SESSION 12

INFORMAL PRESENTATIONS: RESEARCH AND EVALUATION

Moderator—C. Michael Levy, University of Florida

Five writing-assistance programs: A review

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A variety of written material was evaluated with five writing-assistance software packages. Three of the packages were found to be of limited value; they operated at a superficial level and cost much money. Of the remaining two, one was judged potentially valuable, although it was embedded in a larger system designed to teach writing to college students. The other one was judged a best buy on the basis of helpfulness to writers and minimal cost. Software is still no substitute for a good human editor.

Recently, several firms have marketed software and text packages that purport to help writers improve their prose. Spurred by our interest in helping students to become better writers and by the desire to improve our own efforts, and assisted by a grant from the Albion College Faculty Development Committee, we acquired four of these packages, which on the basis of their promotional material, seemed both representative of the genre and promising. They included:

Grammatik III. San Francisco: Reference Software, Inc., 1988. $99.

Readability Program for the IBM PC, XT, and AT. Växsjö, Sweden: Scandinavian PC Systems, 2nd ed., 1988. $79.95, with *Readability* manual.

Right Writer: Version 3.0. Sarasota, FL: RightSoft, Inc., 1988. $95.00.

Wresch, William. *Writer's Helper Stage II.* Iowa City: Conduit, The University of Iowa, 1988. $125. ($28 per copy in Educator Paks; includes student manual, instructor's manual, and student handouts)

To assess the kinds of help that these packages could offer writers, especially student writers, we (a psychologist, an English professor, and a senior English student with computer expertise) put all of the programs through their paces by submitting series of texts to each one. The texts included an artifact essay written by one of us (Cook) to display a variety of the sorts of errors typically made by novice writers, three actual student essays, and two essays by recognized prose stylists (Winston Churchill and Stephen Jay Gould). All of the programs proved intriguing to operate. In terms of their potential utility as editorial or teaching aids, however, we found a wide variability, which seemed to be directly proportional to price. None of them, as one might reasonably expect, was as discerning or as discriminating as a moderately skillful human editor, and only two of them seemed to merit serious consideration as aids to student writing.

Here is the artifact passage that we submitted to each program:

The Heart of Darkness is an interesting book. You can say interesting things about it, however Conrad didn't mean all that he says.

There is a lot of very unique action in The Heart of Darkness and Krutz one of the main characters is the most unique of all. Because he symbol evilness and badness. Due to his unsatiable desire for ivory he does not take lightly to the natives disobeying of him and therefore having a native women to be a mistress even though having an "intended" back in Europe. Then there is Marlow and the Russian and the Pilgrims who you would think Conrad might develop fuller for grinding poverty on the natives. Being that Conrad want the reader to imply the meaning of the story though. He therefore just sketches the characters in light. Just wanting to hint at them. The reader then can envisualize his own interpulation. If I would of thought more about the Russian I would of probly gave him more weight, in my consideration but I was (as usual) drownded despite that

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I left plenty of time to write in homework and did not recieve enough time to of read all the prof assigned to me.

Readability Program

Faced with this example, the *Readability Program*, in our judgment the showiest but the least useful of the four, produced several elaborate graphics that were based on word and letter counts and on matching sentence length and pattern with arbitrarily selected norms. It then produced the following general remarks:

1. "Text's focal point is very favorably located."
2. "Text has a broad spread on the Style [sic] diagram. Very Good!" (The "style diagram" is a computer-generated schema that purports to compare the current writing sample to a series of sentence patterns common to journalistic prose and to an "ideal curve.")
3. "There are no complicated sentences in the text. Simple and easy to read!"
4. "Text contains many simple words. Easy to understand."

In addition, the program offered the following advice: "You can improve your text's readability if you: every now and then try to write a sentence using only short words."

In comparison, about the prose of the late Sir Winston Churchill, the *Readability Program* repeated Comments 3 and 4 above before making these suggestions: "Increase the average number of short words per sentence." "Make a greater effort to have your sentences scattered through the style diagram." "Write even more sentences containing only short words."

