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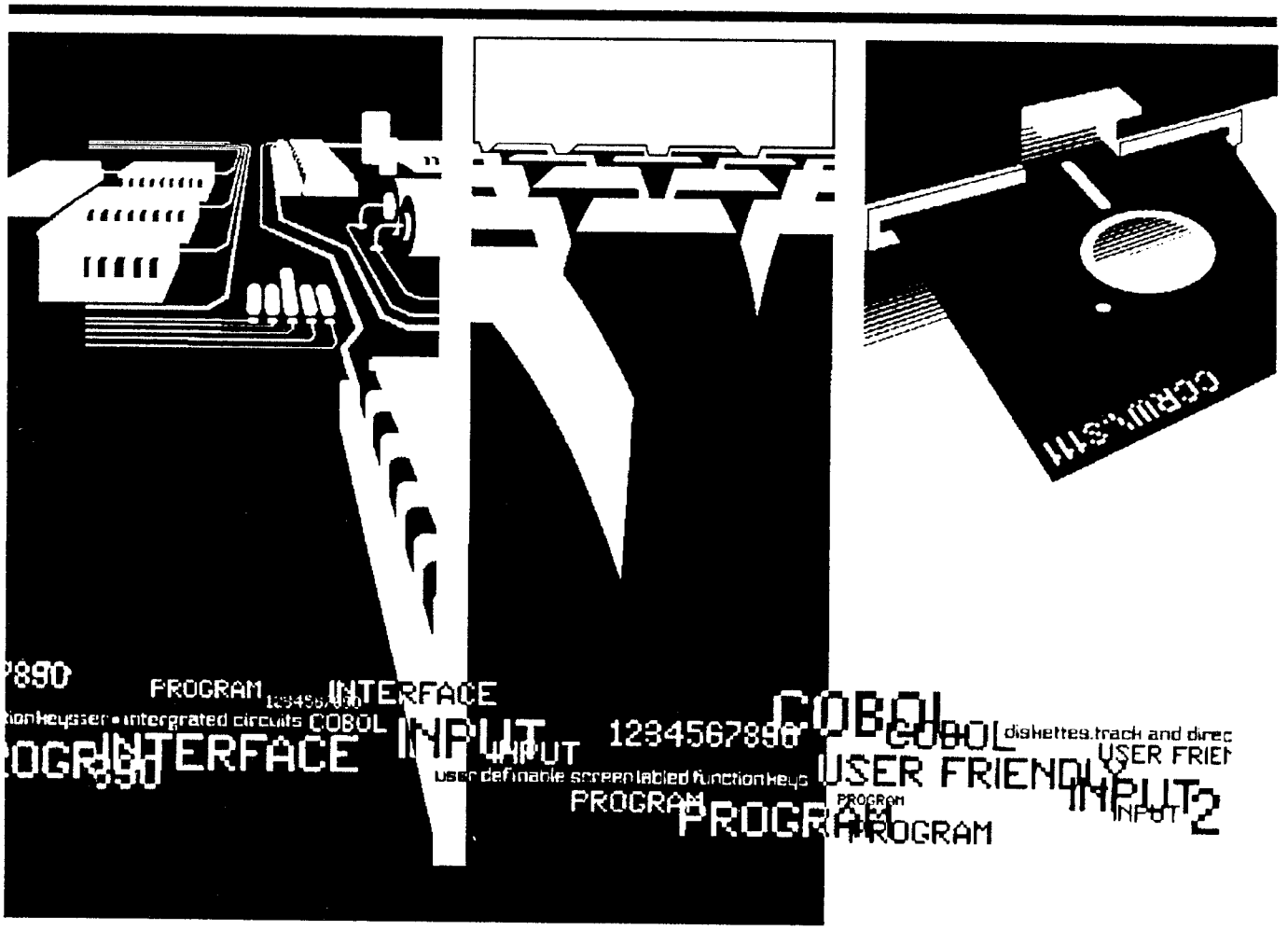

Research in Word Processing Newsletter

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Hard Disk Utilities
Backup Programs

Mauro G. Di Pasquale

Look up "crash" and "down" in your dictionary and you'll see that they can be nasty words. A crash is defined as a forcible or enforced contact between two or more things, a wrecking or smashing, or a sudden and grave failure. Down is defined as reduced economic activity, being low in spirits, or suffering a loss of status.

