Publications and Research   City College of New York

2015

Rule, Pattern, and Meaning in the Second-language Teaching of Grammar

Joseph C. M. Davis
CUNY City College of New York

Rule, pattern, and meaning in the second-language teaching of grammar

Joseph Davis[*]

Abstract

This is a position paper aimed at the interface between meaning-oriented linguistics generally and instructed language-learning. The alliance between usage-based linguistics and form-focused instruction in language teaching stands to benefit from advances on both sides: a recognition by theoretical linguists that systematic meanings of grammatical forms are responsible for observed, emerging patterns of usage; and a greater willingness on the part of advocates of the teaching of grammar to engage in focusing upon individual, meaningful grammatical *forms*, as distinct from unanalyzed, holistic *form*. Explicit knowledge of forms and their meanings can usefully guide the practice of teachers and, potentially, the performance of learners. Pending the wide availability of practical analyses, teachers' and learners' focused grammatical inquiry on authentic discourse can yield useful insights about both language structure and discourse.

---

[*] Email: jdavis@ccny.cuny.edu

1. Introduction

Grammar is uniformly meaningful, and the meanings of grammatical forms are responsible for the patterns of those forms that are observed in usage. The second-language teacher would benefit from knowing not just the patterns of the forms but the meanings of the forms that are responsible for the patterns. In this way, the teacher can guide the learner in making a choice that is felicitous whether it contributes, in any given case, to a more frequent or a less frequent pattern.

Within a pedagogical approach in which attention is paid to grammatical form as a contributor to communication, teachers need to know not only patterns of usage – which combinations of forms are frequent and which are infrequent – but also what grammatical *meanings*, signaled by what grammatical *forms*, are responsible for those patterns. A teacher's knowledge of usage-based tendencies – which when extremely strong have been called *rules* – can be helpful, but, uninformed by the causes behind the effects, such knowledge remains merely descriptive, not explanatory. It looks backward, summarizing a corpus rather than motivating production. Worse, such limited knowledge systematically builds error into production. Rather than providing guidance for choice, knowledge of patterns alone in effect precludes choice by implicitly prescribing across the board the more frequent combinations of forms even when these are communicatively infelicitous. By contrast, analytical knowledge of the meanings of forms can consistently inform the choice of which form to use, regardless of how frequent a given combination may be. More linguistic research is needed to identify exactly what the grammatical forms are, and what they mean.

2. In instruction, grammatical form is attention-worthy

At least since Schmidt (1990) and Terrell (1991), attention to grammatical form has been recognized as necessary if learners are to move beyond a fossilized intermediate communicative competence to a more advanced level of grammatical accuracy. (Nassaji and Fotos 2011 summarize of the history of grammar instruction, with references to research.) Grammatical accuracy is valuable both for academic purposes and for smooth social interaction with target-language speakers, for successfully presenting one's identity in a community that judges members partly on the basis of linguistic usage (Larsen-Freeman 2003). Learner attention to grammatical form – or *noticing* through cognitive effort – can be facilitated through form-focused instruction (FFI).

Various interventionist techniques have been grouped under the umbrella of *consciousness-raising*, that is, making the learner aware of the existence of grammatical form. (Doughty and Williams 1998, and Hinkel and Fotos 2002 are widely used compilations of such research.) Within this broad grouping there is an inclination, consistent with functional linguistics, to view grammar not as a formal, rule-governed structure on which meaningful words are hung but as itself contributing to the communication of meaning (cf. R. Ellis 2002, 23). Within FFI, grammar is typically viewed, much like lexicon, as an instance of meaningful form. "A difference in form always spells a difference in meaning or use" (Larsen-Freeman 2003, 44).

As a corrective to a non-interventionist "focus on [holistic] meaning," a focus on grammatical *form* (Focus on Form, or FonF) was originally advocated in the context of meaningful communication – essentially, an effort to make learners aware that there *is form* somewhere within the communication (Long 1991). It was emphasized that this

should be a focus on holistic *form*; any analytical focus on particular grammatical *forms* (FonFs) was discouraged. The latter was associated with traditional grammar teaching and so tended to be disparaged. But that distinction has not always been insisted upon (e.g., DeKeyser 1998) and, what with the variations on FonF that have ensued, the distinction appears to be less insisted upon today (e.g., in Nassaji and Fotos 2011). In this paper, usage of the term FFI is intended to be broadly defined.

The relaxation of the distinction between holistic *form* and individual *forms* resembles a relaxation (e.g., in Larsen-Freeman 2003) of the distinction between conscious *learning* and unconscious *acquisition*, which had been emphasized – if not universally embraced – since Krashen and Terrell (1983). With these advances, the time now is right for teachers to be prepared to focus on grammatical forms as signals of meanings within a communicative context. And so the time is right to look towards meaning-oriented linguistics for the actual identification of grammatical signals and their meanings.

3. Form-focused instruction and usage-based grammar

The ascendancy of FFI in the field of second language acquisition (SLA) is compatible with the growing view in the field of theoretical linguistics that language is a part of general, "embodied" human cognition (Langacker 1987; Tyler and Evans 2003), a "complex adaptive" (N. C. Ellis and Larsen-Freeman 2009) or "dynamic" (de Bot, Verspoor, and Lowie 2005) system with an "emergent" (Hopper 1987) and "usage-based" (Bybee 2001) grammar of symbolic "constructions" (Bond and Goldberg 2009). In this view of language, speakers interacting in a community base their linguistic behavior at any one time upon, among other things, past linguistic experience. As a result, the structures of language, far

from being static and given *a priori*, "emerge" from usage and so are ever changing, both within the individual and in the community. (The role of social and cultural factors, in addition to "embodied" space, is emphasized in Cognitive Sociolinguistics; e.g., Pütz, Robinson, and Reif 2012.) This compatibility between recent practice in SLA and recent work in theoretical linguistics is made explicit and is explored from many angles in Robinson and N. C. Ellis (2008).

This dynamic view of grammar stands in direct opposition to the idea of a static, innate Universal Grammar (UG) that is "autonomous" of meaning and unconcerned with usage in particular speech communities (Chomsky 1965). An innate UG would precede the individual's experience in the world. Its core principles would reside in a special language acquisition device (LAD) in the brain. That view of the nature of grammar was compatible with a non-interventionist, purely communicative teaching approach for second language. Since, in one still very influential view (Chomsky 1957), syntax had nothing to do with meaning anyway, the teacher and the learner could safely ignore grammar and focus on communication through lexicon and pragmatics. If one was concerned at all with grammar, one could hope that certain parts of the LAD would remain operative post-puberty, and so input alone would be adequate for the acquisition of the target grammar, as in the case of first language.

A usage-based or emergent grammar also stands in opposition to a top-down, traditional, prescriptive school grammar, upon which Grammar Translation was based. And it stands in opposition to the kind of static structuralist grammar upon which Audiolingualism was based.

Usage-based linguistics is not and need not be, however, antagonistic to the synchronic analyses of particular grammatical signals and meanings, such as that offered by the Columbia School, to be illustrated later in this paper. For discussion of the compatibility and differences between Cognitive Grammar and Columbia School, see Kirsner (2004), Langacker (2004), and Huffman (2012).

The compatibility between FFI and usage-based grammar rests upon the following line of reasoning: First language acquisition amounts to a "sampling problem," wherein the language learner, just as in general cognition, estimates norms of usage on the basis of the input to which he is exposed. The learner does not, however, "merely conform" but instead also innovates, and thus language changes. The uninstructed learner of second language behaves similarly except that here the already learned patterns of the first language can interfere in various ways with the acquisition of the second language, resulting in overgeneralization or in avoidance of unfamiliar patterns. Knowledge of the first language can also stand in the way of the learner's perception of phonetically non-salient forms in the second language, especially such bound morphemes as English -s and -ed. It is at this point that intervention by the teacher, in some version of consciousness-raising, enters the picture. The teacher needs to draw the learner's attention to a form that is not being perceived, or is being avoided, if the learner is to move beyond a "Basic Variety" of the target language that suffices for rudimentary communication (Beckner *et al.* 2009). Of course, even basic communication demands more than just words: the words have to go in some order.

