tive journalists, but on her own interpretation; on the basis of this interpretive method alone, it is impossible to assess to what extent a journalist's audience designs work.

While it is regrettable that Ptashnyk has not managed to solve her classification problem and despite several instances of over- and misinterpretation, this book provides new insights into phraseological units. It is of major interest to scholars working in the areas of discourse structure, audience design, and lexicalization.

Martina Häcker
Correspondence address: martina.haecker@uni-paderborn.de

References

Burger, Harald. 2003. *Phraseologie: Eine Einführung am Beispiel des Deutschen*. Berlin: Schmidt.

Burger, Harald., Annelies Häcki Buhofer & Ambros Sialm. 1982. *Handbuch der Phraseologie*. Berlin & New York: Mouton de Gruyter.

Wray, Alison 2002. *Formulaic language and the lexicon*. Cambridge: Cambridge University Press.

Alison Wray: *Formulaic language: Pushing the boundaries*. Oxford & New York: Oxford University Press, 2008. 305 pp. ISBN 978-0-19-442245-1.

Wray's *Formulaic language: Pushing the boundaries* is, as the similarity of titles suggests, a sequel to her monograph *Formulaic language and the lexicon* published in 2002. Since then, she has assessed another host of empirical data which lead her to an informed discussion of follow-up questions such as: "Do we use formulaic language by default? What determines the level of formulaicity in language? How central is formulaic language in natural language learning by humans? How central should formulaic language be when modelling such learning for computers?" and "Does formulaic language constrain what we say and what we think?" (p. 5).

Wray considers boundaries to be "the real test cases" for hypotheses (p. 4); in order to locate them, trespassing is necessary. Therefore Wray goes far beyond unambiguous formulas but takes into account anything that appears to be a complex unit stored in the mind, including deliberately memorised sequences, oral narratives, performance scripts and even signalling systems such as racing car flags and military bugle calls (see p. 4). What is more, her metaphorical account of "pushing the boundaries" does not stop at revisiting our understanding

of the form and function of complex linguistic units, but applies just as well to methodological and theoretical issues. While she liberates linguistic theory from the remnants of underlying, but questionable logical assumptions (e.g. that complex units are necessarily built of smaller ones), no new theoretical boundaries are set up. Instead, the reader is repeatedly reminded of the (often ignored) interdependence between research question, theory and applied method. Thus, Wray avoids the fallacy of comparing apples with oranges when she discusses linguistic approaches from fields as different as generative theory, functional grammars, corpus-driven models, or most prominently cognitive approaches (e.g., Jackendoff 2002; Hunston and Francis 2000; Goldberg 2003, 2006). Quite to the contrary, being well familiar with different theoretical stances, she explores formulaicity with fearless freshness from any possible angle. By assuming that formulaic language is a default, and analytical segmentation and recombination only secondary, plausible alternative explanations are offered to account for a number of linguistic phenomena, such as creativity within formulaicity.

The book is structured into four parts. The first three parts provide the theoretical and empirical basis for the final discussion in part four. Wray starts out with a summary of her publication from 2002 making the reader familiar with the concept of Morpheme Equivalent Unit (MEU), amongst others. A MEU is defined as "a word or word string, whether incomplete or including gaps for inserted variable items, that is processed like a morpheme, that is, without recourse to any form-meaning matching of any sub-parts it may have" (p. 12). In other words, basic linguistic units are not characterized by an abstract formal criterion, but by function and storage principles. This entails firstly, that the lexicon is heteromorphic, i.e. larger units and their analysable subparts are stored side-by-side; secondly, that analysis of subparts only takes place if need be (Needs-Only-Analysis NOA); and thirdly, that MEUs enable the speaker to manipulate the hearer – formulas are rich in overtones and can thus direct the hearer's way of thinking. Wray admits that her account of mental storage and NOA is still speculative; she presents her hypothesis as a possible alternative worth considering and implicitly invites the reader to explore it further, as she often does throughout the book.

The second part examines the state of the art and discusses the contributions of different linguistic approaches. She refrains from lengthy general and evaluative summaries, but focuses her far-reaching account on those aspects which are effectively linked to her specific research. More than once, divergence is attributed to different research questions. The theoretical overview is complemented by a discussion of how to identify MEUs. Wray suggests a diagnostic approach which operationalizes the researcher's intuition. Criteria for identification known from former phraseological research – such as grammatical,

semantic and stylistic oddities, certain phonological patterns, usage preferences, association with specific situations or registers, inappropriate usage etc. – are not used for ontological and static identification, but as a checklist that serves to make the basis on which the researcher grounds her intuition more transparent. After all, if the agenda is "pushing the boundaries," it is better to attribute an MEU falsely and subjectively than to miss a single real one. A first application of this diagnostic approach is added (Namba 2008), affirming the reader's overall impression that Wray always tends to immediately check her methodological suggestions for feasibility and her theoretical hypotheses against empirical evidence.