These meanings take on a new significance when you're talking computers. If your head crashes, your computer will be down and so will you. A head crash (which is in the same league as accidently formatting your hard disk, dropping your computer off your desk, and having your mother-in-law over) is not one of life's little joys; but you've got to be ready for it because it can happen anytime.

Asking about a hard disk's mean time between failure (MTBF) is not just idle curiosity. MTBF is to hard disks what average life span is to humans—both humans and hard disks can kick the bucket before or after their allotted time, but on average the figures are pretty accurate. Don't you wish you could back up yourself as easily as you can your hard disk? (Apples and oranges or what?)

If your hard disk doesn't kick the bucket (it might turn out that head crashes, like scandals, are just things you'll read about rather than have to endure), some or all of the files on your hard disk could; someone might accidently format your hard disk, you might find out by experience what a Trojan Horse means, you might be the victim of a software glitch or a power source hiccup, you might even be a victim of some misguided burglar (everyone knows that computer hackers are penniless souls). The point is that the information on your hard disk can be unexpectedly corrupted at any time. Backing up your hard disk on a regular basis (not just whenever you think of it or can spare the time) is the only insurance you have to protect against loss of your data. If you don't back it up, someday you'll be sorry.

There are plenty of ways you can back up your files and several mediums on which you can back up your hard disk, including another hard disk or floppies, tape and cartridge. You could even use your VCR, if you have the hardware and software tools. Tape backup systems are fast, compact, and painless. When data is lost, it can be restored by simply putting the backup data cartridge in the tape drive and streaming the data back onto your hard disk. Stream-

ing tape has one big disadvantage, its price. Because of this expense, most of us will use floppies to back up our hard disks. After all, we've already got the floppy disk drive(s) and we can always scrounge up the disks we need (or, taking leave of our RAM, we might part with some bucks for a couple of ten packs).

Once you've decided on the medium for your backups, you have to decide on just how much of your hard disk to back up. You could either back up your whole hard disk, or you can back up just part of it—usually data files and the program files which are customized (such as personal dictionaries). After all, you can always reinstall your programs from the original floppies. Alternatively you could do a full hard disk backup the first time and subsequently do periodic backups, limited to files which have been changed since the last backup. I prefer to back up all of the hard disk every time—the other methods get too messy if you ever have to restore all your program and data files.

Tape backup systems are fast, compact, and painless.

After deciding on both the medium and what to back up, you've still got to decide on a program that will allow you to do the backup. Although you could do it with the DOS copy command, and back up some of your files to floppies (or more foolishly to another part of your hard disk) the process is so time consuming and tedious that you won't keep it up. Or you could use DOS *Backup*, the utility which comes with PC/MS-DOS 2.0 or later. However, this backup utility is unbelievably slow, and quirky due to the inefficiency built into the way DOS transfers data to and from disks and allocates disk space. Most commercial backup utilities optimize both data transfer and disk head movement, resulting in increased speed and more efficient backups.

Because effective shareware or public domain backup programs are scarce, the commercial programs are the only way to go. The best four that I've seen, for features and price, are *Corefast*, *DS Backup Plus*, *Fastback Plus* (all three backup to any medium), and the backup utility that is part of *PC Tools Deluxe* (which, like the original *Fastback*, backs up to floppies only). In using all four I had no problems backing up and restoring selected files, directories, or the whole hard disk.

Both *Corefast* and *DS Backup* have two modes of backup, normal speed and high speed. I used only the high speed options for my tests, since the high speed modes usually prove the more error prone and thus are a better test of the programs capabilities. Then, too, speed of backup is important—if the backup process is too slow or tedious, you won't do it often enough. Both these programs operated reliably and there was little to choose between them. I did have some minor problems setting up *DS Backup*, but once I'd fiddled with it for a few minutes, the program operated flawlessly. *DS Backup* was faster than *Corefast*, but not appreciably. *Corefast*, while more expensive than *DS Backup*, offers more backup modes. If you intend to backup to tape or cartridge, either *Corefast* or *DS Backup* are good choices.

As I mentioned in a previous article, *PC Tools'* backup features are every bit as fast and reliable as the original *Fastback*'s. Both it and *Fastback* create a "parity" record that allows recovery of data even if there is an error on every single track of the backup diskette (up to 160 errors). For backing up to floppies, you don't need anymore than the backup features of *PC Tools Deluxe*. Fifth Generation's *Fastback* is the grandaddy of PC backup programs, but it was showing its age and was slowly being retired by the upstarts, who were just as fast or faster and offered more features. In my mind *Fastback* was no longer even in the race.