4. The problem of identifying attention-worthy grammatical form

Naturally, acquisition research and linguistics must go hand-in-hand, since "in order to analyze how language is learned, acquisition researchers need to know the exact nature of what is learned" (Niemeier and Achard 2000, 2). Much work on the intersection between acquisition and usage-based, constructionist, or cognitive linguistics has built upon first-language acquisition and so has focused on uninstructed "naturalistic" second-language acquisition, in which factors such as a form's frequency and saliency, and a meaning's prototypicality, play large roles (e.g., Eskildsen 2008; N. C. Ellis and Ferreira-Junior 2009a, 2009b; chapters in Robinson and N. C. Ellis 2008; and chapters in N. Ellis and Collins 2009).

There is widespread agreement that, in second-language contexts, teachers need to intervene, explicitly or implicitly, to direct learners' attention to grammatical form and to sensitize learners to the role that grammatical form plays in communicating meaning (see, e.g., N. C. Ellis and Cadierno 2009; Robinson 2011; Yuldashev, Fernandez, and Thorne 2013). One illustration of this which also involves a recognition of cross-linguistic differences (as opposed to UG), as well as attention directed at particular *forms*, is to be seen in De Knop and Perrez (2014).

But it is hard to pay attention to what one cannot identify. And the literature is far from consensus on what exactly the grammatical forms *are* and even farther from consensus on what exactly they *mean*. Between the two logical extremes that a morpheme (such as *-s* or *-ed*) can have a meaning and a sentence can have a meaning, is the question of the status of *constructions*, including "multi-word units" (MWUs).

Yuldashev, Fernandez, and Thorne (2013) point out that the MWUs that supposedly make up "formulaic language use" have been viewed as either "fixed" or "semifixed" and

made up of both "function" and "content" words. Thus, the identification of MWUs has been problematic. These authors endorse a recent shift in thinking, in which there is no distinction between meaningless grammar and meaningful lexicon but in which the two are "fused." Learners are seen as gradually abstracting "chunks" so that what was initially perceived as unanalyzable eventually gets analyzed and thus is ready for creative use.

To illustrate the indeterminacy of form: Beckner and Bybee (2009) address objections to their view that "complex prepositions" such as *in spite of* should be assigned a unitary constituent status, with its attendant formal and semantic properties, over and above the status of the individual words that make up the sequence, and contrary to the traditional syntactic analysis: [in [spite [of [X]$_{NP}$]$_{PP}$]$_{NP}$]$_{PP}$. Thus, consensus is lacking as to whether or not *form* in language includes constructions larger than the morpheme and smaller than the sentence; consequently, consensus is lacking as to the meanings that are encoded in any given utterance, as opposed to whatever communicative effects are inferred with the help of context.

Even when the identification of a form is uncontroversial, its meaning may be "opaque" (DeKeyser 1998). The form-meaning connection (FMC) may appear to be "complex" for reasons that include low "transparency" of the meaning (VanPatten, Williams, and Rott 2004). This is particularly problematic if – as often in the literature – traditionally favored notions are relied upon, as they tend to be (e.g., "declarative" and "interrogative" in Eskildsen 2008; "agent" and "recipient" in Bond and Goldberg 2009; "impersonal" in Achard 2010). See Diver, Davis, and Reid (2012) on the "stickily tenacious" nature of traditional categories. For instance, if *-ing*, as in *I'm cooking risotto tonight*, means something like 'process,' then what to say about the simple tense of *Here's how I cook*

risotto: Doesn't *cook* here refer to a process? As Celce-Murcia (2002) advises, it is necessary to recognize that, in addition to a form's meaning – whatever that may be – "contextual knowledge" and "discourse knowledge" are also involved in a choice. But even that may not be enough. If we add to the traditional assumption that English *a* means something like 'indefinite' the recognition that "Speakers make different presuppositions about what listeners know and share with them," then even so simple an utterance as *I still say that's a nice scarf you've been wearing all week* can be puzzling. The scarf would appear to be not only definite but also discourse-familiar.

Since the sheer number of constructions, or MWUs, is "vast and diverse," and therefore "daunting" to the learner, it would be an improvement, certainly, if one could show that constructions are "motivated" rather than arbitrary (Boers, Eyckmans, and Stengers 2006). For instance, what if the construction of subject-verb agreement were motivated? See below.

As a consequence of this vacuum in linguistic analysis, teachers are left to muddle through with no explanation for learners at all ("Just because"), or to provide a patently inadequate "rule of thumb" ("We usually do it this way"), or – worst but perhaps most commonly – to fall back upon a traditional account that we all know to be inadequate ("That's the rule, but there are many exceptions").

5. Grammatical form is meaningful

There are grammatical forms that everyone, from linguists to language teachers, views as being meaningful. Here it is easy to justify talking about the learner as having a "choice" (Larsen-Freeman 2002). Among such forms are the tenses (1a, b):

1a. We *walked* five miles (yesterday).

1b. We *walk* five miles (every day / tomorrow at the walk-a-thon).

Within the domain of time, one form, *walked*, signals the meaning PAST, while the other,

walk, signals any other time, call it NON-PAST.[i]

Such relation between grammatical form and meaning notwithstanding, it is still

commonplace for grammar to be viewed as a set of rules for forms, which by strict

definition do not involve choice.[ii] Among such forms are typically the singular and plural

forms of the verb, apparently reflexes of a rule of subject-verb agreement (2a, b). Indeed,

belief in a construct of subject-verb agreement is so widespread – from formal linguistics to

the language classroom to the prescriptive judgements made by educated speakers – that it

can serve here as a heuristic to illustrate how a theoretical dispute compromises practice.

2a. Our kid *plays* soccer.

2b. Our kids *play* soccer.

In the traditional account, such sentences do not involve choice between verb forms;

rather, each sentence has its respective verb form because of a rule of subject-verb

agreement. The first sentence has singular *plays* because of the singular subject *kid*; the

second sentence has plural *play* because of the plural subject *kids*. Once the number of the

subject is chosen, the number of the verb is automatically determined (alternatively, once

the grammatical number of the sentence is chosen, the grammatical number of the subject

and verb are automatically determined). In this view, rules are essentially exceptionless arrangements of structural elements of sentences. Such a view of linguistic structure existing apart from meaning is not limited to traditional or pedagogical grammars but is found too in scholarly research either consonant with or at least influenced by a UG-type competence grammar (e.g., R. Ellis 2002).[iii]

To accommodate cases where the formal agreement pattern does not hold, a careful traditional or even modern functionalist treatment would note exceptions. For the rule of subject-verb agreement, exceptions would involve collective nouns and words that do not distinguish singular and plural. Thus, at least in U.S. English, the following would be deemed acceptable or target (3, 4):

3a. Our music faculty *plays* an important role in the school.

3b. Our music faculty *play* instruments from around the world.

4a. Most (of the steak) *looks* done.

4b. Most (of the steaks) *look* done.

In such cases, some provision might be made for a role for meaning, though likely camouflaged under what looks like a formal sub-rule: (3) When a morphologically singular noun (*faculty*) is used in a collective sense, it takes a plural verb (*play*). (4) Some words (*most*) have the same form in the singular and the plural. In this way, the verb form is ostensibly kept dependent not on its own meaning but on something else (the subject), and

so we preserve the illusion of having a mechanical rule that works while describing the variability in subject-verb patterning that is observed.[iv]

Still other components of grammar, such as English subject-verb order (SV vs. VS), adjective-noun order (AN vs. NA), and verbal aspect (complex vs. simple tenses), appear to fall somewhere in between on this scale of meaningfulness. In each case, among the alternative forms involved, we might sense some difference in communicative effect, but we would be hard-pressed to say just what that difference is, so we would be unable to furnish either a rule or advice for meaningful choice.

