). To illustrate semiotic systems analyzed in terms of relations, Enfield presents complex linguistic and cultural examples. The former pertaining to properties of Munda and Mon-Khmer languages, and the latter to sections and subsection systems in Aboriginal Australia defining kinds of kinship. The conclusion is that we never deal with detached linguistic/cultural items, but with items within functional relations to other linguistic/cultural items. Enfield argues that by focusing on relations within the system, the ontology of language is gained for free. Building a causal account of language in which a basic unit of analysis is "item with its relation to the context" allows to derive system transmission from item transmission.

The last chapter deals with the explanation of how cultural/linguistic systems are transmitted, drawing on the item-based (items as defined above) process of transmission. The author points to combinatorial relations in which cultural and linguistic items are embedded and considers where they might come from. The conceptual shift made by Enfield in pursuing an answer to that issue is that relations are transmitted and therefore are placed in the center of the proposed framework. After dealing with the explanations of linguistic change and variation in previous chapters, Enfield concentrates on how to explain the stability of conventional systems. The proposed solution to item/system problem is based on the reconceptualization of what is transmitted (items with functional relations to context) combined with the set of forces that structure items into systems. However, the author does not strive to close the proposed framework, leaving it open to further elaboration. Enfield signalizes only a direction toward solving the item/system problem what might be considered not fully satisfactory.

The *Natural causes of language* is a book grounded in several research traditions and disciplines (evolutionary approaches to language, ethology, anthropological school of diffusionism, de Saussure's linguistics, social network theory, cognitive psychology). The author draws on them with ease, using their findings and with the same ease crossing the borders that divide them. In my opinion, Enfield fulfills his promise and provides us with a novel and interdisciplinary conceptual framework for studying change and stability in natural languages – coherent but open to further complementation. For instance, the set of transmission biases might be supplemented. Enfield does not concentrate substantially on biases that could explain the structure of language, as well as on memory biases (some innovations are more memorable than others) or biases operating on social interaction as such. The difficulty here might lie in setting a constraint on adding new biases and in explaining why we observe them. Enfield's solution seems to be insufficient to answer those problems. Another issue for further consideration and development are social networks, which in Enfield's framework play the important role of paths that innovations take. Recent research shows that the topology of the networks and the kinds of links between agents, reflecting communication patterns, significantly influence the propagation of information/conventions (Zubek, Barański, Wróblewski, Plewczyński, Rączaszek-Leonardi, in prep.). Hence, the choice of network model is not trivial.

The framework is presented in a dense, compact way, sometimes without going very much into detail and elaborated argumentations¹. Nevertheless, I find this book exceptional, because it raises hopes for bridging the disciplinary gaps to do justice to the complexity of the phenomenon under study. Language is not a petrified, static thing but a constantly changing system in which social contact plays a primary role, and which connects the public and

¹ That is probably a consequence of the fact that some thoughts were presented in Enfield's earlier publications.

private levels. Provided new explanatory concepts enable us to deal with the problem of language change in a broader perspective, taking into account multiple processes and levels of analysis. I see this book as a kind of conceptual tool-box that Enfield hands us for further linguistic studies aimed at studying language in its sociocultural context.

Another important merit of this book is its inspirational potential for further theoretical and empirical investigations. It raises challenges for some common assumptions about the reality of language systems and units of language transmission. The application of this framework to the study of language would mean (1) thinking in causal terms about language (what accounts for the historical change and transmission of language); (2) a switch to “relationship thinking” (i.e. of linguistic item and its functional relation to context); and (3) combination of thinking in terms of dynamic processes and more static events or constraints (e.g. transmission biases). The framework could also help develop and improve existing agent-based models of evolutionary processes of language (e.g. Beuls & Steels, 2013; Steels & Belpaeme, 2005). It would also pose a challenge to theories of language acquisition in developmental psychology that concentrate mainly on finding cognitive learning mechanisms in an individual head, often underestimating social relations and immersion in interactions (e.g. Horst, 2013; but see Rączaszek-Leonardi, Nomikou, & Rohlfing, 2013).

Research guided by Enfield’s theory would focus more on horizontal transmission and the enchrony frame (i.e. social interaction and causal machinery of iterated practice). One of the most prominent works that already used a similar conceptual mechanism in an attempt to explain the structure of language (biases in iterated learning) is the one conducted by Kirby and colleagues (2004, 2008). They proposed a model of the process of linguistic transmission called the iterated learning model. They showed that the origins of structure in language can be explained by iterated learning. According to this model, an individual learns a behavior by exposure to another individual’s behavior, who learned it in the same way. The authors consider this process to be a key mechanism of cultural evolution of language. They focused on generations of individuals in a human population, i.e. macro-level state change (ontogenetic frame). However, they omitted micro-level local cycles in the enchronic frame, which is constituted by many iterations of exposure and reproduction with feedback from other’s reactions to how we use words in context. This layer is central and well described in Enfield’s account. Therefore, integrating these two models seems to have a great explanatory potential.

According to Enfield’s theoretical proposition different kinds of research questions would require taking into account different causal frames (without forgetting about their interdependence) and various kinds of data. Moreover, usage of the proposed framework would also result in methodological shifts, e.g. it would require an integration of various data sources: findings of linguistic anthropology, psycholinguistic experiments, computer modelling and diachronic language studies. Here,

the difficulty might lie in combining the obtained results. The conceptual tools for dealing with a very difficult problem of reconciliation of the results from different causal frames, often operating within different time scales, do not seem sufficient.

The theoretical stance presented in this book recalls in some aspects the approaches of distributed language (Cowley, 2011) and dynamical psycholinguistics (Rączaszek-Leonardi & Kelso, 2008). The reviewed book should be of great value for anthropologists, linguists and psychologists dealing with language and communication. Although the book is written in accessible language, knowledge of the basic theories in the abovementioned fields would be helpful in understanding it. Rarely do we find work with such potential of facilitating dialogue among those disciplines and different research traditions on language. Enfield does not stop at letting them speak; he gives a meaningful conceptual proposition that joins them together.

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