Then early this winter, Fifth Generation released *Fastback Plus*. *Fastback Plus* is up to twice as fast as the other three backup programs and needs only half as many floppies. Added features include

enhanced error-correction, automatic data compression, DOS-compatible diskette format, support for any logical DOS device (tape, cartridge, or hard disk), a simplified "pop-down" help menu that can be customized for beginning, experienced, and advanced users, a macro facility for automating your backup sessions, and a directory tree diagram for file selection and backup preview.

Which one should you choose? It all depends on your needs and whether you've got the bucks to spend. If you want the best and are willing to pay for it, then get *Fastback Plus*; it's king of the hill. If you're on a budget, and you'll be backing up only to floppies, then get *PC Tools Deluxe* – as a bonus you get all its other features.

Contributing Editor Dr. Mauro G. Di Pasquale may be reached for questions or comments at 23 Main Street, Warkworth, Ontario, Canada K0K 3K0.

Software Mentioned

Corefast

Core International Inc., 7171 North Federal Hwy, Boca Raton, Florida USA 33444

DS Backup Plus

Design Software, 1275 Roosevelt Road, West Chicago, IL USA 60185

Fastback Plus

Fifth Generation Systems, Inc. 11200 Industriplex Blvd., Baton Rouge, LA USA 70809

PC Tools Deluxe

Central Point Software, Inc., 9700 SW Capitol Hwy. #100, Portland, OR USA 97219

Articles & Reviews Welcome

The *Newsletter* welcomes article submissions that pertain to word-processing, text-analysis, and research applications in professional writing situations, either corporate or academic. Also, hardware and software reviews are encouraged, but please contact Dr. Jim Schwartz, Hardware/Software Review Editor, ***before submitting them*** (call Jim at 605-394-1246). Manuscripts should be submitted on MS-DOS 5¼" floppy disks using *Aldus PageMaker*, *XEROX Ventura Publisher*, *WordPerfect*, *Microsoft Word*, or standard ASCII format. The Editors reserve the right to edit manuscripts if necessary. If you want your disk returned, please send enough postage to cover the return cost along with a self-addressed mailer. Address all correspondence to the Editors, *Research in Word Processing Newsletter*, South Dakota School of Mines and Technology, 501 E. St. Joseph, Rapid City, SD, USA 57701-3995. Jim may also be reached on CompuServe (70177,1154).

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> "Text does not necessarily consist of linear strings of characters from the ASCII – or IBM's extended-character set. Three projects at the Norwegian Computing Centre for the Humanities are presented as examples of this. Character representation in computer memory, on VDUs and on printers is heavily device dependent. This is exemplified with references to existing computer equipment. This hardware dependency makes it necessary to use local character encoding to get the most out of equipment at hand. This again necessitates a standardized encoding to be used when textual data is exchanged. Such a standard should be developed with the SGML framework. The Norwegian Computing Centre for the Humanities sees the development of standards for encoding complex textual data as one of its main fields of interest in the forthcoming years." (p. 162)

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"An English professor at the University of South Carolina is spying on her students, and they're delighted. Carolyn B. Matalene, who teaches at the university's Columbia Campus, is using a program called *'LiveWriter'* to watch students at work in her freshman composition class. From her computer, she can gain access to each computer attached to a classroom network while the students are working on their assignments. She can type questions, which appear in a 'message window' at the bottom of the student's screen, or she can insert corrections directly into the student's text." (program created with Robert Oakman)

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Minnesota Call for Papers: Computers and Writing

The Fifth Computers and Writing Conference will be held at the University of Minnesota on May 12-14, 1989. With an emphasis on how computers and networks are altering the way people work and think together in the writing classroom and in the world at large, papers and demonstrations are being sought in composition, hypertext, computer support for collaboration, computer-mediated discourse communities, uses of "Groupware" decision-support software, empirical studies, evaluation, and other practical applications. January 20, 1989, is the deadline for three copies of single-spaced, two-page abstracts. Contact Geoffrey Sirc, University of Minnesota, 120 Nicholson Hall, 216 Pillsbury Drive S.E., Minneapolis, MN 55455, or call (612) 625-5882.

