Grammatical meaning and the second language classroom: introduction

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Abstract

This special issue assembles empirical work on second language teaching and learning from a generative linguistic perspective. The focus is on properties that constitute grammar–meaning interaction, that differ in the native and target language grammars, and that have not been highlighted in the pedagogical literature so far. Common topics address whether and how learners acquire grammatical meanings in the second language, including difficult misalignments between native and target-language constructions and functional morphemes. We propose that teaching and learning a second language can be enhanced by focusing on the relationship between grammatical forms and their meanings, as elucidated by contemporary linguistic theory.

Keywords

Grammatical knowledge, grammar–meaning interaction, implicit–explicit knowledge interface, generative linguistics, grammar instruction

Why grammatical meaning?

Acquiring core second language (L2) knowledge involves pairing the linguistic forms of the target language with meaning. Apart from the lexical words in a language, there are grammatical forms such as auxiliary verbs, verb and noun endings, pronouns, and topic markers—including word order permutations—that reflect grammatical meaning, in the

sense of tense, aspect, definiteness, doer of the verbal action, old versus new information, and so on. For example, the fact that, in Spanish, subject pronouns can be omitted when they are recoverable from the context is a grammar–meaning interaction. In this special issue, we consider the acquisition of grammatical meaning, along with learning the target words, to be fundamental to the L2 acquisition process. The collected papers thus focus, in different ways, on the meanings of grammatical morphemes in the context of the language classroom. For example, in relation to the English articles *a* and *the*, the paper by Lopez (2017) highlights the meanings of *definite* noun phrases and *specific* noun phrases, with a view to helping the L2 student realize that there is a difference between these two meanings, and that only one of them (definiteness) is captured in *a* and *the*. Or, in teaching French, Shimanskaya and Slabakova (2017) consider the utility of emphasizing that gendered clitic pronouns stand for inanimate things, not just for people, in contrast to gendered pronons in English.

Investigation of the relationships between syntax, semantics, and discourse has long been an important focus of formal linguistic research (e.g., Chierchia, 1998, 2009; Jackendoff, 1992; Krifka et al., 1995; Kuroda, 1988). More recently, research into L2 acquisition from a generative linguistic perspective (see below) has turned its attention to some of the grammar–meaning interface phenomena explored in formal linguistics, in order to address questions about L2 acquisition theory (Belletti, Bennati & Sorace 2007; Mai & Yuan, 2016; Marsden, 2008, 2009; Slabakova, 2003; Slabakova & García Mayo, 2015; Sorace & Serratrice, 2009; among many others). The output of this body of research includes findings that could have implications for the language classroom. For example, there is evidence that the specific domains involved in a given linguistic property (e.g., syntax and semantics, syntax and discourse, or syntax alone) affect how easy or difficult that property is

to acquire (Slabakova, 2008; Sorace, 2011). However, there has been little consideration of how theory-driven findings about grammatical meaning can be exploited in the language classroom. The present issue aims to address this gap by presenting a set of papers that each consider teaching implications for a given grammar–meaning property.

The properties under investigation in the different papers all relate to elements of language that typically receive at least some attention in the language classroom: articles (Lopez, 2017; Umeda, Snape, Wiltshier & Yusa, 2017), adjectives (Hirakawa, Shibuya & Endo, 2017), and negation (Gil, Marsden & Whong, 2017) in English, and clitic pronouns in Spanish (Leal & Slabakova, 2017) and French (Shimanskaya & Slabakova, 2017). The formal linguistic properties of these elements have all been investigated within the generative linguistic paradigm. In different ways, each paper integrates insights from generative linguistic research with questions about language teaching. Before turning to details of the specific papers, we will define how we conceive of "generative linguistic research" and "language teaching" in this volume, and we will also comment on research methods used in generative L2 acquisition research.

