

The Role of Language in Diverian Linguistics

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The role of language writ large in linguistics has been uncertain but has tended to be minimized. It is as if the humanistic and the scientific had been at odds. Yet the role of language does not need to be minimized in linguistics. William Diver was longtime Professor of Linguistics at Columbia University. His students received Ph.D.s there from 1964 to 1992, and several remain active today. Diverian linguistics represents a way of investigating human language that is both scientific and humanistic. Diverian analyses shed light on the workings of the human language faculty while valuing the role of discourse, including literature. In this view, language is essentially a human tool comprised of meaningful signals that are employed intelligently in the communication of messages. The linguistics of Diver and his students is unique, but it developed within the intellectual context of its time, and today it continues to have insights to offer in the intellectual climate of linguistics.

Linguistics before Diver

Though intertwined, the fields of linguistics and literature have long been viewed as separate. Language gets used in discourse, which includes literature, and discourse relies upon language as its medium. How, though, does language work? Linguists seek to elucidate the workings of language. Literary critics seek to elucidate literature. Literature is viewed as an externalization of—or an “expression” of thought by means of—the “inner” workings of language. The two

fields, then, have traditionally reflected a division between the “inner” and the “outer” perspectives with regard to language. In Diver, the fields of linguistics and literature meet.

The earliest modern linguists took it almost for granted that linguistic structure is a part of language writ large. It is for that reason that, from the very birth of the modern field, the proper scope of the field of linguistics needed to be carved out. In the foundational *Cours de Linguistique Générale*, the Swiss Ferdinand de Saussure (1916/1972) went so far as to make a technical distinction between the *language system (la langue)* and, encompassing that, ‘language’ in the larger sense, including literature (*le langage*). In Saussure’s view, the proper domain of linguistics would be the *language system* (p. 27). Similarly, the American Leonard Bloomfield (1933: 21-22), in his book *Language*, distinguished linguistics from the study of just that part of language that is privileged to be published as a society’s literature; linguistics would not be prescriptive.

Once such early linguists, including the anthropologist Franz Boas (1911), began observing closely the actual mechanisms available in a given language system to a speech community, they rapidly realized that the classically assumed, logic-based categories of the sentence and its parts (subject, predicate, parts of speech, rules of syntax)—categories that came down to them from ancient times—would not do as a serious, empirical, scientific account of human language. Those categories accurately described neither colloquial nor erudite language. Thus “traditional grammar” was relegated to the dustbin of scholarship, and the modern discipline of linguistics was born. (Subsequently, linguistics followed then somewhat separate strands on the two sides of the North Atlantic.) The research question became: If the reason human beings use language is to communicate—if communication is language’s *function*—then by what means does language communicate?

If the linguists of the early twentieth century were justified in rejecting logic-based traditional grammar, they were, however, misguided in turning their gaze away from discourse as the matrix within which all the mechanisms of language function. Those two strands would eventually, later, be brought together by William Diver, an American student of a European teacher (Diver 1974/2012: 23).

Meanwhile, having to start from scratch, without the framework of traditional grammar, the early American Descriptivists, following Bloomfield, made it a point to try to be anti-theoretical and to develop a discovery procedure for the categories of language. Thus constructs such as the *phoneme* (a language's smallest distinctive unit of sound, e.g., the /æ/ of /kæt/ 'cat') and the *morpheme* (its smallest distinctive unit of meaningful form, e.g., /kæt/) were adopted as fundamental tools of the trade. Linguistics in this way came almost from its inception to have a—shall we say?—somewhat atomistic point of view, to direct its attention away from language writ large—the stories people tell—towards instead the particular mechanisms that individuals in a community manipulate, or—shall we say—articulate. Phonemes, morphemes, constituent structures comprised of morphemes, By the 1940s (Harris 1946), the American Descriptivists had worked their way up to essentially what had been the classical sentence, that pre-Bloomfieldian, pre-Saussurean construct. Such were the structures of structuralist linguistics.

The 1940s and 1950s were, at the same time, the early, heady days of computer science with its formal rules and algorithms. The time was right for the appearance on the scene of Noam Chomsky, who with his little book *Syntactic Structures* (1957) explicitly reintroduced the *sentence* as a construct and formally defined *a language* to be “a set (finite or infinite) of sentences, each finite in length and constructed out of a finite set of elements” (p. 13). In that

book and in *Aspects of the Theory of Syntax* (1965), Chomsky radically reoriented linguistics, taking it from empiricism to rationalism, from functionalism to formalism, from particularism to universalism, and from at least an implicit concern for texts to a laser-like focus on the construct of the sentence. Chomsky was concerned with an individual's "competence," defined as the individual's inner knowledge of his grammar, as evidenced by his ability to judge, through *intuition*, whether or not a given sentence was compatible with the principles of his internal grammar (i.e., was "grammatical"). Chomsky was emphatically not concerned with an individual's "performance" of that competence, with usage in any sense. In Diver's view (1986/2012), at the same time as Chomsky had reoriented linguistics, he had also taken it back to its pre-scientific, metaphysical days.

According to Chomsky (1957: 17), grammar was "autonomous" of meaning, and any considerations larger than the sentence—considerations such as communication and frequency of use in discourse—"have no direct relevance." In view of the evident complexity of the task of acquiring a first language—one, anyway, whose principles conform to Chomsky's syntactic model—it must be that humans have an "innate" (p. 25) "language-acquisition device" in the brain (p. 32). Influenced by Chomsky's thought, the Modularity Hypothesis of language had tremendous sway in the late twentieth century. If the properties of language, being modular, have nothing to do with anything else—communication (that of any biological species), general human cognition, physiology and acoustics—then clearly storytelling, whether written or spoken, will be beside the point. Linguistics was clearly to be kept distinct from the concerns of literature.

