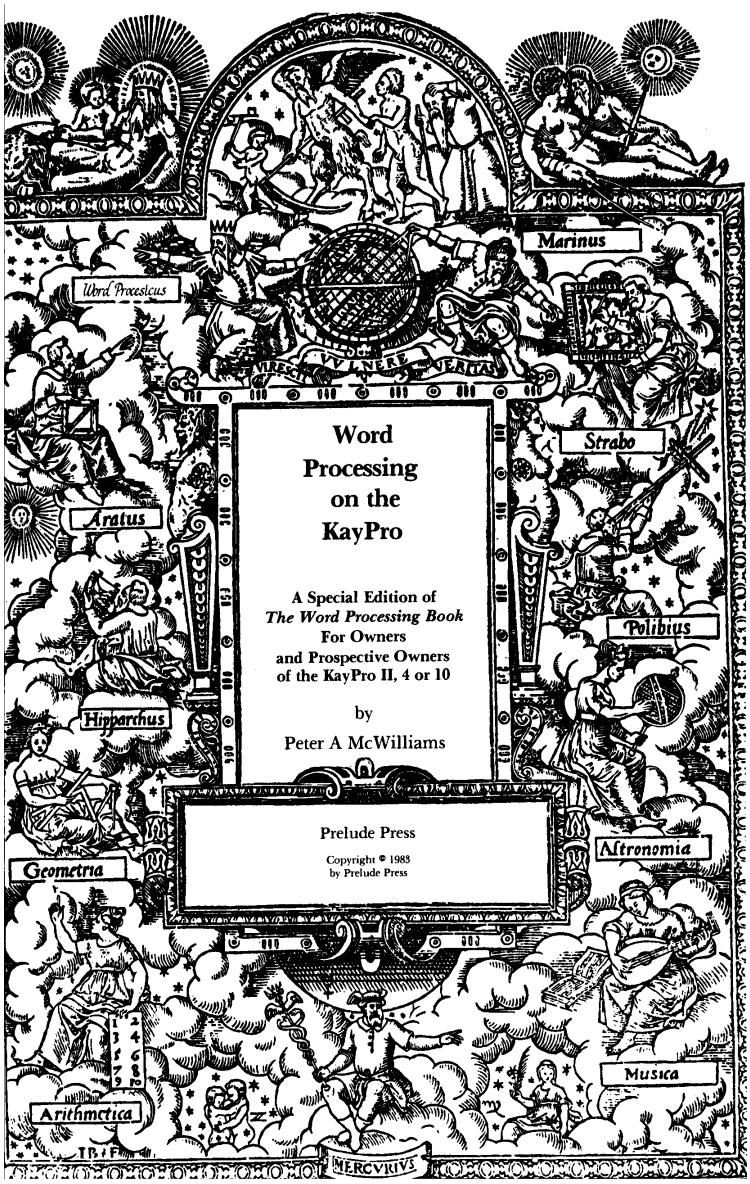

Word Processing on the KayPro

A Special Edition of
The Word Processing Book
For Owners
and Prospective Owners
of the KayPro II, 4 or 10

by

Peter A McWilliams

Prelude Press

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Word Processing on the Kaypro

PART I

What Word Processing Is and What It Does

Chapter One

A Brief and No Doubt Inaccurate History of Word Processing

The New York Times.

NEW YORK, FRIDAY, APRIL 8, 1927.

FAR-OFF SPEAKERS SEEN AS WELL AS HEARD HERE IN A TEST OF TELEVISION

LIKE A PHOTO COME TO LIFE

Hoover's Face Plainly Imaged as He Speaks in Washington.

THE FIRST TIME IN HISTORY

Pictures Are Flashed by Wire and Radio Synchronizing With Speaker's Voice.

COMMERCIAL USE IN DOUBT

This book is written for the absolute novice who has either purchased a KayPro computer, or is considering one, and has an interest in word processing. If working with words is something you do with some regularity, and your total knowledge of computers is a memory of the reel-spinning monoliths from 1950s movies or those little square cards with little square holes that say "DO NOT FOLD, SPINDLE OR MUTILATE," then this book is for you.

I will assume that you have some familiarity with a typewriter and a television. If not, might I suggest you read ***The Wonder of the Age: A Machine That Writes Like a Book*** (*Scientific American*, June, 1867) and ***Far-Off Speakers Seen as Well as Heard Here in a Test Of Television — Like a Photo Come to Life.*** (*New York Times*, Page One, April 8, 1927.)

Computers, alas, have not gathered the best of reputations in their first thirty-or-so years of service to humanity. We have the idea that we might lose our jobs to a box with a blinking light. We fear that, once "they" become smarter than we are, "they" will somehow take over the world. (Remember the movie *2001*? The only villain was HAL the computer. It did not take us long to figure out that the next letter in the alphabet after H was I, the next letter after A was B and the next letter after L was M. HAL = IBM.) And how often have you been treated to the brief end of the stick due to a "computer error"?

In the last five years all this has changed. It began with baby computers known as hand-held calculators. Within two years they went from $300 to $12.95 and were found on watches, pens and refrigerators. We all promptly forgot our multiplication tables. Long Division? Isn't that a housing development on Long Island? Soon, with variations of these hand-held marvels, we could play football, count our calories, check our biorhythms and decide which horse to bet on at the race track. If these were computers, they weren't so bad.

This set the stage for the first full-scale personal home computers. With cute little names like PET and APPLE they were free from the taint of evil; and how could anything truly menacing come from Radio Shack, that store in the shopping center next to the A&P that sold phonographs and CB radios?

WORD PROCESSING ON THE KAYPRO

Those who did not yet make the plunge and acquire a Total Home Computer made do with ATARI video games or played PONG until the wee hours of the morning. Little computers, known as microprocessors, began doing wonderful things for microwaves and televisions. Digital readout became the norm for wristwatches. The family car had an on-board computer that told miles per gallon, temperature, and estimated time of arrival. The Twenty-first Century had arrived, twenty years ahead of schedule.

Meanwhile, the brave pioneers, manning and womaning their PETS and APPLES and TRS (Tandy Radio Shack) 80s, were balancing the family budget, educating their children, educating themselves, playing a myriad of increasingly complicated games and were, in fact, the nucleus of a quiet revolution.

Well, truth be told, they weren't that quiet about it. They began by telling their friends. America had witnessed nothing like it since the early 1950s when people from up and down the block would gather around the neighborhood's only TV, sometimes just to look at it, even if nothing was being broadcast at that moment; the set turned off, they would gather round this icon of the future. A test pattern was a thrill to behold. "That circle with the lines around it is all the way downtown, more than twenty miles away!" the owner would say.

The owners of Personal Home Computers invited their friends over to watch the family budget being balanced or to take part in a two-handed game of hangman. Soon, though, the friends who were interested in computers got their own, and the friends who were not interested grew weary of watching another family's budget being balanced. A new way of sharing the wonders of modern technology was needed and was duly discovered: The Written Word.

You would have thought they had invented the English language. (Actually they *were* inventing a language: Computerese. We'll discuss that a bit later.) It began innocently enough with letters to friends, the ones they couldn't talk to in person. These expanded into articles that filled the ever-increasing number of computer magazines as well as civilian magazines and newspapers and PTA bulletins and company

newsletters and supermarket bulletin boards.

Then one day, it had to happen, and it did: an actual book about computers. This was simply the first kernel in a very large pan of very hot popcorn. Almost at once there were dozens, then hundreds of computer books, then little publishing companies that published nothing but computer books, and finally big publishing companies that published nothing but computer books. Not since Mr. Gideon began putting Bibles in hotel rooms has The Printed Word been spread with greater speed, volume and zeal.

And what, do you suppose, did these Personal Computer Owners turned Literary Giants use to write this cornucopia of prose? You guessed it: Their personal home computers, adapted to process not the family budget, but *words.*

Of course, word processing has been a part of Big Business for some time. Those giant room-filling computers of the early 1950s were there to process data. Numbers would go in one end, get sorted and resorted (processed) and come out the other. After a while someone said, "If we can process data, why can't we process words?" Well, they could and they did, and word processing was born.

We as consumers were first aware that computers were being used for more than payroll deductions when we started getting personalized impersonal letters in the mail. I'm sure we all got the one from *The Reader's Digest.* I must have received a dozen of these, proclaiming on the outside, "THE MCWILLIAM FAMILY HAS ALREADY WON $1,000,000 AND TWO SLAVES." Well, how can you throw such an envelope away without at least opening it?

The letter began, "Dear Mr. and Mrs. McWilliam and Children." They always seemed to leave the "s" off "McWilliams." There was no "Mrs. McWilliam," unless they meant my mother, in which case I would have been the "children." The letter continued, "Imagine, Mr. and Mrs. McWilliam, what it would be like to live like a millionaire, complete with English butler and maid!" So much for the two slaves. Furthermore, The Grand Prize does not include $1,000,000, one discovers as one reads the increasingly smaller print, but simply "The life of a millionaire" for the duration of the actual Grand Prize: A glorious two week vacation in

beautiful downtown Pleasantville (home of *The Reader's Digest*, coincidentally).

Unfortunately, what a millionaire could spend his or her money on is rather limited in Pleasantville. The finest hotel is the Ramada Inn. The best restaurant is Howard Johnson's. The hottest night spots are the Cinema I & II. "All this and more is included in this Dream Vacation, Mr. and Mrs. McWilliam, but first, let us tell you about our special offer on the next 26 issues of *The Reader's Digest* . . ." The Dream Vacation is not even ours, alas. We have a *chance* to win it. Our name has been automatically entered in the Grand Sweepstakes Drawing with 76 million other Americans, their children and their mythical Mrs.

After the excitement wore off, after the humor wore off, we learned to toss these missives aside. "Another computer letter," we'd sigh.

But those were the dim, dark days of yore: back when computers cost hundreds of thousands of preinflation dollars; back when, if you wanted a personal computer to balance your household budget, you would have to buy an additional house just to put it in; back when the only companies that could afford computers were at least as big as IBM, and they used their computers *for* themselves, which certainly seemed as though they were being used *against* the rest of us.

That's all changed. Computers now cost but a few thousand post-inflation dollars, they sit on one side of a dining room table and leave enough room to eat dinner on the other, and they can be used by consumers for consumers. (I may even use my computer to write that long autobiographical piece on "The Most Unforgettable Character I've Ever Met" and collect my $2,500 from *The Reader's Digest.)*

So, after this rather rambling preamble, let's take a look at, of all things, word processing.

If you think of your mind as a sort-of-computer, when you write even a simple sentence you have, in essence, processed words. The procedure goes something like this:

1. From your vocabulary, stored in your memory, you choose words that generally fit the subject you wish to write about.
2. You select the best of these words.

3. You select words to connect the best words together.
4. You lay them out with a beginning, a middle, and an end based upon certain rules you have learned, again calling upon your memory.

You have successfully processed words into a sentence. You might then change and alter the words, the arrangement of words, add words, delete words — all of which would be a continuation of the word processing process.

There is a story told of Keats, who, after looking out a window for awhile, turned to his friend and said, "Something beautiful is forever a joy. What do you think of that?"

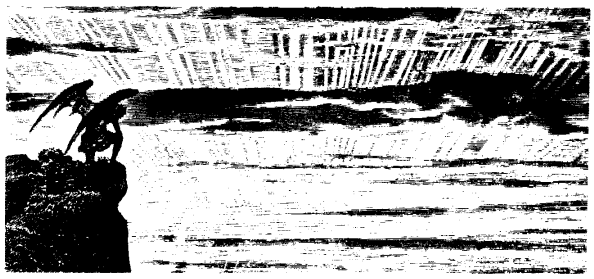
His friend looked up, considered it for a moment, said, "That's very nice," and returned to his writing.

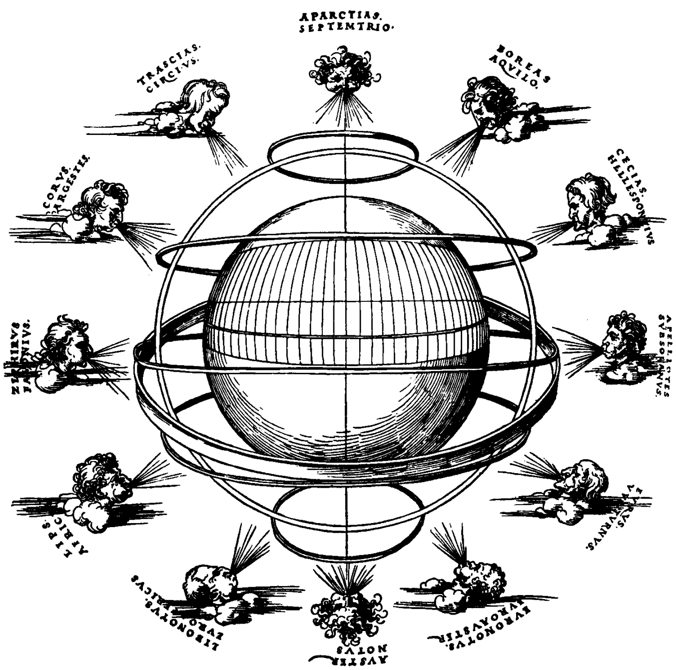
Keats continued looking out the window. A while later he said, "A thing of beauty is a joy forever."

His friend put down his pen. "That," he said, "will live through eternity."

What Keats was doing while looking out the window was processing words. He knew what he wanted to say, and he rearranged nouns, verbs, and adjectives until the beauty of his words matched the beauty of his thought.

Word processing machines are tools that serve the word processing that goes on in the ultimate word processor, the human mind. Word processing machines allow for maximum flexibility in alteration, change, correction, revision and expansion. After all this processing of words has taken place, the word processing computer will print out as many copies as you like, letter perfect.




APARCTIAS.
SEPTEMTRIO.
BOREAS
AQVILO.
TRASCIAS.
CIRCIVS.
CECIAS.
CORVS.
AVSTER
NOTVS
EVRONOTVS.

Chapter Two

Personal Computers

In order to describe how all this altering, changing, correcting, revising and expanding of written text, known as word processing, happens in a machine, we must first describe the machine itself—the personal computer. This chapter is a brief description of the main components of a personal computer, any personal computer, be it a KayPro or no.

When describing word processing, one is caught in the chicken/egg syndrome. Does one start with the chicken (the computer) or the egg (the wonders of word processing)? I'll give an overview of the chicken in this chapter, look carefully at the egg in the next chapter, examine the specifics of the KayPro chickens, er, computers (and the software which comes with them) in Chapter Twelve. We'll have a look at printers, additional software, and accessories in Chapter Thirteen.

As we go along, I will be familiarizing you with Computerese. Computerese is so unique that it could rightly qualify as the world's 297th language. It's a tough language to crack, too. So much of the jargon is defined by other jargon which is defined by still more jargon. Sometimes it's eight and nine layers deep. Some of the Computerese words are used because they're accurate, specific, scientific terms. They are clear, concise and, once learned, not confusing. Other terms are abstract and, at heart, meaningless. These are the trade names given to various computer products by manufacturers trying to get a trademark for their slight variation of a norm.

An example of a trademark with which we're all familiar is Kodak. Mr. Kodak did not invent the Kodak camera. There was, in fact, no Mr. Kodak. The word "Kodak," like the Kodak camera, was invented by George Eastman. He sat down with pencil and paper and made up a name. He wanted it to begin with a K and end with a K, "Two good, strong consonants," as he put it. He then played around with the letters in between, and a trademark was born. The Eastman Kodak Company. Most people think "Eastman" is Mr. Kodak's first name. The invention of the word "Kodak" gave rise to Kodachrome, Kodacolor and all the rest. (Where did "Brownie" come from? That's what I want to know.)

I don't mean to criticize manufacturers for this practice. It's good to know the difference between Kodak and Fuji film or between Xerox and Savin copiers. I set this forth as a warning, that learning the language of computers is like learning, for the first time, the language of automobiles: not only will you have to learn "sedan" and "engine" and "transmission," you'll also have to learn "Ford" and "Volkswagen" and "Hupmobile."

So, off we go. If you know what a television and a typewriter look like, you'll have no trouble understanding personal computers.

The first computer component we'll look at is the **keyboard**, which looks like a typewriter keyboard, using the standard QWERTYUIOP arrangement of keys. The keyboard is connected to a **video screen**, which looks like a television screen; in fact, it often *is* a television screen. The video screen is also called a **monitor** or a **CRT** (which stands for cathode ray tube, which is the kind of tube a TV picture tube really is — to scientists, anyway).

A keyboard and a video screen together are known as a **terminal**. The video screen is not for checking out reruns of *Happy Days*. It is for displaying the words that are typed on the keyboard.

Because the words, or **text**, are written in light on an ephemeral medium such as a TV screen and not permanently printed on a piece of paper, the ease of alteration at the heart of word processing is possible.

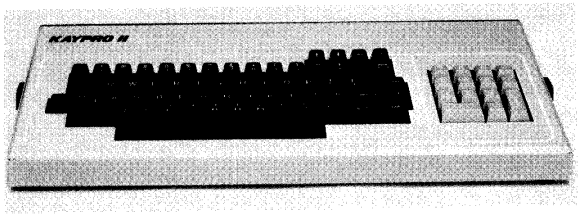
Speaking of heart, we now come to the heart of any computing system, the computer itself. The computer has two main components. The first is the **CPU** or **central processing unit**. The CPU is the real brains of the outfit; it's pretty smart. Variations of CPUs are what make everything from pocket calculators to "computerized" sewing machines so clever. The problem with CPU is that, while CPU is long on intelligence, it is short on memory. Hence the second part of the computer, the **RAM** and the **ROM** — two types of memory.

RAM stand for **random access memory**. This means that the CPU can add to or take from this memory any time it wants: it has random access to the memory. (When a CPU adds information to the memory it's called **writing**. When a CPU takes information out of memory it's called **reading**.) ROM stands for **read only memory**. The information in the ROM memory was placed there by the manufacturer, and although the CPU has access to it, a ROM cannot be changed.

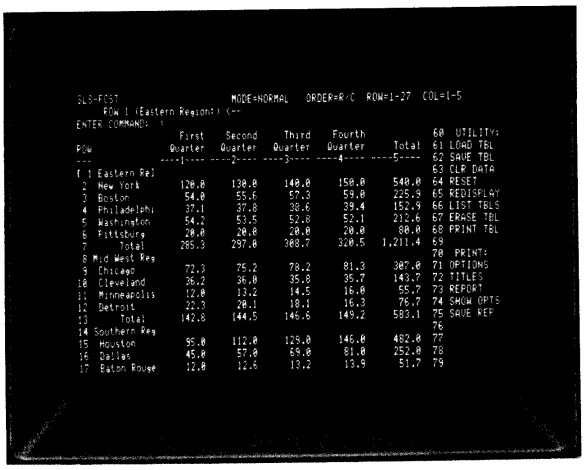
A good analogy between ROM and RAM is the difference between a phonograph record and a cassette tape. The phonograph record would be like ROM: information can be taken from it as often as desired, but no new information can be added. A cassette tape is like RAM: information can be added, altered or retrieved at any time. RAM is also referred to as **user programmable memory**.

Why not have all RAM then? The answer is that, unlike cassette tapes, the memory of RAM is temporary: it will last as long as the computer is turned on. Once the computer is turned off, whatever was in the RAM is no more. ROM, on the other hand, keeps its information intact, power or no power, indefinitely.

RAM and ROM and CPU all live together, usually in some kind of box, making up the core of what is technically the computer. Everything else is known as **peripherals**. However, a complete system of core computer and all the



The Keyboard



The Video Screen

peripherals is also called a computer. It's like taking a visit to "The Sea." One does not just visit the sea, one also visits the sand and the boardwalk and the hot dog stand. All this activity is summed up in the phrase "The Sea." But there is also a lot of water that's called the sea. It is not uncommon to visit a computer owner's house and have him or her say "Over here is my computer," indicating a series of boxes connected by wires, "And over here is my computer," pointing to one box in particular.

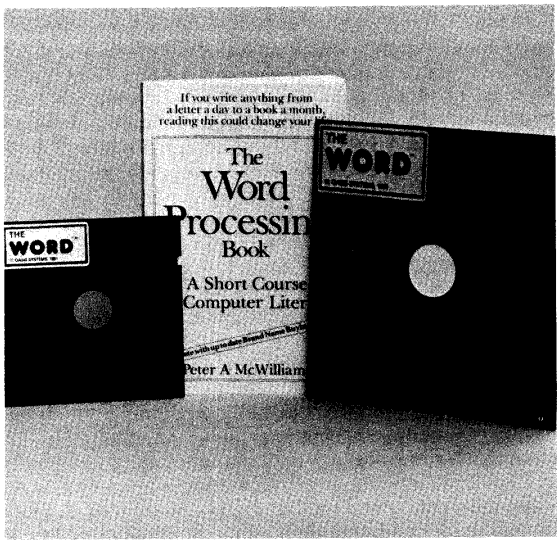
So, where are we? Oh, yes: You type on the keyboard, text appears on the video screen, it goes into the CPU, which sends it to the RAM. Now, what would happen if it came time to turn the computer off and we wanted to keep what was in RAM? We would use what is fashionably referred to as **magnetic media.**

Magnetic media are any of several formats that can record and play back magnetic impulses. The most familiar is the cassette tape. The "magnetic medium" is the brown coating on the tape inside the plastic cassette case. The brown stuff is iron oxide, which is a fancy word for rust. On some personal computers, cassette tapes — the very kind you record music on — are used as the magnetic media. This is the least expensive and least effective method of storing information.

