Hyland, Ken. 2005. *Metadiscourse: Exploring interaction in writing*. London: Continuum.

Kytö, Merja & Matti Peikola. 2014. Philology on the move: Manuscript studies at the dawn of the 21st century. *Studia Neophilologica* 86(1), 1–8.

Martin, James R. & Peter R. R. White. 2005. *The language of evaluation: Appraisal in English*. Basingstoke: Palgrave.

Mirenayat, Sayyed A. & Elaheh Soofastaei. 2015. Gérard Genette and the categorization of textual transcendence. *Mediterranean Journal of Social Sciences* 6(5), 533–7.

Peikola, Matti, Aleksi Mäkilähde, Hanna Salmi, Mari-Liisa Varila & Janne Skaffari (eds.). 2017. *Verbal and visual communication in early English texts*. Turnhout: Brepols.

Yáñez-Bouza, Nuria. 2017. Paratext, title-page and grammar books. *Studia Neophilologica* 89(1), 41–66.

(Received 9 December 2021)

Alexander Haselow and **Gunther Kaltenböck** (eds.), *Grammar and cognition – Dualistic models of language structure and language processing* (Human Cognitive Processing – Cognitive Foundations of Language Structure and Use). Amsterdam and Philadelphia: John Benjamins, 2020. Pp. 358. ISBN 9789027207722.

Reviewed by Arne Lohmann, Universität Leipzig

The edited volume by Haselow and Kaltenböck brings together a collection of nine chapters on the topic of dualistic models of language structure and processing that are based on papers given at an international workshop held at the University of Rostock in 2018. As the editors explain in an introductory chapter, the aim of the volume is to test what they term the *Cognitive Dualism Hypothesis* (*CDH*), which is the claim that cognitive processing – and linguistic processing in particular – cannot be explained by a single system but rather by one that has a dualistic organization. Beyond this claim, the present volume seeks to explore to what extent a possible dualism in processing is reflected in language structure and models attempting to explain this structure.

    The editors take as a starting point the observation from psychological research that processing of information is carried out by two forms of memory, a procedural and a declarative one. The declarative memory 'involves the explicit knowledge of meanings … derived from conscious experience' (p. 7), while the procedural memory 'refers to motor routines developed through usage or performance events, and thus to the tacit or implicit knowledge of *how* things are done' (p. 7). In my understanding, the question the volume is most concerned with is to what extent this dualistic organization of the processing system is reflected in linguistic structure and grammar and may to a certain extent explain dichotomies that have been observed in linguistic research. One such linguistic dichotomy may be the distinction between combinatorial and non-combinatorial language, e.g. fixed expressions. As the editors explain, one way in which such a correspondence may be

tested is via findings of different neural substrates being active during the processing of linguistic structures that fall on different sides of the dichotomy. The chapters of the book employ psychological, neurological and linguistic evidence. Consequently, the edited volume can be claimed to represent a truly interdisciplinary enterprise.

The edited volume is organized in two parts: the chapters of the first part – entitled 'Dualistic approaches to language and cognition' – are concerned with a more 'big-picture' discussion of the possible correspondence between linguistic and cognitive dichotomies. While focusing on different linguistic aspects, the contributions of this part concentrate on the general question of the benefits of a dualistic approach. The second part takes a more detailed perspective, largely containing case studies that analyze specific linguistic phenomena from the perspective of a possible dualistic organization.

The first chapter, authored by Diana Van Lancker Sidtis, focuses on the dichotomy of combinatorial versus non-combinatorial language and analyzes a number of non-combinatorial expressions under the heading of 'familiar phrases'. The chapter discusses various properties of familiar phrases, such as their semantics and different degrees of cohesion. In advocating a dual-process model of language, with familiar phrases in one and novel language in another category, the author reviews various characteristics of these expressions. She claims that familiar phrases are acquired differently, as they 'stand out' in various ways and are often emotionally loaded. Evidence from psycholinguistic studies is reviewed, demonstrating that processing and representation differ between novel and fixed expressions. Furthermore, neurolinguistic evidence is discussed, showing that fixed expressions are predominantly processed in the right hemisphere, while the left hemisphere serves the production and processing of spontaneous combinations. Evaluating the evidence from different disciplines, Van Lancker Sidtis concludes that a dual-process model is best suited to account for the observed dichotomy between formulaic and novel language.

