Introduction - The New Energy Crisis : Climate, Economics and Geopolitics

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Introduction

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The selection of articles presented in this volume springs from the Third
Conference of the International Society for the Linguistics of English that took
place in Zurich, Switzerland, on 24–27 August 2014, and in particular from the
special theme of the conference "Building Bridges – Inter- and Intradisciplinary
Research." Thus, on the one hand this book aims at providing a cross-section of
current developments in English linguistics, and on the other it does so by trac-
ing recent approaches to corpus linguistics and statistical methodology, by intro-
ducing new inter- and multidisciplinary refinements to empirical methodology,
and by documenting the on-going emphasis shift within the discipline of English
linguistics from the study of dominant language varieties to that of post-colonial,
minority, non-standardised, learner and L2 varieties. Among the key focus ar-
eas that define research in our field today, we have limited our selection to four:
corpus linguistics, English as a global language, cognitive linguistics, and second
language acquisition. Most of the articles in this volume concentrate on at least
two of these areas and at the same time bring in their own suggestions towards
building bridges within and across sub-disciples of linguistics and beyond. In the
introductory sections that follow, we summarise contemporary advances in the
four chosen topics and highlight the links between the articles both within and
across the topics. The summaries of the individual papers are provided in the sec-
ond part of the introduction.

1.   Corpus linguistics

All the papers in our volume bring in methodological innovation to enlighten
our understanding of linguistic variation and change, by using corpus resources
in creative ways or by introducing/compiling new corpora, by applying statistical
methods, or by borrowing new methodologies, e.g., from cognitive linguistics or
second language acquisition.

Corpus linguistics has constantly widened and expanded its field of application, as Sampson and McCarthy note:

> Fifty years ago, corpus linguistics was an obscure and highly specialized minority activity. Since then, slowly at first but in the last ten years almost explosively, it has widened out to provide virtually every approach to the study of language, humanistic or technical, with new methods and new insights. By now, many agree with a widely quoted remark by Hoey in 1998: "Corpus Linguistics is not a branch of linguistics, but the route into linguistics."   (Sampson & McCarthy 2004: 4)

Since these lines were written, corpus linguistics has expanded further. The use of corpora has revolutionized many branches of linguistics, not least by means of bringing statistics, empirical methods and machine learning to the discipline. This has occurred most notably in computational linguistics, but also in psycholinguistics (Janda 2013), and possibly in linguistics as a whole, as the crucial role of frequency in grammaticalization and language processing has been recognized (Bybee 2007: 337).

At the same time, perceived gaps between the sub-disciplines are closing and bridges are being built, such as the one, for example, between corpus and computational linguistics. Anticipated by Tognini-Bonelli's (2001) description of corpus- or data-driven approaches, statistical modelling approaches are now reaching centre-stage in corpus linguistics and computational linguistics alike. Natural language processing and computational linguistics started off as engineering approaches, often with simplistic linguistic assumptions, and with a completely task-oriented perspective. But approaches have matured, computing power increased, and the size and range of corpora which are available today have made it possible to test ever more complex models and linguistic theories (for example, with a complex statistical model for which only a computer can keep track of all the factors). Further, they have made new areas of research possible, for example Learner Corpus Research, to which the contributions by Laitinen, by Wärnsby et al., by G. Schneider & Grigonyté and by Gilquin are dedicated.

In complex models which recognize the importance of frequency, it is uncontroversial that statistics are becoming the cornerstone. But Gries (2012) laments that university curricula in linguistics do not give enough attention to teaching statistical methods (Gries 2010: 123). Gries (2010, 2015) and others (e.g., Evert 2006) recommend the use of multivariate regression, mixed effect models and other advanced statistical approaches, and observe that they remain underused. This deficit is addressed in the current volume in the contributions by A. Schneider and by Krug, Schützler and Werner, who use mixed-effect regression (the latter also a phylogenetic data-driven clustering approach). A data-driven approach is also taken by Bruckmaier, who uses what she calls "a radical corpus-driven approach"

(122), in which separate word forms are used as the basic unit of analysis rather than grouped together under a lemma, and the categories arise from the data.

The contribution by G. Schneider and Grigonyté, on the other hand, uses a computational linguistics tool which heavily employs statistics, namely an automatic syntactic parser as tool and as model. The use of parsers for large-scale analysis with sufficient accuracy has become possible recently, as van Noord and Bouma (2009) point out.