We suffer, then, under a cognitive dissonance with respect to grammar. Is it meaningful or not? It is.

6. Rules are just strong patterns

Though many teachers may uncritically believe in rules as the obscure but constant reality of language structure underlying observed, variable usage, there is in fact no usage-based justification for a distinction between rules and patterns or tendencies.[v] In actual usage, combinations of grammatical forms exhibit a *range* of strengths of association, from near-perfect 100% correspondence – the ideal reflection of a linguistic rule – to a 50-50 split – the proverbial coin toss. Figure 1 illustrates, with eight representative combinations arranged in descending order of strength of association.
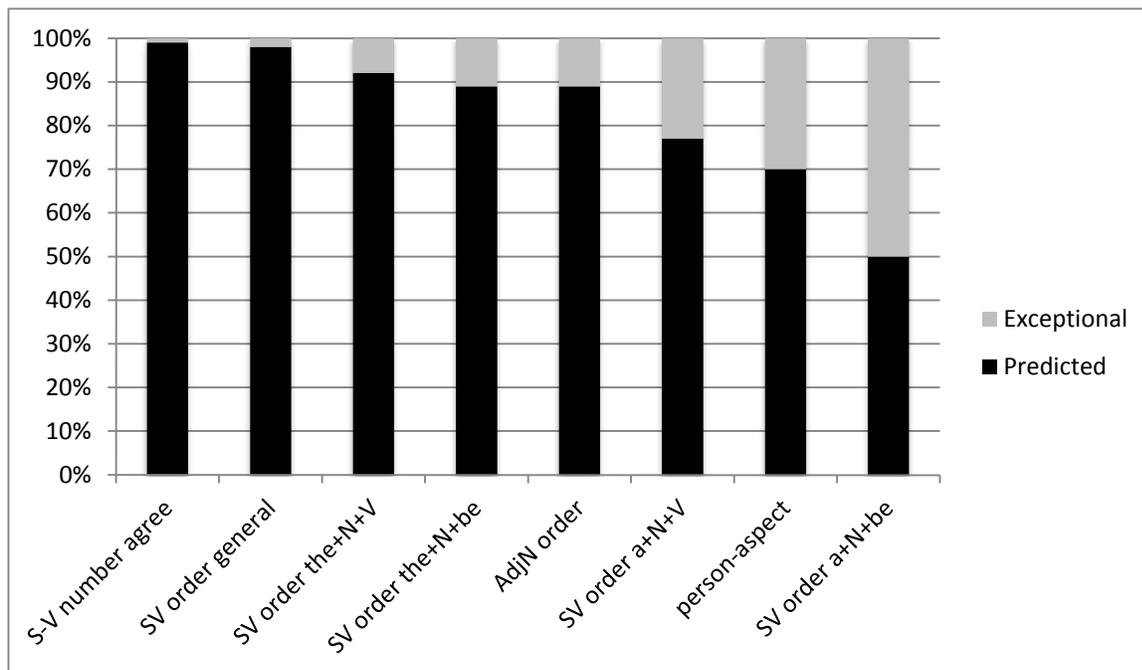
Gradient Tendencies in English

Figure 1. Decreasing strengths of association for various co-occurrences in English (sources various, see below).

Though the quintessential syntactic rule is that of subject-verb agreement, in fact third-person present-tense verbs formally agree in number with their subjects somewhat less than 100% of the time, 99% according to one count (Reid 1991, 363); recall example 3b.

Only somewhat less successful is the rule of subject-verb order. One can easily state a rule, or a pattern, stipulating that in an English sentence the subject comes before the verb (followed by the object and adverbial elements):

S-V-O-P-T = Subject-Verb-Object-Place-Time

S-V-O-P-T = a basic English sentence structure.

(Azar 2003, 164)

And indeed, subjects usually do come before verbs in English, 98% of the time in one count (Huffman, 2002, 331).[vi] The SV pattern, as in *On the horizon a bright moon appeared,* is frequent, but the VS pattern, *On the horizon appeared a bright moon,* also occurs.

Other patterns are just as real but not as strong. That 98% figure for subject-verb (SV) order is actually an overall figure; there are sub-tendencies within the tendency, depending on factors such as whether the subject is definite (*the*) or indefinite (*a*) and whether the verb is substantive (e.g., *stand*) or existential (*be*). See Figure 2.

Gradient Tendencies Within the Tendency of Subject-Verb Order

Subtype	% SV	Favored order illustrated
The + subject + subst. verb	**92%**	*The Colosseum stood on the left.*
The + subject + form of *be*	**89%**	*The Colosseum was on the left.*
A + subject + subst. verb	**77%**	*A small vase stood on the left.*
A + subject + form of *be*	**50%**	*A small vase was on the left ~ On the left was a small vase.*

Figure 2. Decreasing strengths of sub-tendencies within the tendency of "SV order general" from Figure 1 (source, Davis 2004:168)

The more specific the rule, the less reliable it becomes, to the extent that the two patterns *A small vase was on the left* and *On the left was a small vase* are equally likely to occur.

Teachers who know Spanish are familiar with the rule that, in English, the adjective comes before the noun. But in fact, both languages exhibit both orders (cf. Klein-Andreu 1983 for Spanish). To illustrate, one short English text has a 31:4 ratio of AN to NA orders;

in just 89% of the cases does the adjective actually precede the noun.[vii] One token serves to illustrate both orders: *we found our front door unlocked* (vs. *we found our unlocked front door*).

As a final illustration of a weak but real pattern, consider the correlation of grammatical person with verbal aspect, a correlation weak enough that it may never even have been mentioned in published grammars, certainly not as a rule. See Table 1.

Table 1. The correlation of grammatical person with aspect in a text (percentages)

Grammatical person	% present perfect	% simple past	
First	74	26	100
Third	33	67	100

n = 205. Source: Davis (2002: 68)

The combination *I have taken*, for example, is statistically preferred over *I took*, while the combination *He took* is preferred over *He has taken*.

When actual correlations range between 100% and 50%, there is no practical way to distinguish between a rule and a tendency. The notion of subject-verb agreement having a special status as a *rule* begins to seem indefensible; instead, the co-occurrence of subject and verb numbers begins to look like simply a very strong pattern among many other patterns.[viii] The field of second language instruction can therefore justifiably dispense with the notion of rule and focus instead on the patterns that appear in usage and – the point being made here – on *explaining* those patterns, with the ultimate goal of helping learners towards communicatively effective production.

7. Native speakers know the facts of usage

There is abundant psycholinguistic evidence that native speakers in some sense have knowledge of the statistical patterns in their language, that is, the probabilistic facts of usage. N.C. Ellis (2004) summarizes the evidence and also articulates the theoretical position.

> Language learning is the associative learning of representations that reflect the probabilities of occurrence of form-function mappings. Frequency is thus a key determinant of acquisition because 'rules' of language, at all levels of analysis from phonology, through syntax, to discourse, are structural regularities that emerge from learners' lifetime analysis of the distributional characteristics of the language input. (N. C. Ellis 2004, 53)

This view of acquisition is consonant with usage-based linguistic theory. "Experience affects representation. The use of forms and patterns both in production and perception affects their representation in memory" and so their accessibility for use (Bybee 2001, 6–7).

Such treatments of language processing and of mental representation itself explicitly relate, rather than separate, usage and knowledge, probability and structure. That is, to know a language is, in part, to know its patterns.