In chapter 2, Bernd Heine, Tania Kuteva and Haiping Long address the very central questions of the volume by comparing dual-process frameworks (DPFs) in psychology to DPFs in linguistics. The chapter provides a broad overview of different linguistic frameworks that assume a dualistic organization: novel vs formulaic speech, thetical vs sentence grammar and macrostructure vs microstructure. The authors explicitly compare the architectural features of the DPFs in the two disciplines in order to explore the compatibility between the two. This comparison is the most important achievement of the chapter, in my opinion, as it reveals a number of striking similarities between the DPFs in the two disciplines. For example, in psychological DPFs it is assumed that Type 1 processes mean a more holistic and heuristic processing, while Type 2 processes are characterized by more analytic and rule-guided reasoning. This difference in analyzability is also found in linguistic DPFs, namely in the difference between formulaic, unanalyzed linguistic material and the creation of compositional language characterized by an internal structure. With this comparison the authors clearly address the very core question of the volume as a whole, which makes this chapter particularly relevant and informative.

The third chapter, authored by Alexander Guryev and François Delafontaine, takes a closer look at differences in hemispheric activation during language processing. The authors distinguish two modes of discourse processing, namely micro-syntax and macro-syntax, of which the former is predominantly performed by the left and the latter by the right hemisphere. Micro-syntax denotes morphosyntactic structuring according to 'basic grammar principles of hierarchical dependencies' (p. 101); macro-syntax means a more macro-level planning of discourse that includes pragmatic reasoning. The authors explain the division of labor between these two systems within the Fribourg model of Pragma-Syntax. While the basic idea of a hemispheric asymmetry is convincing, the discussion of the model of Pragma-Syntax is not easily accessible to readers like me, who have no prior experience with this framework.

In chapter 4, Kasper Boye and Peter Harder approach the question of a possible dualistic organization by proposing the lexis–grammar division as a major dualism in language. Elaborating on this division, they discuss the question 'of what it is that constitutes the defining features of grammar' (p. 134). Drawing on their own previous research, well-known to grammaticalization researchers, the authors argue that grammatical items in language are secondary as they depend on a primary host construction (see Boye & Harder 2012). In advocating the lexicon–grammar divide as an important dualism in language, Boye and Harder explicitly set themselves apart from frameworks that assume lexicon and grammar as constituting two ends of a continuum, the latter position being well established in functional, cognitive frameworks, most prominently in Construction Grammar. The authors show that the proposed dualism is reflected in the processing theory by Ullman (2001), which assumes a division into a procedural and a declarative part, and a neurocognitive model by Mogensen (2011), which also advocates a dualistic organization. Drawing on these different resources, the authors propose a model of language that distinguishes between a procedural ability and declarative knowledge, which corresponds to the lexicon–grammar divide. In conclusion, Boye and Harder emphasize the point that the different aspects of language cannot be explained via a 'one-size-fits-all' model.

Chapter 5 begins the second part of the book, consisting of case studies that focus on specific linguistic phenomena. Katsunobu Izutsu and Mitsuko Narita Izutsu offer an analysis of final particles in four East Asian languages (Japanese, Korean, Chinese and Mongolian), contrasted with three West European languages (English, Spanish and German). The authors approach the topic of final particles from a dualistic perspective taking as a starting point the distinction between sentence grammar and thetical grammar (Heine *et al.* 2013) and the macrogrammar/microgrammar distinction by Haselow (2016). Izutsu and Izutsu point out that elements covered by thetical grammar are usually syntactically non-integrated and serve more large-scale discourse-organizational, relational functions. Sentence grammar elements instead are typically syntactically integrated and express the propositional content of the sentence. Interestingly, Izutsu and Izutsu show that final particles in East Asian languages constitute linguistic elements not straightforwardly captured by this divide as they exhibit characteristics of both domains. Final particles in the East Asian languages studied serve discourse-organizational

functions, but are nevertheless morphosyntactically integrated. Based on this observation the authors find that the boundaries between the two types of grammar are not discrete but rather constitute a continuum. This conclusion does not fit squarely with the claims of a strictly dualistic conception. While this is noted by the authors, the theoretical implications of this empirical observation are not discussed in detail. Such a discussion, which should address the question of how dualist theories may be revised to integrate the results reported, may constitute a rewarding next step.