Generative linguistics is the study of linguistic structure, with a view to determining the fundamental building blocks of language, which are assumed to be universal and innate, and, as such, to constrain language acquisition and to provide the basis for the "generation" of every utterance. This school of linguistic thought began with Chomsky (1959) and has yielded a vast, fine-grained knowledge of how languages vary cross-linguistically, in addition to motivating decades of experimental research into native and non-native language acquisition and processing. The generative linguistic approach to language acquisition, which emphasizes properties of language, is often termed a "formal" linguistic approach, in contrast to a "functional", or "usage-based", approach (e.g., Tomasello, 2003). The latter

emphasizes development, and in which abstract grammatical knowledge is argued to emerge solely from developing language use rather than via the mediation of innate linguistic knowledge. In both approaches, input is fundamental to the acquisition process. The key controversy that separates the formal and functional approaches is the question of whether or not there is innate linguistic knowledge (Rothman & Slabakova, 2017; Schwartz & Sprouse, 2013). However, the purpose of this volume is not to engage with this controversy (see Shirai & Juffs, 2017, for a recent overview of this issue in the L2 acquisition context, and an introduction to a series of papers that engage with it), but to set it aside, and instead to draw on the wealth of detailed knowledge of properties of language that has arisen through the work of many linguists and to look at how this knowledge could be informative for language teaching.

Turning, then, to our conception of language teaching, we acknowledge the multidimensional nature of the language classroom, which is attested by the range of different questions addressed in classroom research, covering motivation, individual differences, sociocultural questions, teaching methods, and many other areas. Since our perspective comes from generative linguistic research, our focus is necessarily on properties of language, and therefore engages with the grammar element of language teaching and learning. In this volume, "language teaching" will invariably mean "grammar teaching" because the useful expertise that generative linguistic research can offer pertains to language structure. This should not be taken as a suggestion that generative linguistics has an agenda to promote grammar beyond other important concerns in the language classroom. In fact, generative linguistics itself, just like the usage-based approaches briefly presented above, does not have any kind of agenda for the language classroom, because its core questions are about the nature of language, not how to teach language.

Motivation of the present special issue

If the generative approach to L2 acquisition has no agenda for the language classroom, why this volume? We, as generative L2 acquisition researchers ourselves, see the answer in at least three directions. First of all, generative linguistics has as yet not communicated its findings widely enough beyond its own area. Published generative linguistic work is not easy to follow and understand without some specialized training. We consider this the responsibility of generative linguists and would like to suggest that we have been somewhat remiss in this respect (but see Whong, Gil & Marsden 2013 as an important first step in this direction). Secondly, knowledge of language is clearly a multifaceted experience, but implicitly knowing and using the target language grammar is undoubtedly its core. No amount of learning strategies or motivation can propel the learner to meaningful communication in the second language without acquiring words, grammatical meanings and their expressions. As generative linguistics approaches the L2 acquisition process with a highly-articulated theory of language, it can make an invaluable contribution to accomplishing the goal of L2 learning: communicating in the target language. Thirdly and most importantly, we believe that the approach has already yielded a lot of information that will be of interest and benefit to language teachers and learners. We hope that this volume will be a step towards sharing this knowledge base.

Research methods in generative L2 acquisition research

Generative L2 acquisition research uses a range of measures for investigation of L2 knowledge. Some are not dissimilar to classroom language activities, such as free and elicited production tasks in spoken or written format, and language comprehension tasks. Others are not found in the classroom, such as online processing tasks using self-paced reading or eyetracking methods, and acceptability judgement tasks (AJTs). The latter are

common in generative L2 acquisition research, including in the papers presented in this volume, so we will briefly introduce this method here. In a nutshell, an AJT involves asking participants to judge whether each sentence in the set designed for the study is grammatical, or acceptable, in the target language. Even if a research participant understands the sentence meaning, they have to consult their "gut reaction" to its acceptability. For example, the pair of sentences below have similar meanings and are generally understandable, but their acceptability diverges strongly:

1. Jill is likely to win.

2. *Jill is probable to win.

Judgements may be made on a binary *yes/no* scale, or, more commonly, on a Likert scale. Typically, participants are asked to respond to the sentence as quickly as possible, and the stimulus sentence is only presented for a few seconds, in order to facilitate instinctive responses rather than metalinguistic reasoning. Crucially, these tasks usually involve judging sentences that are ungrammatical in the target L2 such as (2) above, as well as grammatical sentences as in (1). This provides evidence about what an L2 speaker rules out in their L2 as well what they allow, thereby creating a fuller picture of the structure of the speaker's grammar than could be obtained from production data alone. Although AJTs do not lend themselves to use in language classroom activities for a number of reasons, including that they tend to present series of unrelated sentences rather than being constructed around a topic-based communicative goal, they have been shown to yield systematic evidence about participants' unconscious grammar knowledge (Loewen, 2009; Schütze & Sprouse, 2014), which in turn allows for development of cognitive theories of grammar and for understanding of the process of grammar building in an L2. Both of these outcomes are of potential value to language teaching.