The essential problem with the *Readability Program* lies in its underlying assumptions about what makes prose readable. In fairness, its creator, Roland Larson, recognizes some of its limitations:

The Readability method is based on statistical procedures that measure word length, sentence length, percentage of commonly encountered words. Naturally, there are many other factors that affect the ease with which a reader can understand whatever message we are trying to get across. For example, your Readability program [sic] has no way of knowing how familiar the reader is with the subject at hand, how interested he is in it or his general level of education. Syntax errors that flaw the structure of a sentence and unclear references within sentences are also examples of factors that your Readability program [sic] cannot measure. (*Readability* manual, pp. 6-1 to 6-2)

To that list of limitations, one could add that the program has almost no provision for the recognition of the lexicon. (The program does recognize and count what it calls "mortar and bricks"—prepositions, articles, relative pronouns, and some subordinating conjunctions.) We find it astonishing that, although the accompanying manual has a useful section of tips for writers—tips with respect to the passive voice, abstractions, and nominalizations, all of which are the very stuff of government gobbledy-gook—the program itself makes no provision for recognizing these offenders; instead, arguing for the applicability of a series of mathematically interesting but linguistically trivial formulas to the process of writing, it blithely assumes that to discover short- and long-word-to-sentence ratios will somehow improve one's style. One would therefore get precisely the same general results if one ran the program on samples of alphabetically spelled Chinese or, indeed, on a sample of nonsense.

Therein, no doubt, lies the marketing genius of the effort; with minor modifications it could run for virtually any language. A certain misleading and unattractive defensiveness appears, then, in the *Readability Program* manual's insistence that, irrespective of lexical and grammatical values, reliable qualitative assessments of writing result from exclusively quantitative measures of sentence and word length and their ratios: "However, it [the *Readability Program*] nonetheless provides you with a useful and objective measure of the quality of your writing" (*Readability* manual, p. 6-2).

Neither did we find either useful or very informative the measurement of these ratios against an ideal curve that scatters "simple, normal, narrative, foggy, elegant, difficult, pompous, and wordy" sentences on either side of a norm (the "Readability Index") developed from the Gunning Fog Index, and the Recalculated Flesch Score.

Accompanied by an excellent instruction manual, which contains both the best introduction to MS-DOS that we have read and a clear discussion of good writing, the *Readability Program* is fun to use. It displays attractive scatter diagrams and bar graphs, and it can reveal clusters of long words. Despite the attempt to dazzle, though, the program gives information too global to enable careful revision. Its most useful advice about writing appears in the accompanying manual, and in our view that information is more economically available in any basic text on style.

Grammatik

Grammatik II used similar counts of words, syllables, and letters to compare a text sample with Lincoln's "Gettysburg Address," a Hemingway short story, and a life insurance policy, but *Grammatik III* will only do so with the purchase of an additional utility package.[1] *Grammatik IV*, the most recent update, also does this. It makes these comparisons in terms of the Flesch Reading Ease Score and the Flesch–Kincaid grade-level scale. Lincoln rates a 64 on the reading ease score, as does the author of the "Heart of Darkness" sample. Hemingway scores an 86 (higher is easier) and Gould a 38. *Grammatik III* also recognizes questions, exclamations, passive constructions, and prepositions. It assumes that short words and short sentences are good, regardless of subject matter or audience. In fact, the *Grammatik III* manual literally suggests that the best way to improve your readability scores is to "use short words and sentences." An

update to *Grammatik IV*, which includes both the *Grammatik III* options and the utility package, is obtainable for $29.

