

# Prescriptive Linguistics and Plain English: The Case of "Whiz-deletions"

Thomas N. Huckin, Elizabeth H. Curtin, and Debra Graham  
Carnegie-Mellon University, Pittsburgh

*The plain English movement is under considerable pressure to produce simple, easy-to-apply guidelines for writers. Often, however, such guidelines are not consistent with the actual practices of good writers and are therefore ineffective. As a case in point, this paper discusses the guideline "Avoid whiz-deletions," taken from a highly-acclaimed plain English handbook. It is shown that whiz-deletions, or reduced relative clauses, actually abound in good writing. They outnumber full relative clauses by a 4-to-1 margin in good standard prose and by an 8-to-1 margin in model plain English documents. Whiz-deletions are useful in helping to de-emphasize information, promote sentence rhythm, facilitate parsing, avoid ambiguity, and omit needless words. The maxim in its original form should be replaced by a more descriptively-accurate one that reflects these features. In general, the plain English movement should promote only those guidelines that are consistent with the practices of good writers. Furthermore, such guidelines should be formulated so as to direct the attention of novice writers to broader contextual factors, not just sentence-based ones.*

Prescriptive linguistics is the study of how language is used by good writers, its purpose being to devise rules-of-thumb which can help other writers. In this sense, although its methods of analysis are borrowed from descriptive linguistics, sociolinguistics, psycholinguistics, rhetoric, and other primarily theoretical fields, its orientation is basically pedagogical. The plain English movement, devoted to improving the readability of public documents, also has an important pedagogical function. In trying to persuade lawyers, bureaucrats, businessmen, and others to produce writing that is easily understood by the general public, it is under great pressure to provide rules-of-thumb that are both easy to apply and effective in making writing more comprehensible.

Unfortunately, research in prescriptive linguistics (and its related field, readability research) shows that there are very few rules-of-thumb that satisfy both of these criteria. In their analysis of noun compounding, for example, Kaufer and Steinberg (1984) show that a simple maxim like "Avoid noun compounds," though easy to apply, is so oversimplified that it does not reliably improve readability. On the other hand, their revised maxim, though effective if faithfully followed, is significantly more difficult to apply. This trade-off relationship can be seen in other recent studies as well, such as Selzer (1983),

Huckin (1983), Moskovit (1983), Geisler, Kaufer, and Steinberg (1984), and Steinberg (1986).

In our view, there is no obvious way around this difficulty. It is important for the plain English movement, however, not to succumb to demands to produce oversimplified, ineffective prescriptions. No matter how easy a maxim may be to apply, if it does not result in better comprehension then it can serve no useful purpose. And what is worse, the hard-earned credibility of the movement will suffer. It is better, we feel, to produce accurate descriptions of what good, clear writing actually looks like. Though such descriptions may turn out to be quite complex, at least we will have a more accurate picture of what plain English is and will be able to go about devising appropriate methods for teaching it.

### **Current practice in plain English pedagogy.**

To illustrate our contention that stand-alone prescriptions tend to be oversimplified and ineffective, we will focus our attention on a prescription drawn from *Guidelines for Document Designers* (henceforth *GDD*), the state-of-the-art handbook published by the American Institutes for Research. Written by five well-known experts in the field (Daniel Felker, Frances Pickering, Veda Charrow, Melissa Holland, and Janice Redish), *GDD* contains what we feel is the most complete and most representative set of plain English principles yet produced. As the authors state:

We chose the document design principles in these guidelines for two reasons. First, experienced document designers widely agree that the principles in this book do influence the clarity of prose. Indeed, all of the principles we have selected are included in at least several writing and design manuals aimed at practitioners. Second, all of the principles in these guidelines have been examined in research studies to see how they affect the comprehension of information. (p. 1)

Based on research that is summarized in an earlier book by this same team (*Document Design: A Review of the Relevant Research*, 1980), *GDD* contains twenty-five maxims for writers of public documents. These maxims include principles for organizing text, for writing sentences, for formatting, and for using graphics. For each maxim, the research on which it is based is explicitly described. It is this feature that makes *GDD* stand out from other writing handbooks. While the maxims themselves are quite similar to those found in Strunk and White's *Elements of Style*, the *Harbrace College Handbook*, and many other writing handbooks, the citing of specific psycholinguistic and cognitive psychological studies makes *GDD's* treatment unique.

