APPI VING I	INCHISTIC THE	DRY TO TRADITIONAL.	GRAMMAR AND ST	VIF

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# This is the sort of English up with which I shall not put. Winston Churchill<sup>1</sup>

#### **INTRODUCTION**

Churchill's quote wittily reveals the weakness of English teachers' old rule *never* end a sentence with a preposition. Nonetheless, grammar as it is taught in schools and understood by the well-educated public remains rife with such rules. Style and grammar books promising to teach us *How to Write Grammatically* are a dime a dozen, yet with all the advice out there, writing clearly and concisely remains extraordinarily difficult for almost all of us.

Steven Pinker in *The Blank Slate* (2002) and in a recent lecture at Stanford (2004) has argued that we can and should apply the discoveries of the sciences of human nature—cognitive and evolutionary psychology, behavioral genetics, theoretical linguistics, sociobiology, neuroscience, etc., i.e., the cognitive sciences—to the real world. Theoretical linguistics should be ideal for this—after all, it is among the most successful of the cognitive sciences and language is so relevant to all of life. For the most part, though, linguistics has hardly been applied to the real world. In this paper, I suggest some possible applications of theoretical linguistics to grammar education and writing style, topics which have been surprisingly ignored by most theoretical linguists.

Theoretical linguistics is the scientific study of language (Lyons 1981). It has its origins in the philological tradition of scholars studying ancient languages, but it came of age under the influence of Noam Chomsky in the 1950s and 1960s. The "Chomskyan" revolution in linguistics coincided with the development of and helped to create cognitive

<sup>1</sup> Columbia World of Quotations. 1996, http://www.bartleby.com/66/88/12388.html, accessed December 4, 2004; alluded to in Pinker 1994.

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science as we know it. Although there were tremendous hopes for applications of linguistics to computer translation, philosophy, and even literary theory, by the 1970s hopes of applications of linguistics to the real world had waned.<sup>2</sup> Theoretical linguists retreated to their ivory towers. Where they did venture as linguists into the public realm, it was often either political, as with George Lakoff and Geoffrey Nunberg in writing about the role of language in politics,<sup>3</sup> or for a popularization, as with Pinker (1994).

An explanation of a few relevant linguistic distinctions is in order. First is the distinction linguists make between descriptive and prescriptive grammar. Prescriptive grammar refers to the traditional meaning of "grammar," i.e., what is taught in schools proscribing how one *should* speak and write. Linguists, seeing themselves as scientists seeking to understand how language works and what language is, have shunned this normative approach and instead focused solely on descriptive grammar, which describes language scientifically without judging. Prescriptive grammar is made up of a few, rather arbitrary, I shall argue, rules that have to be consciously learned. The descriptive grammar that linguists study, by contrast, consists of a complicated, interrelated set of unconscious rules that are naturally acquired by children.

Unfortunately, the public conception of grammar is almost entirely based on prescriptive grammar, with little understanding or even awareness of the fundamentally more important unconscious grammar linguists have shown we all have. Ill-conceived prescriptivist notions of grammar reign for high school English teachers, language pundits such as William Safire, and much of the well-educated public. Theoretical

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<sup>&</sup>lt;sup>2</sup> There have since then been fruitful applications of linguistics in such fields as second language learning, reading development, and speech disorders, but few directly related to the core of linguistic theory, grammar

<sup>&</sup>lt;sup>3</sup> Chomsky's political works, unlike Nunberg's and Lakoff's, are generally considered to be unrelated to his linguistics.

linguists rue this state of affairs, but they do little to change it. Introductory linguistics texts include the necessary distinction between descriptive and prescriptive grammar and point out with a smug we-know-more-than-you air the failings and silliness of prescriptive grammar. But they then proceed to say no more about prescriptive grammar, or about what alternatives could be taught (e.g., Sag et al. 2003). Few theoretical linguists have broached the topic, and then only vaguely (Pinker 1994, Nunberg 1983). Some, including Chomsky, have even "denied that linguistics has, can have or indeed should have any relevance to language teaching" (Hudson 2004, 105).