In such an intellectual climate, linguists felt compelled to separate themselves from those in the academy who had an interest in text, in particular from literary scholars. Linguists and

literary scholars typically dwelled in separate academic departments. Emblematic, perhaps, of the intensity and the duration of that alienation was the organizing, fifty years later, by faculty members in the (oddly unitary) Department of Linguistic and Literary Studies at the University of Padua of an international conference that would bring together linguists and literary scholars who had up till then been perhaps only accidental colleagues. The conference would have the revealing title “Bridging Gaps, Creating Links: The Qualitative-Quantitative Interface in the Study of Literature.” At that conference, Diver’s last student illustrated how such a bridge might be built—well, had already been built.¹

William Diver

At the same time that Chomsky was leading the alignment of linguistics away from other humanistic studies in the direction of more apparently hard-science fields such as neurology, Diver was developing his own linguistics resolutely within the humanities.

In the paper that his followers have ever since considered to be seminal in his theory, Diver (1969/2012) used Homer’s *Iliad* to develop and support a hypothesis that various forms of the language are *signals* of *meanings* that contribute to the communication of the Poet’s overall *message*. Specifically, these linguistic forms signal the “Relevance” of various events in the narrative. That signaling, to be clear, is Diver’s hypothesis about the structure of Homeric Greek, not about the *Iliad*; Diver was doing linguistics, not literary criticism. Yet in this enterprise, Diver, far from treating grammar as autonomous of meaning, defined grammar as a union of form and meaning. Moreover, this was a meaning of a very human nature; Relevance is

¹ See Davis (2019) for a development of one part of that illustration.

a purely human consideration. Later, Diver (1975 onward) would refer to this *orientation* in his linguistics—this independent body of knowledge to which he appealed—as language’s Human Factor. Diver (1969/2012) used authentic discourse—classic literature in this case—both to provide his data and to furnish the context in which those data must be interpreted. That is, from literature Diver collected tokens of the forms in question and analyzed those linguistic forms with a view to how they contribute to the realization of the Poet’s literary aims. Diver was using literature in the service of linguistics. Homer, the language-user, had simultaneously provided the linguistic data and the context that would be required for an analyst to make sense of the data. The very title of Diver’s paper—if one reads between the words—proclaims this alliance between the fields of linguistics and literature: “The System of Relevance of the Homeric Verb.”

Towards the end of the paper, Diver anticipated that the alliance might well benefit both parties: the linguistic scholar, who wants validation of a claim about human language, and the literary scholar, who wants a deeper understanding of a text.

In [Homeric] Greek, a language that is but one manifestation of a culture we can no longer observe directly, we may in some instances never come to a satisfactory understanding of what it was the author was trying to communicate, or what contribution to the message he intended by the inclusion of a certain [linguistic] signal Whoever takes seriously the analysis offered in this paper will . . . find opened to him an entirely new area in the investigation of Homeric style Whereas the linguist will be most interested in those passages where redundant information is available for the validation of an analysis, the student of Homeric style will naturally turn his attention to the unexpected, the areas where redundancy is either lacking or present only in some subtle form. (Diver 1969/2012: 157-158)

In a follow-up paper, Diver (1982/2012) again relied on the *Iliad* but this time to make it explicit that there are “Spheres of Interaction” between the fields of linguistics and literary

theory.² He suggested, and illustrated, how a linguistic analysis might inform the interpretation of certain problematic passages in the text, thus in a way repaying the linguistic debt to the text, which itself had made possible the linguistic analysis.

[It] is possible to have an approach to the study of language that parallels the chemist's approach to the study of matter . . . [i.e., an approach based on close, as opposed to "common-sense," analysis of observation].

[Once] this is done, sound ground will have been laid for fruitful cooperation between the fields of linguistic and literary analysis. Linguists will be able to provide a much more reliable initial interpretation of a text as a basis for literary analysis, and literary analysis itself will be able to provide invaluable aid in confirming linguistic hypotheses.

. . .

The task of understanding and interpreting a master work like the *Iliad* requires the application of every available piece of evidence. [This] task can fruitfully be divided between linguistic analysis and literary analysis, each contributing what it does best. It is the linguist's task to provide sound comprehension of evidence that the grammatical forms of the particular language provide. By dispelling ignorance of the role of grammar . . . linguistic analysis can eliminate the need for sifting out interpretations based on that ignorance which should never have been made in the first place. It can also point out the direction that interpretation should take, although imprecisely (Diver 1982/2012: 163-174)

Throughout his career Diver worked to flesh out his theory of language (including phonology), relying unwaveringly upon authentic discourse, especially the classics, to do that. In fact, in his very last oral presentation, in 1995, Diver returned to the problem of the linguistic contribution to thematic relevance in literature, this time through the meanings of grammatical forms in Latin as observed in Caesar's *De Bello Gallico*.³

² Already, Saussure (1916/1972: 21) had imagined that linguistics should be useful to anyone who studies texts, and Bloomfield (1933: 22) had warned that students of literature should first learn something about language, thus acknowledging the relatedness between the fields.

³ Diver's radical re-analysis of those forms appears in Diver and Davis (2012), which paper incorporates ideas from the oral presentation.

In his last published paper, “Theory” (1995/2012), Diver summarized what he modestly insisted was not a grand theoretical edifice to stand for all time in the field of linguistics but merely “an overall view of how things look at this stage of development.”

An obituary of William Diver is Huffman (1996). An edited collection of Diver’s works was published posthumously (Huffman and Davis 2012).

The role of discourse in the larger field of linguistics

Eventually, other linguists besides Diver began to appreciate the value of discourse, as opposed to the isolated sentence, and also the value of attested data, as opposed to constructed data.⁴

Soon, it had become so respectable in the field to hold views different from the formalists that a book-length survey of functionalists (Butler and González-García 2014) treated twelve functionalist schools of linguistics, one of them the Columbia School that grew out of Diver’s work.⁵ The authors note the major areas of disagreement between functionalist and formalist linguistics, in particular: the functionalist tenet “that language is first and foremost a means of communication between human beings in social and cognitive contexts”—that is, that language is “not autonomous” of all else human; the use of “naturally occurring” data; and the use of discourse “beyond the sentence domain” (p. 3). Over the years, dialogue between Diver-influenced linguists and such functionalists has taken place at conferences and in publications.