2.   Global English

Recent advances in corpus linguistics and the use of statistics are also highly visible in the second focus area of the volume: variation and change in the language of people who regularly use English, whether as a first, second or foreign language (the latter groups greatly outnumbering the former) (see Crystal 2008). Since the 1980s, variation and change in English on a global scale has been the focus of many publications, e.g., in the *Varieties of English Around the World* series or in specialized journals such as *World Englishes* (typically with a more applied focus, including aspects of teaching and language politics) or *English World-Wide* (with a clear focus on sociolinguistics and the description of world Englishes). Over the years, the field has become an established part of English socio- and variationist linguistics, moving from the description of fairly well-known varieties to lesser-known varieties, e.g., English in Tristan da Cunha (Schreier 2003). Various scholars have developed theoretical frameworks for the study of world Englishes (such as Strevens' 1980 "world map of English" or Kachru's 1992 "three circles model"). More recently, Edgar Schneider (2003, 2007) proposed a dynamic model for the evolution of postcolonial Englishes that has made a significant impact in the field, as evidenced by the many publications it has spawned (see, e.g., the contributions in Buschfeld et al. 2014). Another milestone for the development of the field was the launching of the *International Corpus of English* (ICE) project in the 1990s: ICE has enabled detailed, corpus-based descriptions of different Englishes, increasingly also with a cross-varietal perspective (see, e.g., Hundt & Gut 2012).

Like other areas in English linguistics, the study of world Englishes has lately seen what we might want to call a "numerical" turn, i.e., variation is modelled in probabilistic terms (typically based on substantial amounts of corpus evidence). While for the longest time, investigation of second-language varieties of English and learner English was conducted in two separate fields, using separate frameworks and methodologies, scholars have started to bridge what has been called a "paradigm gap" and begun to work towards a rapprochement of World Englishes and SLA research.

The globality of English invites our readers to reconsider time and place parameters of language change on at least three different levels: a) inner circle: the idiosyncrasies of English among native English communities in a foreign country are addressed by Hirano & Britain; b) World Englishes: Ghanaian, Jamaican, Maltese, Puerto Rican, Singaporean and more are tackled by Krug, Schützler and Werner, Green, Bruckmaier, A. Schneider; c) English as a second or foreign language is used as data by Gilquin, Laitinen, Wärnsby et al., Schramm and Mensink, and G. Schneider and Grigonyté.

3.   Cognitive linguistics

One of the most important bridges built by this volume is from corpus linguistics to cognitive and psycholinguistics. Many of the articles are also linked by the third umbrella topic, the underlying topic of cognitive and psycholinguistic explanation, which has always been the holy grail and ultimate justification of linguistic research, all the way from Antiquity (Plato's concern was whether language was a man-made artefact, or supernatural in origin), German philosophy (Wittgenstein's *Sprachspiel* stresses the social aspects of cognition and that meaning presupposes cognition and use) via Chomsky's I-language as a biologically based feature of the brain (Chomsky 1986) up to current efforts of using computational models for language acquisition and processing (e.g., Lenci et al. 2014). It is increasingly being recognized that the scientific study of language needs a common effort by linguists, neuro-scientists and psychologists (Walenski & Ullman 2005: 328). Cognitive linguistics considerations unite contributions by Schramm and Mensink and G. Schneider and Grigonyté; corpus compilation is the focus in Laitinen and Wärnsby et al.

4.   Second language acquisition

Learner language (L2) offers an exciting bridging position between cognitive linguistics and corpus linguistics. L2 speakers are challenged precisely because they have not been exposed to as much data as native speakers, as Pawley and Syder (1983) point out. As such, they do not have the opportunity to acquire the same stock of semi-formulaic utterances as native speakers do.

> The stock of lexicalized sentence stems known to the ordinary mature speaker of English amounts to hundreds of thousands. In addition there are many semi-lexicalized sequences, for just as there is a continuum between fully productive

> rules of sentence formation and rules of low productivity, so there is a cline be-
> tween fully lexicalized formations on the one hand and nonce forms on the other.
> (Pawley & Syder 1983: 192)

The close correlations between frequency and expectations, for example semantic expectations associated with words, which have, e.g., been shown by Schulte in Walde and Melinger (2008), is another connection between psycholinguistics and corpus linguistics which has not been investigated enough to date. But the connections between the fields are increasingly being recognized. Gries (2012: 47) states that "cognitive approaches to language are not only compatible with much recent work in corpus linguistics, but also provide a framework into which corpus-linguistic results can be integrated elegantly." The current volume aims to deliver a contribution to this research trend.