A second important distinction is between spoken and written language. Theoretical linguists have almost exclusively concerned themselves with spoken not written language (Sampson 1985). Linguists' primary goal has been understanding the universal grammar all humans are endowed with, rather than the specifics of a few particular languages. Because all normal humans can speak language, but only those in literate societies write, linguists have focused on spoken language. That so few linguists in recent years have studied writing helps explain why so few have applied their research to the real world of writing and style. The prescriptive rules I will discuss can apply to both spoken and written language, but, because most prescriptive grammar is suggested in the context of writing and style, I will focus on writing. Regardless, both spoken and written language have the same essential purpose, clear and effective communication.

Theoretical linguistics can and should be applied to traditional grammar and style, following Pinker's imperative that the results of cognitive science be applied to the real world, in three ways. First, and most easily, the discoveries of linguistics should be used

<sup>&</sup>lt;sup>4</sup> Cameron (1995) also makes the excellent point that such prescriptive rules should be considered by sociolinguists as a real influence on language.

to dispel once and for all ill-conceived prescriptive grammatical rules, which continue to prevail in many classrooms and in the public psyche. These rules foster elitism and too often get in the way of instead of improving communication. Second, real theoretical linguistics should be introduced as a subject in primary and secondary education, replacing prescriptivist grammar classes. In addition to helping debunk prescriptive grammar and replace it with an understanding of true, linguistically-informed grammar, teaching linguistics in schools can help writing by improving understanding of language, encourage scientific and logical thinking, and promote diversity. Third, and most intriguingly, linguistic theory and psycholinguistics could actually improve style by offering insight on what grammatical constructions are most easily processed and understood.

It is important to understand the justifications for these three proposals. What is the purpose of language? I work primarily from the belief that our goal in language should be effective, efficient communication. I base my arguments on ideas set forth by the philosopher Paul Grice (1989), who has suggested that we follow a set of conversational maxims, such as "be relevant," "do not say what you believe to be false," and "make your contribution as informative as is required." His "Maxims of Manner" are most relevant to grammar and style:

- 1. Avoid obscurity of expression.
- 2. Avoid ambiguity.
- 3. Be brief (avoid unnecessary prolixity).
- 4. Be orderly. (Grice 1989, 27)

These, of course, seem to be logical, reasonable rules to follow. In addition, Grice notes that there are "all sorts of other maxims (aesthetic, social, or moral in character)" (Grice 1989, 28); these, too, may be relevant to a discussion of grammar and style, but of primary concern is communicative efficiency and effectiveness. It is these maxims of manner that motivate my argument against prescriptive grammar, and in favor of linguistically-aided alternatives.

### THE PROBLEMS WITH PRESCRIPTIVE GRAMMAR

Prescriptive grammar, the grammar taught in schools that consists of conscious, normative rules to be learned, dominates the public's view of language but is actually divorced from the realities of language. Pinker, introducing his criticism against prescriptivism, describes it this way:

Imagine that you are watching a nature documentary. The video shows the usual gorgeous footage of animals in their natural habitats. But the voiceover reports some troubling facts. Dolphins do not execute their swimming strokes properly. White-crowned sparrows carelessly debase their calls. Chickadees' nests are incorrectly constructed, pandas hold bamboo in the wrong paw, the song of the humpback whale contains several well-known errors, and monkeys' cries have been in a state of chaos and degeneration for hundreds of years. Your reaction would probably be, What on earth could it mean for the song of the humpback whale to contain an "error"? Isn't the song of the humpback whale

whatever the humpback whale decides to sing? Who is this announcer, anyway?

But for human language, most people think that the same pronouncements not only are meaningful but are cause for alarm. (Pinker 1994, 370)

This is what traditional, prescriptive grammar does—it criticizes the natural way people speak. A whole industry of amateur grammarians, dubbed "language mavens" by Pinker (1994), laments the "decline" of English language, but in this paper I will focus specifically on the application of prescriptive grammar in the classroom.

Theoretical linguistics should be applied to debunk prescriptivist notions of grammar. These grammatical rules, such as the admonition not to end sentences with prepositions, should go because, contrary to their proponents' claims, they interfere with logical, effective, and clear communication, guidelines for which are cogently captured by Grice's maxims of manner. Indeed, they are arbitrary and difficult rules that are little more than an indication of having gone to the "right" schools and having heard the "right" advice. If we are to have a truly meritocratic society, people should be judged not by their adherence to a few, arbitrary prescriptive rules, but by the content of their ideas. Where languages have norms, they should be to encourage easy communication, not to serve as irrational barriers.