8. Nonnative speakers need to be made aware of the facts of usage

Researchers in the field of second language have taken the psycholinguistic evidence for first language acquisition as justification for advising that learners of a *second* language need to be *made aware* of the facts of usage. As N. C. Ellis (2004, 60–61) points out, native speakers' knowledge of the facts of usage comes from implicit, not explicit, learning. No one is taught the frequencies; rather, "The only source is usage, in naturalistic communication." "Yet," Ellis continues, "if that was all there was to it, then second language acquisition would be as effective as first language acquisition." Instead, "there are certain aspects of language to which second language learners commonly prove impervious." Upon this fact is built up the case for explicit instruction to promote noticing.

Larsen-Freeman (2003, cf. 14, 55) concurs that the structure of language is probabilistic and that learners need to be made aware of the tendencies, which she calls "rules of thumb" – that is, not true structural or formal rules.

In this wing of the field of second language learning, where grammar has meaning, the current prevailing view is that knowledge of language amounts to, or results from, knowledge of usage. There is wide acceptance of the view that, for second-language learners, explicit learning of the facts of usage (awareness of linguistic form) is beneficial in promoting accuracy (grammatical proficiency), rate of acquisition, and ultimate attainment (Terrell 1991; Norris and Ortega 2000).

9. But the facts of usage are not the linguistic system

Granted that highly proficient speakers have at least unconscious knowledge of the gradient statistical facts of *usage*, it does not follow, however, that such knowledge is

indistinguishable from their knowledge of the categorical linguistic *system*. The existence

of clines in no way precludes the existence of categories, and "an account that recognizes

ONLY gradience has difficulties in being precise about the role (if any) of categories" (Boye

and Harder 2012, 6). The dichotomy between categorical and emergent grammar may be a

false one.

A person who routinely drives a car through a certain intersection with a 'delayed

green' stoplight may well know, consciously or unconsciously, that even after the traffic

perpendicular has stopped once their light has turned red, our driver's own light is going to

remain red momentarily before turning green. Or a driver may know that a particular

intersection has an unusually long, or unusually short, red light. Drivers know that amber

lights typically flash only relatively briefly as the transition from green to red takes place.

All this is practical knowledge about the usage of particular traffic lights, their operation in

real time. None of this, however, alters the *system* by which the lights signal what drivers

must do: green for 'go,' amber for 'prepare to stop,' red for 'stop.' Nor does it alter the

driver's knowledge of that system. Knowledge of the variable quantitative experience is

separable from knowledge of the unchanging system. And it is the systematic meanings of

the system that fundamentally matter. On a trip through many intersections, greens,

ambers, and reds will exhibit various patterns of relative length, but the meanings 'go,'

'prepare to stop,' and 'stop' consistently communicate what a driver must do, even at

unusual intersections.

Analogously, even if speakers or writers of standard U.S. English know, in some

sense, that the collocation *I be* is rare relative to *I am*, that knowledge in no way prevents

them from using *I be* when they need to: *It is important that I be honest with you*. Second-

language learners, lacking the extensive experience of proficient speakers, may need help in making grammatical choices, and it is not adequate for teachers to be aware of the patterns. Yes, teachers who know that *I am* is merely common – as opposed to being the reflex of a rule – are in a position to provide input that includes tokens of *I be,* but even they are not in a position to answer the question "What is the difference between the two?"

10. Learning rules or patterns is not enough

Teachers need to know more than just which combinations of grammatical forms are frequent and which are infrequent. Again, verb number will illustrate. Consider the pair of standard English utterances in example 5, with contrasting verb forms highlighted[ix]:

> 5a. Five dollars *were* stuffed in my pocket. Now they're all crumpled.
>
> 5b. Five dollars *was* returned to the customer as a refund.

In the most readily imaginable contexts for each of these, it would be odd to say instead:

> 5a'. ? Five dollars *was* stuffed in my pocket. Now they're all crumpled.
>
> 5b'. ? Five dollars *were* returned to the customer as a refund.

Let us leave aside the view that one of these, 5a, is the product of a syntactic rule while the other, 5b, is a pragmatic deviation in performance or a product of some kind of non-syntactic, perhaps semantic, rule.[x] Instead, let us say, with a usage-based view of grammar, that meaning is behind the data, that each utterance reflects a pattern that exists

in the speech community, and that one pattern (S=V, represented by 5a) is frequent and the other (S≠V, represented by 5b) is relatively infrequent. The suggestion that meaning is involved is, today, linguistically sound on a theoretical basis.[xi] The suggestion that the two sentences reflect existing patterns of different frequencies in the speech community is commonsensical. So far as this reaction to the data goes, there is nothing to dispute. But what are the implications for instruction?

Suppose that a learner is taught a rule of thumb:

Subjects and verbs agree in number. Singular subjects take singular verbs, and plural subjects take plural verbs. Use this as a rule of thumb.

This would be in line with the advice of Larsen-Freeman (2003). However, a learner faithfully following this advice would successfully produce 5a, *dollars were,* but not 5b, *dollars was.* A learner successfully producing 5b would not be following the rule of thumb but deviating from it. For this advice to be helpful, then, learners would have to know when to follow the rule and when to disregard it. A second level of instruction would be required:

Ignore the rule of thumb when you need the verb form to be independently meaningful.

This advice begs the question whether the verb form isn't inherently meaningful in any case: Use plural when you mean plural, singular when you mean singular. The plural meaning of *were* in 5a is just as appropriate for the message communicated there as is the

singular meaning of *was* in 5b.[xii] But if that is the case, as Reid (1991) claims, then we do

not need the rule of thumb to begin with.

Suppose that a learner is instead taught discourse frequencies:

Subjects and verbs usually agree. Singular subjects usually co-occur with

singular verbs, and plural subjects usually co-occur with plural verbs.

That statement is empirically true. But what is the good learner to do with it? If this is all

the guidance the learner has, then the smart thing to do would be to bet on the winner

every time. Always make your verbs agree with your subjects, and you'll be wrong only a

small percentage of the time; try to pick and choose, and you risk making bad choices. This

learner's choices, then, will be:

5a. Five dollars *were* stuffed in my pocket. Now they're all crumpled.

5b'. ? Five dollars *were* returned to the customer as a refund.

One right and one wrong. Both usage-based principles for guidance – rule of thumb and

discourse frequency – fall short.

Sometimes the choice of verb number is more subtle and either form could

conceivably be used, a situation that might be labeled – somewhat unhelpfully – *free

variation*. Though this entails that a particular choice will not lead to severe

miscommunication, it does help us to see that the distribution of forms is indeed a result of

choice. Imagine a learner writing about two upcoming musical events. The learner has to

choose verb number on two occasions (6a, b) in a brief text. (The setting for 6a is a barge that has been converted into a floating concert hall.)[xiii]

6a.   The Vertigo Quartet, part of the barge's pool of excellent young players, <u>perform / performs</u> two seldom heard quartets in A Minor: By Schubert (No. 13, "Rosamunda") and Walton (the Quartet No. 2), along with music by Mendelssohn.

6b.   The dashing young Trio Capuçon – featuring the violinist Renaud Capuçon and his cellist brother, Gautier, along with the American pianist Nicholas Angelich – <u>perform / performs</u> the three piano trios by Johannes Brahms.

On what basis is the learner to make the choices? If the choice is made purely on the basis of the fact that subjects and verbs agree 99% of the time, then the learner would again be wise to bet that any given verb is going to agree with its subject, that is, to make all verbs agree with their subjects. This way, there will be only about one error per one hundred opportunities.[xiv] Thus, our good student will choose singular *performs* in both cases above. In practice, the results for this student will be identical to those for a student following a syntactic rule.