Five papers in the present volume are concerned with L2 English, four of which rely on corpus linguistic methodology. These contributions push the boundaries of traditional distinctions and methods, present new resources, and shed light on areas which until now have remained underexplored. Gilquin, for example, builds a bridge to global English (e.g., Hundt & Mukherjee 2011) in her comparison of EFL (English as a foreign language) with ESL (English as a second language). Further, she disregards the usual connection of ESL varieties to Kachru's (1992) outer circle and EFL varieties to his expanding circle, by stating that Sweden is "widely recognised" as an ESL country. Laitinen, as well as Wärnsby et al. present new corpora that fill gaps in the current range of L2 English corpora available. Laitinen presents two corpora of advanced non-native English texts in a wide variety of genres, a resource hitherto lacking. Wärnsby et al. likewise introduce a new corpus resource, consisting of multiple drafts of student texts and feedback on these. The latter resource will enable researchers in linguistics, pedagogy and writing alike to gain a greater understanding of the process of acquiring writing skills in L2 English. Schramm and Mensink, by contrast, focus on comprehension rather than production and cast light on a little-examined area in learner English, namely learners' understanding of grammatical aspect in narratives. Finally, G. Schneider and Grigonyté show that learners (even advanced ones) have limited command of formulaic language, and their production in turn is more difficult to process both for native speakers and for automatic parsers. This suggests that the latter can be used as a model of human language processing, or at least provide clues about how humans do this, and why they make comprehension mistakes.

5.   The individual contributions

The first two contributions offer a global perspective on synonymous lexical items (e.g. HAVE GOT TO vs. HAVE TO, or *anticlockwise* vs. *counterclockwise*) which are traditionally associated with British and American English, respectively. Both contributions provide a statistical analysis of lexical usages in selected varieties of English, yet each reveals a different research focus: while Hirano and Britain study the role of accommodation and social networks in changes concerning traditional preference patterns observable in a group of English speakers in Japan, Krug, Schützler and Werner examine the relative distance between four varieties of English in terms of similarities and differences in lexical usage and uncover a move towards globalisation in second-language varieties. In "Accommodation, dialect contact and grammatical variation: Verbs of obligation in the Anglophone community in Japan", Hirano and Britain apply a social network approach to explore the intermediate stage in dialect contact, i.e., "the stage between fleeting accommodation and permanent linguistic change" (14). Focusing on changing usages of the verbs of obligation MUST, HAVE TO, HAVE GOT TO and GOT TO, of which HAVE GOT TO is predominantly associated with British English (BrE) and HAVE TO with North American Englishes, they examine on the basis of spoken data whether young speakers of particular varieties of English (BrE, AmE and New Zealand English) converge towards each other after prolonged contact with other English varieties in Japan where they are based as teachers or during their university studies. Hirano and Britain analyse the lexical choices of individuals at the beginning of the contact period and again after one year, and detect, for instance, a pattern of divergence between AmE and BrE speakers, the latter increasing their usage of HAVE GOT TO; however, when these BrE speakers have strong ties with Americans this increase is less pronounced. In a final step the authors consider grammatical contexts to account for the lack of convergence observed in their data.

In their contribution "Patterns of linguistic globalization: Integrating typological profiles and questionnaire data", Krug, Schützler and Werner investigate the differing usage of 68 lexical binaries such as *tap* and *faucet* in four varieties of English: BrE and AmE, as well as Maltese English (MaltE) and Puerto Rican English (PRE). By combining questionnaire-elicited acceptability ratings for these lexical items with aggregative analysis and visualisation through phenograms, and by using regression models, the authors provide new insights into the interrelatedness between, as well as lexical variation within, these varieties. They identify two clusters of lexical usage, with BrE and AmE at opposite poles, and MaltE and PRE situated closely to that variety by which they have been influenced historically and politically, i.e., BrE and AmE respectively. Furthermore, they observe that the second-language varieties are closer to each other in terms of lexical preferences,

and feature considerably more internal variation, than BrE and AmE. There is also evidence for apparent-time changes in MaltE and PRE with a move towards free variation and away from exonormative orientation, which the authors argue to be globalising tendencies – a process also observable in the first-language varieties.