Most personal computers that attempt any serious word processing use thin, flexible circles of plastic coated with the same brown magnetic media (rust). These are called **disks, diskettes, mini-disks,**or **floppy disks.** They are 5¼ or 8 inches in diameter and are permanently encased in a thin, square cardboard envelope.

To use a disk, the whole envelope goes into a **disk drive** and disappears. With a quality disk drive and God on your side, it will come out again. If your disk drive is hungry, it may eat the diskette, and this is known as a **crash.** I don't want to scare you, just want to let you know that every so often, not very often, but every so often these things happen. Computers are no more perfect than the rest of us.

The disk drive has a magnetic head, known as a **read/write head.** It is similar to the head that records and plays back information on a cassette recorder. The read/write



A 5¼ and an 8-inch floppy disk, leaning against a copy of this book for size comparison

head, however, moves. Just as with RAM, when information is recorded onto a disk, it is known as **writing** on the disk; when recorded information is played back, this is **reading** from the disk.

When a complete set of information is written onto a disk, this is known as a **file**. A file can be any length, from one word to hundreds of pages, and there can be many files on each disk. The system that decides how a file is written, how it is read, and the way in which the disk interfaces with the rest of the computer is known as the **disk operating system** or **DOS**.

The high end, most efficient and expensive magnetic medium is called a **Winchester** or **hard disk system.** This is a circular platter of solid aluminum (hence "hard" disk as opposed to the "floppy" disk) covered with magnetic media. Hard disks spin at an outrageous speed, hold a remarkable amount of data, and can read and write information at an incredible rate. This was invented by IBM, and the code word used during development was "Winchester," maybe because it's faster than a speeding bullet. I don't know. At any rate, the name stuck.

Of the three — cassette tapes, floppy disks and hard disks — most word processing applications use floppy disks, often with two separate drives. Word processing can be done with one, but two drives makes copying disks and files much easier. It also increases the amount of **on-line** storage. ("On line" is the amount of informational storage that is available, or on line, at any given time.)

Magnetic media are not just used for storing information entered through the keyboard. They are also used for entering information from other sources, such as **programs**, which we'll discuss later in this chapter.

All the above-described components — the keyboard, video screen, core computer (CPU, RAM and ROM), and magnetic media — can come individually packaged, can be combined in any of several combinations, or may arrive all in one unit. Often the keyboard and video screen are combined to form a terminal. (Having a detachable keyboard is *highly* desirable for serious word processing applications. We'll discuss the reasons for that in Chapter Twelve: **The KayPro Computers.**) The core computer and disk drives are often combined in one box. Sometimes the core computer is hidden inside the terminal and the disk drives are in a box off to one side. Most often these days core computer, keyboard, video screen and disk drives come packaged all together in what looks like a television/typewriter with slots.

The last piece of equipment, which is almost always separate from the other components, is the **printer.** The printer does just what its name implies: it prints. It does this with great speed, far faster than human typing in most cases.

There are two kinds of printers, **dot matrix** and **letter quality**. Dot matrix printers form their letters by using dots, much like those signs on banks that tell you the time and the temperature. The dots are smaller than the light bulbs on those signs, but the effect is the same: the information is communicated efficiently, but far from elegantly.

```
This is a sample of dot matrix printing.
You will notice that the text is
perfectly readable, but the
printing is not as dignified as one
might require for business
correspondence or grant application.
```

```
Dot matrix printers can be set to go
over each line twice, which slows the
printing speed but improves the quality
of the type. This is an example of
double-running a dot matrix printer.
While an improvement, it is still not
worth writing home about. (It's good
enough to write home with but not
about.)
```

Letter quality printers use a ribbon and some sort of typing element to make a solid impression of each letter. The letters are printed, one after another, just as in typing, and it's difficult to tell the difference between a letter typed by a first-rate electric typewriter and a first-rate letter quality printer; hence, letter quality.

Dot matrix printers cost less to buy and print pages faster. Letter quality printers cost more to buy and print pages more slowly. The quality of a page printed on a letter quality printer is far superior to the quality of a page printed on a dot matrix printer.

So there we have the basic components of a personal computer. But what it is not yet is a word processor. To use all this equipment to process words, one key element must be added: a word processing **program**.

A program is to a computer what a record is to a phonograph. (Didn't you used to love those tests in school?

"The sun is to the moon as a _____ is to an artichoke.") Without records, all the machinery that makes up a phonograph is useless. Without programs all the electronic circuitry and typewriter/televisions and magnetic media that make up a computer are likewise useless. In the hi-fi business, speakers and turntables and amplifiers are all known as hardware. Records are known as software. In Computerese, the computer and its peripherals are called hardware, programs are called **software**. You play a record; you **run** a program.

Whatever you want to do with a computer requires a program. It's the plan, the guide, the instructions and the rules that tell the various parts of the computer what to do when. If you want to balance your checkbook, you run a checkbook program. If you want to play blackjack, your run a blackjack program. If you want to write anything from a letter to a book, you run a word processing program.

A personal computer, then, with a word processing program, becomes a word processor.

Here we have an early personal computer on the left and an early word processor on the right. It's hard to believe that no one thought of putting the two together until the last quarter of the Twentieth Century

To review, the six main components of a personal computing system to be used for word processing are:

The Main Computer. This is made up of a Central Processing Unit (CPU), and two kinds of memory, Random Access Memory (RAM) and Read Only Memory (ROM). The CPU is smart, but has little memory. RAM and ROM have lots of memory, but are not very smart. Together they make a very happy triple. RAM is also known as user programmable memory.

The Video Screen. This looks like a television screen, in fact it *is* a television screen, but rather than tuning-in *Three's Company*, the screen displays letters, words, sentences and paragraphs. *(Three's Company* is being acted out in the main computer by CPU, ROM and RAM.)

The Keyboard. This looks like a typewriter keyboard, with a few extra keys added. The keyboard and video screen usually come in one unit, referred to as a **terminal**.

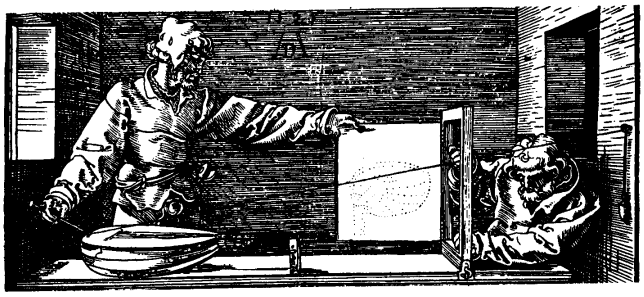
Disk Drives. Disk drives drive disks, also known as floppy disks or mini-disks. Disks are 5¼ or 8-inch circles of flexible plastic that store information. The disk drives record information onto disks, known as **writing**, and play information back, known as **reading**.

Printer. The printer does just that, it prints information onto paper. There are two kinds of printers: dot matrix, which forms letters using little dots; and letter quality, which types letters one at a time, much like an electric typewriter.

Program. All of the above machinery, known as **hardware**, would be for naught if it were not for programs, or **software**. Programs tell the computer what to do, when to do it, and how to do it. The variable that makes one computer an accounts receivable computer and makes an identical computer a word processing computer is the program. Programs are to computers what records are to phonographs.

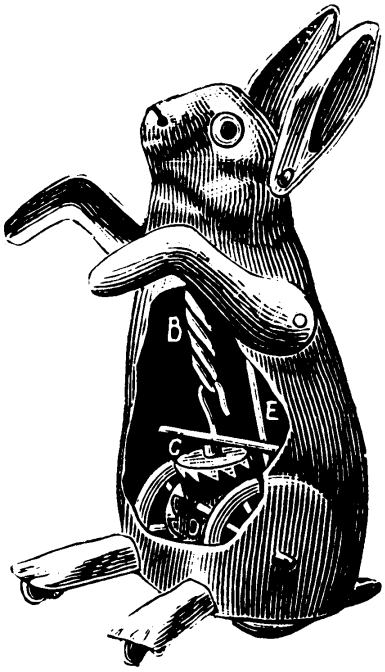
In the next chapter we'll look at word processing programs in detail.

Some early word processors required one to write directly on the video screen...

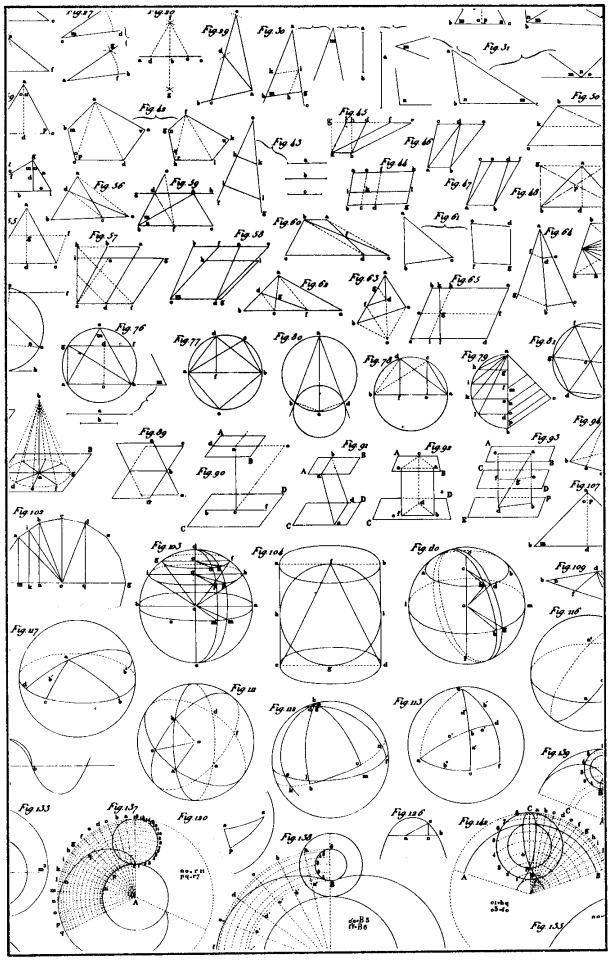


While others required the help of another person...

And many writers appreciated the help very, very much



To help us better understand how computers operate, consider the mechanical rabbit. Rubber band (B) turns wheel (C) which moves gear (D) and pulls rod (E). That should certainly clarify the operation of personal computers



For those who find the "mechanical rabbit" explanation too elementary, here is a more detailed—although equally lucid—diagram

Chapter Three

The Wonders of Word Processing

The Basics of Word Processing

Discussing word processing is like discussing Beethoven's Fifth Symphony. There are a great many recordings of this symphony, all different. Some are less different than others. The several versions done by the New York Philharmonic are going to be more similar to each other than the one done by the Omaha All Kazoo Band.

And so it is with word processing programs. There are about as many word processing programs as there are recordings of Beethoven's Fifth — maybe more. They're all different, but some are less different than others. The ones costing $500 are likely to be more similar to each other than are the ones costing $19.95.

All recordings of Beethoven's Fifth, from the Berliner Philharmonic to the Tijuana Symphony will begin with (we hope) "DA DA DA DUM." So, too, (we hope) do all word processing programs have some things in common. Let's look at those similarities, the basic features you can expect from any word processing program. Then we'll discuss the many variations, additions, and refinements that ingenious programmers have added in the past few years.

In explaining a basic word processing program, I'll use the typewriter for comparison. When you type on a typewriter, the words are transferred directly to the paper. When you type on a computer, the words appear on the video screen. Rather than ink on paper, you have written with electrons on phosphor. Ink on paper is hard to change; electrons on phosphor, easy.

If you make a mistake on a typewriter and catch it before putting too many characters between you and the mistake, you have several correcting options. The first is an eraser. Not recommended. The next is paint; little jars of white paint with brushes in them. You paint over the mistake, let it dry, and type over the paint. Similarly, there are little sheets of white carbon paper that will hide mistakes, in a fashion.

The ultimate solution to typing errors was the Wonder of the Age back in 1974: The IBM Correcting Selectric. On this machine you push a button, backspace to the mistake,

retype the mistake, and a ribbon of flypaper comes out of the typewriter and magically lifts the offending characters right off the page! Why, this so thrilled typists throughout the country that there was a movement to give IBM Thursday of National Secretary's Week.

To make a correction on a word processor you press the "delete" button and watch it erase all that went before it, letter by letter until you release the button. You then type in, or "keyboard in" as they say in Computerese, whatever you would prefer to have in that space.

Let's say you've finished typing a page, and it comes fresh and neat from the typewriter. You notice a sentence in the middle of the page that should not be there. Another sentence, that happens to be quite a bit longer than the sentence that should not be there, should be there. What do you have? A Moral Dilemma. A question worthy of Aristotle arises: "Is making this change that should be made worth retyping the whole page?" And if it's a long document, several pages long, and the pages have already been typed, the change would mean going onto another page, so the question becomes, "Is making this change that should be made worth retyping the whole document?"

If you own a word processor, you need never face that dilemma again. You will have to face other dilemmas, like how to pay for the word processor perhaps, but you will never face the to-retype-or-not-to-retype dilemma again. Whatever you're working on in word processing, from a wedding invitation to the great American novel, is known as a document. When you want to make a change in a document, you move the cursor to the point in the document where the change is to be made, and make it. A cursor is a little, blinking square that is the length and height of one letter —it tells you where you are in the document.

Taking words out, putting words in, correcting spelling, removing or adding literally pages of information can take place at any point in the document. The rest of the document adjusts accordingly, automatically, electronically. Change is easy because it's all done with electrons and electrons *love* to change. You could say it is one of their primary characteristics.

This ability to change what you want to change whenever you want to change it is the key to the value and growing popularity of word processing computers. With this feature, even the most basic word processing program can do more than the most expensive and sophisticated type-directly-onto-a-piece-of-paper typewriter.

After everything looks all right on the video screen, it comes time to print. Even the slowest printer types faster than all but the fastest typists, and printers can do it hour after hour after hour, 24 hours a day if necessary. The slower computer printers (converted IBM Selectrics, ironically enough) print at 15 characters per second (CPS).

Figuring an average word to be seven letters long (that's just my figuring; heaven knows the length of an average word), that comes to 128.57 words per minute (WPM). The slower printers designed especially for computers print at 25 CPS or about 215 WPM; and the faster letter-perfect printers for computers travel at the remarkable rate of 55 CPS, which clocks in at around 470 words per minute. They print in both directions, from left to right and then, not to waste a return trip, from right to left. Many dot matrix printers go faster than that.

As you might gather, even if changes are desired after the document has been printed, making changes on the video screen and then printing a new document requires minimal time and effort. In fact, while doing word processing, working copies are printed all the time. The onus on retyping and re-retyping, and even re-re-retyping is gone. Push a few buttons and the printer clicks out a new copy in a matter of minutes.

The implication this has on personalized form letters is obvious. You can send out hundreds of letters, all saying the same thing, each looking hand typed, and the only thing you need to change each time is the name. And, fellow writers: Freshly typed manuscripts are far more impressive than Xerox copies.

Those are the basics you can expect from any system that dares call itself a word processor. Although formidable, it's just the beginning.

Beyond the Basics of Word Processing

Some people require or desire a feature or two or twelve more than a basic word processing program provides. Who can blame them? After spending several thousand dollars on hardware, spending a few hundred more on better quality software that will turn their Volkswagen into a Mercedes is certainly understandable.

What follows is a guide to some of the features designers of word processing software have created. Each description will begin with the Computerese name for the feature.

File Length. File length determines how long a document can be. This is usually designated by the number of **K** or **Kilobytes**, each kilobyte being equal to 1024 **bytes**. A letter, number, character, or space is a **byte**. "20K" would be around 20,000 bytes, "240K" would be about 240,000 bytes, etc. If you're wondering what the relationship between a kilobyte and the written word is, a double-spaced, typewritten, 8½ x 11 sheet of paper with generous margins contains about 2,000 bytes, or 2K. Some less expensive word processing programs can handle only one or two pages of text at a time. (Of course, longer documents can be done one page at a time, just like on a typewriter.) The finest word processing software limits the size of the document to "disk capacity," meaning that, however many K the disk is capable of holding, that is the maximum length of the document.

Word Wrap. This means that when you reach the end of the line (meaning right-hand margin, not major life crisis), the next word will begin the next line automatically.

This may take some getting used to. If you're accustomed to a manual typewriter, you may find your left hand moving suddenly upwards and slapping the side of the video screen at the end of each line. Once you've become adjusted to word wrap, however, it's delightful. No more listening for the little bell. No more looking up to see how much room is left on a line. No more wondering if the next word will fit before the carriage stops dead. No more margin releases. Just type, type, type. The only time you'd use the carriage return is to begin a new paragraph or when you

want the line to end before the right margin, such as in list making or poetry writing.

File Insertion. Each disk has many files. A file can be anywhere from one letter in length to the maximum length permitted by the word processing program. If you were typing along on file A, and you wanted to add the contents of files B, C, and D to file A, with the push of a few buttons it would be done.

Using file insertion you could create files of frequently used paragraphs or phrases and have them added to the text in a matter of seconds. This is great for correspondence or contracts. I have my name and address in a file marked AD and my name, address and phone number in a file marked ADP. When I come to the end of a letter and want to add my name and address I type two letters — a code to let the computer know that I want to "read" a file into my text — and then type AD. If I wanted to include my phone number I would type ADP. Zip. There it is.

Block Move. A block is a group of words that are all together in a bunch. I guess if you drew straight lines around a chosen bit of text on a printed page it would look like a block. I don't know. The logic of those three people who sat up until four in the morning making up these terms escapes me. At any rate, if you've ever written a paragraph and then wished it were in another part of the document, you will appreciate block moves.

All you'd need do is mark the beginning of the block, the end of the block, move the cursor to where you'd like that block to go, and within seconds the block has moved into its new neighborhood feeling very much at home. There are other good things you can do with blocks:

Copy Blocks, which lets you make a copy of the block, so that the original block stays where it is, but an identical copy can be written into another part of the document.

You can also copy a block onto another file. Let's say you're typing along and discover you have written a paragraph that you will want to use again in other documents. You can copy it onto a new file, naming it whatever you like, and move on. The next time you need that paragraph, you can use file insertion and read it into the text. All this moving

around of blocks, by the way, is known as "text manipulation."

Global Search. Although this sounds like something James Bond might request ("We'll find him, sir. I'll have a global search run on him right away"), global search in word processing is far less dramatic, although equally exciting. Global search will find anything, at any point in your document, in a matter of seconds.

Let's say you have a very long document, and you want to return to the section in which you were rhapsodizing about clouds. You would simply type the word "cloud" into global search, and the computer would find and display the first time you used that word. If that wasn't quite the section you wanted, with the push of a button the computer would move to the point in your document where "cloud" was used for the second time, and so on.

Search and Replace. This not only finds any word or character in the document, it will change that word or character to any other word or character. If you've written a letter to Michael, using his name throughout the letter, and now you want to send the same letter to Mary, all you do is have the computer find each occurrence of "Michael" and change it to "Mary." In a few seconds the letter will be personalized to Mary.

Another use for search and replace is to save typing. Let's suppose you're doing a very long report on the heterobasidiomycetes (a subclass of fungi, for the two or three out there who didn't know. You know who you are). Now, writing as you would be on heterobasidiomycetes, you would no doubt have to mention the word heterobasidiomycetes quite often. You might not want to type out heterobasidiomycetes as many times as you'd be using heterobasidiomycetes, and you may, in fact, after awhile, find yourself avoiding the word heterobasidiomycetes altogether. Now, rather than type out the word heterobasidiomycetes each time, with search and replace all you would have to do is use an abbreviation, say "H" each time you wanted to use heterobasidiomycetes. When finished you would simply have search and replace find all occurrences of "H" and replace them with "heterobasidiomycetes." In this way your report, your fingers, and your sanity are saved by search and replace.

Dictionary. (Also known as Proofreader or Spell Check or something along those lines.) This checks every word in your document against a list of correctly spelled words. These lists of correctly spelled words range from 10,000 to 45,000 words. If a word in your document does not match a word in the word list, it means that either the word is misspelled or the word is correctly spelled but not located in the program's list of words.

The dictionary feature will make a list of the unmatched words for you to examine. If they are correctly spelled, they can be added to the dictionary. All future checks will include those words. If they are incorrectly spelled, they are automatically marked in the text and found using global search. (A "*" for example, is placed by the program before each misspelled word. You have global search find all incidences of the symbol "*" and, one by one, the misspelled words will present themselves for correction.) Incorrect spellings, by the way, include most typographical errors. This feature is great for ferreting out typing mistakes, the ones usually discovered *after* the letter is sent.