One of *GDD's* maxims is "Avoid whiz-deletions," which it describes as follows:

In English, many subordinate clauses are introduced by the words "which is," "who were," "that are," etc. These "little words" help make the structure of the sentence clear to the reader — they make it easier for the reader to understand how the subordinate clause relates to the rest of the sentence.

Removing these "little words" is called "whiz-deletion." "Whiz-deletion" can often make a sentence unclear or ambiguous; it can place a greater than necessary burden on the reader. Wherever possible, replace the missing "which is," "who was," etc. [*GDD*, p. 39]

*GDD* exemplifies this statement with these two sentences:

- (1) a. The director wants the report *which was* written by the Home Office.
- b. The director wants the report written by the Home Office.

In this example, deleting the relative pronoun and auxiliary verb produces — out of context — an ambiguous sentence. Instead of the meaning given in version 1a, it could mean "The director wants the report *to be* written by the Home Office." With this in mind, the authors of *GDD* say, "To avoid ambiguity and to reduce the burden on your readers, restore the missing relative pronoun plus copula verb *whenever possible*" [emphasis ours]. This statement amounts to a strong prescription: "never leave out a *which is, that are, etc.*" The authors of *GDD* later qualify this prescription somewhat when they write: "It is not necessary to *always* restore the relative pronouns plus copula verb. If the whiz-deletion does not interfere with the clarity of the sentence and the reader's ease in reading it, you may leave the sentence as it is." But they clearly imply that such instances of "harmless" whiz-deletion are the exception, not the norm.

Noticing that the ambiguity of sentence (1b) results not from whiz-deletion alone but also from the presence of a main clause desiderative verb (*wants*) which can take either a sentential complement or a noun-phrase complement, we were curious to know how common such sentences actually are in real-world writing. Do they occur frequently enough to merit a maxim? It is possible that whiz-deletion leads to ambiguity in other kinds of sentences as well, but the other two example-sentences that *GDD* provides are not compelling ones.<sup>1</sup> The authors of *GDD* say only that "whiz-deletion can often make a sentence unclear or ambiguous"; they do not cite any evidence.

*GDD* does refer to psycholinguistic research, claiming that it gives "indirect" support for the maxim. But when we looked closely at this research, we found that it had very little relevance for whiz-deletion. For example, Fodor and Garrett (1967) and Foss and Lynch (1967) used sentences with double embeddings, as in "The pen (which) the author (whom) the editor liked used was new." Such sentences almost never occur in real life and, furthermore, do not contain whiz-constructions. Hakes and Cairns (1970) used sentences with only single embeddings, but these sentences did not contain whiz-constructions either. Hakes (1972) used sentences which had no relative pronouns at all, only complementizers (e.g., "The blind student felt (that) the material in the art course would be too difficult for him to understand."). Charrow and Charrow (1978) did study whiz-deletions, but — like all of the studies cited above with the exception of Fodor and Garrett — their experimental procedure used oral rather than written texts and thus did not measure readability.

## Survey of data.

Given the fact that there is virtually no psycholinguistic evidence for or against the use of whiz-deletions, we thought it would be useful to consider a different kind of evidence — namely, the practices of good writers. Do good writers use whiz-deletions? And if so, why? In answering these questions, we first looked at samples of plain English, then we looked at samples of unsimplified writing.

Our samples of plain English were taken from *How Plain English Works for Business: Twelve Case Studies*, published by the U.S. Department of Commerce. We chose this collection because it is recently published (1984), because it contains writing samples that are considered models of plain English, and because it was edited by the same people who wrote *GDD* and devised the “Avoid whiz-deletions” maxim. For every sample of plain English in this book, we counted the total number of words, the number of whiz-deletions, and the number of “whiz-constructions” (i.e., full whiz-forms without deletion).

The first document we examined from this volume was a consumer promissory note from Citibank, approximately 550 words long. It contains 7 whiz-deletions and one whiz-construction. Some examples of each type are (▲ marks the deletion side and boldface marks the whiz construction):

- (2) I understand that I must maintain property insurance on the property ▲ covered by the Security Agreement for its full insurable value.
- (3) You can then demand immediate payment of the balance of this note, minus the part of the finance charge **which hasn't been earned** ▲ figured by the rule of 78.

The second document is a consumer information guide from JCPenney. It is approximately 770 words long, contains 3 whiz-deletions and one whiz-construction. Here are examples of each type:

- (4) If you are fairly active, under age 35, and healthy, you can develop your own exercise program from guidelines ▲ given in this guide.
- (5) Exercise cycles are one-wheeled stationary bicycles **that are** pedaled like a regular outdoor rolling bicycle.