Part three contains six case studies from fields as different as computer-aided communication, language learning, meaning construction strategies and memorizing techniques. Formulaic language is examined in terms of its various (potential) functions in and effects on communication. The study on a machine-translation program for oral interactions, TESSA, suggests that formulas help the program to be less susceptible to errors: if several synonymous formulas are stored, the computer is able to disregard non-salient differences. TALK, on the other hand, is a computer program for assisting speech-disabled people. The study is illuminating in two regards. Firstly, frequent types and loci of formulas in conversations are identified (e.g., perspective, topic/function, and interjections). Secondly, the study suggests that fluency is more important for conversing parties than accuracy. The two studies about beginning and advanced L2 learners suggest that memorized, functionally well-chosen formulas have obviously positive effects on retention, motivation and confidence. Observed errors of the beginners seem to indicate that adults can obviously not "bypass linguistic analysis" (p. 151). The study with the advanced L2 learners reveals that learner errors are not necessarily due to lack of competence; the propensity of risk-taking in expressing one's self grows with the degree of linguistic proficiency, i.e. questions of cultural identity can intervene (see also Pawley 1986). This observation ties in perfectly with the results of Wray's study on comedians, where again risk taking by using spontaneously assembled speech instead of memorized phrases is a feature of high professionalism, but also of naturalness. Effects of NOA, i.e. constituent blindness towards known formulas vs. constituent analysis to derive meaning from unknown formulas, are at the bottom of another study in part three: the "coonass court case" of linguistic abuse. Part three is both thrilling and entertaining thanks to the variety of the studies, their sometimes exotic (or even absurd) settings and the wealth of aspects to formulaicity depicted. Wray's capacity of making out the deeper implications of observed phenomena and establishing interconnections while strictly keeping her focus is impressive.

Part four then continues in a similar way, tying in even more empirical data into the profound discussion of her five main questions. Firstly, "do we use formulaic language by default?" Apart from some traditional arguments for default holistic processing, such as failing intuition in view of word frequencies, fossilized archaisms, etc., Wray approaches the question from an evolutionary angle; what if formulas were the phylogenetic starting point of language? (Her approach is, however, different from Croft's (2000) seminal publication on the topic). Studies in closed language communities, be it Maori or the jargon amongst aviation maintenance staff, seem to suggest that in a setting where almost all contexts are shared by all members, phonological units tend to refer to highly complex concepts. In other words, the cognitive view that words are mere pointers to concepts is taken to an extreme (see also Sperber and Wilson 1995; Croft and Cruse 2004). Using Thurston's (1988) terminological distinction between "esoteric" and "exoteric communication" (insider vs. outsider communication), Wray assumes that human language may have been fully holistic at first, as our ancestors presumably formed esoteric communities, i.e. communities of insiders. However, as soon as communication with outsiders became necessary, language needed to become more autonomous and NOA set to work. The outsider "look[ed] for patterns which [were] not there," whereas insiders may have become aware of where potential problems lie and regularized idiosyncratic complex forms (p. 211). Consequently, segmentation and analysis may be only a secondary feature of language, rather than constituting its central building blocks. If one puts this idea to its logical conclusion, grammar is possibly nothing but a chimera, i.e. a heuristics to flexibly construct and convey meaning independent of context. Wray sees her hypothesis as an alternative account to explain the puzzling discrepancy between the complexity of potential grammatical constructions and our limited processing capacity. Moreover, Wray points out that the formulaic default also offers a viable explanation of why formulas are a prime means of identity construction: insiders use their 'jargon' all along (and outsiders are free to "refuse" it).

The second question scrutinized in part four is, "What determines the level of formulaicity in language?" Arguing that it is mainly the speaker's assumptions about her interlocutor and her own communicative motives that influence the degree of formulaicity, Wray implicitly applies Sperber and Wilson's (1995) notions of "mutual cognitive environment" and the "principle of relevance" to her specific linguistic feature. A speaker apparently opts for a certain degree of formulaicity according to her judgements about the interlocutor's group membership and her assumed familiarity with the holistic expression. On the other hand, Wray cites numerous examples of people with language impairment and

of L2 learners who sacrifice creative flexibility for the sake of fluency. Thus the formulaic restrictions of native-speaker-like competence (Pawley and Syder 1983) could also be explained by fluency constraints. Wray concludes that "[i]n all situations, formulaicity and creativity were set in a specific, appropriate balance, and the challenge for the speaker was to maintain the optimal relationship between them" (p. 258).

