fields of acquisition. As this is one of the first books to extensively report on comprehensive heritage language issues, it is difficult to identify its weaknesses. However, one issue that can be noted is that although sociolinguistic factors were recognized as essential to HLA research, only a few were mentioned but not extensively addressed. Admittedly, Montrul's explicit focus is on the grammatical development of heritage languages and it is to be hoped that detailed accounts of sociolinguistic aspects of HLA will emerge from future work. Overall, the book is an outstanding resource in terms of the depth and breadth of its coverage of current issues in HLA. Anyone interested in this area, whether researcher or educator, will find this book to be an excellent starting point for understanding some of the critical issues in HLA research.

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David Wood, *Fundamentals of formulaic language: An introduction*. London: Bloomsbury, 2015. Pp. vii + 198.

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This volume is probably the first monograph that is entirely devoted to reviewing the status of formulaic language research, a complex multidisciplinary field.[1] The author defines 'formulaic language' (e.g. *on the other hand*) as multi-word expressions which have a single meaning or function and which are prefabricated or stored and retrieved mentally as if a single word (3). By combing and distilling works in formulaic language research over almost a century, the book offers a comprehensive and insightful overview of formulaic language research in relation to issues such as mental processing, language acquisition, spoken and written language, and language teaching. It provides readers with an overall sense of what has been achieved and what remains to be done in this field, both theoretically and

methodologically. Thus, the book is likely to be a useful resource for both new-comers and established scholars interested in formulaic language research. The book consists of ten chapters, covering a historical overview of the development of formulaic language research (Chapter 1), eight major areas of research (Chapters 2–9), and a summary of formulaic language research to date (Chapter 10). The first chapter offers a historical perspective on research in this area. Considering the 1970s as a 'turning point' in the history of formulaic language research (8), the author briefly reviews the state of research in the field before and after this decade. Before the 1970s, early research was conducted by researchers from diverse fields (e.g. collocation researchers, anthropologists, neurologists, psychologists, and grammarians). Since the 1970s, linguists have established their own lines of investigation resulting in formulaic language becoming a mainstream research area. The author briefly reviews major areas of research within the linguistic field (e.g. identification, classification, speech production and comprehension, and applications), laying the foundation for the remainder of the book.

Chapters 2 and 3 focus on identification and classification of formulaic sequences. Chapter 2 discusses strengths and limitations of three major measure types for identifying formulaic sequences. The first is a frequency measure, which establishes the frequency of formulaic sequences by setting minimum frequency criteria (e.g. 40 tokens per one million words). The author points out that statistical measures may not apply to small corpora because the standard minimum frequency cutoffs may not be met, and may also fail to guarantee the psycholinguistic validity of sequences because some sequences are semantically and structurally incomplete (e.g. *to do with the* as in *The second criterion has to do with the writing processes*). The second measure type concerns psycholinguistic factors such as reaction times, eye movement, and electrophysiological measures. According to Wood, these provide only 'a partial view of the use of a sequence' (22), for example, by providing little information on frequency. The third is native speakers' intuitions. The author argues that native speaker judgments have 'to be restricted to smaller data sets' (24) and may involve inconsistent judgments. The author concludes that 'formulaic language may best be identified by use of a combination of measures' (32). A number of checklists complement the aforementioned measures. These include the checklist developed by Wray & Namba (2003), who attempt to grade the perception of formulaicity of a sequence by using a Likert Scale of 1–5. Similarly, Wood's (2010) checklist addresses the concerns about native speaker judgments by using a small corpus and having a benchmark identification session before the actual individual judgment sesion. After discussing the issue of determining formulaicity, Chapter 3 addresses diversified labels of formulaic language. By examining key terms in formulaic language research (e.g. collocations, idioms, lexical bundles, and phrasal verbs), the author provides 'a strong sense of what is actually meant by formulaic language' (37) and shows that formulaic language is not a unitary phenomenon. He concludes that 'the classifications and taxonomies are somewhat leaky' (50) and the distinctions between some categories are 'blurry' (50).

Chapters 4 and 5 move from basic aspects to more abstract areas of formulaic language research: mental processing and acquisition. Chapter 4 addresses a fundamental question in formulaic language research, which is whether formulaic sequences are 'stored and retrieved as wholes' (52). The author introduces key concepts in mental processing and models of language production (e.g. declarative and procedural knowledge, spontaneous speech, and long- and short-term memory) as well as relevant studies relating to language storage and processing (e.g. those addressing idiom processing and language-impaired individuals). These studies provide interesting evidence of holistic processing of formulaic sequences and the important role of frequency in the holistic storage and processing of formulaic language. Drawing on the discussion in Chapter 4, Chapter 5 investigates the role of formulaic language in first and second language acquisition. A review of the research into child first language acquisition and adult second language acquisition of formulaic language leads the author to two important conclusions. The first is that, in child first language acquisition, formulaic sequences are acquired as wholes first, and are later segmented and analyzed to develop linguistic competence. The other conclusion is that, in second language acquisition, 'adult learners tend to use formulaic sequences as communication and learning strategies' (75). The author also points out that a small number of studies have 'yielded some tantalizing and useful results' in child first language acquisition (67), while adult second language acquisition is still an area 'crying out for quality research' (67).