Though founded by intellectual descendants of Chomsky, Cognitive Grammar (Langacker 1987), as its very name implies, is non-modular, taking as an assumption the position

⁴ They also increasingly appreciated the relevance to language of other things that the human brain does (e.g., Bybee 2001: 7).

⁵ Huffman (2012: 5) gives reasons, however, why the Columbia School should not be conflated with the functionalist schools.

that language is part of general human cognition. Moreover, like Diver's linguistics, Cognitive Grammar is clearly semiotic in that its principal unit is a form with a meaning, something akin to the Saussurean *signe linguistique*. Between Cognitive Grammar and Diverian linguistics, there has been considerable dialogue (cf. Langacker 2004, Kirsner 2002, Huffman 2012). Nevertheless, in Cognitive Grammar—or at least at its roots or in its essence—I find very little about discourse, even in the realm of methodology. Cognitive Grammar appears to me to have less of an investment than Diverian linguistics or some of the other functionalist schools in discourse beyond the sentence.

Usage-based linguistics (e.g., Bybee and Hopper 2001) opposes the modular view and rejects structuralism, such as American Descriptivism, even more thoroughly than Chomsky did. Being functionalists, these linguists take issue with the “premise that language structure is independent of language use” (pp. 1-2). Instead, “linguistic elements and patterns that are frequently used in discourse become conventionalized [over time] as grammar.” It is thus appropriate and necessary for a linguist to report, for instance, “on evidence from natural conversation,” as opposed to constructed sentences in isolation. The use as data of large stretches of natural discourse stems from these linguists’ “increasing impatience with studies of individual ‘competence’ and growing suspicion regarding the reliability of intuitions [on sentences] as a source of data.” Whereas Chomsky had sought to define syntactic categories (*types* at a level above *tokens*), usage-based linguists, like Diverian linguists, are interested in the presence of actual forms (*tokens*) in texts. In the words of Bybee and Hopper, “By definition, any study that [as does theirs] deals with tokens (as opposed to types) takes as its data base extended samples of natural language, whether these be written language or transcriptions of speech” (p. 4).

Where usage-based linguistics most fundamentally differs from Diverian linguistics, in my view, is in its unwillingness to pause, as it were, in the diachronic “emergence” of linguistic structure and provide an account of the distribution of forms as found in a text (or texts) at a given point in time; that is, in their reluctance to provide a *synchronic* account. After all—to use an analogy—to analyze a movie still as photography is not to deny that the still is part of a movie. Too, usage-based linguistics differs from Diver’s in its being more ready to accept—at least provisionally, at worst unquestioningly—the categories of traditional sentence grammar (such as parts of speech), even if those linguists view those categories as being somehow communicative (cf. Otheguy 2002).

Also taking an essentially dynamic—i.e., diachronic—view of language, linguists who specialize in *grammaticalization* (or *grammaticization*) pay attention to discourse beyond the sentence (cf. Traugott 1982). Thus those who specialize in grammaticalization share with usage-based linguists a reluctance—or a considered refusal?—to provide a freeze-frame account of the observations in a particular (body of) text.⁶ And while they appreciate the expressive and the textual aspects of language (that is, that a speaker speaks subjectively and coherently), they too assume (i.e., take for granted the existence of) a propositional, referential component in language, something reminiscent of Chomsky and traditional grammar.

Diver’s intellectual successors have made contact with variationist linguistics too (see Otheguy and Zentella 2012 and Shin and Erker 2018). Breaking out of the Chomskyan framework that was dominant in that day, Diver’s contemporary William Labov (1969) undertook to study non-standard English as produced in actual, socially marginalized speech

⁶ Indeed, it would be a mistake to think that the schools of thought briefly reviewed here are entirely mutually exclusive. Many practicing linguists do not belong neatly to just one school or the other.

communities. Labov was analyzing actual discourse, especially the discourse of interviews. This technique was necessary in that day because Labov distrusted these speakers' own intuitions about the Chomskyan "grammaticality" of their utterances. Said Labov, the standard (or "superordinate") variety of the language will invariably contaminate speakers' intuitions concerning utterances in the non-standard (or "subordinate") variety. Following Labov's lead, many scholars have specialized in language variation, taking advantage of actual discourse data used in real communication. Yet it would appear that variationist linguistics has never entirely shaken off its Chomskyan roots and developed its own, original set of categories. How can *one thing* (such as the third-person singular present-tense indicative-mood verb in English—e.g., the *-s* of *It goes*) be said to *vary*? Are the variants really tokens of one type? If two tokens are manifestly not the same, then in what way, really, are they the same?⁷

Even recent formal linguistics, descended intellectually from Chomsky's work, has come to pay heed to actual language use in communication, to what it once dismissed as the mere "performance" of a speaker's "competence." Granted, even now, formal linguistics has not abandoned its faith in native-speaker intuition on constructed sentences in isolation, yet authentic language use cannot be totally ignored forever. And so there has even been dialogue between Diver's students and formal generative linguists (Contini-Morava 2011; Reid 2011).

In sum, since its advent in the 1960s and 1970s, the linguistics begun by William Diver has come to seem less isolated in the field, less extreme. That is due not so much to any changes that Diver's intellectual heirs have introduced into his way of doing linguistics as to changes that the rest of the field has undergone.

⁷ Thanks to Ricardo Otheguy (p.c.) for the gist of this critique.

Diver's intellectual legacy

In the spring of 1968, some of Diver's students urged him to discuss with them, more thoroughly than could be done in his classes with them, his innovative ideas about linguistics. Thus began the inimitable "seminar," so formative in those days and still central today. Diver's seminar became a site of intense intellectual activity, and Diver's students could hone there our ideas for our doctoral research. In 1989, the Department of Linguistics at Columbia ceased operations, and the University granted its last linguistics Ph.D. in 1992. After Diver's death in 1995, the seminar, finding itself newly unmoored, entered a long period of wandering, but its participants continued to meet and collaborate. In 2010, the seminar officially affiliated with the Columbia University Seminars. In 2012, the Seminar sponsored a conference celebrating the posthumous publication of Diver's works (Huffman and Davis 2012). In 2018, the Seminar celebrated its fiftieth anniversary with an event at Faculty House at Columbia.