Most often this feature will not be found as part of a word processing program, but can be purchased as a separate program and used with whatever word processing software you own. The best dictionary programs will look up the correct spelling for a word, even if you don't know how it's spelled. You type in how you think it's spelled and, nine times out of ten, it will come up with the correct spelling. (The next chapter, **The Curse of Noah Webster** looks at one of these dictionary programs in greater detail.)

Centering. The computer will automatically center any word or group of words between the left and right margins. Great for headings, titles, addresses, invitations, poetry, and the like.

Page Display. This will display on the video screen where the page breaks will be when the document is printed. It helps avoid the last three words of a paragraph beginning a new page.

Automatic Pagination. The page numbers will automatically be printed at the bottom, top, left, or right side of every page. Like most features, this one can be "switched off" so that no page numbers print.

Screen Oriented. Programs that are screen oriented mean that what you see on the video screen is what you'll get on the printed page. If you want justified right margins, they will be displayed that way on the screen. If you make a change, that change is reflected instantly on the screen in both the content of the words and the format the words are in.

Word processing programs that are not screen oriented are known as **character oriented.** This means you see all the words displayed in the order, but not necessarily in the format, that they will be printed. Some people don't mind this. As long as one word follows another as written and the new paragraphs begin when requested, that's all that matters. Others will want to see what they're working on, in the form it will be printed, as they go.

Justification. No, this is not a list of good excuses for why you spent so much money on a fancy typewriter. This means the right margin is straight and even, just like the left. Most books, newspapers and magazines use justified right and left margins, also known as "flush right" and "flush left."

Studies have shown, however, that while perfectly justified right and left margins look more impressive on a printed page, unjustified ("ragged") right margins are easier to read. Moral: If you want to impress, turn the justification on. If you want to communicate, turn it off. (And you can see where *this* book stands!)

Justification is done by expanding shorter lines. This expansion is done by adding spaces. If little itsy-bitsy-teeny-tiny spaces are added between letters, this is known as **microspacing.**

Proportional Spacing. A typewriter allots the same amount of space for each letter, so that a capital "W" is the same width as a small "i." Proportional spacing prints the "W" wider than an "a" and an "a" wider than an "i." Most books and magazines print with proportional spacing. Proportional spacing produces printed copy that is as close as you can get to professional typesetting. This requires, of course, not only the appropriate software but also one of the better letter quality printers.

While we're on the subject of printers, why don't we wind up this review of word processing capabilities with some of the many printing enhancements that are available when a first-rate printer and top-quality word processing program combine. In fact, let's switch from professional phototypesetting to a letter quality word processing printer.

Underlining. We all know what underlining is. At least I hope we all know what underlining is. Underlining is when you draw a line under something. The words "hope" and "under" were underlined, as was the word "underlined." (Do you see how boring this book must be to anyone who knows a lot about word processing?)

Double Strike. This means that every character is typed twice. It gives a darker, more solid impression and would stand out on a page, but not quite as blatantly as boldface. It is very useful for preparing copy that is later to be printed.

Boldface. Here, too, each character is typed twice, but the second impression is slightly to one side of the first. The "slightly" is very slight, so that the two impressions overlap and form one dark, solid character.

Pitch Changes. This refers to how many characters there are per inch. The pitches we're most accustomed to are pica, which is ten characters per inch, and elite, twelve characters per inch. The better programs and printers allow you to change from one to another, at any point, without interrupting the printing. At least one system can print as few as four characters per inch, and as many as thirty. Thirty characters per inch. As my father would say, "Can you feature that?" Well, all right, I will feature that. Here is what "Come live with me and be my love and we will all the pleasures prove" looks like at thirty characters per inch:

Come live with me and be my love and we will all the pleasures prove.

Subscript and **Superscript.** These functions put the words, characters or numbers slightly below or slightly above the line they are printed on. It's useful when writing H_2O

(the "2" is in subscript) or $E=MC^2$ (the "2" is in superscript.)

Kerning. Kerning is a term from printing that refers to the spacing between letters. Some word processing software allows the movement of a single letter to the right or to the left in infinitesimal increments.

Overprinting. This allows you to print one character over another. It's useful in foreign languages, when you want to put the "´" over the "e" in "olé" or if you want to create your own characters, as someone did when he combined the "?" with the "!" and came up with "‽". It's called an interrobang and it's used to punctuate sentences such as "You're what‽" or "You're going where‽" or "You just bought a word processing what‽"

Strikeout. For the life of me I cannot see the point of strikeout. All it does is put little dashes (-----) over whatever you've written and prints it that way. You pay all this money for a word processing machine so that there will never have to be any more strikeouts or erasures or white carbon paper or white paint all over your documents and then they include a special way of making them look bad. I don't know. The only possible use I can come up with is to make typewriter-like mistakes so that no one will know you have a word processing machine and nobody will want to come over and use it. That's all I can figure. (I am told this has some value in a law office. A great many unusual things do.)

The text above is an example of proportionally spaced printing on a word processor. The text you are reading now is an example of nonproportional (regular) spacing. With regular spacing, each letter is allowed the same amount of room, no matter how wide or narrow it might be. This is standard for typewriters. The type faces are designed, in fact, so that an "i" is wider than it might normally be and an "M" is narrower.

This paragraph and the one just above are also set with right-and-left justified

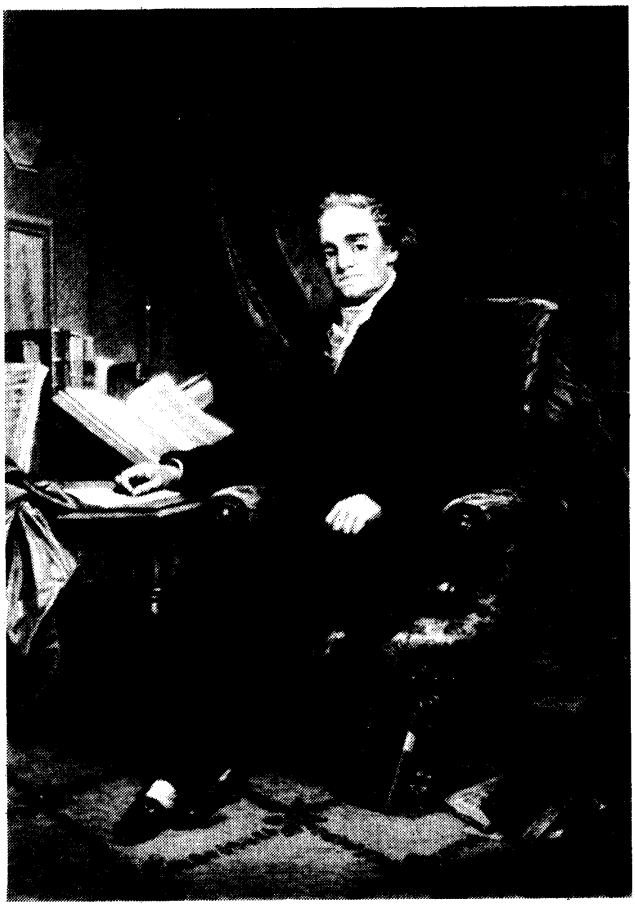
margins (obviously) using microspacing. The spaces necessary to extend shorter lines to the right margin are added in between each letter rather than in between each word.

The look of a printed document is also affected by the choice of type styles and how those type styles are manipulated. This is the same typeface as the previous two paragraphs, but the pitch was changed from 10 to 12 pitch. In this way the same print wheel gives different results.

Print wheels can be changed, of course, and a wide variety of type styles is available. We just switched from Courier to Times Roman. The proportional spacing above was printed in Emperor. Some word processing programs allow for print wheel changes *within* sentences. This allows one to *italicize* words by changing type wheels. Boldface does not require changing type wheels since it is done automatically by the printer and the word processing program.

For most correspondence you'll want people to think it was typed on a regular (albeit expensive electric) typewriter. You'll probably want to turn the right justification off. If you send out left-and-right justified letters people will know you have a word processor and suspect form paragraphs ---or worse---form letters. To maintain the illusion, you can print correspondence ragged right.

This chapter has exhausted only you and me. It has far from exhausted all the features currently available on word processing programs, and more are coming every day. Whatever your personal needs involving the processing of words, the chances are good that the program exists that will make your task a whole lot easier. If they can help me spell, they can do anything.



Chapter Four

The Curse of Noah Webster

I have always had a fondness for Thomas Jefferson. Anyone who wrote the Declaration of Independence and said, "I have nothing but contempt for anyone who can spell a word only one way," can't be all bad. I will not be spending much time on the Declaration of Independence in this chapter, but I have a feeling that I will be discussing the subject of spelling a great deal.

I am an awful speller. I am so bad that I don't even know when a word is spelled correctly. Ninety percent of the words I take the time to look up (and I do mean time: I'm lousy at alphabetical order, too) are right in the first place. It's discouraging. Hence, one of the deciding factors in my purchase of a computer with word processing capabilities was the flurry of programs promising to forever end the Curse of Noah Webster. (He's the one who started it all, you know. He's the one who came along 198 years ago and gave Americans only one way to spell a word. The right way. His way.)

In my research I came across a bit of dictionary software that not only does more than any of the others I've used or read about, but costs less. Far less.

The WORD retails for $75. (Spellguard, the trade name for another popular spelling-correction program, costs $295. Others run in the $200-250 range.) "The first question people ask me," says the creator of The WORD, Wayne Holder, "is 'What's wrong with it? Why is it so cheap?'" Thus far I've found nothing "wrong," and a good deal right, with it.

I will use a description of The WORD's several programs as the basis for this chapter. Not only will it tell you what is available in dictionary software today, but it will show you how special features can be added to whatever word processing program you decide upon.

The dictionary in The WORD is massive, more than 45,000 words. The dictionary is compressed, allowing that many words, plus all other programs and commands, to fit into less than 154K of disk space. (The dictionary uses 136K of that.)

The WORD will do what all the other "dictionary" programs will do, namely check each word in the text against the correctly spelled words in the dictionary; list

words that do not match (indicating misspellings, typos, uncommon proper names, jargon or technical terms); and then, after the option to edit the list, mark the mismatched words in the text for correction.

The latest edition of The WORD (version 2.0) uses a feature called REVIEW. Each of the mismatched words appears, one by one, and with a single keystroke you can either mark the misspelled word in the text for later correction; add the word, if correctly spelled, to the dictionary so the word will never appear on a mismatched word list again; add the correctly spelled word to a special dictionary that will only be checked upon request; or delete the word from the mismatch list altogether.

What if you accidentally delete a word that should have been added to the dictionary, or add a word to the dictionary that should have been marked as a misspelling? Review is very forgiving. You simply back up and reroute the word to its desired location. (If you have a version of The WORD prior to 2.0, OASIS will update it for only $10.)

To find the correct spelling for the misspelled words, The WORD uses a program descriptively entitled LOOKUP. LOOKUP is a tool that, from my point of view, is worth far more than $75 all by itself. One simply types "LOOKUP" and the way one *thinks* the word should be spelled, and LOOKUP will, nine times out of ten, find the correct spelling. I misspelled twelve words in the writing of this chapter, and LOOKUP found the acceptable-to-Mr.-Webster spelling for eleven of them.

It does this, I am told, by "correcting" the word in a great many ways, using the four most common mistakes in spelling, checking these "corrections" against the main dictionary, and listing the words that match. All this takes about ten seconds.

If I were to ask it to LOOKUP THIER, for example, The WORD would list THEIR, THIEF and TIER. I may be bad at spelling, but of the three, I known the word I'm looking for is THEIR.

A problem in any spell-check program is homophones. Homophones are words that are pronounced the same but spelled differently, depending on their use: words like "sta-

tionary" and "stationery"; "their," "they're," and "there"; "to," "too," and "two." Take the sentence: "Their going two the stationary store, to." Although this sentence would sound all right if it were spoken, and although individual words are correctly spelled, because of each word's usage there are four misspellings in that sentence. "They're going to the stationery store, too." would be correct. Since dictionary programs can only check the spelling of words, and not their context in a sentence, homophones are a problem.

The WORD offers a partial solution to this problem. The program has a file of 860 homophones. You go through and remove the homophones you know how to use correctly. The ones that remain are potential troublemakers for you, and The WORD will, upon request, mark these words in the text for closer review.

Another fascinating feature of The WORD, indispensable to crossword puzzle fanatics (who don't mind a little help) and writers who need to rhyme (who welcome all the help they can get), is FIND. Based upon the number of letters known, with "?" or "*" representing the letters unknown, FIND will find all the words that might fit the format you request. If, for example, you were doing a crossword puzzle and you needed a four-letter word that ended in "Q," all you'd need do is type "FIND ???Q" (each "?" represents one letter), and in less than a minute FIND would tell you that the word you're most likely looking for is "IRAQ."

If you were writing an "Ode To My Computer" and were seeking a melodic match for "terminal," all you'd do to find more than enough rhymes is enter "FIND *AL" ("*" represents any number of letters) and all words, of any length, ending in "AL" would come flooding forth (as a poet might say). This would give a nearly endless list of words. To tighten the rhyme you might want to remove just the first letter and enter "FIND *ERMINAL." This yields only one possibility, GERMINAL. So you might want to loosen the rhyme a bit and leave off the first syllable, entering "FIND *MINAL." This brings forth from the depths of iron oxide such gems as CRIMINAL, NOMINAL and SEMINAL.

Two more great tools for the writer included in The

WORD are Wordcount (WC) and Word Frequency (WORDFREQ). There are 2,099 words in this chapter. It took Wordcount about three seconds to give me that information. (Can you imagine how long it would have taken me to give me that information?) However, there are only 611 unique words. That is, I used 611 words, and by repeating some, came up with a 2,099-word chapter. Which words were repeated, and how many times each? That's where Word Frequency comes in.

Word Frequency tells how many times each word in the document was used, and will list them either in descending order of usage or alphabetically. The Top Ten words in this chapter are: **THE** (with a whopping 165 occurrences), **WORD** (with 76), **AND** edged out **A** (with 55 and 54 respectively), **IN** (53), **OF** (51), **TO** (47), **FOR** (35), **IS** (30) and, egomaniac that I am, I used **I** 29 times. Of the 611 unique words, 349 of them were used only once.

So, I used 611 words, 349 only once, repeated 262 of them as many as 165 times each to form a 2,099-word chapter. Now where else in the world could I come up with that information?

DICTSORT (Dictionary Sorter) is a program that will put any group of words in alphabetical order within seconds. If it puts one index of one book in order, it's paid for itself. Also great for mailing lists, record collections (mine is: Popular, alphabetical by artist; Classical, alphabetical by composer), or, if you're more like Daniel Webster than Noah Webster, it will put your book of "Alternative Spellings for Free Americans" in perfect order faster than you can say, "Life, liberty and the pursuit of happiness."

Each 5¼-inch disk on my word processing computer will hold about 340K of information. I've combined The WORD with WordStar (a word processing program described in Chapter Thirteen), along with a few of my own boilerplate paragraphs, on one disk and I still have 80K to spare. I use this disk for correspondence, articles, or short chapters. I enter text, edit, correct spelling, and print, all without changing drives. I then copy the file onto an appropriate storage disk, erase the original, and have 80K again for my next project.

The WORD is fast. With my system, spelling is checked on shorter documents in under a minute. I clocked an 8,382 word document at one minute and nineteen seconds, a 10,535 word document in one minute and forty-nine seconds. It would take me an hour to read, much less proofread, a 10,535 word document!

The 42-page manual is clear, friendly, and to the point. It includes all you'll need to know to be working The WORD within an hour. (Maybe less for you: I'm as bad at reading as I am at spelling.)

I can heartily recommend any of the several programs contained in The WORD for the $75 price; and when they're all together, in one package, at that same price, well, it's one of the great software bargains around.

Some people can't leave well enough alone. Wayne Holder seems to be one of these people. Not content with a perfectly good spell-check program, he had to go and improve it. The result is The WORD Plus. If you were happy with The WORD, you'll be ecstatic with The WORD Plus.

The WORD Plus is **menu driven.** A menu in personal computing is the same as a menu in a restaurant: It lists all that's available. Menu driven also means the programs, or portions of the programs, will be presented in a logical order for selection. In a restaurant this logical order might be appetizer, soup, salad, main course, dessert.

In a spell-check program, the first logical question would be, "Which file would you like checked?" This is The WORD Plus's first question. One types in the name of the file and hits the return key. The WORD Plus checks the file for misspellings, tells you how many there are, and then automatically goes into the REVIEW program.

As described earlier in this chapter, the REVIEW program presents words not found in the 45,000-word dictionary one at a time for, well, review.

One can delete the word from the misspelled list, add the word to the dictionary, or mark the word in the text. With The WORD Plus, one has several other choices. One can, for example, ask for the context in which the word appeared. If the misspelled word is "ands," should it have

been "and," "ends," "sands," or one of several other possible words? Looking at the misspelled word alone, it's hard to tell. With the press of one button (the V key for "View"), The WORD Plus displays the line from the original text in which the word appears.

After discovering that the word should be "and," one pushes the C key (for "correct") and types "AND." The WORD Plus will, wonder of wonders, change "ands" to "and" in the text. No need to mark the word with an asterisk and return to the text and change it; the correction takes place automatically.

The WORD Plus incorporates the LOOKUP feature in REVIEW. Simply push L and within a few seconds (less than five on my computer), several possible correct spellings for the misspelled word are listed. With two keystrokes the correct word is noted and the acceptable-to-Mr.-Webster spelling automatically replaces the misspelled word in the text.

Two features, not directly connected to spelling correction, but helpful in the processing of words, are a part of The WORD Plus. The first is HYPHEN. As the name implies, this program will either suggest possible hyphenations for individual words, or place "soft hyphens" in all the words in a given text. Soft hyphens are hyphens that print as hyphens only when they fall at the end of a line, otherwise the words print whole without hyphenation. This is invaluable in documents with narrow margins, long words, or both.

The second, almost for fun, is called ANAGRAM. This will find anagrams for any word or collection of letters — provided, of course, that the anagrams to be found are listed in the 45,000-word dictionary. (An anagram of ANIMAL is MANILA, for example. Anagrams for SAINT include STAIN and SATIN.)

Beyond solving word-scramble puzzles and finding character names that subconsciously hint at personality traits, ANAGRAM will find words based upon *sounds*.

Let's say you were writing a story and wanted to set the mood with ooo sounds, like soothing or smooth. One would simply type in "ANAGRAM OO???" and all five-letter words with two Os would appear — a long list with BLOOM,

MOONS and ROMEO among them. How about all six letter words with three Os? Type "ANAGRAM OOO???" and one discovers such beautiful words as COCOON, ROCOCO and COMORO (a group of Islands in the Mozambique Channel).

If you wanted to find some buzz words, I mean real buzz words, words with some zip and pizzazz to them, you could type in "ANAGRAM ZZ???" and be pelted with DIZZY, FRIZZ and JAZZY. Harder sounding words? Let's try "ANAGRAM KK???." We're assaulted with KHAKI, KINKY and our old friend KODAK.

The WORD Plus sells for $150, half as much as the best-selling spell-check program, although The WORD Plus does much, much more. Those who own The WORD can upgrade to The WORD Plus for $75.

The WORD Plus approaches perfection in spell-check programs; it certainly is the state of the art. But some people can leave neither perfection nor the state of the art alone....

The Word Plus is included, free, with all KayPro computers.

Perfect Speller also comes with some KayPros, but it is not as efficient as The WORD PLUS. Perfect Speller checks for root words and then adds prefixes and suffixes to them. This means that not-real words, made up of acceptable prefixes, acceptable suffixes, and acceptable root words, could slip by. "Thoughful" for "thoughtful," "verbage" for "verbiage," or "courtious" for "courteous," would not be tagged for correction. For accuracy, stick with The WORD PLUS. Noah Webster would be pleased.

PART II

The Uses of Word Processing Computers

When an operator tells you that she uses the

Remington

she stands up a little straighter.

She knows as well as you do that her choice of the Recognized Leader among Typewriters is a fine recommendation--one which raises her in your estimation.

Remington Typewriter Company
(Incorporated)
New York and Everywhere

Chapter Five

Word Processing in The Office

What Would Happen If I Traded In My Selectric for a Computer?

Ladies and gentlemen, welcome to yet another edition of *Peter Predicts*. On this show I deal with the future for, as the Great Criswell has said, the future is where you and I are going to spend the rest of our lives.

I see the Prediction of the Day coming to me from the clouded mists of the future. Today's prediction is: By 1990, every Selectric in every office in America will be replaced by a word processing computer. I see small business machine dealers very upset, because their vast inventory of previously owned Selectrics has depreciated by two-thirds. I see IBM, happy as always, because their $1,000 Selectrics are being replaced by their $4,000 IBM Personal Computers. I see business people angry because they waited too long to "go word processing," and now the trade-in value of their Selectric has dropped to a level slightly higher than the value of a fifty-pound-all-mechanical-Burroughs-Calculating-Machine-circa-1965. I see...I see...the screen of my crystal video display screen is clouding. That's all for today.