The sociology of these rules is fascinating. In 18<sup>th</sup> century England, increased social mobility led to a demand for self-improvement grammar manuals. These books, based on Latin, which was "considered the language of enlightenment and learning" that offered "an ideal of precision and logic," flourished, trying to "outdo one another by including greater numbers of increasingly fastidious rules that no refined person could

afford to ignore" (Pinker 1994, 373). Once these rules were introduced, they prevailed, Pinker suggests, for three reasons. First, like college hazing, the older generation would tell the younger "I had to go through it and am none the worse, so why should you have it any easier" (Pinker 1994, 374). Second, few would counter the rule out of fear that they would be perceived as ignorant. Third, the elite favored these rules because they served as "shibboleths, differentiating the elite from the rabble" (Pinker 1994, 374).

Three common prescriptive rules will illustrate how prescriptivism interferes with clear communication. First is the rule never end a sentence with a preposition. This rule, introduced in the 17<sup>th</sup> century by poet John Dryden (The American Heritage Book of English Usage, §50), has been justified by countless middle and high school teachers this way: "A preposition has to come before something; therefore, it can't appear at the end of a word." This, however, is a misunderstanding of the nature of English prepositions. While prepositions in a language such as Latin do, indeed, always come before the word that is the object of the preposition, in English this is not necessarily the case. In fact, to linguists, the traditional parts-of-speech are not set in stone: "The traditional list of ten or so parts of speech is very heterogeneous in composition and reflects, in many of the details of the definitions that accompany it, specific features of the grammatical structure of Greek and Latin that are far from being universal" (Lyons 1981, 109). Prepositions appear at the ends of sentences in many verbal idioms, for example throw away, pick on, and put up with. All of these, as Churchill so wittily noted, sound ridiculous rephrased to keep the preposition away from the end of the sentence, as in *Those are the kids on whom* I picked. Sometimes, the preposition ending the sentence is even required, as in That depends on what you believe in (The American Heritage Book of English Usage, §50).

<sup>5</sup> I forget which of my middle school teachers gave me this explanation.

Other times, it is needed to express semantic subtleties; *John was spoken to* relays a slightly different meaning than *Someone spoke to John*. To proscribe against ending sentences with prepositions is to deprive English of its flexibility, to encourage writers to add unnecessary wordiness, and ultimately to get in the way of clear communication.

A second common prescriptive rule forbids splitting infinitives. Once again, this rule comes from a misapplication of Latin grammar to English. Latin's infinitives are a single word, as in amare, which obviously cannot be split (Pinker 1994). English, however, has two-word infinitives: to followed by the verb in base form. There is no reason not to split infinitives; English is not Latin. In fact, some English sentences cannot be said without splitting the infinitive. For example, how else can one say I expect the sales to more than double next year? (Zwicky 2004) Similarly, I wanted to really like her cannot be expressed without splitting the infinitive; in I really wanted to like her, really modifies wanted, and I wanted really to like her and I wanted to like her really are not grammatical.<sup>6</sup> In other cases, splitting the infinitive avoids ambiguity: in *I wanted badly* to beat them and I wanted to beat them badly, badly can be read as modifying either wanted or to beat, and only in I wanted to badly beat them is the meaning unambiguous. While it may be good advice to avoid splitting infinitives—partially because many educated audiences dislike them and partially because they often sound awkward—a blanket prohibition gets in the way of clear communication.

A third and most politically-charged prescriptive rule concerns gender-neutral pronouns. English lacks a gender-neutral third-person singular pronoun such as French's *on* to refer to a person of unspecified gender. In ordinary conversation, we use *they* or

<sup>&</sup>lt;sup>6</sup> The last sentences might be found grammatical if read with the right intonation and pauses, with *really* serving as somewhat of an interjection (as in *I wanted to like her–REALLY!)*; this, however, is obviously not the sense desired.

them in such circumstances. If anyone calls, tell them I can't come to the phone sounds perfectly normal (Pinker 1994, 378, quoting J. D. Salinger's Catcher in the Rye). Prescriptive grammarians raise a fuss at this, insisting that because anyone is singular, them, being plural, is wrong and illogical. At first, the "correct" thing to do, according to them, was to use him or he to refer to a person of unspecified gender. This, of course, leads to the awkward, misleading and sexist If anyone calls, tell him I can't come to the phone. In response to this sexism, the new, politically correct rule is to use him or her and he or she in such situations. But this is just as ungainly: If anyone calls, tell him or her I can't come to the phone. The obvious solution is to use they and them. This avoids the sexist presumption of him and the awkwardness of him or her, and more importantly reflects how we actually speak. Human grammar is idiosyncratic, and it should be seen as a testimony to its flexibility, not a sign of illogic, that English has co-opted the third person plural they to serve in such situations.