Upon Diver's death, several of his followers founded the Columbia School Linguistic Society to continue the line of research that he began. The Society has, among other activities, sponsored twelve conferences and nine institutes.⁸ The Society has also sponsored graduate fellows and post-doctoral fellows.

And so Diver's legacy continues. His successors have not only conducted analyses of individual problems in individual languages but have also pursued certain—one might say—themes, among them:

⁸ Host institutions, in addition to Columbia, have been The City University of New York, Kean University, Rutgers University, The University of Copenhagen (Denmark), The University of Virginia, and Universidad Nacional de La Plata (Argentina).

- the intellectual kinship between Diver and Saussure, at least as Saussure is known through the *Cours* (Davis 2004a, and Reid 2006);
- an expansion of our understanding beyond the quasi-Saussurean *oppositions of value*, which resemble in some respects Diver's own grammatical hypotheses, into other types of relationships among linguistic elements: the lexical or quasi-lexical (Reid 2004, Crupi 2006, Sabar 2018), those found across—not within—semantic substances, the *oppositions of substance* (Davis 2002b, Gorup 2006, Davis 2017), and those involving perhaps non-minimal linguistic forms, that is, forms that might be thought of as chunks or clusters or constructions of morphemes, such as *myself* vs. *me* (Stern 2004);
- the purpose and the methodology of quantitative validation of hypotheses (Reid 1995; Davis 2002a, 2004b); and, the longitudinal theme that most closely relates to this paper:
- the way that authentic discourse, including literature, plays an indispensable role in linguistic analysis.

The text in Diverian linguistics

One of the distinguishing features of Diverian linguistics has always been its reliance upon extended context, as opposed to isolated sentences (Contini-Morava 1995: 24). All linguists, in some way, offer accounts of the appearance of tokens of linguistic forms, but they differ in the role they give to the sentence in those accounts (as well as in other respects).

For many linguists at least since Chomsky, the sentence, with its subject and predicate—*Socrates | is a man*—has been taken, *a priori*, to be the relevant matrix to frame that account. For such linguists, the account, therefore, consists of statements as to the various syntactic

categories (or types) into which a given linguistic form can fit. To illustrate in traditional terms: A noun (e.g., *man*) or one of its equivalents (*he*) can be the “subject” of a sentence. The form *a* can occur in the “determiner” slot before a noun (*a man*). In such linguistic analyses, the data consist, typically, of intuition on constructed sentences in isolation, artificially and deliberately devoid of natural context, thus restricting the linguist’s attention to just what is presumably relevant to the account. (For example, the sentence **Man a Socrates are* would be judged by intuition to be “ungrammatical”—thus the asterisk.) Extra-sentential context is deemed to be irrelevant to the task of ascertaining linguistic structure. In such treatments, sentences such as those in the following two pairs (*a*, *b*) of sentences can appear to have “the same meaning”:

(a). *A teenager stole my wallet.*

My wallet was stolen by a teenager.

(b). *The clerk sold the customer a shirt.*

The customer bought a shirt from the clerk.

Implicit in such accounts is the assumption, supported by unexamined intuition, that each sentence of a pair (*a* or *b*) can equally describe a given *scene* (Diver 1975/2012: 48). In each pair, the two sentences appear to be interchangeable.

By contrast, Diverian linguists do not assume that the sentence is the only relevant matrix to frame our accounts of the distribution of linguistic forms. A Diverian analysis would show that the two members of pairs such as those above are likely to appear in different contexts: in a story about a *teenager* or a story about a *wallet*, in a story about a *clerk* or a story about a *customer*. A Diverian analysis would posit that the grammatical *meanings* involved are

responsible for that difference in distribution. Thus the context in which a signal appears is essential if an adequate account of the observed distribution is to be provided, and consequently, if the signal's encoded *meaning* is to be posited. Signals may be morphological (*stole* vs. *stolen*) or positional (*a teenager stole* vs. *stole my wallet*). The extent of that relevant context is deliberately and necessarily left undefined; on occasion, it may be a phrase, a sentence, a paragraph, a conversation, an episode, a chapter, a book, and so forth: whatever context the analyst needs to appeal to in order to account for the appearance of the signal in question. For example, in pair (a) above, the relative position represented by *A teenager* before *stole* and by *My wallet* before *was* might signal a constant meaning; in pair (b) above, the positions of *clerk*, *customer*, and *shirt* relative to each other might signal relative meanings. The morphological form represented by *stole* may have a different meaning from *stolen*. And so forth.

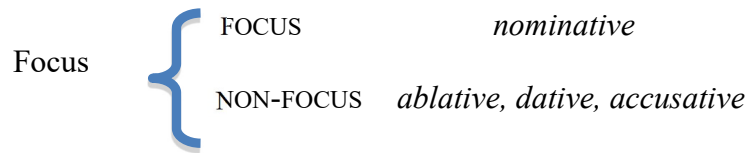
A corollary of the need for context is the necessity of relying upon attested data, as opposed to sentences constructed by the analyst for the purpose of the analysis. Thus, Diverian linguists rely upon the linguistic output of language-users other than the analyst, including published writers. That way, whatever context turns out to be needed will typically be found ready to hand. And the analyst cannot be accused of concocting just the data that suit.

To illustrate: Diver relied upon Caesar's war commentary *De Bello Gallico* for data to inform an account of the distribution of the Latin morphological cases. One of Diver's hypotheses about the Latin cases is his grammatical system of Focus (Diver and Davis 2012: 212).

semantic
substance

meanings

signals



Diver’s hypothesis is that Latin grammar has a mechanism (a *grammatical system*) that allows the writer to direct a reader’s Focus (the *semantic substance* of that system) onto various entities as the narrative progresses. The two grammatically signaled *meanings* at the writer’s disposal are FOCUS and NON-FOCUS; these two meanings exhaustively divide the semantic substance. Each meaning has its *signal* (one form or a set of forms): respectively, the nominative case (FOCUS) and the ablative, dative, or accusative case (NON-FOCUS).⁹

For example, in the passage below, the writer, by hypothesis, signals FOCUS on ‘Caesar’ (nominative case) and NON-FOCUS on the ‘legion’ (ablative case) and the ‘wall’ (accusative case) (cf. Diver and Davis 2012: 224-225).