There are 8 other samples of plain English in this collection of case studies. They, and the documents from Citibank and JCPenney, are listed in Table I along with the relevant data-counts. It is clear from these data that the guideline “Avoid whiz-deletions” is not observed in model samples of plain English.

When we looked at samples of writing from *GDD* itself, we found that it does not adhere to its own guideline. A random selection of 9 pages, totalling about 3000 words, revealed 11 whiz-deletions and only 2 whiz-constructions.

Broadening our survey, we looked at randomly-chosen samples of good but unsimplified writing from a variety of published sources. We examined technical writing (a memo, a business letter, two process reports, and an investigative report) from Kolin and Kolin's *Models for Technical Writing*, scholarly journals (e.g., *The New England Journal of Medicine*, *College Composition and Communication*, *Child Development*, *Memory and Cognition*, *Current History*),

advertisements for IBM, AT&T, Apple, Planned Parenthood, Sebastian International, and the Collector's Library (found in *Time*, *Esquire*, *Atlantic Monthly*, *Glamour*, and *Popular Computing*), popular magazines (*National Geographic*, *New Yorker*, *Psychology Today*, *Science 84*, *Sports Illustrated*), informational writing (*Encyclopedia Britannica*, a plain English brochure), journalism (*Washington Post*, *Wall Street Journal*, *Time*), and fiction from Isaac Asimov, Philip Roth, James Michener, Joyce Carol Oates, and John Updike. The data is summarized in Table II.

We can conclude from all this that good writing in general, whether it is labeled plain English or not, does not follow the prescription to "Avoid whiz-deletions." In fact, whiz-deletions are so heavily used that they can be considered, if anything, a *standard feature* of good writing, with whiz-constructions

<i>Document type</i>	<i>total words</i>	<i>whiz-deletions</i>	<i>whiz-constructions</i>
St. Paul insurance policy	2760	35	6
Shell information sheet	1000	7	0
JCPenney information guide	770	3	1
Citibank consumer loan note	550	7	1
Pfizer healthcare ad	520	0	0
Shell ad	450	2	0
HOW homeowner's warranty	380	4	0
Roche's medication information	330	1	0
Insurance information brochure	110	0	0
Product safety notice	100	2	0
Aetna table of contents	100	1	0
	7070	62	8

Table I. Data for model plain English documents.

<i>Type of writing</i>	<i>total words</i>	<i>whiz-deletions</i>	<i>whiz-constructions</i>
Fiction	18185	41	6
Popular magazines	18156	68	21
Scholarly/academic	18038	121	18
Journalism	15209	66	18
Technical	2345	6	9
Advertisements	2298	16	4
Informational	1612	7	0
	75843	325	76

Table II. Data from good, unsimplified writing.

being used only for special circumstances. The reasons for this widespread disregard for the maxim are discussed in the next section.

### Analysis of a sample.

When we analyzed our corpus for individual instances of whiz-deletions and whiz-constructions, trying to understand why the former are so preferred, we found some interesting patterns. First of all — and contrary to the claim made in *GDD* — we found that whiz-deletion almost never made a sentence unclear or ambiguous. There was only one case of desiderative-verb ambiguity like that in (1b),<sup>2</sup> and only one or two cases of ambiguity of other types. In fact, it was more often the case that whiz-deletion actually *reduced* ambiguity. Secondly, we found that whiz-deletion serves the major rhetorical purpose of de-emphasizing one part of the sentence so that another part can be emphasized. At the same time it often promotes better sentence rhythm. It can help make complex sentences easier to parse and thus easier to understand. Finally, it makes writing more concise — certainly a desirable feature for any plain English document.

These points are illustrated below with examples taken from a consumer loan agreement in *How Plain English Works for Business* (see Figure 1). In this pioneering case Citibank decided to devise a simplified promissory note that would be understandable to ordinary borrowers, not just to corporate clients. There are 7 whiz-deletions and one whiz-construction in this form. We will look at each in the order in which they appear. (The underscoring in all cases is ours.)

- “Amount ▲ Financed” (line 12).

This phrase is part of a formatted list of items. There are many reasons why a writer might prefer the whiz-deleted form rather than a longer form such as “Amount that is Financed” or “Amount that is being Financed.” First of all, clarity: the meaning of the expression is perfectly clear from the context, especially given the “1 + 2 + 3” formula that follows it in parentheses. Secondly, ease of reference: as a compressed form, it gives the word “financed” more of an adjectival (descriptive) quality than it has in the unreduced form, where it is more of verb. Thus it works better as a name or even as a technical term, and can easily be used as such by a loan officer or customer. Third, economy of expression: it uses fewer words and thus fits better into the space provided. Finally, parallelism: as a phrasal construction rather than a clausal one, it is similar in form to the other items on the list.