Okay, enough of the future and *Peter Predicts*. Let's return to the present and *Peter Reports*. This chapter will answer the office manager's burning question, "What can a personal computer, with a letter-quality printer, running a word processing program, do for my office?" And, to the secretary in that office, the question answered will be, "What would happen if I traded in my Selectric for a word processing computer?" ("Selectric" in this chapter will represent any expensive electric typewriter.)

Before we begin, let me apologize for the sexist language it was necessary to use in this chapter. The perpetration of the stereotype that the boss is a man and referred to as "he" and the secretary is a woman and referred to as "she" was necessary in this chapter. There were too many sentences that read, "He or she asked his or her secretary to type his or her letter on his or her typewriter." It was awkward and unclear. "He asked her to type his letter on her typewriter" may be full of sexist assumptions, but it does communicate. Please feel free to switch around in your mind any "he" that refers to a boss or "she" that refers to a secretary.

This chapter will not deal with multi-user systems, in which one computer connects an entire office with dozens of

terminals. Although most of the features discussed in this chapter would apply to multi-user systems, the installation and use of a multi-user system is beyond the scope of this book.

Just because a company is large, however, is no reason to automatically assume that one big computer with lots of terminals is the way to go. In some situations it is, and in others, buying a word processing computer for every person currently using a Selectric might prove more cost effective. (This and the next several paragraphs are obviously directed at office managers of large corporations, and I must use terms like "cost effective" to keep their attention.) Below are a few of the reasons why individual word processing computers might be better than one large computer with many terminals.

1. It takes a long time, a lot of money, and an unbearable amount of expert consultation to decide which large computer to buy. Further, it is often difficult to justify the expense of buying a large computer for word processing alone. Higher-ups will say, "Well, we already have a computer. Let's use that one." The computer in the data-processing department may be ill-suited for word processing or may be too small to add a dozen extra terminals. And how do you prove a large word processing computer will do any good? This takes yet another study, and another study takes more time and more money. And on and on and on.

Buying a personal computer or two, and having them replace a Selectric or two, is not as difficult. Within six months you'll have information from within your own company on how they are doing. If the results are positive, then several more machines can be added. Six months later, if the results are still favorable, you can get a word processing computer for everyone. It'll take a year, but that will be less time than most corporations spend researching and buying a large computer.

2. There is a fear of computers among some office workers. In starting slowly, you can give word processors to those who are anxious to have them. They will use them well, the fearful will learn that there is nothing to fear, and within a brief period of time the formerly frightened will be

demanding computers of their own.

3. How often have you heard the phrase "Our computer is down?" Like most of us, computers do "get down" from time to time. If twenty people are dependent upon one computer for all their word processing needs, you can imagine what happens when the computer stops working. If, however, you have twenty separate computers and one breaks, it's hardly noticed. In larger corporations, having an extra word processing computer "in reserve" would be a justifiable — if not intelligent — expense.

4. Since a word processing computer is nothing more than a small computer programmed for word processing, it is easy to run other programs. One executive, for example, might need to have accurate stock market quotations. His secretary could have her computer linked to one of the information services that provide up-to-the-minute stock market information. For another executive, financial projections using an "electronic worksheet" program might prove invaluable. A third might need ongoing airline information, a fourth might use electronic mail and so on.

Rather than having a terminal attached to an inflexible large computer, you have the advantages of many small computers and the flexibility they offer.

5. If it happens all at once, the transition from individual typewriters to large computer can be a nightmare. The addition of individual word processors can take place gradually, over a period of time, and the overall workflow of the office need not be disturbed.

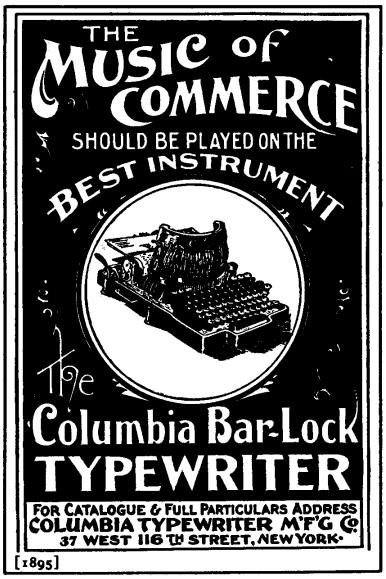
6. Twenty personal computers, complete with printers and word processing software would, at $7,000 per computer, cost $140,000. You can *easily* spend that much researching, purchasing, and programming a large, twenty-terminal computer.

There are situations in which it is far more economical to buy one large computer. I mention the advantages of individual word processing computers because, if you call in a word processing expert who has spent the last ten years installing nothing but large-scale word processing operations, it is doubtful that he or she will mention any of the above. It is in fact possible that the expert might not even *know* any of

the above. Personal computers have been around for a very few years. Many of the Big Computer Experts continue to look upon them as toys.

This chapter will also not tell you how to turn your typing pool into an electronic sweatshop. Some businesses have programmed their word processors to count the number of keystrokes per hour each keyboard operator makes. This is noted in a daily report, and each day the operator is expected to type faster and faster. I see this as tyranny of the worst sort, and a glowing example of using the remarkable powers of computers to enslave rather than to free.

What we will be looking at, then, is what would happen if that large, expensive, electric typewriter — be it the only one in an office, or one of several hundred — were replaced by a slightly larger, electric, more expensive word processing computer.



Let's look at the various tasks a typewriter is most often used for in an office, and see how a word processing computer would handle the same tasks.

Certainly one of the primary uses for a typewriter in the office is correspondence: letters, notes, memos and the like. It would seem, from superficial examination, that some kinds of correspondence would benefit from word processing and others would not. Form letters, or letters that might use boilerplate paragraphs, would obviously fall into the "it would benefit" category, whereas original correspondence, in which a letter is dictated and typed only once, would not. Let's see if the latter assumption is true.

WORD PROCESSING ON THE KAYPRO

To type an original letter on a typewriter, one puts a piece of paper in the typewriter, types, and takes the letter out of the typewriter. Simple. To type an original letter on a word processor, one must put a disk in the disk drive, create a file, type the letter (which would be displayed on the video screen), put a piece of paper in a printer, instruct the computer to print the letter, watch while the letter is printed, and remove the letter. Not as simple.

It would seem, then, that if most of the work done by a given secretary were original letters, a word processor could be a hindrance. But let's look a bit more closely at how an original letter is created.

Most original letters are dictated. The secretary types the letter from the notes she has taken, and submits the letter for a signature. If there's a single typo or misspelling (bosses seem to *enjoy* finding mistakes, don't they?), then the

entire letter must be retyped. If typos are found in the retyped letter, it must be typed again, etc., etc. If the letter is free from secretarial error, the boss, seeing his thoughts immortalized on paper for the first time, will no doubt begin making changes. Even a simple "add this" or "take that out" means only one thing to the secretary: "retype the whole thing."

The word "retype" is seldom mentioned in a word processed office, just as the phrase "crank it up" has fallen into disuse around automobile circles since the advent of the electric starter. The phrases linger for nostalgia's sake more than anything else, I think; car batteries are rated for their "cold cranking" abilities, and a boss in a word-processed office will occasionally say, "Would you retype this?" But what he means, and what the secretary hears, is, "Would you make these changes and print a new copy?"

Making changes is fast and easy. Simply call the file up on the video screen, remove what is unwanted, add what is wanted, and print the results. Fast letter-quality printers turn out freshly printed documents at the rate of a page per minute.

Even if no changes are made, the speed at which a spell-check program can ferret out spelling and typing errors make a word processor more than earn its keep.

Then we come into the areas of correspondence at which word processors truly shine: boilerplate paragraphs and form letters. Most businesses have paragraphs, even whole letters, that repeat themselves day after day after day. "Thank you for inquiring about our new Wonder Widget...." "We certainly hope you will enjoy your new Wonder Widget...." "All of us are prostrate with grief that your new Wonder Widget did not live up to your expectations...." And so on. With a word processor, these boilerplate paragraphs can be stored on a disk and added to the letter whenever necessary. Once added, they can be altered, added to, or shortened.

I have a boilerplate paragraph I use whenever I write a letter of complaint. I attempt to shame the company into not sending me a form letter response. I do this with a form paragraph. It reads:

> I am reminded of the man who wrote a letter to the Pullman Company back in the 1940s, complaining of bedbugs in his sleeping car. He received a very apologetic letter saying that this was the first they had ever heard of such a thing and that all the cars were being fumigated as a response to his letter. Along with this letter was enclosed, by mistake, the original letter of complaint the man had sent. Written by hand at the bottom of the letter was: "Send this SOB the bedbug letter." I certainly hope that I will not receive a "bedbug" letter from you.

I have this paragraph in a file named "PULLMAN," and it takes but a few seconds to add it to the text of any letter or, in this case, book. To type it would take several minutes, and to find the original to type it from would no doubt take longer.

Names and addresses are typed and retyped in the course of a business day. A name and address is first found on the Rolodex, then typed at the top of the letter. Later, the same information will be typed once again on an envelope. With a word processor, a mailing list can be kept on a disk. In less than the time it takes to find a file on a Rolodex, the computer has not only found but added to your letter the name and address in question. When it comes time to print the envelope, a command or two from the keyboard takes care of it.

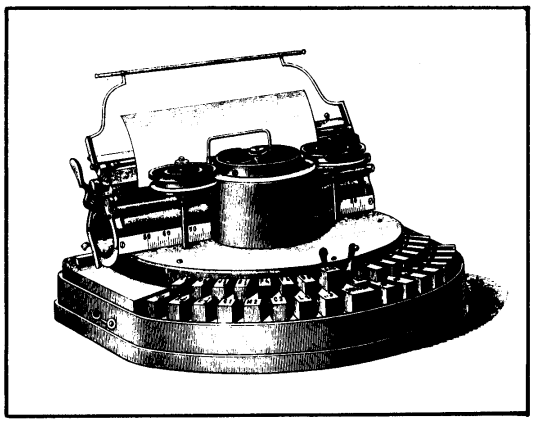
Form letters are well known to us all. The same thing needs to be said to fifty people, but each person must receive the information personally typed. A task of this kind in a Selectric office would sentence a normally cheerful, productive secretary to a day of drudgery and depression.

In a business I once ran we would hire various sales organizations to sell our wares, each organization having a dozen-or-so salespeople. Now, these were the people who would be selling our product for, in some cases, an entire state. I felt that a personalized letter welcoming them and

telling them about the company seemed in order. This began as a two-page letter, but soon grew to five. Each time I hired a new sales organization my secretary would, understandably, grow pale and bored (boredom is hostility without enthusiasm). About the time that I thought it would be a good idea to thank every buyer who ordered from us with a personalized letter, she quit. The two events were no doubt related.

On a word processor, fifty personalized, one-page letters would take less than an hour. With an automatic sheet feeder (a device that attaches to the printer and feeds individual pieces of paper into the printer one sheet at a time), the operation would require minimal supervision.

Most programs permit the automatic insertion of the name or other information within the letter, so that, "I know you'll find Minnesota Wonder Widget Country, Jim!" in one letter automatically becomes, "I know you'll find Hawaii Wonder Widget Country, Carol!" in the next. In addition, each of the fifty letters would not require individual proof reading. Only the name and address would need verification; the balance would be letter-perfect.



Most of the other office tasks requiring a typewriter are extensions of the letter, and the contributions made by a word processing computer would be very much the same.

Reports, for example, are subject to many revisions before the final draft is approved. The same report may be retyped a dozen times before it is deemed suitable for circulation. The absence of retyping that word processing brings to letters, it brings with an even greater sigh of relief to reports.

On larger documents, some of word processing's other features are useful: the freedom to move a paragraph from one part of the document to another in a matter of seconds, for example, or the ability to find all occurrences of a word or phrase and change it to a different word or phrase. Using right-justified margins adds a professional look, and if you use proportional spacing they'll think you sent it out to be typeset.

On long documents, the computer's ability to find typos and misspellings is particularly valuable. The longer the document, the harder it becomes to find mistakes. As the operating manual for The WORD points out, "Studies have shown that in documents longer than 20 pages, most people fail to find more than 50% of the misspelled words." A good spell-check program won't miss a one.

Once perfect, in what form should the report be circulated? Who gets original typed copies and who gets Xerox facsimiles? With a word processor, nearly everyone can receive a personally typed copy.

Having the report on a disk can become quite valuable. You may wish to quote from it; it could form the backbone of a great many well-written letters. With only minor changes, a report to the President can become a report to the Board of Directors and with a few more changes a newsletter for the sales force is born.

Speaking of newsletters, we might as well speak about newsletters. Newsletters are the duty of some secretaries, and word processors make organizing them relatively easy. To put together, for example, an inspirational message from "the boss," simply go through some recent correspondence (all neatly stored on disks), select a few timeless excerpts,

arrange them in a logical order and there you have it. No need to retype any of these gems. Just copy them from the files on which they are stored. You can "cut and paste" electronically, some word processing programs letting you set the type with right-and left-justified margins around spaces for photographs or drawings. Print a copy, add photos and drawings, and it's ready for the printer or the Xerox machine.

And now for the bad news (or, if you have a deep emotional attachment to your Selectric, the good news): What typewriters do better than word processors. The list is small. Come to think of it, it's not even a list; it's just one thing. What Selectrics do better than word processors: Fill in blanks. When you type on a word processor, the text is displayed on a screen first and printed on paper later, therefore it's difficult to tell precisely on which line what typing will fall. With a Selectric, you position the ball above the line in question and type away.

It is not impossible to fill out forms with most word processors. CP/M based systems (CP/M is a disk operating system we'll discuss in Chapter Twelve) have a simple command that turns the keyboard/printer into a mock-Selectric. Position the form in the printer, then use the keyboard to type the information. One must be careful, though: unlike a correcting Selectric, there is no ribbon of fly

paper to magically lift your mistakes from the paper. If you make a mistake it's back to Correctype.

It is because of forms, and one-time labels, that people keep a Selectric or small electric typewriter around the word processed office. It depends on the number and kind of forms and labels needed.

Usually standard company forms can be filled out faster on the word processor once the operator knows the spatial relationship between the form and the screen. Sometimes a special program can be run that duplicates the forms of a company, and sometimes it's simply a matter of knowing that question 23 should be answered on line 42, column 12. Line and column information is usually displayed somewhere on the video screen, and getting to a certain line and column is easy.

So much for what a Selectric can do better than a word processor.

Let's look at a few of the random benefits gained by having a word processing computer around the office.

Earlier in this chapter I mentioned the ability to run programs other than word processing programs on the computer. The only difference between a word processing computer and an accounting computer is the software.

In an office in which one person is responsible for not only correspondence and reports but also invoicing and bookkeeping, a personal computer equipped with both word processing and accounting programs could easily double the effectiveness of this person.

In slightly larger offices, where billing and such is done by one person and correspondence is handled by another (the classic "this is my bookkeeper and this is my secretary" situation), it is sometimes possible to share one computer between two people. The bookkeeper gets it in the morning, the secretary in the afternoon or something like that.

If the need is so great that two terminals would be

required, my (rather radical I do admit) suggestion: Buy two computers. Most two-terminal set-ups, in which one person is doing word processing and the other is doing data processing, require a hard disk, and that adds enough to the

price that you might as well get two computers. Accounting will probably be happier with a dot-matrix printer anyway, so that saves $1,000, bringing the difference between buying one two-terminal hard disk computer or two one-terminal floppy disk computers within a couple thousand dollars.

The installation of a two-terminal computer is more elaborate and its operation more complicated. Further, if the accounting computer is down and the checks must go out, it's comforting to know that the secretary's word processing computer can be converted to an accounting computer in a matter of seconds — assuming you bought two identical computers, which is a very good idea.

In a larger office, one that has its own "dp" (data processing) department with its own computers, the ability to run the literally thousands of programs availabe for a CP/M system can be quite valuable. To list them would (and does) fill a book. Suffice it to say that whatever your business there are no doubt programs — from figuring the amortization of a mortgage to balancing the boss's personal checkbook— that will make the secretary's work not only easier, but more effective.

Whatever the office size, being able to use the computer to connect to one of the information data banks could benefit just about any business. The Source and CompuServe are two of the largest. Your computer connects to one of these data banks using a telephone and a device called a **modem.** You dial the local access number of the data bank, activate the modem, and your personal computer becomes a terminal for a very large computer that has acess to an enormous amount of information.

You can research any subject; read the electronic edition of the *New York Times*, the *Los Angeles Times*, or the *Washington Post*; get stock market quotations; check the price of gold; send electronic mail to anyone who subscribes to the same data bank service; send Mailgrams to anyone; get medical information; or run one of the hundreds of programs always "on line" at the monster computer.

Data bank sharing offers an amazing array of services, all of which are accessible through the machine that everyone thought would only type letters.

One benefit of word processing in the office is that word processors are so quiet. The movements of fingers on a keyboard and the appearance of characters on a screen is very close to absolute silence. Some people find this quiet

annoying after many years of "click-click-click," so some terminal manufacturers have added an electronic "click." After a weaning process, most people turn this feature off. If you buy a terminal that clicks, beeps or boops, make sure the noises can be turned off.

No denying that the printer is a noisy son-of-a-gun. It's about as loud as a Selectric being used full-tilt. However, the printer is usually not used as often as a Selectric. This is because many of the corrections that would normally require retyping have been discovered and corrected on the video screen. Further, since a fast letter-quality printer prints around 450 words per minute, the work is over relatively soon.

If noise is a major problem, the printer can be covered with a Plexiglas enclosure designed especially for silencing printers.

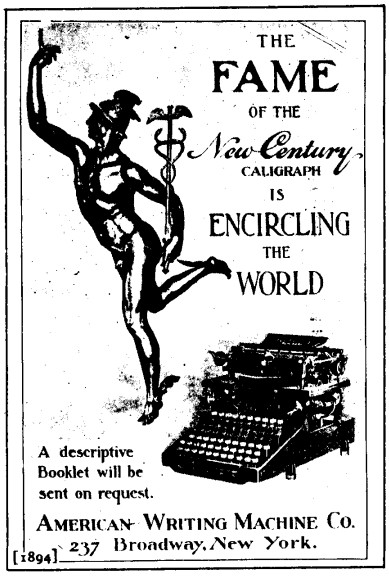
When asked by business people, "Should we buy now or should we wait? New and better computers are coming out every day." I reply, "Yes, there are, and buy it now."

Although personal computers will undoubtedly be less expensive in months and years to come, the money saved by increased efficiency and productivity will be far greater than whatever one might save by waiting.

Further, the office that buys a word processor now is clearly ahead of the game. Within a few years word processors and the work that they do will be standard. By the end of the

decade an office without a word processor will be as passe as an office today without an electric typewriter.

As an example of this, take the personal letter. Presently, an individually typed, personalized letter means something. It gets noticed. Even if 500 other people got a letter that said the same thing, someone cared enough to order it personally typed. In five years everyone will know that preparing a personally typed letter on a word processor is only slightly more difficult than making a Xerox copy (less difficult if the Xerox machine is down the hall). Personally typed letters will lose their meaning. What will be the effect of a letter your secretary spends twenty minutes typing on her Selectric in 1986? It will hardly be noticed. By 1990 personally typed letters will be *expected*. Of course, by that time business letters will be considered almost quaint. The real movers and shakers in the business world will have taken to electronic mail years before.



"Well, what do you think, Leo: Should we get a word processor?"

Chapter Six

Word Processing and the Student

Within the next few years, personal computers will become the greatest Preppy status symbol since the alligator shirt. Lacoste, in fact, is planning on marketing a personal computer available in twelve designer colors with a little alligator in the corner of the video screen.

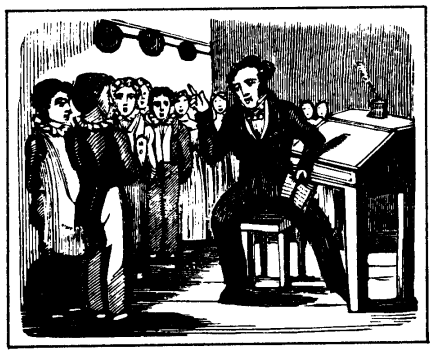
Personal computers like double-knit polo shirts are not for Preppies alone. We can all join in.

This chapter will examine what a personal computer, programmed for word processing, can do for students, be they high school, college, graduate students or "students of Life." The chapter will not deal so much with the educational possibilities of personal computers, although some of them will be mentioned later. The question answered in this chapter is, "What would happen if I sold my Smith-Corona portable typewriter to my little brother and got my parents to buy me a word processing computer?"

You may have noticed that this chapter is sandwiched neatly between a chapter on word processing in the office and word processing for the professional writer. This is no accident. As a student you are expected to record, organize and regurgitate material with the efficiency and accuracy of an executive secretary while maintaining a vast creative output and a literary style that ranges from the clarity of journalism to the imaginativeness of poetry. While this goal of student life, like absolute zero, can never quite be obtained, a word processor can offer certain tools that might prove valuable in the quest.