Interea Caesar-*nom* . . . legione-*abl* . . . murum-*acc* . . . perducit (*dbg* I 7-8)

Meanwhile, Caesar-FOCUS, (using) the legion-NON-FOCUS, constructed a wall-NON-FOCUS.

Anyone who knows *De Bello Gallico*, Caesar’s account of his military conquest of Gaul, will not be surprised that Caesar tends to place Focus on himself. Nevertheless, Diver furnishes quantitative evidence to support his hypothesis. The quantitative evidence, for the sake of illustration, comes from the first fifteen sections of Book I of the text. Here is Diver’s rationale:

What the Focus hypothesis predicts, in terms of this procedure of verification, is that Caesar and the Helvetians, the parties of chief interest in the narrative as a whole, will appear a disproportionately large number of times in the nominative, and a disproportionately small number of times in those cases that

⁹ By hypothesis, the genitive case is not part of this system.

signal NON-FOCUS, here represented by the accusative. In corollary, the distribution of the unimportant (and hence rare) items will be skewed in the opposite direction. Such a prediction follows directly from the hypothesis that the nominative is a signal that directs that attention be concentrated on the lexical item with which it is associated, and that the accusative signals the opposite.

. . . [The] two extremes of the frequency count have been selected for comparison, as seen [here below]. (Diver and Davis 2012: 214)

And here are the numbers:

	FOCUS <u>nominative</u>	NON-FOCUS <u>accusative</u>	
Frequent mention	124	23	
Rare mention	28	105	OR > 20

In the text examined, the odds of Caesar or the Helvetians getting FOCUS are over twenty times as high as more rarely mentioned entities, such as the Pyrenees, getting FOCUS (The Odds Ratio is greater than twenty). Thus, a consideration at the level of context supports a hypothesis about linguistic form.

Typically in the work of Diver and his successors, the context that is provided to the reader of the analysis of a given example (a token of a linguist form) is the smallest context deemed necessary by the analyst in validating the analyst's account of the presence of that form at that point in the text. It is, of course, a judgment call by the analyst as to how much convincing the reader will need. The context deemed to be relevant may at times actually be less than a sentence in length, but often it is two or three sentences, or a paragraph or so. Thus, a Diverian linguistic analysis, unlike those in many schools, typically contains extended passages of literary text, in addition to what looks more like linguistic analysis. The role of that context is to provide support for the linguist's hypothesized meaning for the signal. Elements of the

context can do this to the extent that the analyst and the reader can agree upon the semantic compatibility of various forms in the context in together contributing to the writer's message.

For instance, in accounting for the presence of the forms *is* and *are*, Reid (1991) offers the following attested, contextualized examples and then comments upon the passage. (So that they will stand out, Reid italicizes the forms in question.) Notice how, following the passage he quotes, Reid picks up on explicit elements in the context that support his hypothesis for the semantic difference between the forms *is* and *are*. Specifically, in supporting a hypothesis that *is* signals the meaning Number ONE and *are* the meaning Number MORE THAN ONE, Reid mentions "locations," "ZIP codes," theology, and Woodward and Burtchaell:

'Heaven and hell is not about ending up in two different places,' says moral theologian James Burtchaell of the University of Notre Dame. *'It's about ending up in this life, and forever in the next, being two very different kinds of persons. It's about character, not context.'* In other words, *heaven and hell are* no longer thought of as different locations, with separate ZIP codes, but radically opposed states of intimacy with and alienation from God.

(Kenneth Woodward, *Newsweek*)

Heaven and hell are conventionally thought of as two different locations, with separate ZIP codes as Woodward puts it. But these two notions can also be taken as jointly defining a complex construct that has a single theological significance. In [the example], Burtchaell denies the first conceptualization and affirms the second. In speaking of their theological significance—what they are collectively 'about'—he unifies them with the Focus Number meaning ONE [signaled by *is*]; but when Woodward elaborates the conception Burtchaell is rejecting—that of being different locations—he individualizes them with the meaning MORE THAN ONE [signaled by *are*]. (Reid 1991: 231-232)

Presumably, in Reid's judgment, this amount of context will suffice, along with the analysis of many other such examples, to support his hypothesis. (Notice that an isolated sentence could not have been used to support Reid's hypothesis that *is* means ONE: *Heaven and hell is not about ending up in two different places. Is means ONE?*) There is no insinuation, however, that the

analyst (here Reid) has milked everything out of the context that some critical reader might deem to be relevant; for instance, it is quite arguably relevant that *Newsweek* is a magazine and Kenneth Woodward a journalist on its staff. The point, instead, is that a linguistic form appears where it does in a text because its *meaning* contributes, along with that of other linguistic signals in the context, to a language-user's communicated *message*. There is no reason to believe, *a priori*, that the sentence is the limit of the supporting context; quite the contrary.

Whole text in Diverian linguistics

While such practice is typical of the work of any successor of Diver, the point of this essay is best made by extending the range of relevant context used to, in effect, a maximum: a whole text. In theory, there is no way to distinguish between, say, an episode from a whole text and a whole text itself. A linguistic form is always used in some sort of context, even if only in a situational context ("*Help!*"). And there is no principled way to draw a line in advance between what context will be more relevant and what will be less relevant in supporting a hypothesis for the meaning of a signal. At times then, Diverian linguists have made use of whole texts in supporting their hypotheses.