In addition to AJTs, current generative SLA research uses a variety of meaning-probing tasks, such as Picture Selection Tasks, where two or three pictures are presented together with a test sentence, and the respondent is asked to choose which picture best describes the action in the sentence (Joo, 2003). The alternative is to present learners with two test sentences and ask which of them better describes a picture they see (Joo, 2003). Finally, Truth Value Judgment Tasks (Slabakova, 2003) provide a story and a test sentence, asking the participant to evaluate the truth of the test sentence (True or False) with respect to the story. Thus this framework of L2 acquisition investigation utilizes tasks and methodologies probing knowledge of form, meaning and language processing. A good selection of these research methods is exemplified in the articles of the special issue.

Introduction to papers

The papers in this volume can be divided into two sets: those that report on a teaching intervention study that aims to incorporate linguistic description from generative linguistic research into grammar instruction (Hirakawa et al., 2017; Lopez, 2017; Umeda et al., 2017) and those that combine experimental L2 acquisition work with pedagogically oriented research, including a survey of the presentation of linguistic properties in textbooks (Gil et al., 2017), a survey of language teacher views and investigation of classroom input (Leal & Slabakova, 2017), and exploration of materials development (Shimanskaya & Slabakova, 2017).

Intervention studies

Hirakawa et al. (2017) report on two small-scale experimental studies that, together, investigate the effectiveness of explicit instruction, natural exposure, and input flood in facilitating knowledge of restrictions on adjective ordering in L2 English by Japanese

speakers. Their starting point is two observations ensuing from generative linguistic research (Cinque, 2010; Laenzlinger, 2005; among others). First, cross-linguistically, there are two types of adjectival modification of nouns: direct modification, where an adjective phrase is directly adjoined to the noun; and indirect modification, where the modifying adjective is contained within a relative clause. Both of these can be exemplified in English: *a big cat* versus *a cat that is big*. However, Japanese (among other languages) has only indirect modification, whereby adjectival modifiers are analysed as relative clauses. Second, when languages have the option of direct modification, an adjective order hierarchy based on semantic categories applies in multi-adjective constructions. Thus, in English, *a beautiful yellow flower* sounds natural, but *a yellow beautiful flower* sounds odd, because non-absolute adjectives, such as *beautiful*, must come before absolute adjectives, such as colour. Within these broad categories of non-absolute versus absolute, still further ordering restrictions apply. By contrast, languages with only indirect adjective modification do not exhibit restrictions on the order of adjectives. Hirakawa et al. find that, prior to any intervention (form-focused instruction, a three-to-five week study abroad period, or input flood), their low-intermediate level learners do not demonstrate any knowledge of adjective order restrictions. Following the interventions, only those who received explicit instruction demonstrate knowledge that non-absolute adjectives precede absolute adjectives (while still lacking knowledge of ordering within those broad categories). Hirakawa et al. conclude that it would be beneficial to include increased instruction and practice on adjective order in multi-adjective constructions, and that this could be relatively easily realised at any point where adjectives are used in instruction materials.

The two following studies by Umeda et al. (2017) and Lopez (2017) both test teaching interventions that focus on aspects of determiners in English, but with less

promising findings than Hirakawa et al. Umeda et al. start with a discussion of the debate about whether primary linguistic data in the form of comprehensible input that language learners are exposed to is sufficient for acquisition of any grammatical property. Scholars have acknowledged that there may be some properties for which such naturalistic exposure could be insufficient because it is very rare. These would be the properties where explicit instruction might be needed. This is precisely what Umeda et al. (2017) set out to investigate. They take definite generic noun phrases and indefinite singular generics as cases in point. The former construction (e.g., *The pelican is protected as a species*) refers to "natural kinds", while the latter (e.g., *A coat is necessary in winter*) describes temporary states. Note that switching the articles on the subject of the two example sentences would not be felicitous. The goals of the study were to find whether linguistics-based explanations help with the acquisition of this subtle meaning contrast and whether any learning gain is sustained over time. Indeed, the instructed group improved their performance on the meanings at early post-tests, but this advantage was lost by the delayed post-test 15 months after intervention. The researchers argue that the explicit instruction did not bring about a change in the learners' underlying knowledge. However, keeping in mind that these constructions are rare, one can also surmise that explicit instruction needs to be complemented with implicit exposure in the long run, for the property to be acquired properly. This process may take years indeed.