In the original published source text, 6a has singular *performs* while 6b has plural *perform*. (Below, we consider the reasons behind the choices.) The learner's usage, though intelligible, would not match the proficient writer's.

In sum, both the successful application of a rule and the judicious application of knowledge of a tendency in usage guarantee that a learner will make errors. Both practices systematically introduce error into usage.

How often would such infelicitous subject-verb agreement arise? In a 6,635-word text, Reid (1991, 363) identified 618 opportunities for subject-verb agreement.[xv] Assuming an incidence of felicitous mismatch in subject-verb number at slightly under one percent (.008, the incidence Reid found), our hypothetical learner writing a comparable essay, and applying the rule of subject-verb agreement with unfailing accuracy, would run over a 99% chance of making at least one error.[xvi] More realistically, to the extent that this learner applies the rule with less than perfect accuracy, there would be an even greater chance of making errors (infelicitous agreement plus infelicitous lack of agreement). It requires only 77 opportunities involving verb-number choice for the chance of error due to mechanical agreement to exceed 50%.

Errors in subject-verb number can be costly. Consider the evidence from a small empirical correlation study of subject-verb number and overall score on a sample of 23 admission essays to a school of education. The proportion of subject-verb number choices judged by the present writer to be felicitous correlated positively (+.17) and significantly (p<.01) with essay scores assigned independently by trained readers. The higher the proportion of felicitous number choices, the higher the score on the essay tended to be. Among 9 essays investigated in detail, 4 had a passing score, and 5 had failing scores. In the passing essays, the proportions of subject-verb choices correct ranged from .94 to .994; in the failing essays, the proportions correct ranged from .83 to .96, with a median of .92. That is, failing essays had approximately 92% correct. Though an error rate of 8% is much

higher than the 1% that would result from following a mechanical rule, it does suggest that readers' tolerance for number error in academic writing is low. Readers' comments on the essays bear out the importance of grammatical number, including its effect on communicative success: Readers criticized "agreement problems," "syntax," and "s[entence] s[tructure]"; "grammatical s.s. errors make coherence a problem."[xvii]

Following a rule or betting on a tendency is not the way proficient speakers make their choices anyway. Proficient speakers arguably make their choices on the basis of which forms bear the *meanings* that contribute most effectively to their intended message (Diver 2012c).

It is not difficult to intuit how proficient speakers and writers make the choices in examples 5 and 6. In 5a, plural *were* is appropriate because all five dollar bills, each individually, were stuffed in the pocket. In 5b, singular *was* is appropriate because one amount of five dollars was returned as a refund. In 6a, the *Quartet* is one "part of the barge's pool," whose players are not individually named, while in 6b, the *Trio* is individualized into three "dashing young" musicians with names, relationships, and instruments to play. Example 6a focuses on the quartet as one group; 6b focuses on the trio as more than one individual.

11. Grammatical number is fully meaningful

If learners are to be helped to make choices, then teachers need to know not only the patterns of the forms but also the *meanings* responsible for creating the patterns. Teachers should know that (third-person non-past indicative) subjects and verbs "most often" agree (Larsen-Freeman 2004, 238). But they should also know the actual forms and meanings

that instantiate this agreement. And they should know how the meanings can on occasion be mismatched – how one number meaning "intersects" with the other (ibid.) – to produce a nuance that mechanical agreement would fail to produce.

This advice with regard to the teaching of grammar is compatible with the suggestion by Liu (2010) that cognitive and linguistic analysis, being "a very important and useful part of the language-acquisition process," needs to replace the noticing and rote memorization of lexical collocations (e.g., *strong tea* vs. *powerful car*), because these are in fact semantically motivated by their parts (see also Walker 2011; Boers, Eyckmans, and Stengers 2006). Similar to lexical patterns, grammatical patterns are semantically motivated by their meaningful parts.

In the approach being proposed here, the meaning of a form is not merely one item in a list of things that the learner needs to know (cf. Larsen-Freeman 2004, 238); rather, it is *responsible for* many of the things the learner needs to know. In a phrase, the meaning of a form is "the reason for the rule" involving the form (Larsen-Freeman 2003, 50). The meaning of a form creates the patterns in which the FMC appears: a tendency to agree with other grammatical meanings (*Our kid-s play-Ø soccer*); a tendency to occur with or to avoid certain lexical items (*mile-s* being frequent but *people-s* being infrequent) (Reid 1991). A form's meaning also quite likely influences other properties, such as notional interpretation (count vs. noncount) and a tendency to avoid certain grammatical positions (*a schools chancellor*).

Going beyond the traditional treatment of "singular" and "plural" subjects and verbs with their rule of agreement, Reid (1991; 2011), of the Columbia School of linguistics[xviii], proposes that English has two semi-independent grammatical systems having to do with

the semantic domain of Number. Each system is made up of forms that signal meaning. Thus, meaning is fully involved both in noun number (-Ø = ONE, -s = MORE) and in verb number (-s = ONE, -Ø = MORE).   Meaning is involved not only in the choices *kid/kids* and *faculty/faculties* but also in *plays/play, performs/perform* (examples 2, 3, 6).[xix]

Figure 3 gives illustrations of agreement and non-agreement, from examples already seen.

The Intersection of Noun and Verb Number

ONE = ONE	MORE = MORE
Our kid-*Ø* play-*s* soccer.	Our kid-*s* play-*Ø* soccer.
MORE ≠ ONE	ONE ≠ MORE
Five dollar-*s was* returned.	The trio-*Ø* perform-*Ø*.

Figure 3. Four possible patterns of subject and verb number, agreement and non-agreement, illustrated

The cases of agreement involve redundant information as to how many kids and how many soccer-players. (Discourse is replete with such redundancy; cf. grammatical person signaled redundantly in *I am going myself*). In the cases of non-agreement, a subtler message effect is achieved thanks to the mismatch of Number meanings. The meaning ONE of *was* leads us to think of *five dollars* as one entity with respect to being returned (it is the amount of the refund). The meaning MORE THAN ONE of *perform-Ø* leads us to think of the *trio* as more than one entity with respect to performing (three individual musicians perform).

Reid's innovation can be fully appreciated only if the scope of these meanings is fully appreciated: the meanings apply in all cases, not just in the "exceptional" cases of non-agreement (*pace* Celce-Murcia and Larsen Freeman 1999, 59–60 n. 10). Reid's treatment contains authentic examples in context, with discussion as to how the Number systems contribute to the communicative effects.

12. Pedagogical implications and conclusion

If explicit information about forms and meanings (as with the two Number systems) is available, developing teachers can work with authentic text and use the grammatical meanings signaled in the text to enrich their own and learners' understanding of a passage. Students in my grammar course in an education program select passages from model literature (including children's stories) and, for a given grammatical topic, explain the writer's choice of opposing meanings as contributions to communicative ends. As a consequence, our understanding of both grammar and discourse grows.

In existing practice, some teachers may simply teach grammar the way they were taught it, or they may avoid explicit teaching because they lack metalinguistic knowledge, especially if they are native speakers of the language (Spada and Lightbown 2008, 109–110). By contrast, a teacher who appreciates how grammatical meanings contribute to communication in successful discourse is in a better position to help a developing L2-user than one who either has little conscious understanding of the grammar or has a misunderstanding of it as being governed by a syntactic rule or a usage pattern. Such a better-informed teacher can:

- use judiciously selected authentic discourse in preference to manufactured and isolated sentences;

- collect and highlight (input flood and input enhancement) examples of less frequent patterns, so that the learner is exposed to rich input, particularly those examples that are most instructive of the role of form and meaning;

- engage in consciousness-raising tasks that are informed by an understanding of the workings of grammar; and,

- when appropriate, provide instruction that is form-focused, meaningful, and clear.