As mentioned above, Diver (1969/2012), in his seminal paper, used the whole text of Homer's *Iliad* to support a hypothesis that certain linguistic forms bear meanings of the Relevance of events in the narrative. Clearly, the Relevance of a given event in the narrative will reflect the writer's assessment of the importance of that event in the story to be told. In Diver's words (p. 138), "There is thus available to the speaker of the language a distinction between

remarks that are relatively tangential and remarks that are relatively to the point.” To validate the hypothesis of Relevance, Diver (p. 140) proceeded as follows:

Three passages from the narrative portions of the *Iliad* will now be analyzed, differing from each other in terms of their tightness of organization in respect to the main line of the story: 1) fast-paced action in a battle scene, 2) transitional material between two major episodes of the story, and 3) a more complex passage containing minor episodes and transitions between them.

Here is a linguist analyzing linguistic forms by appealing to literary structure. This is not a linguist who views language as being in any sense modular, separate from human experience, but rather a linguist who views the mechanisms of language as constituting a set of tools that serve in an essential way in a very human act of storytelling.

A similar appeal to the structure of a whole text is made by Gorup (1987) in her validation of hypotheses that certain forms of Serbo-Croatian bear meanings of Focus. Says Gorup (1987: 89-90):

The data which served as the basis for this validation comes from novels and short stories written in Serbo-Croatian. The plot of the story itself will be used as a measure for evaluating the extent to which individual events should receive greater or lesser degree of attention. In other words, the reason for concentrating different degrees of attention on different events will be seen in relation to what overall importance an event might have in the plot of the story.

In her analysis, Gorup refers repeatedly to the “main narrative line” and to “departures” therefrom. Again, literature is taken to be essential to the task of linguistics.

As mentioned above, Reid (1991) relies extensively upon context to validate his hypotheses. In one or two places in the book in particular, however, the reliance upon a whole text is crucial. For instance, an essay in the magazine *The Atlantic* is used to show that Reid’s hypotheses for separate Number meanings on both the subject and the verb (to use traditional terms) “correlate in the manner of the examples [quoted individually in Reid’s book’s] in actual

running text” (p. 190). The actual degree of the correlation is not the point here; rather, a definitive correlation in a running text can be shown *only* by using an *entire* running text.¹⁰

Huffman (1997: 233-252) makes masterly use of the entirety of Charles De Gaulle’s *Mémoires de Guerre* in an extended demonstration that “motivated choice,” rather than syntactic government, is responsible for the distribution of certain French pronouns with respect to certain verbs. That is, the forms are not merely the automatic reflex of “governing verbs” but are instead signals of meanings in their own right. The verbs and the pronouns together point towards the author’s intended communication. To show this, Huffman takes note of independently known facts such as De Gaulle’s attitude towards “French officialdom,” De Gaulle’s tactical acumen, and his attitude towards military versus civilian personnel. In other words, it matters that the text is the mature De Gaulle’s *War Memoirs*, not the adolescent De Gaulle’s fictional play about a traveller.

As one part of his validation of Focus meanings for certain Italian pronouns, Davis (2017: 47-48) relies upon four published texts: two novels, a short biography, and a memoir.

Davis comments upon a correlation shown in those texts:

In a novel with one clear main character (a “hero”), that character can be predicted to be assigned, more often than other characters, the highest level of Focus. Minor characters, though important enough to be mentioned in the text, will tend to be assigned lower levels of Focus. This statistical tendency can be seen in [the table given there], which combines results for counts on four texts, each with one clearly identifiable principal character.

Clearly, it requires an appreciation of a whole text to assess who is a main and who is a minor character in a literary work.¹¹ Linguists, after all, can read.

¹⁰ Empirically, in the actual *Atlantic* essay, the odds of the Number meanings on the subject and the verb matching are greater than 6,000 to 1.

¹¹ In offering such a demonstration based on character status in narrative, Davis is applying an analytical practice initiated by Diver and a student of his, David Zubin (see Diver 1981: 81).

The recognition of the distinction between major and minor characters is, however, a rather superficial recognition of the usefulness of linguistics to literary theory, and vice versa. Not every main character tends to be assigned a Focus meaning; there are quirky texts. Too, there are different scopes of Focus, depending on the grammatical peculiarities of the language.

Some Focus systems operate rather globally. In Latin, seen above, the signals of the Focus meanings are case forms (suffixes attached to nouns, not verbs). In the opening sections of *De Bello Gallico*, as we have seen, Caesar and the Helvetians are more Focus-worthy than the Pyrenees. Caesar and the Helvetians tend to show up in the nominative case; the Pyrenees, in the accusative case.

Other Focus meanings, by contrast, are not so global in reach but are grammatically tied to individual events (verbs) in the narrative. Davis (2019) accounts for the unusual distribution of the two Italian forms *egli* ‘he’ and *lui* ‘he’ in Lampedusa’s famous novel *Il Gattopardo*, where the main character tends *not* to get the Focus form *egli* but the Focus-neutral *lui*. Davis appeals to the main character’s idiosyncratic role in that story: in *Il Gattopardo*, the main character is relatively inert, *not* the prime mover of events. And in modern literary Italian, Focus is apportioned not globally, but among participants in individual events.¹² While in Latin, the signals of Focus meanings are cases on nouns, in Italian, the signals of Focus are the pronominal *satellites* to the verb: *egli* (CENTRAL Focus) and the clitics (PERIPHERAL Focus). The main character in *Il Gattopardo* tends less to be assigned Focus, with *egli*, than someone else, someone who really moves the narrative along.

¹² The point that, in Latin, Focus is not tied to individual events is made in Davis (2016).

It requires a sensitivity to the genius of an individual text and an awareness of the properties of individual grammars to account successfully for the distribution of forms in texts. Not only are the grammars of individual languages different, but texts are different too.

To be sure, Diver and his successors were not the first to perceive a relationship between linguistics and literature. In the early days of linguistics, Sapir (1921/1949: 222) recognized that “Language is the medium of literature as marble or bronze or clay are the materials of the sculptor.” And while “The literary artist may never be conscious of just how he is hindered or helped or otherwise guided by the matrix [of his language],” his work of art nevertheless stands ready as a resource for the identification of those linguistic mechanisms. And so, while, for the most part, linguists historically have emphasized the distance between what they do and what literary scholars do, literature has always hovered just over the horizon in linguistic research. Diverian linguists, meanwhile, have gone farther than others in making practical and even explicit use of literature in the service of linguistics. We are doing something far, far different from the formalists whose interest lies in abstract syntactic structure, linguists for whom context is a distraction rather than an essential ingredient in the enterprise.