Exploring a larger number of varieties of English than formed the basis of the first two contributions, Green concentrates on the global distribution of two lexical items and studies "The substitutability and diffusion of *want to* and *wanna* in World Englishes" by drawing on data from the *Corpus of Global Web-Based English* (GloWbE). He examines phonological, grammatical, semantic and pragmatic distribution patterns (including, but not restricted to, occurrence in clause-final positions; co-occurrence with specific modals or subordinating conjunctions; use for senses like "intention", "obligation" and "probability"; expression of speaker projection and advisory use) in order to ascertain in which contexts WANT TO and WANNA are used, and whether they are affected by any particular contextual constraints. In addition, Green provides a survey of the diffusion of these patterns in the twenty varieties of English represented in the corpus. He finds for instance that WANT TO and WANNA are indeed substitutable in many contexts, but that WANNA rarely occurs clause-finally in the middle of a sentence, and that WANT TO is preferred to express a sense of "obligation". Considering that WANT TO is attested in a wider range of usages in more varieties of English than WANNA, Green concludes that the diffusion of WANNA, which appears commonly in informal contexts, is still an ongoing process.

In her paper "Dialect contact influences on the use of GET and the GET-passive", Elisabeth Bruckmaier studies different forms of the highly frequent and often stigmatized verb GET, focusing particularly on its occurrence in passive constructions in Singaporean and Jamaican English. The methodological contribution made by the article is the use of a bottom-up corpus driven approach, in which the individual word forms are used as the basic unit of analysis, whereas in previous studies the forms have often been conflated under the lemma or left unspecified. Bruckmaier, in contrast, considers forms such as *get*, *gotten*, *gotta* as separate lexical items, and also takes into account two passive forms particular to Singaporean English the *kena*-passive and *give*-passive. For data, she mainly uses three ICE-corpora, ICE-Great Britain (ICE-GB), ICE-Jamaica (ICE-JA), and ICE-Singapore, contrasting the results occasionally with other ICE corpora as well as the *Corpus of Global Web-based English* (GloWbE). The results display Jamaica in the sphere of American English and Singapore in the sphere of British English.

Agnes Schneider investigates variation in marking future time in Ghanaian English, including the modal WILL and its variants *will*, *'ll*, *won't* and BE GOING TO and the variants *be going to* and *be gonna*. The corpus consists of 144,000 words of spoken conversations by Ghanaian speakers with a minimum of secondary school

education, recorded by the author during her fieldtrips to Ghana in 2002, 2008 and 2010. These are contrasted with data consisting of 180,000 words of spoken conversations of British English from the ICE corpus. The methodology consists of a multivariate mixed effect logistic regression model combined with discourse analysis. The results reveal BE GOING TO as considerably less frequent in Ghanaian English than British English, and that a number of constraints which affect its use, for example in British English BE GOING TO is almost as frequent as WILL with 2nd and 3rd person subjects, whereas in Ghanaian English WILL is preferred with all subjects. A. Schneider suggests a number of reasons for this, including (incorrect) association of BE GOING TO as a feature of American English, the influence of semantic systems of indigenous Ghanaian languages and most importantly for the present collection: a bridge to SLA, since the actual constraints that influence the choice of future time expressions by native speakers are not taught in a classroom setting.

In "Ongoing changes in English modals: On the developments in ELF" Laitinen explores new ways of investigating English in the expanding circle. Drawing on methods from historical linguistics and variationist sociolinguistics, he investigates how on-going grammatical changes are adopted in advanced non-native English. To this end, Laitinen and his colleagues are compiling two new corpora of texts written by advanced non-native writers of English in Sweden and Finland. Unlike existing non-native corpora, these corpora cover a wide variety of written genres, such as administrative emails, tweets, and professional blogs. Such a corpus design is timely since much English used in non-native contexts today is found in the form of online texts. Based on a comparison between data in these corpora and those in existing corpora of native English, Laitinen reports on a case study concerned with recent and ongoing changes in core modals (e.g., CAN) and emergent modals (e.g., HAVE TO). His research shows that while advanced non-native English follows the American trend of a decrease in the usage of core modals, there is considerable polarisation in non-native usage, i.e., many of the items which have undergone substantial recent increases or decreases in native use exhibit more extreme patterns in non-native use.