Foreign Language Supplements for *Note Bene 3.0*

The *Note Bene 3.0* word processor continues to extend its multilingual scope with the new version of the Special Language Supplements, with Release 1+ not only including more languages, but also allowing all of its foreign-language keyboards to be simultaneously loaded into memory. Because of this, users can switch between languages more easily. Working with *Note Bene*'s familiar command structure, the new release has added a more user-friendly interface between left-to-right and right-to-left languages, more font and printer support, a better search-and-replace function, and an improved cursor movement in Hebrew documents. Contact Dragonfly Software, 285 W. Broadway, Suite 600, New York, NY 10013, or call (212) 334-0445.

CALICO '89 To Be Held at U.S. Air Force Academy

The Computer Assisted Language Learning and Instruction Consortium (CALICO) will hold its sixth annual symposium from March 29 to April 1, 1989, at the U.S. Air Force Academy in Colorado Springs, Colorado. Emphasis will be on interactive video and hypermedia, in addition to a workshop on *ISAAC*, IBM's free network for higher education at the University of Washington-Seattle. Contact CALICO, 3078 JKHB, Brigham Young University, Provo, UT 84602, or call (801) 378-7079.

Mac Newsletter Available

Apple is giving free newsletter subscriptions to faculty interested in tracking Macintosh applications in colleges and universities. *Syllabus—An Information Source on Computing in Higher Education* can be obtained by writing to Syllabus, P.O. Box 2716, 1226 Mandarin Drive, Sunnyvale, CA 94087, or by calling (408) 773-0670.

Computer Version of Shakespeare Available

Under an agreement with Houghton-Mifflin, the Electronic Text Corporation is making available an electronic version of *The Complete Riverside Shakespeare* with the *WordCruncher* text-retrieval program for $499.00. A demo disk (including one Shakespeare play and a limited version of *WordCruncher)* is available for $10. Containing the complete texts of the comedies, histories, tragedies, romances, and poems, this computerized version of Shakespeare requires at least 10 megabytes of hard disk memory running on an IBM PC or compatible with DOS 2.1 or above and at least 512K of RAM (640K recommended). The *WordCruncher* program allows *researchers* to 1) Find references and phrases quickly, 2) See the references in context, 3) Examine frequency distributions showing where words or phrases are found in the text, 4) Discover new facts and relations by seeing related references in context. As you read, you can easily explore related ideas that come to mind. *WordCruncher* also allows *writers* to 1) Print the text of selected references, 2) Copy selected portions of text to your word processor so you don't have to retype quotations, 3) Create a book-style index for your document or book, 4) Create a keyword-in-context (KWIC) concordance to your works, and 5) Use *WordPerfect* Library's Clipboard to speed transfer of selected text to *WordPerfect.* Contact the Electronic Text Corporation, 5600 N. University, Provo, UT 84604, or call (801) 226-0616.

Conference on Language Learning and Linguistics

An international conference on Computer-Assisted Language Learning has been set for Rostock, West Germany, on October 25-27, 1989. The deadline for paper submissions is January 27, 1989, with work invited on new research in CALL, including the learning/teaching applications of computational linguistics. A three-page, double-spaced abstract (with name, address, and 5-10 line summary on title page) is required. Contact Hermann Gall, Wilhelm-Pieck-Universitat Rostock, Institut fur Fremsprachen/Angewandte Srachwissenschaft, Richard Wagner-Strasse 6, Rostock, 2500, GDR.

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StrongWriter
A Better Grammar and Style Checker

Eric Johnson

Grammar and style checkers point out basic blunders in writing, and they make suggestions for revision. We English teachers usually dislike them because we believe their faults outweigh their virtues.

To begin with, grammar and style checkers are sometimes difficult to use: students whose attention ought to be on their writing must make selections from menus, find the proper function keys, and learn how to make their word processors save their papers as pure text files. Also they foster a false sense of confidence among the writers who use them: no computer program can find all writing mistakes. Moreover, they focus the writer's attention on mechanics rather than on more important matters such as theme and structure. Above all, grammar and style checkers are grimly humorless.

Therefore, when it was suggested to me that some of my computer programming for literary analysis could be used to create a grammar and style checker, I did not jump at the idea. When I was prevailed on to produce *StrongWriter*, a grammar and style checker for MS-DOS systems, I worked very hard to make it easy to use, and to make it as helpful as possible, and I insisted that it have a sense of humor. The program is named after Dr. Strong, an amiable schoolmaster in Dickens' *David Copperfield*.