Many teachers are doing these things already but often without adequate conscious knowledge of what the grammatical forms are, what meanings they encode, and how those meanings interact to produce some communicative effect. Well-trained teachers already have ways to make learners pay attention to meaningful grammatical "form." Nor is it a new idea to have developing teachers do some literary analysis in connection with their conscious learning about the structure of the language they will teach (Celce-Murcia 2002).

What might be innovative would be to have teachers learn about grammatical *forms* and their meanings *by doing* literary analysis, and then applying that knowledge of the grammar to their teaching. But how can teachers do that if, in the literature, explicit identification of forms and their meanings is either (as in traditional grammar) misleading or (as in much FFI literature) largely absent, uninformed by linguistics research on the meanings of actual forms? By working in advance with authentic literature, while having an eye towards a grammatical topic (Number, Time, etc.), a teacher can at the very least ensure the provision of a rich range of input, including the kinds of examples omitted from

traditional treatments, the very kind of example that is often most instructive in forcing the

learner to notice and *analyze* the communicative effect of a grammatical form.

Among the most progressive pedagogical advice is possibly that of Larsen-

Freeman (2003): Teach that grammar has to do with meaning and choice, but also

teach "rules of thumb" to give learners something to "hold onto." That advice can be

improved upon: Teach the grammatical *forms* and their *meanings*, and work on the

myriad ways successful target language-users use those meanings to craft discourse.

If you feel it would be helpful, inform learners of (or guide them to discover) the

statistical tendencies in discourse. In practice, of course, learners will not always

make the most felicitous choices (not even native speakers do that), but, guided by

both the meanings and the facts of usage, these learners are better off than their

peers who have either no direction or else suffer from misdirection.

Davis (2009) argues for a concerted effort to sensitize second-language teachers to

the meaningful nature of grammar and to have them develop their explicit knowledge of

the language's systems of forms and meanings. The approach, termed Focus on Form and

Meaning (FFM), expands upon FFI in that it would tie particular linguistic *meanings* to

particular linguistic *forms*. It would give teachers and learners something very concrete to

"hold onto": a reliable form-meaning pairing in place of a mere tendency. This call for an

expanded role for second-language teachers' explicit knowledge of the target language

structure echoes a similar call regarding foreign-language teachers made by Lantolf (2009).

Of course, the approach would require the practical availability of straightforward

form-meaning analyses of a range of grammatical topics, comparable to Reid's (1991) for

Number.[xx] This is a necessary direction for research. Meanwhile, until resources are

available for teachers and teacher-educators providing reliable linguistic hypotheses about

actual grammatical forms and meanings, both groups of professionals can benefit from

working with judiciously chosen authentic texts, with the goal of developing sensitivity to

the communicative effects of particular grammatical forms. Such effects are especially

noticeable when near-minimal pairs, such as 6a and 6b, can be compared. This requires

some preparation and might well factor into a teacher's selection of text: Find a text with

examples of both *I am* and *I be*; examples of both subject-verb orders; of both adjective-

noun orders. For the time being, if even linguists do not agree on the semantic value of a

particular grammatical form, then perhaps teachers and teacher educators need not be too

concerned about the ultimate validity of their own insights. Their insights might well

surpass whatever guidance is given in many published treatments.

Acknowledgements

Biographical Note

Joseph Davis is a member of the faculty of The City College of New York, where he teaches linguistics in the School of Education. He is a founding member and Vice President of the Columbia School Linguistic Society.

Notes

1. Each of these forms has a different function, independent of signaling time, in other grammatical domains; specifically, each is a form of subjunctive mood. The simple NON-PAST is also sometimes used for events happening "right now" (*Look! I* see *a bald eagle!*), but that effect is often better achieved with an active participle in the predicate complement position, presumably due to the meanings of those two grammatical forms (the construction traditionally called the progressive tense or aspect: *Help! I*'m losing *my grip!*).
2. The classic grammatical rule is a "correspondence" between linguistic elements (Crystal, 1985: 268) and thus precludes choice. Attempts to have both rule and choice, such as to say that one must

know how to choose which rule to use (Larsen-Freeman, 2002), are making use of the term *rule* in a quite different—even orthogonal—way, for example as a label for the relationship between a form and its meaning (Davis, 2009).

3. See Contini-Morava, 2011, and Reid, 2011, for a critique of that view of the nature of syntax, such as is represented by other papers in that volume.

4. While it might appear that the UG-type exceptionless formal rule is a straw man, and that the existence of many exceptions is widely recognized in SLA, the situation is actually more dire: a disagreement between two views of the fundamental nature of grammar: one in which the basis consists of formal correspondences that are essentially autonomous of meaning (a rule), with exceptions that are motivated by or explained by meaning, versus one in which grammar is thoroughly meaningful, across the board. The view that one holds – whether consciously or not – will affect not only how one talks about language but how one approaches teaching it (Larsen-Freeman 2003).

5. There may be *a priori* theoretical justifications. In traditional grammar (see Diver, Davis, and Reid, 2012, for a critique) or in mid-twentieth-century formal linguistics (e.g., Chomsky, 1957, 1965), the construct of *rule* is part of the machinery of the formally defined *sentence*, the assumed basic unit of structure. More recent formal linguistics (e.g., Chomsky, 1995) rejects the rule as part of linguistic structure, and some other theories (e.g., Columbia School, see Reid, 2011) do not assume either sentence or rule as components of structure.

6. Huffman (2002) offers a form-meaning hypothesis for the two subject-verb orders in English, one having to do with the relative degree of Focus accorded to the event and its participants in the narrative.

7. Junot Díaz, "The Money," *The New Yorker*, June 13 and 20, 2011, p. 76. For this count, the following types of tokens were excluded: pronouns modified by adjectives; predicate adjectives following copula; and numbers, determiners, and certain other words (*same, only, next*) before the noun. These are effectively invariable in position, though that is probably due to the compatibility of their meanings and the meanings of two orders.

8. The varying strengths of the patterns may beg to be explained, but that is an analytical task beyond the scope of the point being made here: that rules are just strong patterns.

9. 5a and 5b do not represent the only way to express these messages (one could say *Five dollar bills were* and *An amount of five dollars was*), but the acceptable, target-like utterances in 5a and 5b make the point about rule and meaning in a more straightforward way than other options would.

10. The latter would be what Strauss, Lee, and Ahn (2006: 186) term a "fuzzy" rule.

11. The encoded grammatical number meanings contribute to a holistic interpretation of countable dollar bills versus mass dollar amount (it is not that there is a noun *dollar* that means 'count' and a noun *dollar* that means 'non-count').

12. I use the terms *meaning* and *message* in the Columbia School sense: *meaning* as the encoded semantic content of a grammatical signal, *message* as the discourse-level inference made or intended by the joint presence of linguistic forms in context. See, e.g., Huffman (1997: 16-19), Davis (2009), Diver (2012b).

13. These examples (from *The New Yorker*, Feb. 11 and 18, 2008, p. 34) and many others were analyzed in a course I teach on the structure of English.

14. A random distribution of tokens of disagreement at the rate of one per hundred would create about twice as many errors as opting for uniform agreement, since, in every hundred, the verb thus selected to disagree would almost always be infelicitous, and so would the verb that should have been selected to disagree.

15. "Long Distance" by Jane Smiley, *The Atlantic Monthly*, vol. 259, no. 1, Jan. 1987, pp. 69–75. Retrieved July 20, 2008 at www.theatlantic.com/issues/87jan/distance.htm.