This somewhat pessimistic conclusion is echoed by the findings of Lopez (2017). Unlike Umeda et al., Lopez deals with the basic meanings of articles: definiteness and specificity. It is a truth universally acknowledged that learners of English coming from languages without articles find them extremely difficult and continue to make errors well into advanced levels of proficiency. In order to address this issue, Ionin, Ko and Wexler

(2004) proposed the Fluctuation Hypothesis. In their view, learners do not know whether English articles express definiteness (familiarity) or specificity (referring to a specific object/person known to the speaker). During early acquisition, it is proposed, learners fluctuate between the two meanings. In a sense, learners endow English articles with a meaning they don't express, namely, specificity. Lopez predicates her intervention study on this L2 acquisition hypothesis. She offers specially designed linguistics-based instruction to a group of Chinese learners of English and "typical" textbook-based instruction to a comparison group. The experimental instructed group did not show improvement over time. It appears from the results of this study that instruction on specificity was not beneficial for low-intermediate Chinese learners of English. Although these are negative results, they are worth sharing. It is also possible that this particular instruction, teaching specificity to inform usage of definiteness, is too complicated for the low proficiency learners in this study.

Looking at these three studies together, it is interesting to note the meaning-based difference between adjective-ordering on the one hand, and articles on the other. Specifically, adjective-ordering involves the interaction of lexical semantics and syntax, whereas article use involves a three-way interface of syntax, clause-level semantics, and discourse. As touched upon above, generative L2 acquisition research has yielded evidence to suggest that phenomena at the syntax-discourse interface in particular are particularly challenging (Slabakova, 2008; Sorace, 2011). Further teaching intervention research in which the linguistic domain of the properties taught is a variable could shed light on this.

Studies combining a theory-driven experiment with pedagogy oriented research

The article by Gil et al. (2017) brings up the issue of negation and how it is taught. In natural

languages, there are some special words such as English *any* that have to appear embedded under negation in order to be acceptable. For this reason, *any* is known as a "negative polarity item", meaning that it depends on negation for its felicity. But English has two types of negation: grammatical negation expressed by functional morphemes such as *not*, and lexical negation embodied in words such as *seldom* and *hardly*. Language learners have to know that both types of negation allow the use of *any*. The experimental findings reported in the article show that the majority of learners are only sensitive to cases where *any* is under grammatical negation but not to cases where lexical negation makes *any* acceptable. In addition, a textbook survey reveals that lexical negation is not covered in textbooks at all. A clear implication and recommendation arises from this article: textbook presentations of negation could and should incorporate lexical negation and highlight that it shares core meaning with grammatical negation. The instruction of negative polarity items such as *any* would be a good opportunity for such innovation.

Leal and Slabakova (2017) also focus on a structure that is not typically covered in textbook presentations, namely clitic left dislocation (CLLD) in Spanish. This is a topic–comment structure, in which a topicalized object noun phrase is moved from its canonical post-verbal position to the beginning of the sentence, and is doubled by a clitic pronoun, as seen in (3), where *los* 'them' is essentially a repeat of the moved (or, left-dislocated) object:

3. Esos   apuntes, no   los   encuentra.

    Those   notes   NEG   them   find.3SG

    "[She/He] can't find those notes."