- “you will refund the unearned finance charge, ▲ figured by the rule of 78” (line 18).

A consumer reading this loan note is not likely to be very concerned with the exact method by which bankers figure out an unearned finance charge. Hence, although this information may need to be explicitly stated for legal reasons, it will be treated by most consumers as a mere formality. The important point, for them, is contained in the main clause — that the bank will refund the

**Consumer Loan Note**

Date \_\_\_\_\_, 19\_\_\_\_

(In this note, the words **I, me, mine** and **my** mean each and all of those who signed it. The words **you, your** and **yours** mean First National City Bank.)

**Terms of Repayment** To repay my loan, I promise to pay you \_\_\_\_\_ Dollars (\$ \_\_\_\_\_). I'll pay this sum at one of your branches in \_\_\_\_\_ uninterrupted installments of \$ \_\_\_\_\_ each. Payments will be due \_\_\_\_\_, starting from the date the loan is made.

5

Here's the breakdown of my payments:

- 1. Amount of the Loan \$ \_\_\_\_\_
- 2. Property Insurance Premium \$ \_\_\_\_\_
- 3. Filing Fee for Security Interest \$ \_\_\_\_\_
- 4. Amount Financed (1+2+3) \$ \_\_\_\_\_
- 5. Finance Charge \$ \_\_\_\_\_
- 6. Total of Payments (4+5) \$ \_\_\_\_\_

10

Annual Percentage Rate \_\_\_\_\_%

15

**Prepayment of Whole Note** Even though I needn't pay more than the fixed installments, I have the right to prepay the whole outstanding amount of this note at any time. If I do, or if this loan is refinanced—that is, replaced by a new note—you will refund the unearned **finance charge**, figured by the rule of 78—a commonly used formula for figuring rebates on installment loans. However, you can charge a minimum **finance charge** of \$10.

**Late Charge** If I fall more than 10 days behind in paying an installment, I promise to pay a late charge of 5% of the overdue installment, but no more than \$5. However, the sum total of late charges on all installments can't be more than 2% of the total of payments or \$25, whichever is less.

20

**Security** To protect you if I default on this or any other debt to you, I give you what is known as a security interest in my  Motor Vehicle and/or \_\_\_\_\_ (see the Security Agreement I have given you for a full description of this property),  Stocks,  Bonds,  Savings Account (more fully described in the receipt you gave me today) and any account or other property of mine coming into your possession.

25

**Insurance** I understand I must maintain property insurance on the property covered by the Security Agreement for its full insurable value, but I can buy this insurance through a person of my own choosing.

**Default** I'll be in default:

- 1. If I don't pay an installment on time; or
- 2. If any other creditor tries by legal process to take any money of mine in your possession.

30

You can then demand immediate payment of the balance of this note, minus the part of the **finance charge** which hasn't been earned figured by the rule of 78. You will also have other legal rights, for instance, the right to repossess, sell and apply security to the payments under this note and any other debts I may then owe you.

**Irregular Payments** You can accept late payments or partial payments, even though marked "payment in full", without losing any of your rights under this note.

35

**Delay in Enforcement** You can delay enforcing any of your rights under this note without losing them.

**Collection Costs** If I'm in default under this note and you demand full payment, I agree to pay you interest on the unpaid balance at the rate of 1% per month, after an allowance for the unearned **finance charge**. If you have to sue me, I also agree to pay your attorney's fees equal to 15% of the amount due, and court costs. But if I defend and the court decides I am right, I understand that you will pay my reasonable attorney's fees and the court costs.

40

**Comakers** If I'm signing this note as a comaker, I agree to be equally responsible with the borrower. You don't have to notify me that this note hasn't been paid. You can change the terms of payment and release any security without notifying or releasing me from responsibility on this note.

45

**Copy Received** The borrower acknowledges receipt of a completely filled-in copy of this note.

Signatures

Addresses

Borrower: \_\_\_\_\_

Comaker: \_\_\_\_\_

Comaker: \_\_\_\_\_

Comaker: \_\_\_\_\_

unearned finance charge. By omitting *which is* from the relative clause underlined, the writer reduces the predicative force of the clause and effectively de-emphasizes it. This in turn allows more emphasis to be given to the main clause, where it belongs. And since the whiz-words (*which will be*) are quite predictable from the context, deleting them reduces wordiness without causing any ambiguity.