16. P(at least one error) = 1 - P(no errors) = 1 - P(agreement is always felicitous) = 1 - $.992^{618}$ > .99 (assuming independence of felicitousness from token to token).
17. Data from an unpublished study by this writer conducted at [name of institution withheld], 2000.
18. The paper that is considered the seminal work in Columbia School is Diver (1969).
19. See Diver, Davis, and Reid (2012) on the three traditional definitions of *subject*.
20. See Davis (2009), note 17, for references to some analyses that explicitly state hypotheses for forms and meanings for other grammatical systems.

References

Achard, Michele. 2010. "Fields and Settings: French *il* and *ça* Impersonals in Copular Complement Constructions**.** *Cognitive Linguistics* 21–3: 443–500**.**

Azar, Betty Schrampfer. 2003. *Fundamentals of English Grammar* (3rd ed.). New York: Longman.

Beckner, Clay, and Joan Bybee. 2009. "A Usage-based Account of Constituency and Reanalysis." In Nick C. Ellis and Diane Larsen-Freeman, eds., *Language as a Complex Adaptive System* (pp. 27–46). *Language Learning* 59, *Suppl. 1*. doi: 10.1111/j.1467-9922.2009.00534.x.

Beckner Clay, et al. (The Five Graces Group). 2009. "Language Is a Complex Adaptive System: Position paper." In Nick C. Ellis and Diane Larsen-Freeman, eds., *Language as a Complex Adaptive System* (pp. 1–26). *Language Learning* (59) *Suppl. 1*. doi: 10.1111/j.1467-9922.2009.00533.x.

Boers, Frank, June Eyckmans, and Hélène Stengers. 2006. "Motivating Multiword Units: Rationale, Mnemonic Benefits, and Cognitive Style Variables. *EUROSLA Yearbook,* 6: 169-190.

Bond, Jeremy K., and Adele E. Goldberg. 2009. "Input Effects Within a Constructionist Framework." *The Modern Language Journal*, 93, iii: 418–429.

Boye, Kasper, and Peter Harder. 2012. "A Usage-based Theory of Grammatical Status and Grammaticalization." *Language* 88: 1–44. doi: 10.1353/lan.2012.0020.

Bybee, Joan. 2001. *Phonology and Language Use*. Cambridge: Cambridge University Press.

Celce-Murcia, Marianne. 2002. "Why It Makes Sense to Teach Grammar in Context and Through Discourse." In Eli Hinkel and Sandra Fotos, eds., *New Perspectives on Grammar Teaching in Second Language Classrooms* (pp. 119–133). Mahwah, NJ: Lawrence Erlbaum.

Celce-Murcia, Marianne, and Diane Larsen-Freeman. 1999. *The Grammar Book: An ESL/EFL Teacher's Course*. n.p.: Heinle and Heinle.

Chomsky, Noam. 1957. *Syntactic Structures*. The Hague: Mouton.

Chomsky, Noam. 1965. *Aspects of the Theory of Syntax*. Cambridge, MA: MIT.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT.

Contini-Morava, Ellen. 2011. "And Now for Something Completely Different: Reid on English Verb Number." *Natural Language and Linguistic Theory* 29 *(Topic/Comment Special: Phi-feature Inflection and Agreement)*, 1147–1162. doi: 10.1007/s11049-011-9152-2.

Crystal, David. 1985. *A Dictionary of Linguistics and Phonetics*. New York: Basil Blackwell.

Davis, Joseph. 2002. "Rethinking the Place of Statistics in Columbia School Analysis." In Wallis Reid, Ricardo Otheguy, and Nancy Stern, eds., *Signal, Meaning, and Message: Perspectives on Sign-based Linguistics* (pp. 65–90). Amsterdam/Philadelphia: John Benjamins.

Davis, Joseph. 2004. "Revisiting the Gap Between Meaning and Message." In Ellen Contini-Morava, Robert S. Kirsner, and Betsy Rodríguez-Bachiller, eds., *Cognitive and*

Communicative Approaches to Linguistic Analysis (pp. 155–174). Amsterdam/Philadelphia: John Benjamins.

Davis, Joseph. 2009. "Rule and Meaning in the Teaching of Grammar." *Language and Linguistics Compass* 3: 199-221. doi: 10.1111/j.1749-818X.2008.00119.x.

de Bot, Kees, Marjolijn Verspoor and Wander Lowie. 2005. "Dynamic Systems Theory and Applied Linguistics: the ultimate "so what"? *International Journal of Applied Linguistics* 15/1: 116-118..

DeKeyser, Robert M. 1998. "Beyond Focus on Form: Cognitive Perspectives on Learning and Practicing Second Language Grammar." In Catherine Doughty and Jessica Williams, eds., *Focus on Form in Classroom Second Language Acquisition* (pp. 42–63)*.* Cambridge: Cambridge University Press.

De Knop, Sabine and Julien Perrez. 2014. "Conceptual Metaphors as a Tool for the Efficient Teaching of Dutch and German Posture Verbs." *Review of Cognitive Linguistics* 12,1: 1–29.

Diver, William. 1969. "The System of Relevance of the Homeric Verb." *Acta Linguistica Hafniensia* 12: 45–68.

Diver, William. 2012a. "The Elements of a Science of Language." In Alan Huffman and Joseph Davis, eds., *Language: Communication and Human Behavior. The Linguistic Essays of William Diver* (pp. 65–84). Leiden/Boston: Brill. doi: 10.1163/ej.9789004208582.i-566.17.

Diver, William. 2012b. "The Nature of Linguistic Meaning." In Alan Huffman and Joseph Davis, eds., *Language: Communication and Human Behavior. The Linguistic Essays of*

William Diver (pp. 47–63). Leiden/Boston: Brill. doi: 10.1163/ej.9789004208582.i-566.15.

Diver, William. 2012c. "Theory." In Alan Huffman and Joseph Davis, eds., *Language: Communication and Human Behavior. The Linguistic Essays of William Diver* (pp. 445–519). Leiden/Boston: Brill. doi: 10.1163/ej.9789004208582.i-566.90.

Diver, William, and Joseph Davis. 2012. "Latin Voice and Case." In Alan Huffman and Joseph Davis, eds., *Language: Communication and Human Behavior. The Linguistic Essays of William Diver* (pp. 195–245). Leiden/Boston: Brill. doi: 10.1163/ej.9789004208582.i-566.41.

Diver, William, Joseph Davis, and Wallis Reid. 2012. "Traditional Grammar and its Legacy in Twentieth-century Linguistics." In Alan Huffman and Joseph Davis, eds., *Language: Communication and Human Behavior. The Linguistic Rssays of William Diver* (pp. 371–443). Leiden/Boston: Brill. doi: 10.1163/ej.9789004208582.i-566.82.

Doughty, Catherine, and Jessica Williams, eds.. 1998. *Focus on Form in Classroom Second Language Acquisition*. Cambridge: Cambridge University Press.

Ellis, Nick C. 2004. "The Processes of Second Language Acquisition." In Bill VanPatten, Jessica Williams, and Susanne Rott, eds., *Form-meaning Connections in Second Language Acquisition* (pp. 49–76). Mahwah, NJ: Lawrence Erlbaum.

Ellis, Nick C. and Teresa Cadierno. 2009. "Constructing a Second Language: Introduction to the Special Section." *Annual Review of Cognitive Linguistics* 7: 111–139.

Ellis, Nick and Laura Collins. 2009. "Input and Second Language Acquisition: The Roles of Frequency, Form, and Function: Introduction to the Special Issue." *The Modern Language Journal*, 93, iii: 329–335.

Ellis, Nick C. and Fernando Ferreira-Junior. 2009a. "Construction Learning as a Function of Frequency, Frequency Distribution, and Function." *The Modern Language Journal*, 93, iii: 370–385.

Ellis, Nick C. and Fernando Ferreira-Junior. 2009b. Constructions and Their Acquisition: Islands and the Distinctiveness of their Occupancy. *Annual Review of Cognitive Linguistics* 7: 187–220.