Reports. The bane of academic life. And a report by any other name — essay, thesis, term paper, biography, rhapsody, investigation — is still a report: take the information in, mix gently, put the information out. Original thought is generally not welcome, and creativity is limited to rearranging the professor's thoughts and comparing them favorably with the greatest minds of all time. On the whole it's dull work, but welcome to life.

WORD PROCESSING ON THE KAYPRO



There are "good study habits" that have been passed down through the eons of academia. A student with GSH on his or her way to a term paper would do something like this. (Let's see, shall I make this student a male or a female? I'll flip a coin: heads, male; tails, female. It was tails. This will be a female student with GSH.)

During class she takes copious notes. She does not go to the sock hop after class, she does not even pause for a cherry Coke. She goes directly to her room and types her notes while the lecture is still fresh in her mind. While she types, she elaborates upon the notes, remembering other information the professor gave in class and adding references to similar material from past classes. She notes the areas she does not understand and makes it a point to either ask the professor next day in class, ask one of her classmates for clarification, or research the unknown variable in the library. After researching it, of course, she will check with her mentor to make sure that Spinoza and the professor were saying the same thing. As term paper time rolls around she collates her notes, puts them in a comprehensible order, and writes her paper.

Like Sherlock Holmes, I doubt if this ideal student ever existed. I think she was created from all the "shoulds"

that educators throughout time have laid upon themselves while they were in school but never bothered to follow. Using this as our ideal, however, let's see how a word processing computer might fit into this cycle of GSH.

The student would go home after class and type her notes. These would be her version, in her style, of what the professor had said. These would be stored on disks, and a copy could be printed daily or weekly for review. If there was a question, she could ask the professor in class, ask a classmate, or research it. Or she could write the professor a letter. Selecting passages from her notes on disks from past classes, she could put together in just a few minutes a thoughtful, courteous, detailed, perfectly spelled and typed letter from a student who obviously must be very special. The answer to this letter is not nearly as important as the impression it would make. (Don't do this more than three times a semester. You don't want to cross the fine line between intellectual curiosity and stupidity.)

At term paper time her report is essentially written. All she does is pull from her disks the paragraphs she likes

best, ties them together with a transitional sentence or two and prints a letter-perfect paper. While her fellow students are struggling to find (A) a topic and (B) a typist, our student with GSH (and a word processor) is at the student union enjoying a cherry Coke and looking forward to an uncrowded sock hop.

Whatever writing you do will go more smoothly and faster on a word processor. The key to good writing is editing. Most people include too much. With a word processor you can remove the verbiage without the penalty of retyping. You can be much freer in your expression, knowing that you can tighten as much as you like later.

After a paper is written, printed, graded and returned, it is easy to pull the paper up on the screen, make the changes and corrections recommended by the teacher, print a revised copy, and resubmit it. This takes little time and, although it may not alter your grade for that paper, it will give you brownie points galore. When was the last time you heard of anyone *voluntarily* rewriting a paper?

Some people cheat, of course, and buy other people's term papers. It is, in fact, a huge business with some mail-order companies offering tens of thousands of term papers on every imaginable subject.

I have mixed feelings about the practice of buying term papers. On one hand, it is cheating, it is dishonest, and if you're not willing to do the work, why on earth are you in school anyway? On the other hand, if you're a drama major and are forced to write a paper on medieval French tapestry to fulfill some obscure university requirement, then I can see that spending several days researching such a paper would be counterproductive and may interfere with one's education, which might be better served by memorizing lines or painting scenery. Reading a pre-written essay on medieval French tapestry just before adding one's name to it might teach a drama major all he or she would ever need to know on that particular subject.

I suppose that, like so much else in life, prewritten essays can be used either for or against an individual. If they're used to create time for learning about the subject near and dear to one's heart, they may be beneficial. If they're

used to avoid learning necessary lessons of discipline and to support the illusion that an education or any other internal experience can be purchased like a new car, then prewritten papers might prove harmful.

Now, if you are in the former category and are buying essays on medieval French tapestry to create more time for your dramatic studies, or buying essays on drama to create more time for your medieval French tapestry, then the word processor can help. Let's say you buy the essay and transfer it to the computer. You can then go through and rewrite it to suit your personal style. (See the chapter **Poetry From A Computer** and the way in which *Little Miss Muffet* was "updated.") This is easy and the results far more convincing than simply adding one's name to someone else's style.

Of course, it would be easier if you didn't have to type the whole essay into the computer in the first place. Some enterprising entrepreneur will soon offer prewritten papers on disks ready to run on almost any word processor, and this person will no doubt make a fortune. Am I encouraging this? No. But if someone becomes a millionaire from reading this paragraph, I want a share.

At times in school — not often, but at times — you will be asked to create some original prose or poetry. A major mistake nonwriters (and a great many writers, myself at the head of the line) make is to think that before our sentences ever meet paper, they must be perfect. This is the cause of writer's block. It's not that the writer cannot think of anything to write, it's that he or she cannot think of anything *perfect* to write.

There is a theory that the first step in creative writing is to write down anything and everything that comes to mind. The next step is to edit, emphasizing that which is good and removing that which is not.

Once one becomes accustomed to the ease with which changes are made on word processors, it becomes easier to write more and more, take more risks, go for ideas first and perfection later. It is not a magic wand, and we do not overnight become James Joyce, or even Jack Kerouac, but, given time, a freeing of expression does take place.

WORD PROCESSING ON THE KAYPRO

Teachers for some time now have ingrained in us the concept that an inability to spell automatically equals an inability to think. The only person who couldn't spell but who *could* think, in the opinion of most English professors, was Chaucer. You can write a paper that may contain some of the best prose and finest new ideas of the Western world and, if you misspell 10% of the words, you'll be hard pressed to find an educator who will take any of it seriously. Poor spelling equals dumb.

This, of course, is not true. At least I hope it's not true. Spelling requires an ability to inhale and exhale information verbatim, rather like being able to remember that 6 times 8 equals um, uh, let's see, 5 times 8 is 40, plus 8, okay... rather like being able to remember that 6 times 8 equals 48. I'm sure we all know people who can rattle off the times tables, can spell any word and are, in fact, creative wastelands.

Although it's not true that poor spelling equals dumb, it's still a belief; and a widely held belief that is not true is known by a difficult word to spell, prejudice. So, either you wage a one-person campaign against this prejudice (and if you do, you can count on me for a small but heartfelt contribution) or you can conform. Alas, it seems that one of the most painful portions of the educational process is deciding which bits of cultural nonsense we're going to take a stand against and which we're going to conform to. If we take a stand against *all* of them we are totally ignored, or locked up, or both. It seems as though we must pick our top six or

seven dozen causes, flail against them with great vigor, and let the rest go.

If spelling is one you've decided to let go, the computer can help. As mentioned in the chapter on **The Curse of Noah Webster**, a word processor with a spell check program can locate most misspellings and can help you find the socially acceptable spellings. For the student who has spent hours over a dictionary looking up almost every word, knowing that the teacher was a Noah Webster groupie, and has *still* missed a word or two, this feature of word processing will drift into that student's life like manna from heaven.

An interesting thing has been happening since I've been using my word processor to check for spelling errors. Rather than becoming a crutch, the word processor has actually improved my spelling. This surprised me. I thought I was a hopeless case. I had tried everything — flash cards, *Reader's Digest's* "Toward a More Powerful Vocabulary," Misspellers Anonymous ("I am helpless against my inability to spell..."), everything. I had given up.

I was great at finding synonyms. Whenever the word I wanted to use was too difficult to spell I would find one that was easier. I would never, for example, tackle the word "synonyms." I would write "similar words" or "words that mean the same thing," "similar" being a tough one too. I also found that after looking up all the words I *thought* were misspelled, they were usually spelled correctly in the first place. This was very frustrating.

I found that after getting a list of misspelled words, and misspelled words only, from the computer, and then finding the correct spellings for these words, somehow the acceptable-to-Mr.-Webster version began to sink in. I would notice patterns. I would put too many "Ms" in "coming" and too few "Ns" in "beginning." I tended to drop the final "E" before adding "ly." Things like that.

Now I make a game of it. I have the computer mark all the words that are misspelled and I have one chance to see if I can come up with the correct spelling. I'm getting about 50% of them. ("Space Invaders" was never this exciting.)

The fact is that I, like most "poor spellers," *do* know how to spell most words. It's the ones we *don't* know how to spell that give us trouble, and the pattern of these words tends to be as individual as our fingerprints. Knowing which words are our individual trouble makers and then discovering the correct spelling for them is the best way I have found for spelling improvement.

A personal computer is more than a word processor, just as a cassette recorder can be used to play more than Biology lectures. Many other programs available for personal computers can be of value to students.

Personal finance, for example, can do everything from helping you create a budget to balancing your checkbook. A math program can turn your computer into an electronic slide rule and beyond. You can chart your biorhythms or cast your horoscope. The programs offered for personal computers are endless. Like phonograph records, some are of value, many are not.

Then there are the programs that will actually teach you something. Computers are the perfect teacher. They will take you as far as you want as fast as you want, while providing limitless judgment-free tutorials in subjects you may find particularly difficult. If a student were a whiz at English Lit but found math incomprehensible the computer would take him quickly on beyond Beowulf while patiently letting him know that 2 + 2 does not equal 5.

There are programs that will teach you a skill necessary to operate a word processor: typing. If you don't know how to type now, don't worry. It's not hard to learn and you'll be glad that you did.

As described in the last chapter a personal computer can be connected via telephone to very large computers with massive data banks. These not only provide access to what is going on in the world (UPI newswire, the electronic editions of various newspapers, etc.) but also permit detailed research into what has already taken place. If you were researching our old friend, medieval French tapestry, you could enter the word "TAPESTRY" in the computer and receive a great deal of information on tapestry. Any time the word was used in the *New York Times*, for example, the article using that word would be instantly available. If the information was useful you could store it on disks for later reference; if not, you go on to the next article.

While we're discussing "other uses" for a computer, may I suggest that you *not* buy a computer that plays the flashy, full-color, complete with sound effects games? These

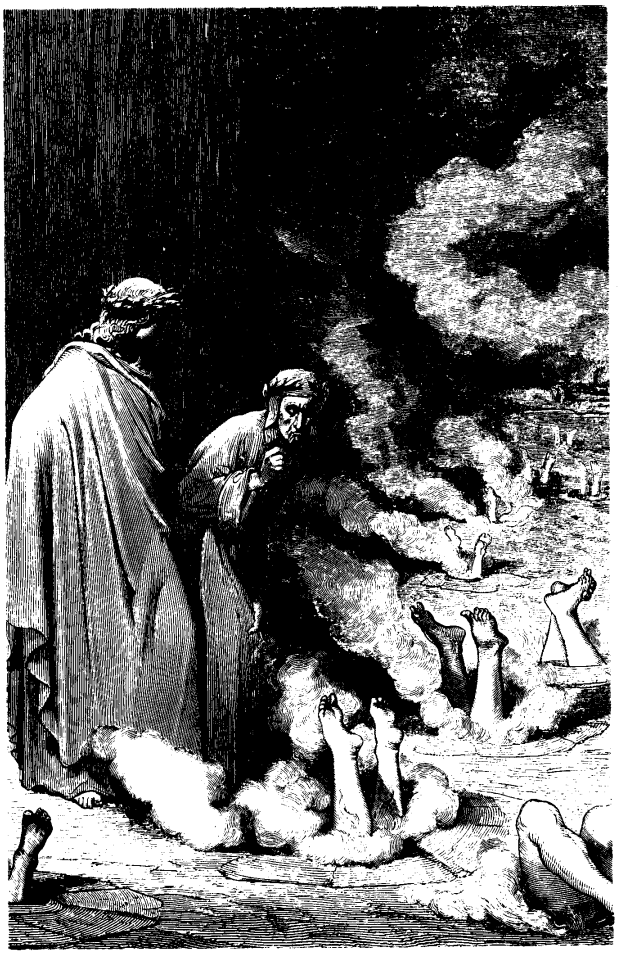
are addictive, it seems, and your room will become an arcade and not a temple of Higher Learning. Enough said. A word to the wise is sufficient. Missile Command and Snafu are my favorites.

Beyond all this, a personal computer will give a student a skill that is valuable today, invaluable in five years and necessary in ten: computer literacy. Computer literacy is simply knowing how to use a computer, how to access it, how to add information to it and take information from it. Most importantly, computer literacy is being comfortable with computers, treating them as tools and not gods; with respect for, and not in fear of, their power. The best way to learn is by doing, and the best way to do is by owning a computer of one's own. It's the greatest investment parents can make in their child's future.

STUDENTS: Remove this page and send the rest of this chapter to your parents, along with your report card and a list of upcoming holidays, including your birthday. You can take out the part about cheating on term papers, but they'll like the idea of not playing games.

It might help if you misspell a few words in the note and make the handwriting occasionally illegible.

Good luck!



PART III

Purchasing a KayPro and KayPro Peripherals

Chapter Seven

Word Processing for Writers

The past thirty years have not been kind to those of us homesteading on the printed page. Flashy technological innovations — from television to long-playing-stereophonic-high fidelity-phonograph-records to transistor radios to six-track-Dolby-stereo-seventy-millimeter-Technicolor-Panavision-SensurroundSound-Plus-motion pictures — have led people farther and farther from the written word.

One hundred years ago the Home Entertainment Center consisted of a bookcase. For a handful of highly sophisticated individuals Home Entertainment meant listening to the gramophone by gaslight; but for most, reading a book by candlelight was the way to spend an evening. The major outside-the-home entertainments of the early 1880s were concerts, musicales, plays and expositions. Parties were popular, from the rural quilting bees and barn raisings to the urban balls and socials. People also seemed to *enjoy* each other, and published recollections of the day refer to something known as **conversation** as being "stimulating" and "amusing."

These few distractions aside, it was a great time for the written word.

Fifty years ago, an occasional player piano or phonograph was beginning to take some readers from reading, but the real competition books faced was from radio which was about to enter its Golden Age. Away from home in the early 1930s, the talkies learned how to sing and Busby Berkeley taught them how to dance. Tickets were cheap and vaudeville was dying, so "a night out" almost always included a movie and maybe a little dancing. References to that form of entertainment known as "conversation" were growing fewer and farther between.

Reading was still popular, however. Thanks to mass education the literacy rate had risen; thanks to mass production the retail cost of a book had dropped (hardcover bestsellers could be had for about "a dollar the copy"); and thanks to mass greed the number of publishers publishing had increased dramatically. Some say this was the Golden Age of the American Novel.

Today the Home Entertainment center features a six-foot color television which can show video tapes, video disks,

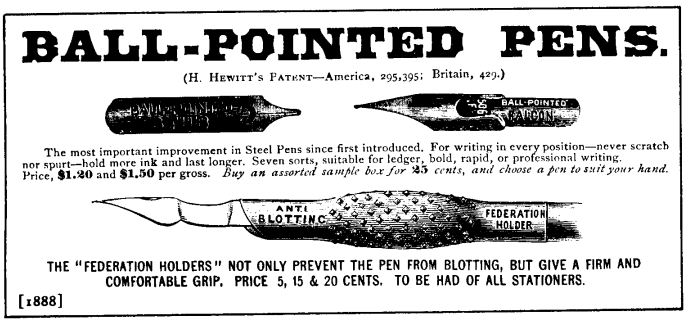
twenty-six channels of cable, seventy-nine channels of satellite programming, and more than one hundred video games; a stereo that plays digitally-recorded-half-speed-mastered records, Dolby encoded metal cassette tapes, and two-dozen stations of FM Multiplex radio; all this connected to a remote master control unit that allows you to manipulate everything from the comfort of your redwood hot tub.

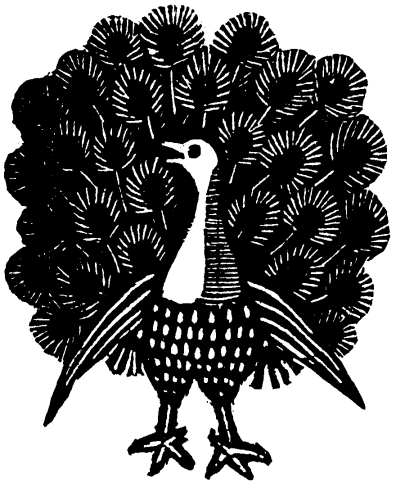
Clearly, there is no reason to leave the house, much less read anything more significant than the operator's manual for the latest technological goodie. If one ever does leave the house to purchase a new video tape or buy chlorine for the hot tub, one need not leave this Audio-Visual Disneyland behind. Car stereos, portable television/radios and light-weight-full-fidelity-tape-players-with-earphones make reading even a *National Enquirer* while waiting in line at the supermarket unnecessary.

Yes, technology has robbed us of a generation of readers. Not only are there far more dazzling alternatives to cracking a book but, thanks to these modern marvels, the literacy rate in this country is on the decline.

What has technology given writers in return? Well, let's see. In 1780 steel point pens were invented, light years ahead of the quill, which had plagued writers and various feathered birds since 600 B.C. In 1884 came the fountain pen: no more dipping. Ball points rolled along (sorry) around 1944. Remember the PaperMate PiggyBack pen that Art Linkletter claimed "writes through butter?" A great boon to writers moonlighting as short order cooks. Today we have such marvels as the felt tip pen (even with nylon points they're still called "felt tip pens") and the Erasable Ballpoint.

Typewriters were introduced a bit before fountain pens in 1874. They were produced by a manufacturer of fire arms, E. Remington and Sons. (The Remington Typewriter and the Remington Rifle both share the same birthplace, one of those quirks of history, like Pulitzer, who made his fortune from yellow journalism, presenting certificates for excellence in writing; or Nobel, the inventor of dynamite, awarding Peace Prizes.) Electric typewriters came along in 1920, the IBM Ball made its debut in 1961, and the correcting Selectric in the mid-1970s.





"Rejoice! Rejoice!
The steel tip pen
has been invented!"

Looking back on this 2,500 year history of writing technology one would have to answer our original question, "What has technology given writers in return?" with a conditional "Not much." Not much, that is, until today.

Word processing computers are sufficiently wonderful to forgive Science for its two-and-a-half millennia of foot dragging. Granted, word processors were not invented for creative writers. They were invented, like the steel point and the fountain pen and the typewriter and all the rest, for businesses. So even if Science did not set out intentionally to rectify centuries of injustice to writers, the end result is so glorious that we can grant them a general amnesty just the same.

It all started with journalists. Journalists used to be called "newspapermen," then women's lib came along and changed it to "newspaperpersons." This sounded silly, so the Federated Newswriter's Union (FNU) hired Image Consultants Inc., a public relations firm, to come up with a new handle for those working in the newspaper industry. Image Consultants (IC) gained notoriety when they changed the term "janitor" to "Sanitation Engineer."

IC, after months of deliberation and research, settled upon the term "Journalist." It was dignified, historical, non-sexist, and more than 70% of the newspaperpersons polled knew how to spell it. It was a natural. The FNU approved, changed their name to the FJU, and embarked on a multi-hundred-dollar campaign to etch the word "journalist" upon the soul of every literate human. IC has since been hired by the graduate students of Montana State University where they are working on an alternative name for the major "Meat Science."

Journalists work for big newspapers that have big computers to do payroll and accounts receivable and financial stuff like that. About fifteen years ago someone said, "If this computer can help the accounting department write checks, maybe it can help the reporters write stories." It could and it did.

Computer terminals replaced typewriters in newsrooms across the land. Clark Kent transformed into, not Superman, but Captain Video. Journalists kept quiet about it, though. The idea that the paper was being written by a computer would not have gone over very well fifteen years ago, and the male of the journalist species preferred to maintain his former image: cigar in mouth, Scotch in hand, pounding out a story on his trusty Remington Upright.

As some journalists moved on to the greener pastures of academic professorship, they discovered that they missed the ease and convenience of computer writing. They also discovered that Big Universities, like Big Newspapers, had Big Computers. Soon dissertations, theses, letters to mothers, and occasional term papers were rolling off University computers.

As the Seventies came limping in, the disagreement in Vietnam winding down, Richard Milhous Nixon as our President, the sum total of computer-assisted creative writing in this country were stories about lost dogs and lost innocence on one hand, and, on the other, scholarly tomes on the effect of Sixteenth Century chivalry upon the mercantile industry of the late 1700s. Plus a few letters to mothers. And so it remained for the next several years.

Then, something happened in the mid-1970s to change all that: the personal computer. No doubt science fiction writers had them first; it's their job to be on the cutting edge of such things. Then graduates of universities who missed the computer more than spring break. Then former-journalists-turned-novelists who wanted to look again at a TV screen with words on it. Then the friends of these pioneers, then the Sons of the Pioneers, then Roy Rogers, Dale Evans and, well, just about every writer or would-be writer around. It was an epidemic, far more contagious and far more real than the Swine Flu.