Other examples of prescriptive rules abound. Often, they come in the form of lamentations that a word is no longer used in its original sense. *Hopefully* should only mean something is done with hope, not *it is hoped that* or *if hopes are realized*, goes one such rule. *Data* is plural, with the singular *datum*, goes another. Many newly coined verbs, derived from nouns, are also denounced, including *access*, *progress*, and *impact*. (Pinker 1994) These prescriptivist laments ignore the reality that languages change. English is not what it was in Shakespeare's time, nor will it be the same in another four hundred years. To try to prevent the relentless change of language is futile. As natural as it may be to mourn the loss of the original meaning of a word—indeed, both Pinker (1994) and Nunberg (1983) do so—a realist must accept this change.

Ironically, prescriptive grammar sometimes leads to the very "errors" it proscribes. In a phenomenon called hypercorrection, speakers over-generalize the prescriptive rules, saying for example *between you and I* or *He told you and I* (Lyons 1981, 51), which their Latinate prescriptive grammar would condemn because objects should be in the accusative not the nominative case. Such examples reveal the hypocrisy and the futility of such difficult prescriptive grammar, which not even its proponents can follow.

In spite of my criticism of prescriptivism, I must make two caveats. First, it is useful and important in educated society to be aware of these prescriptive rules, and, in front of certain audiences, it is probably advisable not to split an infinitive. Second, there are some normative rules of grammar that are appropriate. To be a part of a linguistic community is to follow these rules; someone who says *Barks dog street in* violates these norms. The difference is that these are unconscious, naturally acquired rules that enable effective and easy communication. Writing systems have more consciously-learned rules such as spelling and standard punctuation. Thiss sentuns iz andurstandubul but hard and eckstreemle unoying to reed, this sentence, you Might; also; find annoyinG— It's clear why we have rules of spelling and punctuation. Proscribing against split infinitives, by contrast, does nothing to improve communication. My criticism in this paper is only of these traditional prescriptive rules that get in the way of communication, not appropriate normative conventions such as spelling.

The prevalence of this prescriptivism only increases the importance of challenging these rules. A poll I conducted of about 45 Stanford freshmen revealed that 89% had heard of the rule common prescriptive rule *never end a sentence with a* 

preposition, and 72% of those who had heard of the rule had consciously followed it. Similarly, 58% of those polled had heard of the proscription against splitting infinitives, and 64% of those who had heard of the rule had consciously followed it. (See Appendix for complete data from the survey.)

Of course, criticizing prescriptive grammar without offering any specific alternatives does little good; action needs to be taken if these rules are to go. It would seem at first that brilliant popularizations of linguistics like Pinker's *Language Instinct* (1994) could go a long way—and for linguists to use their substantial authority to make this point in such works and also, as Nunberg does, by serving on usage panels is very helpful—but prescriptive grammar is so entrenched that more needs to be done. To simply stop teaching grammar and writing style of any kind in schools is clearly a bad idea. Instead, students—and their teachers—should be taught grammar that is influenced by linguistic theory.

## TEACHING LINGUISTICS IN SCHOOLS

It's hard to deny that *something* about language<sup>7</sup> should be taught in middle and high school (and college, too, especially when secondary education is sub-par). After all, proficiency at language is essential for success in the world.