Ellis, Nick C. and Diane Larsen-Freeman, eds. 2009. *Language as a Complex Adaptive System. Language Learning* 59*, Suppl. 1*.

Ellis, Rod. 2002. "The Place of Grammar Instruction in the Second/Foreign Language Curriculum." In Eli Hinkel and Sandra Fotos, eds., *New Perspectives on Grammar Teaching in Second Language Classrooms* (pp. 17–34). Mahwah, NJ: Lawrence Erlbaum.

Eskildsen, SØren W. 2008. "Constructing another Language—Usage-Based Linguistics in Second Language Acquisition." *Applied Linguistics* 30/3: 335–357.

Hinkel, Eli and Sandra Fotos, eds.. 2002. *New Perspectives on Grammar Teaching in Second Language Classrooms*. Mahwah, NJ: Lawrence Erlbaum.

Hopper, Paul J. 1987. "Emergent Grammar." In J. Aske, N. Beery, L. Michaelis, and H. Filip, eds., *Proceedings of the 13th Annual Meeting of the Berkeley Linguistic Society* (pp. 139–157). Berkeley: University of California at Berkeley.

Huffman, Alan. 1997. *The Categories of Grammar: French* lui *and* le. Amsterdam/ Philadelphia: John Benjamins.

Huffman, Alan. 2002. "Cognitive and Semiotic Modes of Explanation in Functional Grammar." In Wallis Reid, Ricardo Otheguy, and Nancy Stern, eds., *Signal, Meaning, and*

Message: Perspectives on Sign-based Linguistics (pp. 311–337). Amsterdam/

Philadelphia: John Benjamins.

Huffman, Alan. 2012. "Introduction: The Enduring Legacy of William Diver." In Alan

Huffman and Joseph Davis, eds., *Language: Communication and Human Behavior. The*

Linguistic Essays of William Diver (pp. 1-20). Leiden / Boston: Brill.

Kirsner, Robert S. "Introduction: On Paradigms, Analyses, and Dialogue." In Ellen Contini-

Morava, Robert S. Kirsner, and Betsy Rodriguez-Bachiller, eds., *Cognitive and*

Communicative Approaches to Linguistic Analysis (pp. 1-18). Amsterdam /

Philadelphia: John Benjamins.

Klein-Andreu, Flora. 1983. "Grammar in Style: Spanish Adjective Placement." In Flora Klein-

Andreu, ed., *Discourse Perspectives on Syntax* (pp. 143–179). New York: Academic.

Krashen, Stephen, and Tracy Terrell. 1983. *The Natural Approach: Language Acquisition in*

the Classroom. Oxford: Pergamon.

Langacker, R. W. 1987. *Foundations of Cognitive Grammar*, vol. 1, *Theoretical Prerequisites*.

Stanford: Stanford University Press.

Langacker, R. W. 2004. "Form, Meaning, and Behavior: The Cognitive Grammar Analysis of

Double Subject Constructions." In Ellen Contini-Morava, Robert S. Kirsner, and Betsy

Rodriguez-Bachiller, eds., *Cognitive and Communicative Approaches to Linguistic*

Analysis (pp. 21-60). Amsterdam / Philadelphia: John Benjamins.

Lantolf, James P. 2009. "Knowledge of Language in Foreign Language Teacher Education."

The Modern Language Journal 93: 270-274.

Larsen-Freeman, Diane. 2002. "The Grammar of Choice." In Eli Hinkel and Sandra Fotos, eds., *New Perspectives on Grammar Teaching in Second Language Classrooms* (pp. 103–118). Mahwah, NJ: Lawrence Erlbaum.

Larsen-Freeman, Diane. 2003. *Teaching Language: From Grammar to Grammaring.* Boston: Thomson-Heinle.

Larsen-Freeman, Diane. 2004. "Reflections on Form-meaning Connection Research in Second Language Acquisition." In Bill VanPatten, Jessica Williams, and Susanne Rott, eds., *Form-meaning Connections in Second Language Acquisition* (pp. 237–244). Mahwah, NJ: Lawrence Erlbaum.

Liu, Dilin. 2010. "Going Beyond Patterns: Involving Cognitive Analysis in the Learning of Collocations." *TESOL Quarterly* 44: 4–30. doi: 10.5054/tq.2010.214046.

Long, Michael. 1991. "Focus on Form: A Design Feature in Language Teaching Methodology." In K. DeBot, R. Ginsberge, and C. Kramsch, eds., *Foreign Language Research in Cross-cultural Perspective* (pp. 39-52). Amsterdam/Philadelphia: John Benjamins.

Niemeier, Susanne, and Michael Achard. 2000. "Cognitive Linguistics: Special Issue on Language Acquisition." *Cognitive Linguistics* 11-1/2: 1-3.

Norris, John M., and Lourdes Ortega. 2000. "Effectiveness of L2 Instruction: A Research Synthesis and Quantitative Meta-analysis." *Language Learning* 50: 417–528. doi: 10.1111/0023-8333.00136.

Pütz, Martin, Justyna A. Robinson, and Monika Reif. 2012. "The Emergence of Cognitive Sociolinguistics: An Introduction." *Review of Cognitive Linguistics* 10,2: 241-263.

Reid, Wallis. 1991. *Verb and Noun Number in English: A Functional Explanation*. London: Longman.

Reid, Wallis. 2011. "The Communicative Function of English Verb Number." *Natural Language and Linguistic Theory* 29 (4) *(Topic/Comment Special: Phi-feature Inflection and Agreement)*: 1087–1146. doi: 10.1007/s11049-011-9154-0.

Robinson, Peter. 2011. "Task-Based Language Learning: A Review of Issues." *Language Learning* 61, Suppl. 1: 1–36.

Robinson, Peter, and Nick C. Ellis, eds. 2008. *Handbook of Cognitive Linguistics and Second Language Acquisition*. New York: Routledge.

Schmidt, Richard. 1990. "The Role of Consciousness in Second Language Learning." *Applied Linguistics* 11: 129–158. doi: 10.1093/applin/11.2.129.

Spada, Nina, and Patsy Lightbown. 2008. "Form-focused Instruction: Isolated or Integrated?" *TESOL Quarterly* 42: 181–207.

Strauss, Susan, Jihye Lee, and Kyungja Ahn. 2006. "Applying Conceptual Grammar to Advanced-level Language Teaching: The Case of Two Completive Constructions in Korean." *Modern Language Journal* 90: 185–209. doi: 10.1111/j.1540-4781.2006.00392.x.

Terrell, Tracy David. 1991. "The Role of Grammar Instruction in a Communicative Approach." *Modern Language Journal 75*: 52–63. doi: 10.1111/j.1540-4781.1991.tb01083.x.

Tyler, Andrea and Vyvyan Evans. 2003. *The Semantics of English Prepositions: Spatial Scenes, Embodied Meaning and Cognition*. Cambridge / New York: Cambridge University Press.

VanPatten, Bill, Jessica Williams, and Susanne Rott. 2004. "Form-meaning Connections in Second Language Acquisition." In Bill VanPatten, Jessica Williams, and *S.* Rott, eds., *Form-meaning Connections in Second Language Acquisition* (pp. 1–26). Mahwah, NJ: Lawrence Erlbaum.

Walker, Crayton Phillip. 2011. "A Corpus-based Study of the Linguistic Features and Processes which Influence the Way Collocations Are Formed: Some Implications for the Learning of Collocations." *TESOL Quarterly* 45: 291–312. doi: 10.5054/tq.2011.247710.

Yuldashev, Aziz, Julieta Fernandez, and Steven L. Thorne. 2013. "Second-Language Learners' Contiguous and Discontiguous Multi-Word Unit Use Over Time." *The Modern Language Journal*, 97, S1: 31–45.