The third question in part four is, "How central is formulaic language in natural language learning by humans?" and the fourth asks, "How central should formulaic language be when modelling such learning for computers?" According to Wray, a simplified notion of one right balance between analytic and holistic L2 learning is precluded. Therefore the focus has to be put on the situation, circumstances and purposes (as Wray keeps reminding the reader persistently). If the motivation is to be prepared for many different situations, and if learning cannot go hand in hand with learning new situations, teaching freely combining words and functional items may be the more effective strategy than inflexible, context-bound formulas. In view of computer programs, formulas obviously help cope with vagueness and restrict over-generation. If patterns are drawn from usage data, like in TESSA, a vast corpus tagged for propositions and a trainer might be an alternative to theory-led programs.

Finally, "Does formulaic language constrain what we say and what we think?" As might be expected, Wray starts her discussion with Orwell's famous vision. However, she also draws on more realistic settings, e.g. events in China during the Cultural Revolution. Although formulas may manipulate the hearer to think in a certain direction, they also always require "continuing access to novel thought" in their application (p. 261). It is therefore not so much thought, but the linguistic expression of thoughts that can be restricted by full reliance on formulas. Computer-aided communication and non-linguistic signalling systems demonstrate that unforeseen situations are difficult to deal with. However, new specific situations entail communicative creativity in the long run: there are such things as dialects in racing flag communication. Consequently, creativity can never be precluded completely.

"Perhaps one of the most striking consequences of the approach taken in this book is the extent to which even quite evident boundaries between phenomena have often dissolved in the course of discussion" (p. 277). Despite this seemingly blatant conclusion, Wray avoids the trap of leading the reader to the mere truism that everything is interconnected, (too) complex, fuzzy and vague anyway. Instead, the reader can enjoy a number of "light-bulb moments", such as the possible culture-boundedness of the concept "word" and its consequences, or insights into why learning idiomatic expressions poses problems to L2-learners. The loss of clear boundaries is interpreted as a natural consequence of viewing

formulaic language as a "linguistic solution to a non-linguistic problem", i.e. "the speaker's promotion of self" (p. 101).

Alison Wray's *Formulaic language: Pushing the boundaries* is a prime example of modelling a wide range of very different observable phenomena into a coherent, comprehensive and plausible picture. When a "grand picture" is drawn, details may not always be as carefully painted as the reader might wish. Some of her ideas are only sketched, some are slightly reductionist, e.g. the relation between proficiency and free combination, and some might not be free from circularity such as her scenario of language evolution, which presupposes that the first units were phonetically complex. However, on the one hand, she seems to be very well aware of this sort of shortcomings: her book concludes with a long list of topics for further research. On the other hand, Wray is always inspiring. She offers an intelligent and fresh approach to linguistic theory, which is put in a clear writing style and is very accessible thanks to the vast amount of well integrated examples and empirical studies. Moreover, thrilled by the wealth of angles from which her subject can be approached, she also grants the proper dues to those scholars who inspired her and refrains from fruitless dissociations. All this makes reading *Formulaic language: Pushing the boundaries* enthralling from beginning to end.

Sixta Quassdorf
Correspondence address: sixta.quassdorf@unibas.ch

References

Croft, William. 2000. *Explaining language change: An evolutionary approach*. Harlow: Longman.

Croft, William. & D. Allan Cruse. 2004. *Cognitive linguistics*. Cambridge: Cambridge University Press.

Goldberg, Adele. 2003. Constructions: A new theoretical approach to language. *Trends in Cognitive Sciences* 7(5). 219–224.

Goldberg, Adele. 2006. *Constructions at work*. Oxford: Oxford University Press.

Hunston, Susan & Gill Francis. 2000. *Pattern grammar*. Amsterdam & Philadelphia: John Benjamins.

Jackendoff, Ray S. 2002. *Foundations of language*. Oxford: Oxford University Press.

Namba, Kazuhiko. 2008. *Formulaic language in bilingual children's code-switching*. Cardiff: Cardiff University (Centre for Language and Communication Research) dissertation.

Pawley, Andrew. 1986. On speech formulas and linguistic competence. *Kansas Working Papers in Linguistics* 11. 57–87.

Pawley, Andrew & Frances. H. Syder. 1983. Two puzzles for linguistic theory: Nativelike selection and nativelike fluency. In Jack. C. Richards & Richard.W. Schmidt (eds.), *Language and communication*, 191–226. New York: Longman.

Sperber, Daniel & Deirdre Wilson. 1995. *Relevance: Communication and cognition*. Oxford: Blackwell.

Thurston. William R. 1988. How exoteric languages build a lexicon: Esoterogeny in west New Britain. In Ray Harlow & Robyn Hooper (eds.), *VICAL 1: Oceanic languages. Papers from the fifth international conference on Austronesian linguistics*, *Auckland*, 555–579. Auckland: Linguistic Society of New Zealand.

Wray, Alison. 2002. *Formulaic language and the lexicon*. Cambridge: Cambridge University Press.