Furthermore, when readers (including the writer reading his or her own writing) subvocalize, they would find that this sentence has better sentence rhythm without the whiz-words. The only words likely to be given intonational prominence in this phrase are *figured* (secondary) and 78 (primary). The latter gets end-focus<sup>3</sup> and also nuclear stress<sup>4</sup>; the former carries less informational weight but would probably receive a rhythmic stress due to its position. The word *rule* is not likely to receive any stress at all, since 78, with which it is closely linked, gets nuclear stress. Thus there are eight unstressed syllables in this phrase. If the full whiz-construction were used, there would be ten or eleven unstressed syllables. With only two stressed syllables in the phrase, this would simply be too much of an imbalance.

- "I give you what is known as a security interest in my 0 Motor Vehicle and/or \_\_\_\_\_ (see the Security Agreement I have given you for a full description of this property), 0 Stocks, 0 Bonds, 0 Savings Account (▲ more fully described in the receipt you gave me today) (lines 23-26).

Viewed in isolation, this might seem to be one of those rare cases where whiz-deletion creates ambiguity. The underlined relative clause, in principle, could be interpreted as modifying any of several possible referents: "Savings Account," "security interest," or "Motor Vehicle and/or . . . Stocks, Bonds, Savings Account." However, in actuality, there is very little possibility of such ambiguity arising. Immediately prior to reading this note, the consumer will have turned over to the bank the deeds to those properties that will be used by the bank as security, and received a receipt for them. Then, while reading the note, and just before encountering the relative clause, he or she will have put ticks in the circles referring to those properties. These properties, therefore, will be activated referents in the reader's mind, and will easily be associated with the relative clause. Hence there is no ambiguity.

But there will also be considerable variation from one consumer to another as to the number of circles checked. In some cases there may be only one; in others there may be two or more. If the writer wanted to use the full whiz-construction, he or she would thus have to use an awkward slash form of the auxiliary (" . . . which is/are. . .") to cover both contingencies. By omitting the auxiliary verb altogether, i.e. by using whiz-deletion, the writer can gracefully avoid this problem. Furthermore, like the preceding case, this relative clause is of minor importance in this context and should be de-emphasized anyway. Reducing the length and syntactic complexity of the expression helps do that.

Figure 1. A revised consumer loan agreement from Citibank.

- *"I understand I must maintain property insurance on the property ▲ covered by the Security Agreement for its full insurable value"* (lines 27-28).

Here the situation is just the opposite of the preceding one. Using a full whiz-construction here, instead of reducing possible ambiguity, would actually increase it. The ambiguity arises from the role of the sentence-final prepositional phrase (*for its full insurable value*). Does this phrase modify *must maintain property insurance* or does it modify *covered*?

Psycholinguistic experiments show that readers who lack semantic knowledge and must rely more heavily on syntactic cues, i.e., nonspecialist readers, are likely to interpret the prepositional phrase (PP) as modifying the nearest predicate.<sup>5</sup> If *covered* were embedded in a full whiz-construction (*which is covered by . . .*), it would be a full predicate and would cause many such readers to misinterpret the role of the modifier. Yet, according to our specialist informant, the PP is supposed to modify the earlier predicate, *maintain property insurance*. Whiz-deletion in this case serves to reduce the predicative force of the relative clause and thus make it more likely that the reader will correctly associate the PP with the earlier predicate.

Another way in which whiz-deletion promotes correct parsing in a case like this is by changing the phonological structure of the sentence, specifically, the location of likely breath-pauses. In the whiz-deleted version, the sentence is easily divided into three groups of roughly equal phonological length: *I understand I must maintain property insurance / on the property covered by the Security Agreement / for its full insurable value*. Not only is there a tripartite division here, but the middle breath-unit can easily be read with one less beat than the other two, as indicated, and is thus effectively subordinated. This makes it easier for the reader to see that the sentence-final PP and the main predicate go together. It also makes it easier for the reader to see that the main predicate and the final PP are the most important parts of this sentence. In effect the final PP is part of the predicate and shares its predicative force. Together they comprise the focal points of the sentence, whereas the intervening relative clause merely clarifies, for legal reasons, what property is being talked about. On the other hand if a full whiz-construction were used, the middle breath-unit would have more phonological weight than the other two breath-units (i.e., more syllables and just as many beats). This is contrary to the general principles of sentence-rhythm in English (Quirk et al: 1033-1052) which call for more weight to be given to end-units. Therefore many readers would try to rephrase the sentence as follows: *I understand I must maintain property insurance on the property // which is covered by the Security Agreement for its full insurable value*. This would be a nicely balanced rephrasing (19 syllables and 4 stresses followed by 21 syllables and 5 stresses). But it would induce many readers to interpret the final PP as attached to and thus modifying the relative clause, not the clause preceding it.