It might be objected that if linguists say that language is unconsciously acquired—one of the axioms of theoretical linguistics is that all normal adult humans have full proficiency at speaking their native tongue—then it should not have to be taught explicitly. This implicit school, in which language itself is never discussed and "the

<sup>7</sup> In discussing education about language, I am referring to education about one's native language, English in this case, but I do not mean to discourage in any way the education of foreign languages.

school's contribution to language development is simply to provide a rich linguistic environment" (Hudson 2004), could perhaps succeed in a society without writing, where naturally acquired spoken proficiency would suffice. But writing, which is a crucial aspect of linguistic competence in the real world of our society, is not naturally acquired. As Pinker (1997) has argued, humans have certain innate faculties or "modules" of the mind that do not need to be explicitly taught, including the spoken language; "folk psychology," which lets us understand others' emotions; and the intuitive physics that lets us throw a ball and walk. Writing, by contrast, is one of the "accessories that civilization bolts on" to our "factory-installed equipment," i.e., our spoken language faculty, to use Pinker's metaphor (1997, 342). Thus, writing has to be consciously learned and taught, rather than passively acquired. For that to happen successfully, an understanding of how language works is extraordinarily helpful.

Unfortunately, the way language is taught in schools has very little to do with how it actually works. Traditional grammar as it is taught in schools is based on patently inaccurate views from the 19<sup>th</sup> century. "One might have thought that as university linguistics departments expanded during the 20<sup>th</sup> century, they would naturally assume the role of being the standard source of expertise in descriptive grammar," say Rodney D. Huddleston and Geoffrey K. Pullum (2003), linguists who co-edited *The Cambridge Grammar of English*. "But that is not what happened." Pullum, along with several other professional linguists, has been advocating the teaching of real linguistics in schools and pointing out grammatical "illiteracy" in our society on a weblog, *Language Log*, edited by Mark Liberman, a University of Pennsylvania linguist. Doing so would improve the

linguistic understanding where traditional grammar failed, as well as improving logical and scientific thinking and encouraging a tolerant view of linguistic diversity.

It is clear that teaching linguistically-informed grammar and its methods—that is, real linguistics—will improve understanding of language. This is what traditional grammar sought but failed to do, because it was prescriptivist in focus and because its analyses were flat-out wrong. But new grammars, such as Huddleston and Pullum's forthcoming *A Student's Introduction to English Grammar*, can avoid both of these flaws, shunning prescriptivism and using scientifically justified grammatical analyses. As Huddleston and Pullum explain:

Students [not taught real grammar] miss the pedagogical benefits that accrue from analyzing English grammatical structure in detail. The notion that learning Latin provides a training for the mind seemed old-fashioned and silly by the '60s, but it always contained a grain of truth: Learning Latin in the traditional way involved a lot of work on word and sentence structure, and it is indeed good intellectual training, of the same sort as is provided by symbolic logic and computer programming. (Huddleston and Pullum 2003)

Teaching linguistics in schools will also help to dispel silly prescriptive rules, instead combining a focus on the principles of good writing and communication—including Grice's maxims—with a deeper understanding of grammatical structure.

Teaching linguistics in schools will improve not only students' language skills, but also their scientific thinking. Maya Honda, Wayne O'Neil, and Nigel Fabb, working at MIT and Harvard, have argued that linguistics—one of the cognitive sciences—makes

an ideal introduction to scientific inquiry (Honda and O'Neil 1993; Honda 1994; O'Neil 1998; Fabb 1985). Honda and O'Neil justify teaching linguistics in the science curriculum in three ways. First, they argue, because linguistics relies simply on students' native language knowledge, it is more accessible and relevant to students than, say, astronomy and requires none of the expensive laboratory equipment of chemistry or biology. Second, teaching linguistics in middle school emphasizes that science is "a way of forming questions about the world we occupy and seeking their answers," not simply "the topics covered in their standard high school science textbooks or by the list of names of departments in a college's faculty of science" (Honda and O'Neil 1993, 236). Finally, teaching linguistics allows for more equal access than other sciences, "presenting[ing] few barriers to people with physical handicaps," encouraging English as a second language students, and not being gender-biased—"of particular importance at overwhelmingly female institutions where prospective early childhood teachers are educated" (Honda and O'Neil 1993, 237).

The third clear benefit to teaching linguistics in schools is that it will increase students' understanding of and respect for diversity. To linguists, it's common knowledge that African American Vernacular English, or Ebonics, is a fully structured language that has as complex and logical rules as Standard English (Sag et al. 2003), but few who have not taken linguistics realize this. Similarly, people often assume that for deaf people, sign language simply corresponds word-to-word to the native language, such as English (indeed, I was under this gross misperception until I took a linguistics course); in reality, sign languages are complicated languages of their own right, and deaf children who are not exposed to them may end up not knowing any language. Students who understand the

incredible diversity and complexity of human languages are likely to be more open to other cultures and their languages.