Just as with topicalized structures in English (e.g., *That man I cannot abide*), a topicalized object in Spanish is felicitous only in certain discourse contexts. Moreover, in Spanish, insertion of the clitic occurs only when the left-dislocated noun phrase is specific (i.e., in (3)),

"those particular notes", rather than "some unspecified notes"). Use of this construction is thus governed by the interaction of syntax, discourse, and semantics. Leal and Slabakova (2017) note that CLLD is frequent in everyday Spanish, and that previous research has shown that, by very advanced level, learners of Spanish are able to acquire the construction, with a correlation between number of months of study abroad and proficiency on CLLD. However, Leal and Slabakova's surveys of teacher knowledge and textbook presentation of CLLD reveal that the structure is not covered in classroom instruction. Moreover, their analysis of three Spanish-medium language classes showed that incidence of CLLD was less frequent in this environment than in a non-classroom Spanish corpus. They argue that, taken together, these findings provide motivation for increased use of authentic materials in the classroom, because authentic input via study abroad led to acquisition of this grammar-meaning phenomenon.

Pronouns are also the topic of the final paper, Shimanskaya and Slabakova (2017). The authors address an acquisition problem for English-speaking learners of French caused by a mismatch between French and English third person object pronouns at the level of semantic features. The mismatch relates to English categorising object pronouns in terms of animacy while French categorises them in terms of grammatical gender. Thus, English *him* and *her* are used for animate (usually human) nouns, and *it* is reserved for inanimate nouns. In French, on the other hand, there is no pronoun that is just for inanimate nouns: instead, *le* means "him" or "it" when the noun has masculine grammatical gender, and *la* means "her" or "it" when the noun is feminine. Shimanskaya and Slabakova refer to L2 theory, which predicts that English speakers learning French will initially attempt to divide up French object pronouns in terms of animacy, due to influence from English. They report on an experimental study whose findings from beginner learners support this prediction. From

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this, they argue that, in a foreign language classroom where the learners share the same first language (L1), consideration of grammatical morphemes, such as pronouns, at the level of semantic features can provide utility for the classroom in a number of ways. It allows for fine-grained prediction of where difficulties will arise, and offers opportunities for development of teaching materials that are customised to the specific semantic mismatch.

Conclusions

The contribution of this special issue is to offer a fresh perspective on some elements of grammar that are often covered in language teaching, such as pronouns, articles, negation, and adjective ordering, by approaching them through the lens of grammatical meaning and the background of generative linguistic research. We acknowledge that the volume by no means provides a blueprint for applying linguistic research in the classroom. Indeed, the results of the three intervention studies show only limited success for the particular instruction employed, based on materials informed by formal linguistic research. However, we hope that the volume shows the potential for consideration of linguistic research on grammatical meaning in the context of grammar teaching and textbooks. There is clearly scope for further research by language teachers and linguistic researchers in collaboration, into how to best exploit linguistic findings. A starting point could be to test the proposals from the papers that make recommendations for teaching material innovation.

Inherent in an attempt to bring knowledge from formal linguistic research to the language classroom is an assumption that this knowledge could affect learners' unconscious development in their L2. The question of whether there is or is not an interface between language instruction and the development of unconscious language knowledge is a topic of ongoing debate (see, e.g., Ellis, 2015; Whong, Gil & Marsden, 2014). The suggestions for

teaching materials made in the papers by Hirakawa et al., Gil et al., Leal & Slabakova, and Shimanskaya and Slabakova, all convey an optimism that unconscious L2 knowledge may be affected by explicit instruction. In the case of most of the properties treated in these papers, knowledge of the properties under investigation is evident by advanced proficiency levels, and the authors are suggesting that explicit instruction could speed up and make instruction more efficient.

However, if it turns out that unconscious L2 knowledge is, in fact, impervious to instruction—along the lines that Umeda et al. (2017) conclude—then it would be all the more crucial that instruction materials are as accurate as possible in terms of their linguistic descriptions. This is because there is nothing to stop a learner from making use of their explicit, metalinguistic knowledge of grammar rules during communication in their L2. Therefore, if learned rules conflict with actual use, performance may be impaired, as argued by Rothman (2008) and Valenzuela and McCormack (2013) (among others). As Lopez (2017) shows, it is by no means straightforward to create teaching materials that are both as fully linguistically accurate as possible and also suitably accessible for the learners. Nonetheless, as language learners would be well served by such an endeavour, we conclude with an exhortation for further collaboration by language teachers and linguistic researchers, to make findings from generative linguistics available for language teaching.

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