- *You can then demand immediate payment of the balance of this note, minus the part of the finance charge which hasn't been earned figured by the rule of 78* (lines 33-34).

This is one instance in the text where a full whiz-construction has been used. The writer could have used whiz-deletion (*minus the part of the finance charge not earned figured by the rule of 78*) without much risk of ambiguity, or she could have used the same expression she used earlier in line 18 (*minus the unearned finance charge figured by the rule of 78*) and later in line 40 (*the unearned finance charge*). But either of these forms would have taken emphasis away from the word *earned*. In the whiz-construction version this word receives full predication and phonological prominence (most readers would make a breath-pause right after this word, highlighting it and setting off the following phrase as a separate breath-unit; this will be discussed further below). This bestowing of emphasis could be accidental — merely a result of the writer attempting to use elegant variation. But elegant variation is not in keeping with the principles of plain English. Therefore, it seems more likely that the writer chose this form for a specific reason, that is, to deliberately give prominence to *earned*. In any event, whether done deliberately or not, the emphasis given to this word is certainly appropriate, for it has particular rhetorical value in this context. It occurs in the section defining default conditions and penalties. Since the bank is specifying its right to certain payments from the borrower, an antagonistic situation is depicted where a potential borrower (i.e., someone reading this note and deciding whether or not to sign it) would want some reassurance that the bank would not take money that it has not “earned.” At the same time, by explicitly identifying part of the finance charge as having not been earned, the bank brings to mind the other part, that which has been earned. This is a subtle way of telling the potential customer that the bank will be working for him, not just taking his money.

- *You can then demand immediate payment of the balance of this note, minus the part of the finance charge which hasn't been earned ▲ figured by the rule of 78* (lines 33-34).

This phrase is identical to the earlier one in line 18. By now it can be seen as a formulaic expression, carrying a single holistic meaning. The principles of sentence intonation (Quirk et al.: 1033-1052) would dictate that 78 be given stress but not the other words in the phrase. This leaves nine unstressed syllables (versus the single stressed one). Using a whiz-construction would make the phrase even more unbalanced, with eleven unstressed syllables. Whiz-deletion, therefore, promotes sentence rhythm here even more than in the earlier cases.

Though not punctuated as such, this phrase is essentially a nonrestrictive relative, playing a parenthetical role in the sentence. If asked to read the sentence aloud, most readers, we believe, would pause briefly between *earned* and *figured*. (If an actual comma were inserted here, however, the phrase could be misinterpreted as modifying *the balance of this note*.) As in the earlier case, it is not the focal point of the sentence but just a formality, stipulating a

method of calculation. By using whiz-deletion, the writer de-emphasizes it and allows more emphasis to be given to the phrase preceding it.

Another reason for using whiz-deletion here is to avoid confusion and possible ambiguity. If a full whiz-construction had been used, there would be two *which*-clauses in a row, with the referent of one *which* being embedded within the other. "You can then demand immediate payment of the balance of this note, minus the part of the finance charge *which hasn't been earned which is figured by the rule of 78*." The first *which* would refer to "the part of the finance charge," the second would refer to "the part of the finance charge which hasn't been earned." But many readers, we believe; would not be able to easily and quickly make this interpretation.

- *If you have to sue me, I also agree to pay your attorney's fees ▲ equal to 15% of the amount due, and court costs* (lines 40-41).

The writer could have used a full whiz-construction here ("I also agree to pay your attorney's fees *which will be equal to 15% of the amount due*"), but this would have highlighted the 15% figure and taken some emphasis away from the main clause. As in earlier examples where "the rule of 78" is a relatively minor detail, here the main point of the sentence is not the method of calculating the attorney's fees but rather the fact that it is the borrower who will have to pay them. Using whiz-deletion here not only helps downplay the relative clause but also saves words without any risk of ambiguity.