StrongWriter is easy to use. It can be run from a floppy disk, a hard drive, or a network. From the DOS prompt, users enter STRONG and the file name of the paper they want analyzed. They can also enter only STRONG and the program will ask for the name of a file to examine when it is needed. There are no menus, and no function keys are used.

The way word processors save text can produce a difficulty for writers wanting to use a grammar and style checker. In addition to the text itself, the files produced by almost all modern word processors include strings of special characters to hold formatting information. A grammar and style checker needs only the text; the special characters get in the way. All word processors have a way of saving only the text (sometimes a pure text file is produced with an "ASCII save" command or by "printing" to disk); however, saving a file as text only is often not easy for students to master.

StrongWriter can translate the files produced by several popular word processors into the pure text that it needs, thus making a special way of saving the file by the user unnecessary. It translates files produced by *WordPerfect 5.0*, *Microsoft Word 4.0*, *Microsoft Works*, and *Norton Textra*. (The original file produced by the word processor is, of course, left unchanged.) *PC-Write* is one popular and powerful word processor that produces pure text files; there is no need for *StrongWriter* to translate them.

Information about *StrongWriter* and help in using it is available while running the program (or it can be viewed or printed before the program is started).

The output from *StrongWriter* comes from the persona of Dr. Strong, who phrases his comments a little differently each time they are offered and who occasionally uses gentle humor. For example, he may tell users that he is "strangely interested" in their papers. The output may be viewed on the screen or printed.

The output from Dr. Strong consists of eight parts. Each part appears on the screen by itself, and each part normally prints on a sheet of paper by itself, but, being frugal, Dr. Strong will print two parts on a single page if he sees that they will fit easily. He first prints the text of the paper, assigning line numbers on the left for future reference. Com-

ments on the paper are not inserted between lines of the original paper (as is sometimes done by grammar and style checkers); such a practice not only makes the result almost unreadable, but it also fails to cluster related comments.

The second part of the program counts the number of words and the number of sentences, and it computes the average sentence length. Dr. Strong makes a comment about the average length of the sentences: "Ahem, quite short sentences," "The sentence average is low," "The best authors write sentences about that length," "Oh dear, rather high sentence average," or "I am floored by the length of your sentences!"

The program also computes the number of short, medium, and long sentences. Dr. Strong points this out because most writing teachers want their students to try to vary the length of sentences.

If the paper is one hundred words or more, Dr. Strong computes the approximate grade level of the writing. The grade level is determined by a proprietary formula based on the length of sentences and the size of the words. The best writing, Dr. Strong says, "is the lowest grade level (unless it is ridiculously low) that says what you want to say." Because some writers might be insulted to learn they are writing at a tenth grade level, Dr. Strong insists that the smartest and best authors often write at a grade level of twelve or below.

In the third part of the program, Dr. Strong points out single words that ought to be avoided and the line numbers in which they occur. Sometimes they are misspelled ("alot") or cute spellings ("nite", "tho", and "thru"), wrong forms ("irregardless") or words that have been so over used that they are almost meaningless ("finalize"). *StrongWriter* does not attempt to duplicate the function of the spelling checkers that accompany most word processors, but he wants to catch words that sometimes sneak past them.

Dr. Strong assumes that the text is a rather formal descriptive paper, and he comments accordingly. However, if the first line of the paper states that it is giving directions, internal flags are set to change his comments: for example, "you" is then not identified as a word to avoid (it is awkward to try to give directions without using "you"). Similarly, if the first line says that it is an informal paper, some comments appropriate only to formal writing (such as avoiding small numbers not spelled out with words) are inhibited.

The user (or anyone else) can give Dr. Strong a list of the words for him to point out to be avoided. These words are simply put in a file named AVOID.DAT. If Dr. Strong finds such a file, he will substitute the words in it for his own list. This flexibility is ideal for analyzing any kind of specialized writing.

Fourth, the program points out pairs of words that should not be used together and the line numbers in which they occur. It identifies wrong verb combinations ("have wrote"), wrong number ("a criteria"), double negatives ("not hardly"), wrong words ("could of"), unneeded words ("and etc."), fuzzy logic ("centers around" and "very unique"), the wrong article ("a end"), and incorrect usage ("different than"). Professor Strong notes accidental repetition of a word (such as using "the" at the end of a line, and then repeating it at the start of the next line).