If you're a writer and you've read this far, I'm sure you're well aware of the ways in which word processors can enhance and assist the writing process. To review a few of them:

1. Change is effortless. Adding to, taking from, and moving around of text is simple. The changes are displayed at once, neatly "typed" on the video screen, with no cross-outs, " ^ " marks or scribbles in the margin.

2. Retyping is unnecessary. Even after a manuscript is printed and an error or area of improvement is discovered, all one needs to do is bring up the original on the video screen, make the change, and print a new page. Simple changes take but a few minutes, and most of that time is spent waiting for the printer. Only the changes need be typed. No more agonizing over whether the replacement of one word is worth retyping a whole page. Manuscripts are neat and free from penciled-in changes.

3. Spelling is perfect. Spelling and typing errors are detected by the computer. My mother feels that she must clean house before she can call a cleaning lady. Many writers feel that way about proofreaders: They're there to verify the perfection of the piece, not to correct it. Spell-check programs

will let you know that every word in your text is a genuine, properly spelled word. Whether those words are used correctly or creatively is another story. There is, however, a program that will help with grammar and punctuation. (See *Chapter Thirteen*.)

4. Word processors are quiet. I remember advertisements for Exercycle from the 1960s. There was a photograph of a man exercycling away next to a bed, and on the bed was a woman smilingly asleep. (Back in the 1960s one automatically assumed this was his wife.) Under the photograph was written: "Exercycle: So Quiet He Can Exercise While She Sleeps."

I think the same approach can be used to sell word processors. At the word processor sits a Barbara Cartland type, smilingly writing away, and in bed lies a 19-year-old hunk, smilingly asleep. The caption would read, "Word Processors: So Quiet She Can Write While He Sleeps."

I think, too, it would be interesting to record a version of LeRoy Anderson's "The Typewriter Song" entitled "The Word Processor Song." The portions of the song devoted to typewriter clicking would be silent.

Until it comes time to print something, word processors are blessedly quiet. If neighbors, roommates, lovers, or spouses have narrowed your hours of typewriter writing, word processing will provide you with a lengthened creative day. In a pinch you can even write in the dark. Just to see if that last sentence were true, I turned off the lights and am writing this in total darkness, the keyboard being illuminated only by the light of the video screen. If you can watch TV with earphones and not disturb the slumber of another, then you could write with a word processor as well.

5. You are not chained to a typewriter table. The detachable keyboard, available on many personal computers, is wonderful. As I write this the keyboard is on my lap. With an extension, I could lie down and write, take the keyboard out on the patio (if I had a patio), or even use it in the bathroom. The long hours of sitting in the one position necessary to operate a stationary typewriter with the cramps and tensions caused by that position are no more.

6. No more carriage returns. Most word processing programs automatically place the next word on the next line when the right hand margin is reached. In this way the words can flow, and you need only hit the carriage-return button when you want to start a new paragraph. No more little bells telling you that in eight more keystrokes your typewriter will stop dead.

7. Correspondence is easy. How often have you wanted to write essentially the same thing to five friends? In circulating this information you might get off a letter or two before boredom ("I have to type that *again*") or guilt ("I should be writing my book and not these letters") encourage you to abandon the project. With a word processor all you have to write is one letter and print out five copies, changing only the recipient's name each time. *I* know this is a form letter, and *you* know this is a form letter, but *they* won't know it's a form letter, unless, of course, they too have a word processor, in which case they are probably sending you form letters already.

There are other form letters you may want to send out. In selling your works, it will no doubt be necessary to circulate a series of letters each saying the same thing, to a variety of people: editors, publishers, agents, mothers. These must be individually typed and personalized to the recipient; a Xerox copy simply wouldn't do. In the same way that personalized form letters can help a businessman make a sale, personalized form letters can help you make a sale, too.

Some writers maintain their correspondence but feel that they should be keeping a journal as well; others keep a journal but fall behind in their correspondence. With a word processor you can do both. If you enjoy correspondence, you can write about your life in letters to your friends, then choose the best paragraphs and copy them into your electronic journal. If journal-keeping is your preference, write your journal on the word processor, then send excerpts in the form of letters to your friends. In this way, both literary traditions are maintained.

8. Research is easier. Using the data banks, discussed in the previous two chapters, researching a project that might have required many trips to the library and much correspon-

dence can often take place in the comfort of your own computer terminal.

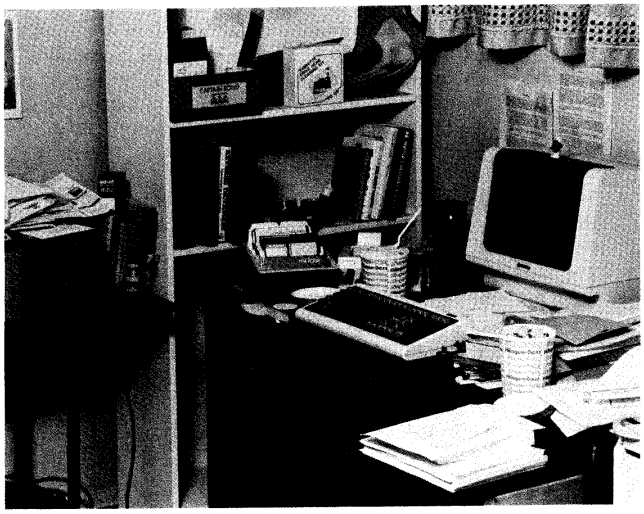
9. Other programs are available. Writers seldom have one-track minds; their interests are broad, passionate, and varied. The many programs that can be run on personal computers when they're not being used for word processing might prove invaluable in satisfying a writer's greatest passion: curiosity. (All right, a writer's second greatest passion.)

10. They're fun. Computers are great, expensive, fascinating toys. As a writer you can justify the purchase of such a toy to just about anyone, including the taxman. (In most cases. See your accountant or the Tax People at H & R Block for full details. Located at larger Sears, J.C. Penney and Montgomery Wards stores coast to coast. Offer void where prohibited by law. Subject to cancellation without notice.)

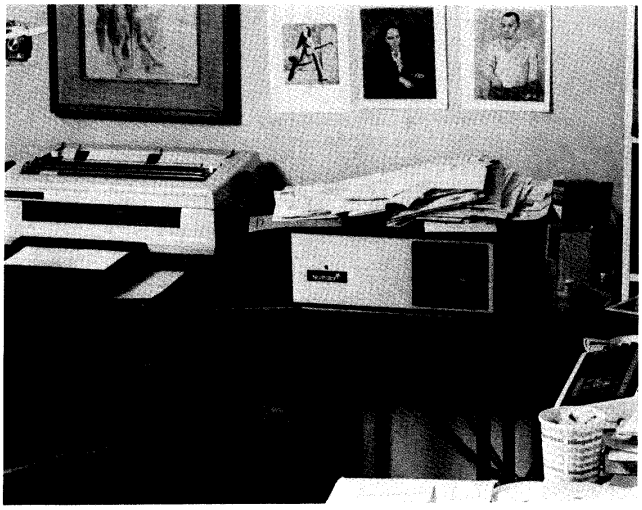
If you're a writer, and if you're anything like me, you turned to this chapter first. I encourage you to read that which came before it, and that which follows, to get a true picture of how word processors might serve you in the creation of your work.

I have made my living as a writer for fifteen years, and nothing — not a correcting Selectric, not a personal secretary, not even a #1 *New York Times* best seller — has thrilled or inspired me to write more than my word processor. All these years, writing has been a chore, a job, work. It's still a job, it's still work but, thanks to the word processor, every so often, more and more often, writing is a joy.

(Any advertising agency that would like to use that last paragraph as copy for the "Word Processors: So Quiet She Can Write While He Sleeps" ad, please be in touch. I work cheap and am not afraid of selling out if the price is right, which it almost always is.)



Here we have a typical writer's workspace using a word processor. Can you find: (A) The keyboard, (B) The Video Screen, (C) Quart of Haagen-Dazs Ice Cream (Maple Walnut), (D) The computer (look for the black square indicating the disk drives), (E) Quart of Haagen-Dazs Ice Cream (Vanilla Chocolate Chip), (F) File to hold floppy disks, (G) Four months of neglected correspondence.



And here is another view of that same creative corner. Can you find: (A) The keyboard, (B) Portrait of Gertrude Stein by Picasso, (C) Computer, (D) Portrait of Picasso by Picasso, (E) Printer, (F) Plastic knife holding light switch in place, (G) Comfortable chair.

"FINE LARGE CUCUMBERS!"

Chapter Eight

Word Processing and the Self-Employed

A great many people work for themselves. They are the self-employed. They own and operate their own small businesses, everything from dry cleaners to farms to mail order companies. They are The Professionals: doctors, lawyers and psychologists. They are the ones who put the words "free lance" in front of whatever it is they do. They are sales people working on commissions. They are the creative people, from artists to dancers to inventors.

As diverse as their occupations might be, the self-employed all have one thing in common: The money they make is linked to their own initiative and is directly affected by what they do, how often they do it, and how effectively they get it done. For a great many of the self-employed, "getting it done" can significantly be aided and abetted by a word processing computer.

Let's look at a variety of occupations, from psychologist to plumber to bookstore owner, and see how a word processing computer might prove useful. If you are among the ranks of the self employed, we probably won't touch directly upon your particular business. You may find, however, that some of the ideas presented in this chapter will adapt to your working situation.

"KNIVES TO GRIND!"

A physician, psychologist, psychiatrist, chiropractor, counselor or health professional of any kind could use a word processor to keep in closer contact with his or her clients. With medical financial software, the computer could also handle billing, insurance forms and a variety of client records. Let's see how one psychologist, Amble, does it.

Amble is a caring man. He has deep concern for each of his clients. He is also a voracious reader and every so often comes across an idea or a quotation or a thought that he would like to share with his friends and clients alike.

Amble has more than a hundred clients and a like number of friends. He's not about to begin a newsletter, and the concept of a mimeographed intimate letter is out of the question. For a solution, he turns to his trusty word processor.

Using a prepared mailing list, Amble can turn out 200 personalized letters, with envelopes, in an afternoon. He signs each letter personally and can, if he likes, add a hand written postscript.

To the recipient, the letter looks hand typed, and indeed it is: Amble personally typed the letter into the computer; fed the sheets into the printer; stuffed, licked and stamped the envelopes himself. He feels more a part of each letter than if he had paid a secretary to type each letter individually.

Some may find it cold and uncaring to do a computer mailing to friends and clients. This concept no doubt comes from the hundreds of "personalized" computer letters we've received from cold and uncaring companies who wanted only one thing from us: our money.

In fact, Amble genuinely wants to share the information in the letter with each person on his list. If he had the time (and ability) he would type or write each letter by hand. But, like most of us, he does not have the time, and his word processor is the tool he uses to turn a loving thought into a loving deed.

Like every other health professional he's ever met, Amble has a book or two in him. Rather than tackle a project as large as a book head on, Amble finds it easier to take it one chapter at a time. These chapters are written as articles for local newspapers and national magazines. This allows him to receive what he would term "positive strokes," for, although

he would hesitate to admit it, Amble likes to see his name in print. He also likes seeing his name printed on checks. He enjoys reading the letters generated by his articles, and answers them, naturally, on his word processor.

Soon, with a dozen articles behind him, he begins the task of compiling a book, an editorial feat made infinitely easier by his word processing computer.

Amble also uses the word processor to remind him of client birthdays and other events he wishes to celebrate. At least one birthday cake per week is consumed in Amble's office. Amble is particularly fond of birthday cake.

The computer is used for client billing, for insurance forms and for managing Amble's personal finances, an area of his life for which he has a disregard bordering on contempt. With his accountant, a tax whiz, he chose a computer program that would record all the information necessary for the accountant to prepare the necessary returns. Amble dutifully enters this information into the computer. It is a test of discipline. He looks upon it as a Zen exercise. He finds that his computer is a far more agreeable partner in the task of fiscal management than were the books with rows of numbers provided him by his accountant in the past.

Amble has given his personal computer a name, refers to it as his "friend and colleague," and every so often considers making it a full partner in his practice.

"FINE ORANGES!"

"MILK BELOW, MAIDS!"

Let's take a look at another self-employed individual, Joe Ann the plumber. Joe Ann purchased her word processor to write a book about her adventures as the first woman plumber of Santa Monica, California. The style of the book, she decided, would be somewhere between Cervantes and Erma Bombeck. Joe Ann soon discovered, much to her dismay, that she could not write. She knew that plumbing required skill, training, and no small degree of inborn talent, but it never occurred to her that writing might require the same qualities.

After several weeks of struggle she put the word processor unceremoniously in the back of her truck and took it to the office. She planned to leave it in a deserted corner and write it off as a tax loss later that year.

Her secretary, Michael, adopted the machine at once. Michael was in charge of bookkeeping and correspondence. "He's the one who types; I take care of the pipes," Joe Ann would explain.

Michael immediately transferred to the computer the form letters he typed several times each day: estimate letters,

follow-up letters, contractual letters, thank you letters, request for payment letters. These routine letters which usually consumed several hours each day, were soon taken care of in less than an hour.

New form letters were created. How was the work we did six months ago and is there anything we can help you with today? How was the work we did a year ago and is there anything we can help you with today?

They began sending out personalized letters on specific subjects to everyone on their mailing list. Do you have a drain that Drano won't help? It's Check Your Water Heater Month! How's your septic tank?

Joe Ann and Michael, buoyed by the success of these mailings, began buying mailing lists of local home owners and sending them personalized letters introducing them to Joe Ann, Santa Monica's First Woman Plumber. The response was heartening.

Meanwhile, Michael was investigating bookkeeping programs and finally purchased one. Slowly he went from paper to electronic billing. As Michael wisely noted, learning how to generate form letters on the computer took a few days; learning how to keep books on the computer would take awhile longer.

Within a year's time business increased to the point where Joe Ann could hire two "fellow" woman plumbers. She didn't discriminate — they were simply the best-qualified persons for the job. And, although his output has increased, Michael is able to still take care of the typing while Joe Ann and Company take care of the piping.

Michael, in fact, finds that he has enough free time to work on a book. Using the word processor, he's writing about his adventures working for Santa Monica's First Computerized Woman Plumber.

WORD PROCESSING ON THE KAYPRO

In the small town of Prospect, Ohio, Mrs. Wicks owns and operates Wicks Book Store. Although her inventory is one-fourth that of the Big City bookstore just down the street, Mrs. Wicks sells more books than they do. This is because Mrs. Wicks cares about every book and every person that goes through her store.

Mrs. Wicks, a retired school teacher, loves books. She loves people, too, especially people who love books. Her gift is remembering what subjects her customers like and notifying them of new titles as they become available.

As more and more people let Mrs. Wicks know their areas of interest, she began cross-referencing these in a card file. Eventually she got a computer. "It was either hire someone or buy a computer." Mrs. Wicks explains. "I decided I'd get on better with a computer."

Mrs. Wicks carefully reads all publishers' catalogs and book announcements in *Publisher's Weekly* and the *Ingram Trade Advance*. Popular books she orders, and when they arrive she sends out personalized letters announcing their arrival to interested readers:

> **Borta O'Hara's latest novel, "Love's Mad, Tender, Passionate Embrace of Torrid Desire" is now in stock. This is Ms. O'Hara's first book since "Passion's Potent Potion," which came out last week, and is said to be her best novel since last month's "Rapture Erupts." Due in next Friday: "Uncle Tom's Passion."**

For books with limited appeal, Mrs. Wicks sends a letter informing the customers that the book is in print and can be special ordered:

> **The latest book on health food, "Don't Eat Yogurt---They Put Bacteria in It!" is now in print and I can order it for you. Chapters include "MSG and the CIA," "Go Yeast Young Man" and "How to Make Solar Granola."**

Mrs. Wicks has her word processor print out reply cards, which are included with each letter. These have the titles of the books suggested, the customer's name and address, and possible methods of payment.

The customer, after reading the letter, need only check the appropriate boxes and place the return reply card in the return reply envelope, thoughtfully — and cleverly — enclosed by Mrs. Wicks.

This is the return mail card of Mr. John Doe, a man who, according to Mrs. Wicks's computer, likes books on cooking, Watergate, sex education, and making money:

Dear Mrs. Wicks, Please send me:
_____ copies "Joy of Cooking Sex" ($9.95)
_____ copies "I Know How to Be Really Rich and You Don't" ($25.00)
_____ copies "The Last Whole Nixon Catalog" ($1.75)

_____ Please bill to my account.
_____ Check enclosed
Charge to my
_____ Visa _____ MasterCard
Number: _____
Expiration Date: _____
_____ Mail books to me.
_____ Hold books at the store.
_____ Call me when they arrive.
Thank you very much.
John Doe
123 Main Street
Anytown, Ohio
12345

Although her inventory is several hundred thousand dollars less than the Big City bookstore down the street, is it any wonder that Mrs. Wicks and her $6,000 word processing computer sometimes get the feeling that they are the only bookstore in town?

"FRESH OYSTERS! PENNY A LOT!"

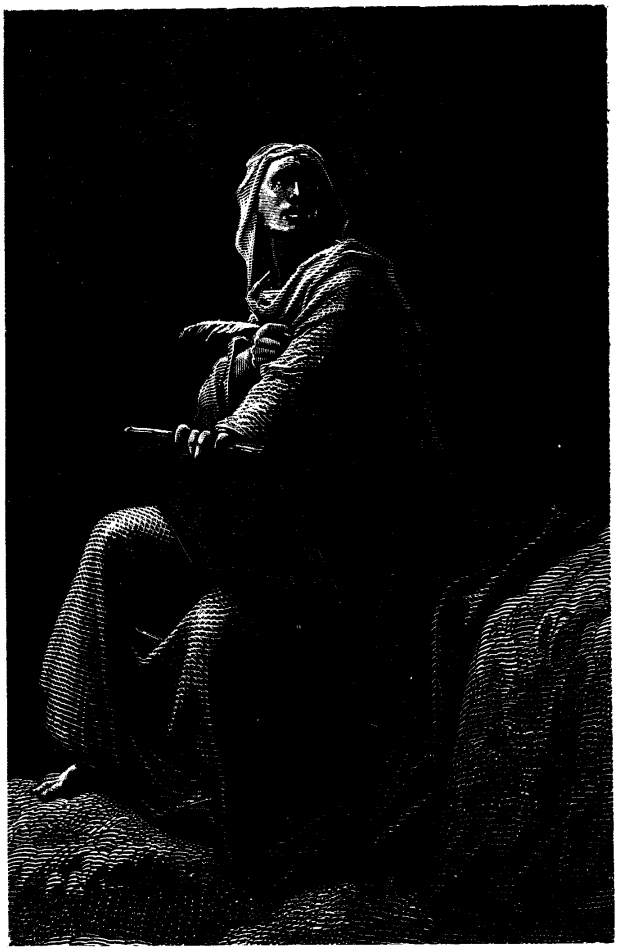
I could sit here imagining word processing applications for imaginary businesses all night — come to think of it, I already have. If you are self-employed, I invite you to join in this brainstorming with me: If you had a machine that did all the things described in this book sitting in front of you right now, how might it benefit your business? How might it help you serve those for whom you do your work? How might it make you, or someone who works for you, more productive? How might it help you generate more business? How might it help you organize the business you already have?

Word Processing and the Self-Employed

Word processing computers are not magic wands. They will not, in and of themselves, save a dying company. They will not turn a poor business person into an entrepreneur.

A word processor is a powerful tool that, when used with intelligence and creativity, will lead the self-employed individual several steps closer to the goals of success, abundance, and personal freedom.

"PINS, NEW PINS!"



Chapter Nine

Poetry from a Computer?

Being a Chapter on the Only Taboo in America That Has Not Been the Subject of a Movie of the Week

We all know about poets and we all know about computers. Poets and computers populate distant extremes on the Continuum of Existence. Poets are ephemeral, fey, ultrasensitive unicorns living on air and inspiration, usually consumed by consumption before the age of thirty. Computers are hard, exacting, unforgiving amalgamations of steel and silicon, designed by scientists to serve Big Business and Big Government in exacting from us what little money and freedom we may have left.

Yes, we all know about poets and we all know about computers. The idea of a poet using a computer to create poetry is about as foreign to most people as the Taj Mahal. Yet it's happening every day, at great Universities, in Computer-Land stores and in stereotypical poet's hovels all over the country: Poets are Poeting and they're doing it on computers.