Rhythmic factors also play a role in favoring whiz-deletion here. This sentence occurs in a context (see Figure 1) where the focal information is carried by the words *have, sue, also, attorney, 15%, amount due, and court*. Of the other content words, *agree* and *pay* are "old" information repeated from the immediately preceding sentence; *fees* and *costs* are predictable after *attorney's* and *court* respectively (both are technical terms); and *equal* is virtually redundant from the context. Putting primary stresses on the focal words produces a nicely balanced rhythm (if read in context) without having to elide any unstressed vowels: *If you háve to sùe me // I álso agree to pay your attórney's fées // equal to fiftéén percent of the amòunt dúe // and cóurt costs*. The longest stretch of unstressed vowels in this sentence is . . . *fees // equal too* . . . Inserting whiz-words here would almost double the number of unstressed vowels in this sequence, and throw the sentence rhythm off. Some readers would perhaps try to compensate for this awkwardness by putting stress on *equal*, but this creates another kind of awkwardness, that of giving emphasis to a word that has little informational importance.

- *If you have to sue me, I also agree to pay your attorney's fees equal to 15% of the amount ▲ due, and court costs*. (lines 40-41).

This whiz-deletion occurs in the same construction as the one just discussed and was probably used for the same reasons. It de-emphasizes this part of the sentence in favor of the main clause, and it saves unnecessary words. Furthermore, *amount due* is essentially a technical term in this context (similar to *amount financed* in line 12) and is likely to be understood as a single lexical unit.

## Discussion.

We have seen that whiz-deletions are used in this plain English document to de-emphasize information, to promote sentence rhythm, to facilitate parsing and avoid ambiguity, and to omit needless words. Whiz-deletion is used similarly in almost all of the 35 other well-written documents (plain English and non-plain English) we looked at. Clearly, it is seen by good writers as a very useful device, especially for de-emphasizing information and for creating graceful (and often useful) sentence rhythms. Furthermore, its use conforms to the standard handbook maxim of avoiding wordiness (even *GDD* has such a maxim: "Avoid unnecessary words"). Therefore, we must conclude that *GDD*'s prescription to avoid whiz-deletions is simply unjustified.

A more accurate approach, judging from the evidence that we have cited, would be to treat so-called whiz-deletion as the standard choice of good writers in most circumstances, with the full whiz-construction being reserved for special conditions. A revised maxim might then look like this:

"Use whiz-deletions except when:

- (1) the word that follows the whiz needs emphasis, or
- (2) the whiz-words help create better sentence rhythm, or
- (3) the whiz-words are needed to avoid ambiguity (particularly following desiderative verbs)."

Our sample analysis has shown, however, that contextual factors (textual, rhetorical, other) play a major role in deciding what constitutes emphasis and what constitutes ambiguity. Anyone using this maxim, therefore, should look closely at each instance of usage and not just apply the maxim blindly.

## Conclusion.

We wish to conclude this paper by raising — and trying to answer — the following question: Why did the authors of *GDD*, who are well-known experts in document design, make the mistake of devising the guideline they did? We think that it is the result, ironically, of the very strategy which sets their book apart from others — namely, a desire to ground their principles in rigorous, process-oriented empirical research. Certainly, such a move was badly needed. The problem is that it was simply not enough. The research they drew on in this particular section of the book comes almost exclusively from the sentence-oriented psycholinguistic tradition of the 1960s and 1970s. For the most part, such research examines only isolated sentences; it seldom considers the effect of context or of nonlinguistic factors on sentence comprehension. Since readers under normal circumstances rely heavily on context, on world knowledge, and on other broad-based linguistic and nonlinguistic variables in interpreting written documents, guidelines for writers based only on psycholinguistic research are bound to be deficient.

Though we have focused our attention on just one of the 25 guidelines in *GDD*, we could have selected a number of others instead, with similar findings. The guideline to "Use the active voice," for example, is violated frequently in the documents we looked at — including the ten plain English ones. Likewise,

the prescription to "Write short sentences" is often ignored, as are other prescriptions like "Avoid nouns created from verbs" and "Unstring noun strings." And not only do good writers often ignore these oversimplified maxims, there are many scholarly papers explaining *why* they ignore them.<sup>6</sup> Such explanations, like those put forth in this paper, consider various contextual and rhetorical factors involved in the use of these linguistic forms, not just syntactic factors.

The plain English movement is making important contributions to public communication. The twelve case studies in *How Plain English Works for Business* are a testimonial to the general concept of the movement — and to those writers and editors who make it work. In all of these cases, large corporations have found that adapting their documents to the needs and abilities of their audiences has paid large dividends. But what exactly have the writers of these documents done to achieve such ends? One thing they have not done, judging from our research, is to simply employ the kinds of writer's maxims that the plain English movement has come to be known for. Rather, they seem to have followed many of the practices that good writers in general have followed over the years. If the plain English movement is to fulfill its pedagogical function and teach novice writers how to write comprehensible prose for the general public, it should look more closely at these general principles that all good writers employ. Otherwise, it will be seen as not preaching what it practices.