Dr. Strong also makes a series of suggestions for improvements. As he says, these are only suggestions, but the line should be reread and changes considered. (He may add, "What do I know? I am only a computer program named after a character in a Dickens novel!") For example, in the fifth section, he will list "whom" if it does not follow a preposition; the wording might be correct, but it is worth double checking.

Some words (like "infer" and "allusion") are so commonly misused, that Dr. Strong suggests that the writer check their use. Again, the user (or anyone) can supply a list of commonly misused words for Dr. Strong to consult.

Sixth, the program counts the use of forms of TO BE. If such forms are a high ratio of the total words of the paper, Dr. Strong will suggest that some be changed. Using a high ratio of forms of TO BE almost always indicates passive construction, colorless writing, or convoluted structure.

Seventh, Dr. Strong identifies words that end with the letters "-tion" that could be changed back into verbs. (He does not identify words like "nation" or "vacation" that usually could not be transformed into verbs.) His point is that he would like to see a sentence like "he made a suggestion about something" revised to "he suggested something."

Eighth and last, the program lists words that end with the letters -ing that could be present participles and gerunds (it does not catch other words ending in -ing such as "something" or "bring"). Good writers frequently use such forms, and Dr. Strong encourages them: "While I was walking to work, I watched the sunrise" is a stronger sentence than these two: "I walked to work. I watched the sunrise."

Although computers analyze words (as opposed to numbers) rather slowly, *StrongWriter* is fairly speedy. It analyzes a five-hundred-word paper in about one minute on most microcomputers. One minute is not a lot of time considering that the computer must perform tens of thousands of complex operations. *StrongWriter* can analyze a five-hundred-word paper in as little as ten seconds using the very newest and fastest microcomputers.

Very often writing that would otherwise be fairly good is marred by absolute howlers and basic blunders. The primary purpose of *StrongWriter* is to point out howlers and blunders to writers and to make suggestions for improvements. Most writers see this as quite sufficient reason to use *StrongWriter*.

From the standpoint of an English teacher, perhaps the chief virtue of students using a grammar and style checker like *StrongWriter* is that it turns students' attention back to their writing for additional editing and revision. The principle that good writing is the result of extensive editing and rewriting is difficult for teachers to instill, and it is frustrating for students to learn. Grammar and style checkers can help.

I have noticed that when a grammar and style checker tells a student to correct a particular blunder, that not only is the correction made in the next draft, but frequently the sentence in which it was found is rewritten, and sometimes the whole paragraph is recast. Therefore, while *StrongWriter* may have simply pointed out a relatively trivial surface blemish, the student gained practice in revision.

It has been objected that grammar and style checkers do not identify all writing mistakes. Of course they do not. Because of the way that computers work (they are not as good at non-numeric processing), a program like *StrongWriter* cannot be an adequate substitute for a composition teacher or a good editor. English composition is very complex, and good teachers and editors often make invaluable suggestions based on intuitive insights. No machine can do that. However, grammar and style checkers can point out some kinds of blunders and make certain kinds of suggestions.

If users realize that the programs naturally have limitations, they can be very useful. A grammar and style checker can allow writing teachers to move to a higher level of teaching effective rhetoric rather than spending extensive time on grammar and usage. The only alternative is for writing teachers to ignore their students' blunders.

Actually, there are some comparative advantages in students using a grammar and style checker: for example, it is always consistent. A human instructor may circle "alot" several times on a paper, but overlook an instance. The student may conclude that it is sometimes acceptable to use "alot" and sometimes not.

Because everyone tends to regard writing as a personal extension, a student whose paper is returned from an instructor with dozens of blunders circled may be simply crushed. Demoralized students do not revise and rewrite with much enthusiasm. On the other hand, students seem to regard the output of a computerized grammar and style checker differently.

They realize that they are reading the results of a machine that has been programmed to identify certain words, phrases, and structures. There is no affront in that. The fact that the stupid machine occasionally makes mistakes is comforting to students and allows them to feel superior (which, of course, they are).

Writers and teachers might try *StrongWriter*; it is not very expensive, and it is easy to use. Writing is important, and all of us need all the help we can get.

[NOTE: Single copies of *StrongWriter* may be ordered for $89.00 from Strong Software, 702 NE Fifth Street, Madison, SD 57042. Site licenses and quantity discounts are available.]

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