WORD PROCESSING ON THE KAYPRO

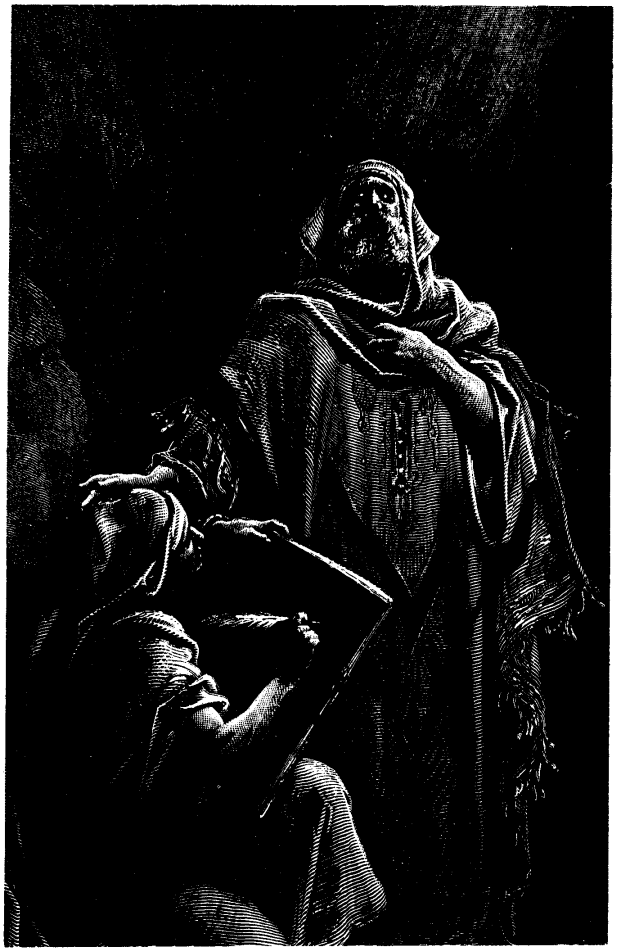
I have actually written poetry on a computer. There, I said it and I'm glad. I didn't set out to write a self-confessional chapter. I thought I could objectively review this controversial subject from a detached point of view, but in the end I could not stoop to journalism. I had to tell you the truth about myself, and I'm willing to take the consequences.

I know, of course, that this means no Pulitzer Prize, at least during my lifetime. (It wasn't until 1953 that the Pulitzer Committee would even consider poetry written on a *typewriter.*) I know that the sale of my next book of verse will be limited to a few computer enthusiasts who also happen to like poetry (twelve, in all). I know that the poetry journals will invent cruel jibes and hurl them at me. They'll call me The Poet Laureate of Radio Shack, and snigger behind their quills.

But I'm strong. I can take it. I don't want to take it, but I can take it. And, quite frankly, I'd rather take it than return to the land of pen and ink, of constant retyping, of watching cherished, beloved poems go in one end of a Xerox machine and not come out the other. "Must like poetry," the machine operator would chuckle. No, I'll take it, and I'll be vindicated by the future, just as I am already vindicated by history.

The first poet to use a word processor was Milton. He was blinded in 1652 and used his daughter as an instrument to write some of his finest works, including *Paradise Lost.* The actual processing of the words went on in Milton's mind. His daughter was there to record his thoughts; to read them back; to make whatever changes, deletions, or additions Milton deemed appropriate; and to recopy the final poem letter perfect for later publication — all the things modern-day computerized word processors do so well.

No doubt Milton was not the first to write poetry using the word processing capabilities of another. I'm sure that



leisurely poets from antiquity on have dictated their opuses to waiting scribes with better handwriting than they. Poets don't tend to admit this, however. The idea of struggling alone and forlorn for the ever-evasive couplet is an image that poets like to maintain. Writers other than poets don't seem to have qualms concerning a little outside help. Socrates had a word processor. His name was Plato. Milton could not avoid giving credit where credit was due. He was, after all, blind, and the Braille typewriter was more than two hundred years in the future.

The first person to ever write a poem on a word processing computer is difficult to pinpoint. No doubt some scientist, back in the days when computers were larger than Orson Welles, wrote a line or two immortalizing the sweetness of his loved one. The computer, dutiful servant that it was, printed the whole thing on a Valentine's Day Card without so much as a giggle.

By the time the computer-cum-word-processor got into the newsroom, closet Superpoets posing as mild-mannered reporters wrote verse after verse on screens of video. Late at night, of course. Long after the mere mortals were at home and in bed. Naturally, there were poets aplenty when computers-turned-word-processors eased onto the campus. Universities are, after all, the first and the last refuge of poets; Universities and Salvation Army Missions. Professorial types, pretending to be working on yet another dissertation, were in actuality dashing off a few more stanzas of their epic *An Ode on "An Ode on a Grecian Urn."*

But all that's history. There is more poetry today being written on computers than graffiti on subways. (I once saw a

young man colorfully expressing his considered opinion of a local law enforcement agency on a formerly blank wall. Ever curious of my fellow writers and their possible use of word processing in any form, I asked him if he had ever tried writing graffiti on a computer. "Yeah," he said. "I was working for this company in the mail room and one night I was there late and I went into the computer room and tried writing some graffiti on one of the computers." How wonderful! I could see the title of my new book before me: **Graffiti in the Computer Age!** I could see the fan mail pouring in. I could see my royalty checks. "How did it turn out?" I asked, my eyes wide with interest. "Not too good," he said. "My spray can ran out of paint before I could finish.")

Why are poets turning to computers in record number?

Personal computers, outfitted with a quality word processing program, allow a writer maximum freedom to rearrange, take from, add to, alter, correct — in a word, change — the material being written. Of all writers, poets do more rearranging, taking from, adding to, altering, correcting — in a word, changing — than anyone else. Hence, the benefits of word processing accrue quickly for poets.

To demonstrate, let's take the work of that beloved poet, Isadora Goose, known affectionately to all as "Mother." Let us suppose that the well-known journal of poetics *Humpty Dumpty* asked me to update a few of Mrs. Goose's better-known poems. I would do it very much as Isadora herself might, if she were alive today with a word processor at her peck and call. Let's take the classic, *Little Miss Muffet.*

Little Miss Muffet
Sat on her tuffet
Eating her curds and whey.
Along came a spider
And sat down beside her
And frightened Miss Muffet away.

Now I know that I would have to keep the basic structure of the piece, maintaining the natural rhythm and as many rhymes as possible. My job is to update, not to rewrite.

The first word that stands out is "tuffet." A tuffet is either a mound of grass or a stool. Mother's meaning is not certain here. She states that Miss Muffet *owned* the tuffet when she said "Sat on *her* tuffet." However, the word "Little" seems to imply that Miss Muffet might be too young to be a landowner, hence "tuffet" may refer to stool or seat. Nonetheless, spiders are more commonly found out-of-doors on grassy tuffets. It is a puzzlement and great books have been written on this very subject by men and women far more learned than I.

The point is that you don't hear the word "tuffet" used very much in either context anymore. Real estate salespersons do not extol the wonders of a garden "with flower-beds, beautiful shrubbery, and several very nice tuffets." And advertisements do not appear saying, "Dining Room Set, complete with breakfront, buffet, table, and six tuffets." No, "tuffet" will have to go.

But what to replace it with? I like the idea that Ma Goose meant tuffet to mean stool. Too many poems have been written outside, going on and on about the beauty of the out-of-doors. We need more poems about the beauty of the in-of-doors. The nearest two-syllable word that means stool, remembering that we must keep the Goose's meter, is "barstool." Everyone knows what a barstool is, even the readers of *Humpty Dumpty*.

WORD PROCESSING ON THE KAYPRO

With the press of a few buttons on my word processor, I find the first two lines have become...

Little Miss Muffet
Sat on her barstool...

The "Muffet" part must go. It no longer rhymes. The "Miss" will, of course, become "Ms." In that light, "Little" seems a bit condescending, too. This whole first line is in need of an overhaul.

What's a contemporary rhyme for "barstool?" Why, of course, "carpool." Wonderful. Teach the kids the importance of conservation right from grade one. "Miss Muffet" is now "Ms. Carpool." We've lost an alliteration, though: the two "M's" in "Miss Muffet." And what about "Little?" What adjective describes this truly contemporary Ms. Carpool and begins with an "M?" Why, of course, "Modern."

Modern Ms. Carpool
Sat on her barstool
Eating her curds and whey.

"Curds and whey" is the solid and liquid parts of whole milk when it curdles. It was very popular back when people sat around on tuffets. It has since lost its popularity. It is doubtful that our Modern Ms. Carpool would be sitting at a bar eating curdled milk. A banana daiquiri, maybe; curdled milk, no. We are, however, writing for a children's magazine, so we can't make this *too* contemporary. She'll have to be eating some healthy dairy product.

Further, whatever she's eating will have to rhyme with "whey" because we want to keep as many of the original rhymes as possible, and we already departed from that in the first two lines: "Muffet" does not rhyme with "Carpool" no matter how far we stretch it.

What rhymes with "whey" and is a healthy dairy product? Simple: Yoplait, the brand name for a kind of yogurt. "Yoplait yogurt," unfortunately, does not rhyme with "curds and whey." We must invoke our poetic license and switch "Yoplait" and "yogurt" around, easy to do on a word processor.

Modern Ms. Carpool
Sat on her barstool
Eating her yogurt Yoplait.

Along came a spider
And sat down beside her...

The stuff about the spider is okay. I mean, it's traditional. Besides, "spider" and "beside her" make a great rhyme. Then we come to the last line:

And frightened Miss Muffet away.

The obvious thing to do is to change "Miss Muffet" to "Ms. Carpool" and collect one's box of Crayolas. But, no: there is something very wrong with this line. In the first place, would "Modern" Ms. Carpool really be frightened away by a spider? I doubt it. She might not appreciate his company as much as, say, John Travolta's, but to be frightened away? We could end the poem with, Said she, "Would you please go away?" making Ms. Carpool the graduate of an assertiveness training group, but this, too, skirts the real issue.

Yes, the disparity is a deeper one. It goes to the very core of one of our primary cultural taboos: unjustified prejudice against spiders. Justified prejudice I can understand. People are prejudiced against mosquitos. Who can blame them? It's justified. But where is the justification for the prejudice against spiders? Nowhere. A few black widows kill a few Sierra Club members every year, but so what? Cars kill 50,000 people each year and we *love* cars. No, the prejudice against spiders is unjustified.

Beyond that, spiders actually do good. They eat mosquitos and flies and all those other creepy-crawly things that we have justifiable prejudices against. It's time we changed, and change must come through education, and education begins at bedtime with nursery rhymes. Let's make the spider an ordinary sort of guy!

So, here we have our scenario: Ms. Carpool is sitting at a bar eating yogurt. A spider comes along, sits down next to her and, keeping in mind that he's a regular, normal person, what does he do? Why, he orders something to eat, just like Ms. Carpool.

But what would a spider order? "I'll have a Yoplait Mosquito Yogurt, please." No. Spiders don't eat yogurt. People eat yogurt. No point in making this a Walt Disney movie. Spiders eat bugs. But going into a bar and ordering a plate of bugs is rather unappetizing, so how do we add a little

class to the situation, and being locked into a rhyme pattern, rhyme his order with "Yoplait?"

Let's make this a gourmet spider. This means he would have to order bugs prepared in some French-sounding way, such as saute or flambee. Eating "bugs" is a bit weird, so we'll modify that just a bit, too. We add this last line to our Mother Goose Computerized Update, and, voila!

Modern Ms. Carpool
Sat on her barstool
Eating her yogurt Yoplait.
Along came a spider
And sat down beside her
And ordered an insect souffle.

There were twenty-six words in the original poem. By changing only eleven of them, less than half, the entire poem was transformed into something quite different. Fifteen words remained the same. With a word processor there was no need to retype even one of them.

The nonsense above is a parody of what goes on in the creative mind as it refines, hones, and coaxes the English language into poetry. Yet behind the fun is a portrait of the actual word processor at work — the human mind. For the poet, a word processing computer is a tool that remembers and displays the best of what has gone on before; that makes experimental alterations quickly, silently, and with a minimum of effort; that awaits patiently, alert and ever-ready for the next command, be it in five seconds or five days. A tool such as this might just free the mind of the poet, allowing true poetry to flow through.

The real news is not that word processing computers will do for poets everything typewriters do, only more and better and faster. The real news will come as poets apply the many joys and wonders of word processors to the creation of new and remarkable forms of human expression for the illumination of us all.

Chapter Ten

The Drawbacks of Word Processing Computers

In discussing the drawbacks of any situation in life (and what would life be without its drawbacks?) there seem to be two extremes.

The first is to ignore all possible danger, the basic what-I-don't-know-won't-hurt-me attitude exemplified by ostriches and those living near nuclear power plants. The problem with this approach is that potential difficulties, if dealt with knowingly and practically, can often be eliminated or reduced. To paraphrase Law Enforcement's favorite cliché, Ignorance of the drawback is no excuse.

At the other end of the spectrum are those who focus on the drawback, only on the drawback and nothing but the drawback. These people seldom leave the house. They watch Geraldo Rivera on television tell them how terrible it is "out there." But in staying at home there is still a great deal to be worried about: burglars, household accidents, air pollution, and radiation beaming at them from their color TVs.

Most of us fall somewhere between those two extremes. We see both sides of an issue in the cool, calm light of reason and make our choices accordingly. We hope. Is life a rose bush with thorns or a thorn bush with roses?

In presenting a chapter on the drawbacks of word processing computers I am sure that I will get reactions from both extremist camps. One will skip the chapter altogether, "I really don't want to know." The other will use it as evidence not to read further, "See, I told you these things were no good."

The rest of us will, hopefully, view the possible drawbacks and the potential drawbacks from a creative point of view, looking for solutions as we go.

Here, then, are the several possible drawbacks of word processing computers I have come upon.

1. They're expensive. Lanier calls their word processing system "No Problem." What about the problem of coming up with the money? No way around it — several thousand dollars is a lot of dollars. Word processors do do a great deal, and there is a price to be paid.

On one hand, they cost a lot. On the other hand, they are a great value. An IBM Selectric costs around $1,000. A Word processing computer costs three to ten times that amount. A word processor, however, will do far more than three to ten times the work of a Selectric. When word

processors are used in a business or professional setting, depending on the application, they often pay for themselves in a short time.

The prices keep going down. I paid around $7,500 for mine. Three months later I could have purchased a word processor with the same capabilities and specifications for $6,000. However, in those three months I more than earned the $1,500 difference. To buy now or to wait? To buy at all? The information in the next chapter, **Is Word Processing for You?**, may help you decide.

2. Eyestrain, neck strain, and back strain. Some people are more susceptible to eyestrain when looking at a video screen than are others. If you have frequent headaches from watching regular television you might be one of these people. You could also be having a natural reaction to most television programming. You might want to rent a word processor for a week or so and see how you feel using it. Most people do not have this sensitivity.

Word processing generally does not involve staring constantly at a video screen. It involves looking at the screen, looking at the keyboard, looking at some notes, and, if you're like me, looking out the window, looking in the refrigerator, and looking for the perfect excuse to "finish it later."

Most eye, neck, and back strain is caused by improper lighting or improper placement of the keyboard and video screen. Improper lighting will cause glare on the video screen, a major cause of eye fatigue. Poor placement of the video screen and keyboard leads to poor posture and awkward positions, causing neck and back strain.

Filters are available that cover the video screen. These filters improve the contrast of the characters and reduce reflected glare. If eyestrain is a problem, one of these filters might help.

3. Radiation. All television screens give off some form of radiation. This is true of home television sets as well as computer video screens. Some people must stare into video screens at close range for long periods of time — military personnel watching radar, for example, or text editors who do nothing but edit other people's material all day.

There are isolated incidences of cataracts in those who

must look continuously into a video screen at point-blank range for long periods of time. These incidents are very small in proportion to the tens of thousands of people who stare into computer screens every day.

It is supposed that low-level radiation caused the cataracts. Radiation is something we cannot afford to treat lightly. "Acceptable" levels of low-level radiation are much lower than once thought. We cannot go about being fearful, either. To get rid of all low-level radiation would mean ridding ourselves of microwave ovens, all televisions, and the sun itself. The fact is, we do not know as much about the effects of low-level radiation upon human beings as we need to know.

We do know that all video screens, including regular home television sets, give off some radiation. We do know that color TVs usually give off more than do black & white. We do know that the farther away the screen is, the less the possible danger.

Based upon what we know, then, the safest way to use a word processing computer would be to use a black & white video screen and have the screen close enough to see the characters clearly but no closer — usually two to three feet. In most cases this will require a detachable keyboard. Also, if you have a large amount of detailed copy editing, it might be better to do that on a print-out rather than by peering into the video screen close-up for hours on end.

On the whole, there is no more to fear working at a word processor for a full day than there would be watching television for a comparable period of time.

4. Mistakes, when they happen, can be big ones. Short of a fire in a filing cabinet or shredding the wrong pile of confidential documents, it is almost impossible when working with sheets of paper to duplicate the magnitude of error possible on a computer.

The Random Access Memory of many computers can easily hold thirty pages of material and if the power fails before that information is transferred to disks, it's back to square one. One little 5¼-inch disk can hold up to 600 pages of text. The following is a partial list of how those 600 pages can be permanently destroyed in less than a second:

Computer error. Every so often a computer will get hungry and eat a disk.

Operator error. Far more common than computer error. With a single mistaken command the information on a disk can be no more.

Paper clips. You know those paper clip dispensers that have a magnetic circle at the top to hold the paper clips until needed? While they're hanging on that magnet, the paper clips themselves are being magnetized. If one of these paper clips should fall on a disk, it would be the equivalent of dropping a red hot paper clip on a phonograph record.

Scissors. Many pairs of scissors, for a reason I have yet to discover, are magnetized. If these are set on top of a disk or a disk is set on top of them...

Ringing telephones. Apparently a ringing telephone produces a magnetic field that plays havoc with disks if the disks are under the phone. Why one would store their disks underneath a ringing phone is beyond me, but apparently some people do and they have had problems. (I have been unable to duplicate this problem myself.)

Food. Anything from spilled coffee to toasted marshmallows: If food lands on a disk it is not good for the disk.

Grease, oil, dirt. If you're eating buttered popcorn and changing a disk at the same time (I'm making myself hungry) and the oil gets on the inside of the disk, not good. Even the natural oil on the fingers, if smudged on the magnetic part of the disk, can cause the disk drive to mistrack.

Pens, ink, eraser gook. If you write on the label of a disk with a ball point pen it might ruin the disk. If you erase the label of a disk and the eraser stuff gets in the disk jacket, it can cause problems.

Et cetera. This category is for all the creative screw-ups people come up with: "My dog ate it," "Somebody stole it," and "I didn't know you were supposed to leave the cardboard *on* the disk." Et cetera.

The solutions to these potential dangers are: save material from RAM to disk frequently while editing; make back-up copies of disks often; keep magnetized objects away from the work area; and treat disks with the same care with which an audiophile would treat his or her record collection.

These are the four major drawbacks I've come across. From my point of view, they are not so much reasons to avoid word processing computers as they are areas in which due caution and respect for the machinery (and one's current budget) are in order.

"The dog ate it."

Chapter Eleven

Is Word Processing for You?

Is a word processing computer for you? That's simple: If you use a typewriter to write anything from a letter a day to a book a month, the answer is "Yes." "Is a word processing computer for you?" unfortunately is not the right question to ask. If you're reading this book, the answer is almost certain to be yes. A more accurate question, although not nearly as punchy, is: "Would my purchase of a word processing computer justify itself in terms of expense and the length of time it would take me to learn how to use it?" Now that's a relevant question; long, but relevant. Let's explore it.

A word processing computer complete with software and printer will set you back at least $2,500. It could go as high as $10,000. A decent, dependable processor that will turn out printed pages equal to the best electric typewriter will run around $5,000.

Further, word processing computers take a while to master. Not much of a while, but a while. Someone who regularly uses a typewriter to do his or her work, from creative writing to correspondence, would be able to have a word processor mastered within a week. Addiction sets in within a month, and after two months going back to even the finest Selectric would seem almost intolerable.

For the secretary or writer who is used to a keyboard, the time it takes to adjust to a word processor is minimal. However, those who are not well versed in typing will need a bit more adjustment. How much adjustment depends upon how familiar one already is with a typewriter and how quickly one learns.

If you plan to use a word processor, some knowledge of typing is essential. Sorry, the computers that will print letter-perfect text from verbal dictation are still part of computing's future. Computers that will read back what you have typed into them are already here and work with a reasonable degree of accuracy. Perfect touch-typing is, thank heaven, not necessary. I get by with a modified hunt-and-peck system using two fingers (it doesn't really much matter which two) at a time.

WORD PROCESSING ON THE KAYPRO

I type about as fast as I can write longhand. Is a word processor valuable for someone who has far from mastered the keyboard? Absolutely. First of all, for those of us who are not good at typing, the very thought of *re*typing something is abhorrent. Typing is a tolerable way of transferring one's thoughts to paper, but to transfer one's thoughts from one piece of paper to another piece of paper is a waste of time and is drudgery beyond belief. Fortunately, word processors never ever require retyping — unless you make a mistake and erase a diskette or the computer makes a mistake and eats a diskette or some such other unthinkable event. On the whole retyping is out.

Second of all, mistakes, quite common to us inexperienced typists, are easy to correct on word processors. Typos are corrected with such speed and ease that there is almost no time to think, "What a dummy I am to have made *another* mistake!" By the time you think, "What a..." the typo is no more and the writing can continue.