Right Writer

More useful is *Right Writer*. This program prints out the text in question with interspersed comments and queries: "Is sentence too long?" "Do subject and verb agree in number?" "Is this a complete sentence?" "Passive voice." Like the two programs discussed above, *Right Writer* counts words and letters, but it also recognizes inflectional suffixes and words. It is therefore capable of elementary syntactic and stylistic suggestions. About the phrase "state of the art," for example, it commented, "overused." It also contains at least a rudimentary thesaurus, and it can suggest replacing a long word with a simpler synonym: "Replace [facilitating] by 'ease' or 'help'," it usefully suggests. Beyond this, *Right Writer* recognizes misspellings by comparing each word in a selection with the words in its dictionary. On encountering "seperate," it informs the writer, "this is not a word." It is possible to add to the dictionary, so that a person who knows his or her own spelling demons could run a constant check on them. It can identify usage as colloquial or wordy. Responding to the Churchill sample, it corrected Sir Winston's "that there was" to "there was" and in one of the student papers suggested that "so as to," which it identified as wordy, become simply "to." We found the documentation in the accompanying manual good and useful for the most part, though we were struck by the irony of the critical remark, "Passive voice is used in the writing."

In addition to the particulars listed above, *Right Writer* does a better job than the other programs thus far discussed in recognizing a text's level of difficulty. The program ranks passages submitted to it on a scale from weak to strong—strength being characterized by the active voice, shorter sentences, less wordy phrases, more common words, and more positive wording. It also characterizes prose on a scale from terse to wordy by computing the proportion of adjectives and adverbs that it recognizes to the total number of words in the text. This means that it makes some allowance for the writer's audience and purpose, rather than always assuming that shorter is better. One can, in fact, set the word-difficulty level according to the educational level of the anticipated audience—general public, high school, college, or uncommon. *Right Writer* opined that readers of the Gould sample would require a 13th grade level of education, and advised him to split up a couple of sentences, to use the active voice, and to employ shorter sentences, fewer weak phrases, and more common words. Although that advice might be ludicrous if applied to Gould, it would not be bad for the average freshman composition student.

Right Writer also generates a jargon index, although we thought peculiar some of the items it identified as jargon: "architectural," "donation," and "abortion." It also prints a list of words to revise. Like the others, it calculates the Flesch and Fog indices. *Right Writer's* greatest strength, however, lies in its ability to call attention to particular instances and to make remedial recommendations. Given a student writer—and there are many—who displays the specific problems it identifies, we think that this program could be of real help in a writing laboratory or in a training department.

Writer's Helper

By far the most ambitious and the best of the commercially available packages that we examined was William Wresch's *Writer's Helper*. This is a total instructional package, including an instructor's manual and handouts for students, and it is intended as a self-contained course in writing. The elements of the package were pretested before being marketed, although the pretest data do not appear in the accompanying materials. *Writer's Helper* displays all the most useful features of the programs discussed above, plus many others. It contains a series of prewriting activities to help students generate ideas. One of these is the "idea wheel," which randomly matches nouns and verbs as subjects, predicators, and objects to help spark student imagination. It permits the operator or the writer a broad degree of control over the use of its various components. One can choose, for instance, among a number of checks on structure that provide help in outlining, paragraph coherence, paragraph development, sentence-length category matching, subordinate clauses, and so forth. It allows for considerations of audience in checking the levels of readability and diction. Indeed, many of its features can be customized to suit the particular level and needs of the user. Because it recognizes subordinating conjunctions, it can produce a ratio of subordinate to main clauses in a writing sample as a measure of the sample's comparative syntactic sophistication.

It was not fooled at all by the now infamous "Heart of Darkness" sample. Ranking it at the 9.6 grade level for prose (generous, we thought), it gave the following response: "You seem to be writing below your audience." (We had set up for Grade 13.) "Are your sentences short and choppy? Perhaps you should combine a few." Good advice! And the following: "Also check your vocabulary. Are you using vague one-syllable words like 'nice' and 'lots?' Use more specific words to rise to the level of your audience."

Another indication of the level of sophistication of *Writer's Helper* is the availability of paragraph checks. For example, paragraph coherence is examined by printing the first and last sentences of each paragraph. In this way, it is easy to see changes from beginning to end. "Paragraph Development" numbers each paragraph in a document, prints a star for every five words, and then prints the total number of words and sentences in the paragraph. If a paragraph has fewer than 50 words, the program calls attention to it, and suggests that one may wish to consider more development. If a paragraph is more than 200 words long, this is also noted, and one is encouraged to see whether every sentence relates to the topic sentence.