High tech and Diverian linguistics

The work of Diver’s successors has been facilitated by advances in computer technology having to do with the printed word.¹³ Those advances have taken the form of the accessibility of three resources previously not easily available: scholarly sources, supplemental data, and “big data.”

¹³ Because essentially no one among Diver’s successors has done work in areas such as speech production or perception, advances having to do with audio data have not figured into our work so far.

Early in the twenty-first century, the new availability on line of out-of-copyright scholarly sources was a boon to the editors of Diver's collected works (Huffman and Davis 2012). Widely available software allowed the editors to find, check, and even add scholarly sources to the original materials, enhancing scholarship that had been done before the advent of such technology. For example (p. 434), the editors were able to provide a solid citation (Bloomfield 1924) where Diver had had only an allusion to previous work.¹⁴

For Davis (2017), electronic searches of strings of text made possible the provision of supplemental data to fill in the gaps in the analytical argument that were created by the idiosyncracies of the published texts already examined or by the analyst's failure, during collection, to foresee the significance of certain pieces of data. For example (pp. 186-187), previous scholars had noted that a certain construction in Italian was "far less common" than another, and an electronic search quickly found an authentic example of the construction, allowing Davis's argument to be made less speculatively.

Sabar (2018) exploits "big data" in his validation of meaning hypotheses for linguistic forms. Though Sabar does rely on examples of the forms quoted in contexts that were created by published authors (e.g., p. 41), he also makes extensive use of an electronic data set that provides huge numbers of authentic data. In particular, Sabar relies upon the *Corpus of Contemporary American English* (COCA), a 560-million-word on-line collection of text, both spoken and written. Such a data set in such a format allows Sabar to discover, through electronic searches of strings of text, many statistical facts of distribution that would otherwise have been unimaginable, and to use those statistical facts to support his hypothesis. In his words (p. 137):

The use of COCA has allowed me to carry out many quantitative tests that would simply be impossible to do if done by "hand" using a couple or several books. . . . The ability to search through the massive corpus on-line allows the analyst an

¹⁴ Bloomfield (1924) is a favorable review of Saussure's *Cours*.

unprecedented freedom, making it possible to test the frequency of virtually any sequence one wishes.

To take just one instance to illustrate: To support his hypothesis of a meaning of ATTENTION, VISUAL for the form *look*, Sabar presents a count correlating *look* with *carefully* as opposed to *carelessly*; the algorithm culled 25,917 tokens altogether. It is difficult to imagine an analyst finding such a large number of tokens of three forms combined by combing painstakingly through printed texts. Indeed, the quantity of correlations discoverable in COCA is limited only by the ingenuity of the analyst in thinking up relevant data points to cull from the massive collection. If the analyst makes predictions that support his hypothesis, then the wealth of quantitative data is quite valuable.¹⁵

Weighing big data versus whole text

While it is too early to say for sure how the availability of computer technology will alter Diver-inspired linguistics for the longterm, it is not too early to make a prediction. To judge from conversations in the group in recent years, I would venture to predict that the use of computer technology will find its proper place alongside the use of whole text. Computer technology can achieve certain things: the rapid procurement of scholarly sources, the easy provision of data that are supplementary to those obtained from whole text, and the ability to search algorithmically through massive data sets for an essentially unlimited number of strings of words. But computer technology lacks certain advantages that whole texts provide.

¹⁵ Sabar's use of inferential statistics, however, is not, in my view, justified (cf. Davis 2002a).

For one thing, many people (myself included) simply get more enjoyment out of studying a good literary text than out of performing an electronic search on a massive data set of unrelated strings of words. This affective advantage comes, however, with a rather serious linguistic consideration: that in a text written by a “skilled writer”—something assessed independently of linguistics—“the writer will exploit the resources of the language more thoroughly, providing both a more challenging problem and a better testing ground” (Diver 1995/2012: 487). In other words, good writers are skilled at exploiting the linguistic mechanisms at their disposal; they use more of the mechanisms and they use them in a communicatively effective way that helps the linguist.

A second advantage of the whole text: Rather than, *pace* Sabar, an author “possibly” having “a particular set of overall communicative goals” (p. 22), I would argue that, typically, an author *presumably* has a communicative goal. The author’s communicative goal is his or her very reason for writing, the *raison d’être* of the text. Caesar’s communicative goal in his war memoir *De Bello Gallico* ‘On the Gallic War’ is not at all the same as Cicero’s communicative goal in his essay *De Senectute* ‘On Old Age,’ and the texts consequently have different linguistic distributions (Davis 2016). The purpose of a particular text, and its rhetorical characteristics, ought to be a central consideration in an analyst’s attempt to account for the distribution of linguistic forms in that text.

A whole text is coherent. The ultimate cause of the massive statistical dependencies (evidenced by correlations) among tokens in connected text is, in fact, the coherence of the text. Meanings that jointly will contribute to an author’s intended message will indeed appear together in context. One recognizes almost immediately those times when the distribution of linguistic

forms is *not* a function of their meanings, as in crossword puzzles, telephone books, and the like (Davis 2002a: 71-72).

Finally—and to return to some of Diver’s own earliest achievements—whole texts make possible the development of hypotheses that have to do with, for instance, the relative importance of characters or of events in a narrative. Several of the hypotheses mentioned above could not have been imagined, let alone validated, without the analyst’s consideration of the genius of the particular text: the relative Relevance of the events in the story, the relative Focus on the characters in the story, and so forth.