Teaching linguistics in schools can be done. Honda and O'Neil (1993) and Fabb (1985) have shown in pilot studies how successful linguistics-as-science programs can be at the middle and high school levels. O'Neil (1998) offers an interesting lesson used for Boston-area school children on the Boston accent, in which *r*'s are not pronounced in certain words and are inserted in others. Huddleston and Pullum's forthcoming student grammar could be used for advanced high school students and college students in introductory writing classes. Mark Liberman has calculated that "there are enough linguistics Ph.D.'s on the faculties of America's colleges and universities that it should be possible for undergraduates to average at least one course each on linguistics" (Huddleston and Pullum 2003). Hudson (2004) points out that linguists, wary of leaving the ivory tower, should realize that this would be a boon to the discipline, as students with an interest in language would study linguistics and become teachers.

#### APPLYING LINGUISTICS TO STYLE

So far, I have presented two concrete proposals for how linguistic theory can be applied to the real world: first, for the discoveries of linguistics to be used to help dispel the myths of prescriptive grammar; and second, for real linguistics to be taught in school instead. These proposals seek to get rid of prescriptive rules, instead preferring Grice's more general maxims of manner for communication, and favor linguistics' descriptivism; they are essentially an argument using the descriptive discoveries of linguistics to debunk the normative grammar rules taught in school. My third proposal, by contrast, seeks to

use the science of linguistics to explicitly shape certain normative guidelines for writing and style. Unlike the prescriptive rules I argued against, however, these new guidelines—not rules—would be based on Grice's maxims of manner, with the sole goal of improving communication. This is merely a cautious and hopeful proposal for a program that would require significant strides in linguistic theory to be realized; still, it offers an intriguing avenue and justification for future research.

Linguists and psycholinguists, studying how we process sentences, can tell us what grammatical formations we do and do not process easily. There are some sentences that are grammatical but difficult to process, for example, The horse raced past the barn fell (i.e., The horse that was raced past the barn fell) (Sag et al. 2003). Good writing clearly should avoid such sentences. Linguists can, I hope, discover subtler examples of formations that are more difficult to process. Some Chomskyan approaches to grammar, for example, have posited that passive voice sentences have undergone a transformation from an original active form (Sag et al. 2003). If this is true and understanding passive sentences requires significant psychological effort, perhaps there is some truth to the prescriptive rule not to use passive sentences. Further psycholinguistic research could tell us whether we process short sentences better, to what extent connective words like and, but, and however help us understand the logical flow of a paragraph, and how easily we process appositions and parenthetical remarks. Advice such as Strunk and White's (2000) famous suggestion to avoid adjectives—which Pullum (2004) lambastes on Language Log—could be tested by psycholinguistic studies of what the optimal idea density, a measure of the number of elementary propositions expressed per ten words (Liberman

2004), is for reading comprehension (sentences with adjectives tend to be far more idea dense).<sup>8</sup>

Punctuation would be an especially fruitful area for this program. As Nunberg (1990) points out, there has been very little linguistic research in punctuation, with most linguists naively assuming that punctuation simply served as a rough guide to intonation and prosody. In reality, though, as Nunberg has shown, punctuation is a complicated grammatical system with its own set of intricate rules. More research into punctuation could suggest where punctuation is helpful and where it is unnecessary. To what extent does punctuation help us process syntactic constituents and to what extent is it unnecessary and distracting? For example, in *I played hard, but(,) despite my efforts, we lost,* how useful would a comma be after *but?* To what extent does punctuation relay intonation? Does a careful distinction between colons, semi-colons, and dashes give us flexibility in connecting related sentences, or does it merely confuse matters? Scientific research about these unanswered questions could conceivably allow us to shape our guidelines for punctuation in a way that will improve communication.

Sociolinguists could help, too, with this program, determining which potential recommendations for style could conceivably be implemented and which would fail to catch on, and how this could be done. An American version of the *Académie Française* promulgating these guidelines is unlikely to work. Old habits die hard, so such a program would be unlikely to succeed unless it can be instilled in new generations, through schooling that includes linguistic theory and a justification for these stylistic guidelines.