Another option, "Category Match," looks for how writers use *the*, *I*, *you*, *he/she*, *is*, and *was*, and determines how the frequencies of use compare to typical writing in the categories of newspaper, informative, scientific, or fiction writing, according to norms published by Johansson (1985). In this way, the writer may determine whether tense is consistent with the norm for the particular type of writing at hand. Is the writer using pronouns in the way that is customary in scientific or newspaper writing?

Writer's Helper also ranks writing for its level of diction on a scale from *informal* through *neutral* to *formal*. It calls attention to over 100 transitional devices and compares the submitted writing sample to its list. This is especially useful, we think, because weak transitions often characterize student prose. Another feature that we particularly liked was its use of Walker Gibson's (1966) scale, which describes writing as *sweet*, like advertising; *stuffy*, like bureaucratese; or *tough*, like fiction. Sweet writing, according to Gibson, contains 10%–19% long words. Stuffy writing contains 20% or more. Tough writing, however, contains under 10%. Is this another variant on the "shorter is better" presumption?—Perhaps, but in the context of the program's capability, this variant did not strike us as so objectionable. We liked this program, and we have recommended it to our school's Developing Skills Center for use with problem writers. It might be a good idea for Conduit to consider publishing this revision section of *Writer's Helper* separately. It could be very useful in teaching or improving writing in advanced psychology courses, among others.

Styled and Stylist

As we were reviewing these programs, one of us came across *Styled and Stylist*, a shareware, public-domain package by Louie Crew. It can be obtained from the National Collegiate Software Clearinghouse, Duke University Press, 6696 College Station, Durham, NC 27708; there is a $10.00 user fee. We found this package to be better than the first three of the four reviewed above, and, considering its price, it is by far the best bargain. Crew makes no simplistic assumptions. Neither does he make inflated claims for his program. In the on-line documentation for *Styled and Stylist*, he announces accurately what its constituent programs do and his purpose in creating the package: "I created them to help me revise. I . . . also use them to analyze what others write." As it happens, we share Crew's tastes for clean, straightforward prose.

Like the other programs reviewed here, *Styled and Stylist* counts the numbers of letters in words and the numbers of words in sentences. It also analyzes punctuation, syntax, and nominalization. Crew's advice in the documentation, however, urges writers to consider long words and long sentences in terms of the writer's purpose, the contexts in which the words appear, and the effects that the writer desires to achieve.

Styled and Stylist sensibly calls the writer's attention to structure words, as opposed to content words, with a view to helping the writer decide whether or not to edit. It identifies forms of the verb *to be* used as main verbs, with the caveat that writers may weaken their prose by burying action in nouns when action verbs would pack greater power. In our judgment, this remark identifies the single greatest weakness in the writing of students who have otherwise mastered the rudiments of writing syntactically sound sentences, so this feature proved especially attractive to us. The program usefully prints out nominalizations—presumably on the basis of recognizing noun-forming derivational suffixes—that may bury action.

An appropriate audience for *Styled and Stylist* might include, at an entry level, students who display basic writing skills at the college level, but who do so clumsily, and, at a more advanced level, professionals intent on polishing their style. The programs require judgment on the part of the user. As Crew remarks, "Each program serves as a heuristic. It only describes; it cannot prescribe or remedy. It can help a clever person to identify and arrange insight. A dullard a dullard will remain." Of the several programs reviewed here, *Styled and Stylist* promises the greatest potential benefit for people who are already reasonably able writers and who are writing or editing with a purpose, whether scientific, commercial, or literary.

REFERENCES

GIBSON, W. (1966). *Tough, sweet and stuffy*. Bloomington, IN: Indiana University Press.

JOHANSSON, S. (1985). Word frequency and text type: Some observations based on the LOB corpus of British English texts. *Computers & the Humanities*, **19**, 23-36.

NOTE

1. The passage from the artifact essay on *The Heart of Darkness* was not tested with Grammatik II or Grammatik IV.