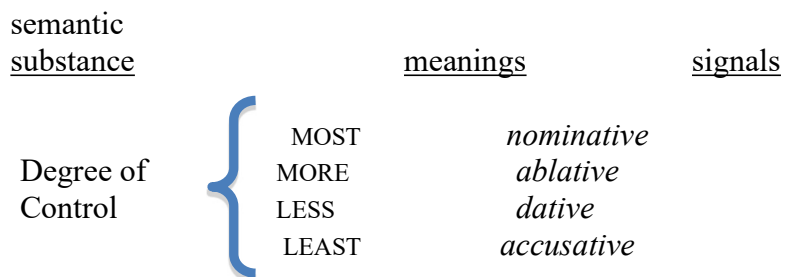
Practitioners in our field will eventually learn how best to balance the utilization of the resources of whole text and the resources of electronic corpora. Electronic corpora were unavailable in the days of Diver himself and his graduate students, but what we learn from electronic corpora can only supplement—not replace—what we have learned from the study of literature. If it is true that the mechanisms of language are tools of communication and that their use reflects peculiarly human characteristics, then we linguists would do ourselves no favor by pretending that we should better analyze data extracted from their context—whether in an isolated sentence or in COCA—rather than data embedded in their context. It is the genius of Diverian linguistics that it takes its data from authentic acts of communication. Over the years, we have learned a great deal that way. In the coming years, we will do well to continue mining the resources of whole texts such as histories, novels, and interviews, even while we increasingly figure out how best to take advantage of new technologies.

Peering into the future of Diverian linguistics

Conceivably, even Diver’s successors, for all our reliance upon context and our recognition of a Human Factor in language, have made less than we could have of the language-user’s overall intent, the language-user’s big message. Perhaps, to balance a token-by-token account, we would do well to promote even more actively than we have a text-to-token account of the distribution of linguistic forms.

For instance, as we have seen, the Focus system in Latin allows a writer, using the morphological cases, to direct a reader’s attention just where the writer wants it to be. This is a matter of the language-user’s choice. That much is clear and has always been appreciated in our school. Caesar, for example, could choose to create a text not about Caesar but about a particular Helvetian, or about the Pyrenees, or whatever.

But just as the Focus system can be viewed in this text-to-token way, perhaps too so can, say, the system of Degree of Control over events in the Latin narrative. The diagram below (simplified) is Diver’s hypothesis for how several of the Latin cases signal meanings of the Degree of Control exercised by a participant (represented by, e.g., a noun) over a particular event (represented by, e.g., a verb) (Diver and Davis 2012: 218). Relative to each other, the nominative case signals that a participant is to be viewed as having the MOST Control over an event, while the accusative case signals that a participant has the LEAST Control over the event, and so forth. Note that the genitive case is not part of the system of Degree of Control, does not signal Degree of Control at all; that feature of the hypothesis will figure into this illustration.



Following now is an actual example from Caesar's *De Bello Gallico* (cf. Diver and Davis 2012: 224). Caesar has a wall built to keep the enemy Helvetians out of the Roman Province.

Interea Caesar-nom . . . legione-abl . . . murum-acc . . . perducit (dbg I 7-8)

Meanwhile, Caesar-MOST, (using) the legion-MORE, constructed a wall-LEAST.

The author Caesar—though he likely never laid a hand on the wall during its laborious construction—attributes to himself the MOST Control (signaled by the nominative case) over the construction of the wall. His 'legion'—the men who actually toiled on the wall—get second billing (ablative case). And the 'wall'—their product—is attributed LEAST Control over the construction (accusative case).

But suppose that Caesar had been more modest, had wanted to keep his own agency more out of the picture, had wanted to tell of the efficacy of parties other than himself. Suppose that Caesar had wanted to tell about the power of the wall to keep the Helvetians out, or to busy his soldiers, or to beautify the countryside, or whatever. Then Caesar could well have arranged to partition the semantic substance of Degree of Control in a different way, something like this:

Interea murus-nom legionem-acc Caesaris-gen occupabat.

Meanwhile, a wall-MOST occupied Caesar's legion-LEAST.

By talking about 'occupying' (or 'busing') rather than 'constructing,' Caesar could easily have attributed the highest Degree of Control to the wall and the lowest degree to the legion, and could have removed himself entirely from the matter of responsibility. But Caesar didn't do that.

De Bello Gallico is not about the effectiveness of a wall; *De Bello Gallico* is a narrative in which Caesar boasts of what Caesar accomplished. The mechanisms of Latin grammar allow Caesar to attribute higher degrees of control over events to himself and less to others in the story. The author's overall intent—his big message—permeates his text and works as a factor in his grammatical choices even way down at what might appear to be the most local of levels. It is insufficient to ask “Who has more control over the ‘constructing’?”; that question takes the presence of the form *perducit* for granted. It is also necessary to ask: “How does the writer of this text partition responsibility for the events in the story he tells?”

Even Diverian linguistics—which has long explicitly valued the language-user's intent as an ingredient in our account of the distribution of linguistic forms—even we may have bought too much into the mindset of the larger field of linguistics where, I would argue, the interest of analysts has focused too exclusively on individual tokens of linguistic form and not enough on the whole text that encompasses them. In real life, tokens of linguistic form occur where and when they do only because a language-user has a story to tell. If communication is one of our theoretical school's major orientations—one of the considerations that we must take into account as we explain our observations of the distribution of linguistic forms—then we must pay adequate heed to the overall communication that a language-user chooses to engage in and within the matrix of which all of the language-user's choices are made.

Reasoning in this way, it is not hard to imagine that a language-user's big message might influence choices even as apparently local as signaled meanings of grammatical Number (*our team / our athletes*), or Time (*As a boy, he looked white / As a grown man, he still looks white*), or even Sex (*You're not going to the dance with him, are you? / You're not going to the dance with that deadweight, are you?*). A language-user might have a demonstrable interest in big

concerns like cooperation (*team* vs. *our athletes*), or a biracial man's biography (*looked* vs. *looks*), or a loved one's social standing (*him* vs. *that deadweight*). There is good reason to pay attention to whole-text considerations, not just atomistic minutiae, in an analyst's account of the distribution of linguistic tokens. Literature is a force to be reckoned with even in linguistics.

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