Wärnsby, Kauppinen, Eriksson, Wiktorsson, Bick and Olsson likewise present a new corpus of texts produced by L2 writers of English. The Malmö University-Chalmers Corpus of Academic Writing as a Process (MUCH) is being compiled in order to analyse the writing process and the influence of feedback on it. A particularly innovative aspect of this corpus lies in its inclusion of multiple drafts of texts. The project aims to include a large number of student papers of different performance levels in different drafts, as well as student metadata, and peer and instructor feedback. In this way, it will be possible to study how texts develop and change during the writing process and how feedback has an impact on the process,

which may result in pedagogical development of writing in higher education. The compilers plan to annotate the papers and feedback in a way that makes possible complex queries, and explain that they will create a search interface tailored to the needs of the writing research community. The latter point is of considerable significance since MUCH will be an open corpus available to, and designed to help collaboration between, scholars in writing, pedagogy and language alike.

Remaining within the field of advanced learner English, Gilquin's contribution examines "Discourse markers in L2 English: From classroom to naturalistic input". Gilquin hypothesises that as discourse markers are not widely taught, EFL learners will have problems with this feature of English, since their main exposure to the target language is in the context of the classroom. Gilquin suggests that even advanced learners will underuse (or misuse) discourse markers. Her hypothesis is tested via a comparison of the Louvain International Database of Spoken English Interlanguage (LINDSEI), a corpus of speech produced by advanced learners of English, with a similarly designed corpus of native (British) English, the Louvain Corpus of Native English Conversation (LOCNEC). The study reveals a general underuse of discourse markers (except for *well*, which is overused) and certain instances of misuse. By contrast, exposure to more naturalistic input, measured by stays in English-speaking countries, helps L2 speakers use discourse markers more appropriately. Gilquin also compares foreign versus institutionalised second-language varieties of English, finding that ESL speakers tend to better approximate native speaker usage of discourse markers in line with their higher exposure to naturalistic English.

The next chapter co-authored by Andreas Schramm and Michael C. Mensink opens the last set of two papers that bring together language acquisition and language processing. Theirs is a contrastive investigation of perfective simple past vs. imperfective past progressive and the role that aspect plays in narrative comprehension and in second language development. The aim is to compare native and non-native speakers of English in their processing of aspectual meanings in narrative texts. Do advanced learners process such meanings, are they able to do so without explicit instruction, and how much their performance differs from native-speaker processing of aspect? A finely designed experiment tests 25 L1 Arabic advanced learners of English and 32 native speakers of English in their comprehension of grammatical aspect and the effects it has on their working and long-term memory. The analysis of the results reveals that non-native readers, even at the advanced stage, differ greatly from native speakers, in that they do not seem to notice aspectual meanings and fail to re-instate them both during and after reading. Thus it appears that the aspectual input is not registered cognitively, and therefore the study suggests that implicit learning of aspectual meanings should seem unlikely. This crucial divide between native and non-native speakers comes

up again in the final chapter in which human comprehension is compared to computer parser confidence scores.

Gerold Schneider and Gintaré Grigonyté's is in many respects one of the most daring contributions in the whole collection, and also one that offers both a critical summary of statistical methods employed in linguistics today and a likely scenario of how and where to our field will be developing in the next years. They start out their survey with significance tests and three assumptions that are typically taken for granted by linguists: the assumption of random, "normal" distribution of data, the assumption of data independence from other factors, e.g., region from genre or gender from social background, and the assumption of speakers' free choice. All the three can be shown to have limited validity. Consequently the use of multifactorial predictive models (such as regression models) that can predict significant variables and the alternations between them is advocated as a highly reliable tool. The problem of free choice, or rather the lack thereof, at all levels of language, however, remains. Empirical research shows that formulaic language, expected continuations, and chunking always have processing advantages for native speakers. Language learners, however, acquire formulaic language relatively late. Their subtle failures, then, must produce unexpected features that increase processing load and ambiguity of utterances. This hypothesis is tested with three global language-processing models: surprisal, a surface-based word-sequence model, POS tagging, a pre-terminal surface model, and a syntactic parser, a hierarchical model, and eventually confirmed – model fits and parser scores are lower for L2 utterances. This is in line with previous studies on native-speaker comprehension of learner non-formulaic features. This leads Schneider and Grigonyté to a conclusion that automatic and human parsers work similarly and that, ultimately, a type of syntactic parser is the candidate for a psycholinguistics model.

Acknowledgements

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