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<sup>&</sup>lt;sup>8</sup> Such a study could not, in and of itself, refute or confirm Strunk and White's advice, but a finding that high idea density sentences are easy to understand might at least suggest that Strunk and White's advice makes for overly-simplified writing; conversely, a finding that low idea density sentences are optimal might vindicate them.

At the start, linguists could influence their peers in academia, who could spread such guidelines through a trickle-down effect to secondary education and to publications in the media. I must strike a note of caution, however; such a program must only seek to provide guidelines for clear writing and communication and must not succumb to the sins of prescriptivism.

#### CONCLUSION

In the spirit of Pinker's proposal that the fruits of the research of the cognitive sciences be applied to the real world, I have proposed in this paper three related ways in which linguistics can be applied to grammar and style in the real world. First, I have shown the weaknesses of prescriptive grammatical rules, which seem to hinder rather than help clear communication and serve only to foster elitism. Language should be a medium for ideas to flow freely, not a means of preserving social difference. Second, I have suggested that actual linguistics be taught in schools, succeeding where prescriptivist traditional grammar failed in improving students' understanding of how language actually works, while also strengthening scientific thinking and encouraging tolerance for diversity. Finally, I have cautiously outlined a program for how linguistics could actually help guide our norms for writing and style. Linguists have been hesitant to leave the ivory tower and address these real-world questions of language, and understandably so, for they are delicate and sensitive issues. Still, if anyone is to give insight on language in the real world, it should be those who know it best.

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#### APPENDIX: INDEPENDENT RESEARCH INVESTIGATION OPTION

For my Independent Research Investigation Option, I polled Stanford students from my dorm, Junipero, about certain prescriptive grammar rules. The poll was conducted online. I sent an email to the dorm list asking that they fill out a short survey for my PWR paper. Junipero is an all-freshmen dorm at Stanford which presumably has a population rather representative of Stanford freshmen. Of the approximately 90 students on the dorm email list, 45 responded over two days, a very good response rate.

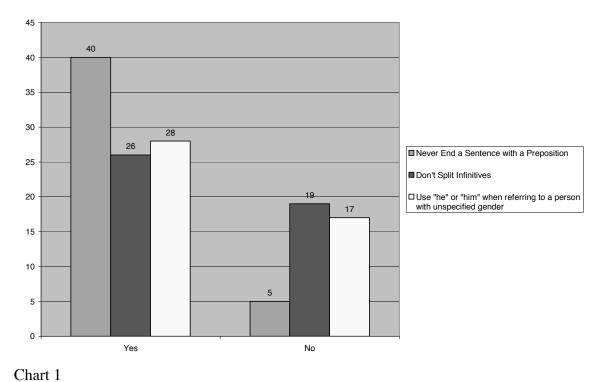
I asked six questions: two questions about each of three prescriptive rules: *never* end a sentence with a preposition, don't split infinitives, and use 'he' or 'him' when referring to a person with unspecified gender. For each rule, I asked first whether they had ever heard of the rule, and then, if they had ever heard of the rule, whether they had ever consciously followed it. Results are listed in charts 1-4, below.

Because grammar is often feared and shied away from, I kept the poll short and as simplified as possible. I thought about asking whether students had heard of and followed the more politically correct, gender-neutral rule to use "he or she" instead of "they" to refer to a person of unspecified gender, but I decided that such a question might be too confusing.

A widespread study of the prevalence of prescriptivist grammatical notions was obviously beyond the scope of this paper, but would be extremely fascinating and fruitful. As Cameron (1995) noted, prescriptive grammar should be considered by sociolinguists and historical linguists as an important influence on language. For the purposes of this paper, however, the primary goal is not what admittedly would be a fascinating sociological analysis of prescriptive grammar, but rather an argument against its use in education. Thus, this poll focused merely on the prevalence of certain grammatical rules among a cohort, Stanford freshmen, that represents a very-well educated set of bright students.

As a further study, to see if a slightly different cohort revealed similar results, I asked about a dozen of my friends from home to respond to the same poll. Of those who responded, most went to Princeton High School, a top-notch public school in New Jersey, and many had gone off to top colleges (e.g., Princeton, Yale, Brown, Michigan). The results were even more pronounced for awareness and similar for having followed the rules (see charts 5-8).