Chapters 6–8 deal with formulaic language research in spoken and written language. In Chapter 6, the author reviews three main areas of spoken language research: speech fluency, phonological characteristics, and speech pragmatics. He first summarizes the dominant methods for identifying formulaic sequences in spoken language. As for speech fluency, he focuses on Wood's (2010) study, which investigates the effect of formulaic language on three measurable aspects of L2 speech fluency: speed, pauses and hesitations, and length of runs. Wood shows that the use of formulaic language facilitates L2 speech fluency by reducing pauses and increasing length of runs. On the other hand, studies have not provided support for a connection between pragmatic competence and the use of formulaic sequences, partially due to the lack of corpus-based studies in pragmatics research. Chapter 7 moves from spoken language to written language research, focusing especially on academic discourse. By reviewing key studies and lists of most frequent formulaic sequences in academic written English based on frequency and range criteria (such as Simpson-Vlach & Ellis 2010), the author demonstrates the importance of formulaic language and deepens our understanding of formulaic language in academic discourse. More importantly, he suggests shifting the focus of formulaic language research from academic registers to non-academic registers, as well as from productive skills (i.e. speaking and writing) to receptive skills (i.e. reading and listening). These suggestions are likely to push the boundaries of formulaic language research beyond current trends to a much wider range of areas. Chapter 8 looks specifically at lexical bundle research – 'one of the most productive trends in formulaic language

research in recent years' (121) – which is also centered on academic discourse in written language. Lexical bundles (e.g. *the use of the*, *in the case of*) are usually defined as 'combinations of three or more words which are identified in a corpus of natural language by means of corpus analysis software programs, identified using a specific frequency cutoff, and present in a particular range of texts within the corpus' (122). By addressing issues relating to lexical bundle research, including definition, identification criteria, structural and functional characteristics, and potential pedagogical applications, the author identifies two important research gaps. First, although lexical bundles are important in academic writing, researchers have not yet reached consensus on how to teach them. Second, it remains unclear how lexical bundles work in spoken discourse.

Chapter 9 turns to the teaching of formulaic language, an under-researched area. A review of pedagogical intervention studies shows that interventions involving only techniques of 'text chunking' (where learners are required to highlight sequences in texts and their results are compared to native speakers' decisions) and 'input flooding' (where learners read abridged texts so that they have repeated exposure to target sequences) yield 'weak results' (142). In contrast, interventions requiring more cognitive engagement with the sequences seem to yield better results. For example, dictation activities help leaners notice the phono-logical characteristics (e.g. alliteration, rhyme, and assonance) of the sequences, which may have a mnemonic effect and facilitate the learning of formulaic sequences. As to the integration of formulaic sequences into teaching materials, the author points out that, among limited materials focusing on teaching formulaic language, some are based on intuition rather than corpus data, while others apply old-fashioned pedagogical methods such as present–practice–produce sequences. Finally, by summarizing a range of practical strategies and activities for teaching formulaic sequences, the author shows that there are many potentially fruitful means to facilitate the acquisition of formulaic language in the second-language classroom.

The final chapter summarizes what has been discussed in the preceding chapters and identifies future directions in formulaic language research. Most importantly, the author finds that 'the biggest issue in the study of formulaic language is the lack of a unifying theory to explain its nature and roles' (167). To bridge the gap, he suggests considering some areas of theory (e.g. Meaning–Text Theory, usage-based models, construction grammar, and lexical priming) to build a theoretical foundation for formulaic language research.

Overall, this book is a well-written synthesis of representative studies in for-mulaic language research, consequently making it a particularly useful research resource. First, it is highly informative in that it is abundant with theories, concepts, methods, and findings on a wide range of issues relating to formulaic language. Thus, researchers will greatly appreciate the book for its various literature reviews, in-depth discussion of methods, interpretation of findings, and thought-provoking questions and suggestions. Second, the wide range of issues covered by the book will give researchers extensive insight into this multidisciplinary field and fresh ideas for further research. Third, the critical

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reflections on the research limitations and possible gaps outlined in the book will provide an excellent starting point for researchers (e.g. psychologists, corpus researchers, and pragmaticists) who plan to conduct their own formulaic language research. In addition to being a research resource, with its plentiful pedagogical activities, the book can also be used as a pedagogical resource by language teachers.

Although the book is informative and helpful in many respects, one minor yet pervading feature may slightly reduce the pleasure of reading. In different chapters or sections, the same study (e.g. Simpson-Vlach & Ellis 2010) may be discussed repeatedly from various perspectives, leading to considerable repetition and overlap. That said, the book serves well as an introductory book for postgraduate students of applied linguistics and a reference book for new and established researchers.

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