1. *GDD* provides two other example sentences, but neither is a good illustration of the maxim.

(1') a. We are detailing methods of computing unit costs and requirements for cost detail *which should be* submitted to support your proposed hourly rates.

b. We are detailing methods of computing unit costs and requirements for cost detail submitted to support your proposed hourly rates.

(1'') a. This policy does not pay benefits to Park Police *who have been* kicked by horses.

b. This policy does not pay benefits to Park Police kicked by horses.

Sentence 1' is not a legitimate example of whiz-deletion because the modal *should* is not a form of the verb *to be*. Sentence 1'' illustrates whiz-deletion but the resulting sentence is not ambiguous. The simple present tense of the main clause verb is not restricted to any particular time-frame (i.e. it is a "general truth"), and thus the inferred tense of the subordinate clause that it governs in (1''b) would also be broad in scope. The two most likely candidates for this role would be the present perfect, as in 1''b, or the simple present, as in (1''a) "This policy does not pay benefits to Park Police *who are* kicked by horses." Most readers, we believe, would not interpret (1''a) and 1''a) as differing significantly in meaning.

2. This ambiguous sentence was found in plain English promotional literature: "We want forms and documents written to be understood by real people."

3. Quirk et al., pp. 937-942.

4. Chomsky and Halle, *The Sound Patterns of English*

5. E.g., Frazier, L., and Fodor, J. D. (1978), "The Sausage Machine: A New Two-Stage Parsing Model," *Cognition* 6, 291-325. Wanner, E. (1980) "The ATN and the Sausage Machine: Which one is Baloney?" *Cognition* 8, 209-225.
6. See, for example Kaufer and Steinberg (1984), McNeill (1966), Walpole (1979), Ohmann (1979).

## REFERENCES

- Charrow, V., and Charrow, R. (1978) *The Comprehension of Standard Jury Instructions: A Psycholinguistic Approach*. Arlington, VA: Center for Applied Linguistics.
- Fodor, J. A., and Garrett, M. F. (1967) "Some Syntactic Determinants of Sentential Complexity," *Perception and Psychophysics*, 1967, 2, 289-296.
- Foss, D.J., and Lynch, R. H., Jr., (1969) "Decision Processes during Sentence Comprehension: Effects of Surface Structure on Decision Times," *Perception and Psychophysics*, 5, 145-148.
- Geisler, C., Kaufer, D., and Steinberg, E. (1984) "The Anaphoric Unattended *This*: When Should Writers Use It?" *Written Communication*, 2:2, 129-155.
- Hakes, D. T. (1972) "Effects of Reducing Complement Constructions on Sentence Comprehension," *Journal of Verbal Learning and Verbal Behavior*, 11, 278-286.
- Hakes, D. T., and Cairns, H. S. (1970) "Sentence Comprehension and Relative Pronouns," *Perception and Psychophysics*, 8, 5-8.
- Huckin, T. (1983) "A Cognitive Approach to Readability," in P. Anderson, R. J. Brockmann, and C. R. Miller (Eds.) *New Essays in Technical and Scientific Communication: Research, Theory, and Practice*. Farmingdale, NY: Baywood Press. pp. 90-110.
- Kaufer, D., and Steinberg, E. (1986) "Noun Compounds: Four Tests," *Journal of Advanced Composition*, (in press).
- McNeill, D. (1966) "Speaking of Space," *Science*, May 13, 875-880.
- Moskovit, L. (1983) "When is Broad Reference Clear?" *College Composition and Communication*, 34, 454-469.
- Ohmann, R. (1979) "Use Definite, Specific, Concrete Language," *College English*, 41:4, 390-397.
- Quirk, R., Greenbaum, S., Leech, G., and Svartvik, J. (1972) *A Grammar of Contemporary English*. London: Longman.
- Selzer, J. (1983) "What Constitutes a 'Readable' Technical Style?" in P. Anderson et al., pp. 71-89.
- Steinberg, E. (1986) "A Pox on Pithy Prescriptions," *College Composition and Communication*, (in press).
- Walpole, J. R. (1979) "Why Must the Passive Be Damned?" *College Composition and Communication*, 30, October, 251-254.