Number of Stanford Students Polled Aware of Certain Prescriptive Grammar Rules



Percent of Stanford students polled who have heard of rule never end a sentence with a preposition who have consciously followed it

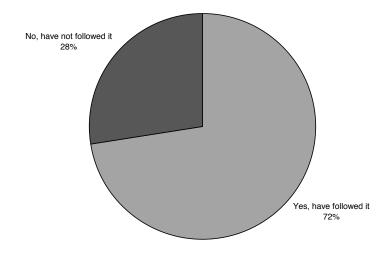


Chart 2

Percent of Stanford students polled who have heard of the rule don't split infinitives who have ever consciously followed it

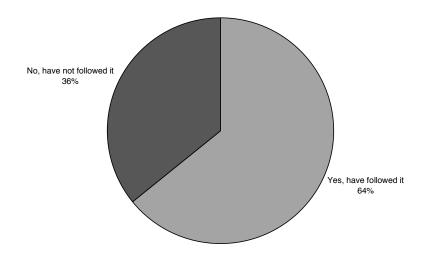
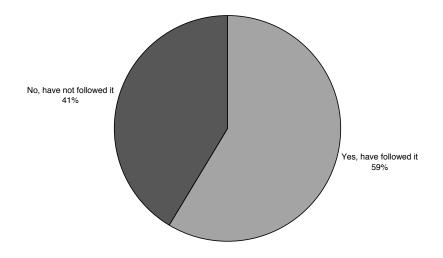


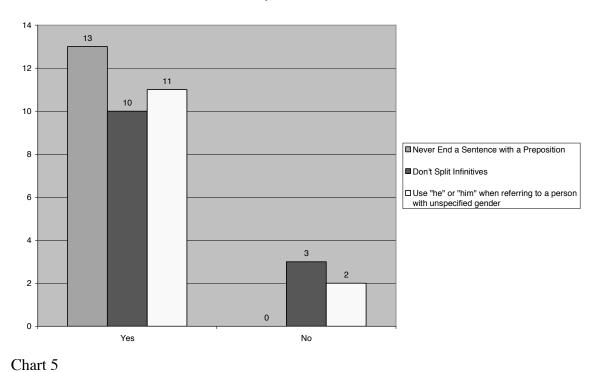
Chart 3

Percent of Stanford students polled who have heard of rule to use 'he' or 'him' to refer to a person of unspecified gender who have consciously followed it



## Chart 4

Number of Author's Friends from (Mostly Princeton) High School Polled Aware of Certain Prescriptive Grammar Rules



Percent of Author's friends from (mostly Princeton) high school polled who have heard of rule

never end a sentence with a preposition who have consciously followed it

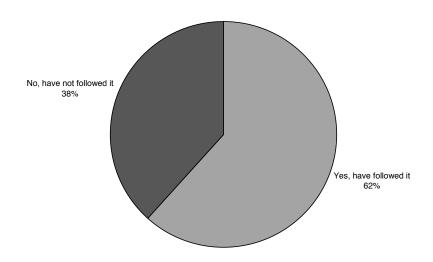


Chart 6

Percent of Author's friends from (mostly Princeton) high school polled who have heard of the rule don't split infinitives who have ever consciously followed it

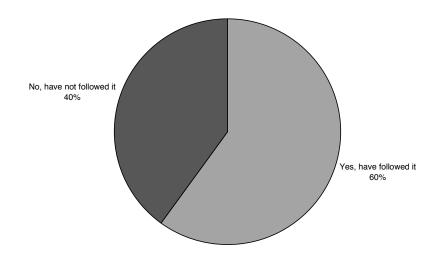


Chart 7

Percent of Author's friends from (mostly Princeton) high school polled who have heard of rule to use 'he' or 'him' to refer to a person of unspecified gender who have consciously followed it

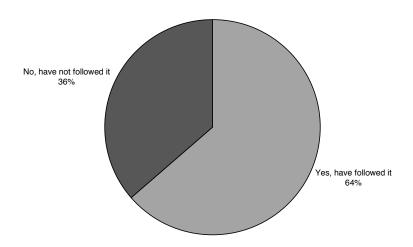


Chart 8