In chapter 6, Evelien Keizer focuses on English adverbs and investigates the distinction between parenthetical and non-parenthetical adverbs in particular. By taking into account semantic, syntactic and prosodic characteristics, Keizer shows that the distinction is not clear-cut. While prototypical cases of parenthetical adverbs are semantically, syntactically and prosodically non-integrated, the criteria do not always go hand in hand. Based on this analysis she concludes that there is 'no coherent concept of integration (or parenthesis)' (p. 226). Keizer demonstrates that the different degrees of integration can be modeled particularly well in the theory of Functional Discourse Grammar (FDG), which allows for the consideration of different combinations of adverb characteristics due to its multi-layered architecture. In the final paragraph of the chapter, Keizer questions whether a dualistic distinction between elements that are part of the clause and those that are not is a suitable approach in light of the present analysis. In my opinion this raises the theoretical question as to what extent linguistic DPFs that assume such a distinction, e.g. the sentence grammar/thetical grammar distinction by Heine *et al.* (2013), are able to account for the multi-faceted behavior of elements such as adverbs. This point surely deserves a more thorough discussion and may lead to the further development of current DPFs, possibly by integrating features from FDG.

Chapter 7 is authored by one of the editors of the current volume, Gunther Kaltenböck, and puts forth a new classification of formulaic sequences within the DPF Discourse Grammar (Heine *et al.* 2013). More specifically, Kaltenböck claims that formulaic sequences can be categorized into Sentence Grammar formulaic sequences (SG-FSs) and Thetical Grammar formulaic sequences (TG-FSs). The former are those that operate within the clause structure, while the latter are extra-clausal. An example of an SG-FS is the string *a lot of*, which is syntactically analyzable and combines with further intra-clausal material. Examples of TG-FSs are parentheticals such as *you know*, which are not integrated into the clause and serve discourse-organizational and pragmatic functions. Kaltenböck shows that this distinction allows for the explanation of a hitherto puzzling observation, namely, that speakers with a right-hemisphere disorder are still able to produce formulaic sequences with a certain frequency even though those units are thought to be processed by the right hemisphere. The current dualistic approach may explain this finding, as it is only the TG-FSs that are processed by the right hemisphere, while the processing of SG-FSs is largely unaffected by right-hemisphere disorder. Based on the analysis of the speech of speakers with either left-hemisphere or right-hemisphere disorder, the chapter shows convincingly that it is only the production of one type of formulaic sequence that is affected by the respective

disorder. This empirical study therefore not only provides an explanation for the complex findings regarding the production of formulaic language by speakers with hemispheric disorders, it also shows that the dualist architecture inherent in Discourse Grammar has a clear neural correlate, which is a point that is worth emphasizing.

In a very long 40-page chapter 8, co-editor Alexander Haselow argues for a distinction of grammar into a macrogrammar and a microgrammar domain, thus also advocating a dualistic framework. Microgrammar establishes local morphosyntactic and semantic relationships, while macrogrammar fulfills a more global, discourse-organizational role. In a first step, Haselow shows that this distinction is mirrored in a number of different grammatical frameworks that – while not always explicitly dualistic in conception – assume a very similar distinction. In a second step, the chapter focuses on macrogrammar and shows that speakers employ extra-clausal constituents to fulfill important macrogrammatical functions, which can be categorized as belonging to the three functional domains Interaction, Discourse Structure and Cognition. In order to address the question of how these domains are reflected in the use of multiple ECCs in either turn-initial or turn-final position, Haselow investigates the ordering of ECCs when occurring in sequence in these positions. In a detailed discussion of a corpus analysis of the ICE-GB spoken section, he argues that the sequence of elements can be explained via a clear sequential order of these three functional domains. While the pattern seems to be fairly robust, as an attentive reader one cannot help but notice that some of the corpus frequencies are very low, especially those of the turn-final sequences. Testing these patterns on a larger sample would certainly be desirable. Overall, while the chapter is certainly an interesting read, the combination of the abstract theoretical claim of dualism with a case study that investigates a very focused question regarding only one of the two domains is maybe a bit much for a single chapter.

In the final chapter, László Drienkó explains his model of language processing and acquisition, called Agreement Groups (AG), which he had proposed in earlier research (Drienkó 2014). The framework is a computational approach that assumes that particular schemas or frames are acquired from the linguistic input that can then accommodate new lexical material that is inserted into open slots in such a frame. In this regard, the AG model seems to be similar to usage-based, construction-centered models of processing and acquisition, e.g. the approach by Tomasello and colleagues (e.g. Tomasello 2003). Drienkó proposes that when analyzing language employing the AG model, three dualities emerge. The first is the distinction between familiar and novel utterances; the second whether utterances are mapped to a single agreement group or are processed collectively by several groups; and thirdly whether only continuous or also discontinuous structures are covered. While it is clear that these distinctions represent different processing modes of the AG model, the question of whether these dualities require a two-system architecture that corroborates distinctions made in other DPFs remains largely unaddressed. In consequence, while providing a good introduction to the architecture of AG, the chapter is difficult to relate to the main theoretical aims of the edited volume.

Overall, I found reading the edited volume a very rewarding and thought-provoking experience. Being fairly new to the idea of dualistic views on processing and grammar myself, I found the book to be a very good introduction to the core ideas and tenets of dual-processing frameworks. The two parts of the volume are fairly different regarding orientation and focus: the four contributions comprising part I address the core questions and claims of the Cognitive Dualism Hypothesis by offering theoretical discussions of the pros and cons of assuming a dualistic architecture. While the hypothesis is approached from different theoretical angles, some points are repeated across the four chapters, a redundancy which is difficult to avoid with an edited volume that comprises contributions by different authors. The second part, which for the most part contains discussions of individual linguistic phenomena, has a very different character due to its narrower focus. While containing interesting case studies, I found it more difficult to see the relationship to the core question of a dualistic architecture with some of the chapters. The chapters by Keizer and by Izutsu and Izutsu contain interesting case studies but the theoretical implications of the results for dualistic frameworks remain rather implicit, and with the contribution by Drienkó it is even harder to assess what the implications for the Cognitive Dualism Hypothesis (CDH) are. Having said that, these contributions still offer interesting and insightful analyses and one needs to keep in mind that many readers will not necessarily read all contributions with the main goal of assessing the CDH, but will appreciate the individual chapters for the pursuit of these contributions' separate and more focused aims. Overall, the edited volume as a whole presents a truly rich and diverse collection of articles offering a multitude of different perspectives and case studies that I recommend to anyone interested in the link between cognitive processing and language structure.

Reviewer's address:
Department of British Studies
Universität Leipzig
Beethovenstr. 15
04107 Leipzig
Germany
arne.lohmann@uni-leipzig.de

References

Boye, Kasper & Peter Harder. 2012. A usage-based theory of grammatical status and grammaticalization. *Language* 88(1), 1–44.

Drienkó, László. 2014. Agreement group analysis of mother-child discourse. In Gabriella Rundblad, Aga Tytus, Olivia Knapton & Chris Tang (eds.), *Selected papers from the 4th UK Cognitive Linguistics Conference*, 52–67. London: UK Cognitive Linguistics Association.

Haselow, Alexander. 2016. A processual view on grammar: Macrogrammar and the final field in spoken syntax. *Language Sciences* 54, 77–101.

Heine, Bernd, Tania Kuteva, Gunther Kaltenböck & Haiping Long. 2013. An outline of Discourse Grammar. In Shannon Bischoff & Carmen Jeny (eds.), *Functional approaches to language*, 175–233. Berlin: Mouton de Gruyter.

Mogensen, Jesper. 2011. Almost unlimited potentials of a limited neural plasticity: Levels of plasticity in development and reorganization of the injured brain. *Journal of Consciousness Studies* 18(7–8), 13–45.

Tomasello, Michael. 2003. *Constructing a language: A usage-based theory of language acquisition*. Cambridge, MA: Harvard University Press.

Ullmann, Michael T. 2001. The neural basis of lexicon and grammar in first and second language: The declarative/procedural model. *Bilingualism: Language and Cognition* 4(2), 105–22.

(Received 12 January 2022)