Third of all, the more typing you do, the more familiar you become with the keyboard and the faster you type. Writing longhand is just the opposite. The more you write the more the hand tires and the slower you write.

I asked a friend for advice on whether I should spend my last dollar on a word processor. He recommended that I make two lists, one giving all the reasons I should buy a word processor and the other giving all the reasons I shouldn't. I sat down, pen in hand, and began listing. The "shouldn't" list began with "It costs a lot" and went on for about a third of a page. The "should" list continued for a page-and-a-half and ended with "No more cramped hands!" because, by the end of the second list, my hand was, indeed, cramped. I honestly think I spent $7,500 because of a cramped hand.

If you are a writer who is used to writing everything out longhand, adjusting to a keyboard and a video screen will take some time, but not as much as you may think. Before getting a word processor my standard method of writing was with pen on paper. I made corrections by crossing out and adding little " ^ " marks all over the place. I then turned this over to a typist with extreme patience and a working knowledge of hieroglyphics. I made further corrections on the typed copy.

(Things always look different when they're typed, don't they?) Then the typist retyped what I hoped would be the final copy.

It took me very little time to adjust to a keyboard and a screen. I can actually read what I've written as I write it; changes are simple; additions are included automatically as part of the text (if you've ever spent time following a string of " ^ s" around a hand-corrected page, you'll appreciate that feature); and the copy, as I enter it, looks typed right there on the video screen. In addition, there are no multiple trips to the typist.

If you know nothing about typing at all, your investment of time in learning how to use a word processor increases. If you take a decent touch-typing course (you can buy a program that uses your computer to teach you), within six months you'll be several steps ahead of us hunt-and-peck artists. (The tragedy of the hunt-and-peck boys and girls is that we know enough to get by, but we never learn the fastest way to type. Sigh.)

So, there are costs to word processing. They are: Time and Money.

Are those costs justified for your particular usage? For your particular situation, is it worth it? That depends. Rather than give a questionnaire ("On the average, how many words do you type each week?"), let me give some examples in which word processing would be most, and least, beneficial. You can then find your place along that continuum.

A person least benefited by a word processor would be a businessperson who dictates a few letters each week, all different; knows nothing about typing, spelling, grammar, or standard correspondence formats; and has a secretary who dutifully takes care of all that. Whether the *secretary* could benefit from a word processor is another question. Also another question is whether the businessperson would benefit from some other programs available for the personal computer — financial planning and the like. Would this person, who cannot type, who writes very little, get much use from a word processor? No. Hopefully, if this person should happen to get a computer it would be equipped with a Space Invaders game so that he or she will be able to get some practical use from the machine.

WORD PROCESSING ON THE KAYPRO

The people who would benefit most from word processing are the secretary, especially one who deals with contracts or correspondence that repeat the same information over and over; the student, especially one with a heavy work load of book reports, term papers, and love letters; and the writer, especially one who demands letter-perfect copy, writes at hours — and on a budget — far too unpredictable to include a secretary, and who has a certain degree of correspondence to maintain.

If you fall into any of those three categories, make the obtaining of a word processor your top priority; it will change your life. Secretaries: leave a copy of this book open to the chapter **Word Processing in the Office** on your boss's desk or next to the coffee machine or in the executive washroom. Students: send a copy of this book, the chapter **Word Processing for Students** marked, along with a poorly-typed note to your parents, hinting strongly that the difference between the honor roll and dropping out lies in their hands. Writers: stop eating, write a quickie pornographic-science-fiction-horror-gothic-romance-thriller, become a gigolo; sell out in whatever way you may have remaining to get one of these things.

There is a middle ground — those people who live ordinary lives; who write a little or correspond a little; who have a portable typewriter sitting on its "free with purchase" typewriter table in that corner of the living room loosely referred to as "the office." What about those people? Again, it depends. Do you have a whole lot of money?

If you do, and if you have the time it takes to learn how to use it, then by all means get a word processor. If you don't have a lot of money, then to word process or not to word process will depend on how useful you would find the other capabilities of personal computers: balancing the family budget, educating the children, charting biorhythms, playing Star-Trek, and the many other wonders described in past and future issues of *Popular Computing*, *BYTE*, *Interface Age*, *Personal Computing*, *Creative Computing*, and other magazines and books on the subject.

A new newsletter on the subject might prove useful, especially if you're a writer. It's called *WP News: A Writer's*

POV on Word Processing. (POV is screenwriter talk for "point of view.") It costs $20 a year and includes hardware reviews, software reviews, and interviews with word processor users. If you'd like to subscribe, the address is in the back of this book.

You'll have to weigh the features and programs of personal computers in general until a critical mass is obtained and the scales tip in the direction of "Forget It" or "Go for It."

I am noticing that this chapter ends somewhat up in the air. I was fishing about for a sentence or two that might help ground it and realized that "up in the air" is where many people will be about word processing at this point. Those who have decided "No" found ample excuses not to read any further in the last chapter's list of drawbacks. Those who have decided "Yes" have skipped this chapter and are well into **The KayPro Computers.**

I have no easy solutions to offer. It was eight months from the time I was first told about word processing computers until I finally purchased one. In that time I went from "I don't need one" to "I've got to have one" and back again several times. There were periods of intense research and times when the subject was forgotten. Obviously, I am thrilled with my final decision, but my situation and needs may be very different from yours.

The only thing I know to do during periods of indecision is to continue gathering information.

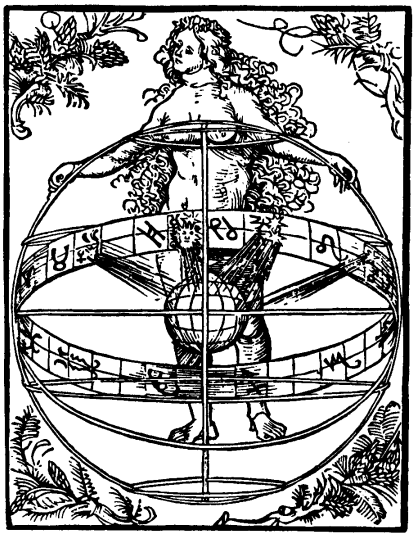
If you are in doubt as to how helpful word processing may be in your particular situation, you might try renting a word processor for a month or so and find out first hand. Look under office equipment rentals in the Yellow Pages.

Another suggestion is to visit a word processing center where computers are rented by the hour. We have one in Los Angeles called WordPlay. It's a sort of Romper Room for writers. Again, check the Yellow Pages under "Computers" or "Word Processing" or similar headings.

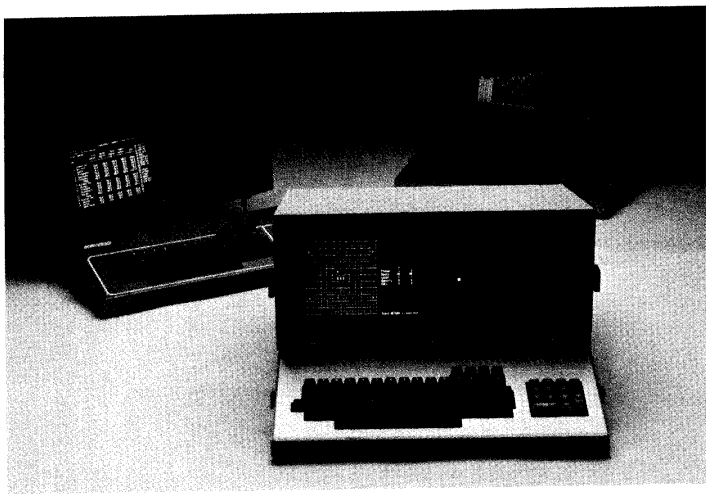
Read the next two chapters and make the rounds of the computer stores. Buy some computer magazines. Read some books on other features personal computers offer. You might want to try my friend's suggestion and make a list of the pros and a list of the cons for your particular situation. That helped clarify it for me.

And while you're up in the air, enjoy the view.

Here we have an early personal computer...



And the same computer as illustrated in Playboy.



Chapter Twelve

The KayPro Computers

Let's assume that you have shopped for computers and are considering a KayPro, or have purchased a KayPro, which, if you've read this far in the book is a rather good assumption. In this chapter we'll examine the three current offerings from the Kaypro Corporation: The KayPro II, The Kaypro 4, and the KayPro 10. Software comes free with all of them, so we'll look at that, too.

However, first let's examine the specifications of a personal computer—any personal computer—that would be used almost exclusively for word processing, a word processor that would do the job, but not overdo it. Here is my list of recommended specifications:

Word Processing Program: One that will do everything you want it to do.

Dictionary Program: The WORD PLUS by Oasis Systems

Video Screen: Black and white or green phosphor. Not color. With few exceptions, the characters on a color video screen are not very sharp. There is the question of how many characters fit on a line and how many lines are displayed on the screen. Low-rent screens will give you 64 characters and 16 lines, or less. Better terminals will display 80 characters and 24 lines. Twenty-four lines is about half a typewritten page, and it's plenty. It shows enough of what has gone on before and, if you need to review, **scrolling** to another part of the text is fast and easy. (Scrolling refers to moving forward or backward in a document. The idea is that the text is written on an imaginary scroll, the two rolls of which are just above and just below the video screen.)

Screens that display full pages of text (55 lines or so) are hindrances. Tests have shown that the operator spends a great deal of time actually touching the screen to hold a place because too much information is being displayed at once.

A nine-inch diagonal measurement is the smallest screen size you should consider.

Keyboard: Detachable. The variety of positions permitted with a detachable keyboard is invaluable during long hours of writing. The keyboard should have large

letters with a good, solid, comfortable feel—no plastic-sounding "clickety-clicks," and the keys should be slightly concave, not flat, to fit the curve of your fingertips. A numeric keypad, a rectangle of keys to the right of the regular keyboard with the numbers 0 through 9 laid out like a calculator, is a must if you work with numbers.

Disk Drives: Two. 5 1/4 inch. A minimum of 150K each. You need two drives because you will have more "on line" storage, which means that your files, hence your documents, can be longer; you can store dozens of extra "boilerplate" paragraphs which can be inserted into letters, contracts and manuscripts; and you can have more programs on line so that you can work on one file with several programs—text editing followed by word counting, for example.

Secondly, and perhaps most importantly, with two disk drives copying files and disks is a breeze. Copying is an essential part of computerized word processing, just as copying is an essential part of any office. (What ever did the world do before Xerox machines?) Copying is used to create disks upon which files can then be written, moving files from one disk to one or several others, and making back-up copies.

For serious word processing (which translates as "more than just a letter to mother"), 150K of storage space is needed. The more you have, the less often you will have to change disks.

Disk Operating System: CP/M.

Random Access Memory: 64K.

Scotch: Dewar's White Label

From this list, the KayPros offer everything—and portability besides.

KayPro II

The KayPro II has a nine-inch green phosphor screen that allows for a full 24 lines with 80 characters per line. The screen is quite readable. The keyboard of the KayPro II is excellent. It has a numeric keypad, separate cursor movement keys, and it's detachable. The two built-

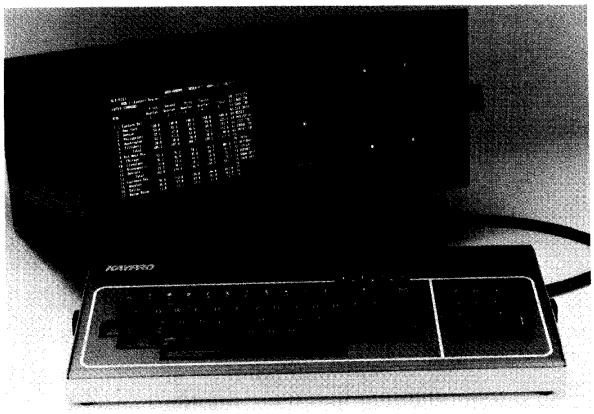
in disk drives each hold 191K of information.

64K of memory is standard. The case is metal and has an attractive "high tech" look. Put simply, the KayPro II is—in terms of hardware—equal to or better than one of the greatest computer success stories of modern times, the Osborne 1. Its cost? $1,595.

The KayPro II offers a small software store free with purchase. CP/M, M-BASIC, Profit Plan, Perfect Writer, Perfect Filer, The WORD Plus, Uniform, and games to keep you away from your writing.

KayPro II's also come with THE GREAT CHOICE: If you prefer WordStar to Perfect Writer (and the other programs in the Perfect package), you can have it. (More on which to choose later). If you want MailMerge, it's $49.95 extra.

Yes, the KayPro II represents a remarkable value. Matched with an inexpensive letter-quality printer, it gives you a great word processor for less than $2,500.



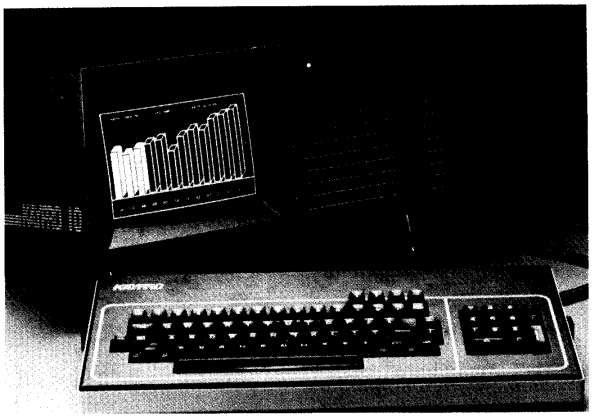
KayPro 4

The KayPro 4 is the same as the KayPro II except that it has double-density, double-sided drives, making each drive capable of holding 394K worth of information. Actually, this increased disc capacity alters things slightly: Your KayPro II disks can be read by the KayPro 4, but not vice-versa.

The price for the KayPro 4 is $1,995 and comes with a different package of software than the II: WordStar, The WORD Plus, Superterm, Microplan, M-BASIC, S-BASIC, C-BASIC, Uniform and CP/M. Mailmerge is $49.95 extra.Or for an alternative, Perfect Filer, which works well with WordStar, is $75.00 extra.

KayPro 10

The KayPro 10 is very much like the KayPro 4 (what happened to the other computers in between?) except that the KayPro 10 has only one floppy disk drive and a built-in 10 megabyte hard disk. KayPro continues to astound one with the price: $2,795. (Some 10 megabyte



disks *alone* cost more than $3,000.) Amazing.

The machine is wonderful, a superb value, and all that, but I have one major concern: the hard disk. In the world of personal computers, hard disks are considered delicate beasties, who must be treated gently, and with the respect that's due anything that can destroy on whim 5,000 typewritten pages of information.

When a hard disk is put in a *portable* computer, considering the knocks and bangs portable anythings are subjected to, I become worried.

The KayPro people assure me that the disk drive is of a new design and double shock mounted and on and on. I still keep thinking about 5,000 typewritten pages being wiped out by one careless porter.

Of course, as with any hard disk computer, one should back up information on a regular basis. This is good advice, and like all good advice, seldom taken. A 10 megabyte hard disk holds the same amount of information as *twenty-five* 400K KayPro floppy disks.

Granted, one will seldom have 10 full megabytes of information that will need frequent backing up. Much of the disk will be empty, or filled with programs that are

already on master disks somewhere. But, still, the idea of making even 10 backup disks on a regular basis is, well, not appealing.

Please understand that these are subjective, primordial, emotional reactions, like the fear of flying. (99.9999% of all airline flights are completed safely. 50,000 more people die in traffic accidents every year than in plane crashes. Then why am I afraid of going on an airplane and not afraid when I get behind the wheel of my car? It's not logical, especially the way I drive, but there it is.) I want to share all this with you, doctor, so that I could get it all into the open, talk about it, maybe get over some of this fear.

You see, the KayPro 10 is a great computer. It's fast, has a nice screen display (better than its little brother), has an attractive blue-grey brushed metal case, has all the software given with the KayPro 4. And it's the best hard disk computer bargain around.

This computer is heaven-sent for people with tens of thousands of things to file. The titles of whole *libraries* or bookstores or auto parts companies or baseball card collections can be put on this computer.

Ten magabytes could handle the accounting, inventory, and word processing needs of a good-sized company, and still leave room for the boss's computer games.

Then why am I afraid? Why do I fear the letter that says: "I took your advice and I bought this thing and after five months of putting everything I know on it it broke and I hate you forever."?

Ten magabytes is a lot. It's very powerful, but very dangerous. *Please*, with this or any other hard disk computer, *back up your irreplaceable information regularly.* Backing up information is like wearing a seat belt: If it's only used once in ten years, it was worth the effort.

Maybe the KayPro 10 and I should get away somewhere, take a long trip together or something, and maybe we can work on my anxiety together.

Let's take a closer look at the software included with these machines. The WORD PLUS and Perfect Speller were already examined in Chapter Four. Let's peek at the other pieces.

SOFTWARE INCLUDED WITH THE KAYPROS

WordStar

If one had to choose an industry standard for word processing software it would be WordStar. All the features listed in *Chapter Three*, **The Wonders of Word Processing** are included with WordStar except a dictionary program, proportional spacing and kerning.

WordStar is a screen oriented program. What you see on the video screen is exactly the way the text will appear when printed, word for word, line for line, page for page.

Giving commands to WordStar one uses a standard key on all personal computers, the **control key**. With the control key depressed all the characters on the keyboard take on a new meaning. It's rather like sending your keyboard to est. The control key is depressed and, while depressed, one or two other keys are hit. In this way WordStar uses a standard keyboard to communicate 97 different commands.

If you were to type "KY," one would think you were discussing a lubricating jelly. If you type "KY" while depressing the control key, you would be telling WordStar that you wanted a certain block of text deleted. (The computer abbreviation for the control key is "^"."^KY" or "Control-KY" both mean "Depress the control key and hit "KY.")

To move the cursor, for example, you would press^ E,^ S, ^ D, or ^ X. The letters E, S, D and X form a diamond on the keyboard: E is on top, S is left, D is right and X is down. Hence, with WordStar, if you want to move the cursor up the screen you would press ^ E. If you wanted to move it left you would press^ S. If you wanted to move it right you would press ^ D, and ^ X would move it down. Typists can do this with one hand, usually. The control key is located close to the E-S-D-X diamond on the keyboard. Hunt-and-peckers such as myself will find that two hands are necessary. (Some computers,

such as Xerox, Otrona, and KayPro, have adapted WordStar so that cursor movement keys move the cursor.)

^ KB marks the beginning of a block of type; ^ KK marks the end. ^ KV moves the marked block to another part of the text. ^ OR sets the right margin, ^ OL sets the left. ^ G deletes a character, ^ T deletes a word, ^ Y deletes a whole line, and so on.

All this might seem confusing at first and rather hard to learn. Why not have some extra keys on the keyboard with those functions clearly labeled? Surely pressing a "Delete Character" key is easier than remembering "^ G." So it seems, but keep in mind that you would need a keyboard with at least 97 extra keys, all with little printing on them, saying things like "Save, exit to operating system," or "Read file into text." This would not only add to the cost, as it does with stand alone word processors, but it would also add to the confusion.

Further, once you know that ^ G means "delete character" it's much faster to find ^ G than a new key labeled "delete character." This is because a typist — even a poor one like me — already knows where "G" is. One need only learn the placement of one new key, the control key. It is easier for the mind to learn that "^ G equals delete character" than it is for the hand to learn the placement of a delete character key.

This is one reason programs that are advertised as "easy to learn" should be examined carefully. Programs that are easy to learn are often difficult to use. Imagine riding a bicycle on which the training wheels were never removed.

WordStar has a companion program, MailMerge, that is highly recommended if you want to print form letters or multiple copies of the same document.

WordStar is the product that put its manufacturer, MicroPro International, on the map. It is well supported, although in recent months they seem to be spending their corporate time developing programs that imitate existing programs from other manufacturers rather than keeping WordStar the best. They released, for example, a truly mediocre spelling program, SpellStar, rather than adding proportional spacing, footnoting, and other potential improvements to WordStar. It is doubtful, however, that they will ever let WordStar slip too far behind the competition.

Perfect Writer

Let us begin by accepting the fact that there *is* no perfect word processing program. Word processing is still dominated by tradeoffs ("In order to have this you can't have that") and personal tastes (some people like pushing special buttons to implement commands, others like a control key followed by a familiar character on the keyboard.)

Perfection, in fact, is probably impossible. Like audio, state-of-the-art is the most one can hope for.

Is Perfect Writer, then, at least a state-of-the-art Writer? Well, it's headed in the right direction. Let's hope the creator(s) of this program do not take the program's name too much to heart: it is, by definition, impossible to improve upon perfection.

Perfect Writer has some useful features not offered by WordStar. You can split the screen and edit two files simultaneously, moving text from one file to another. It does true proportional spacing. It creates indexes and handles complicated footnoting and endnoting. (The size of each footnote is, however, limited. Add-on footnoting programs are available for WordStar. These are more powerful but will cost extra.)

Perfect Writer has a most important command: Yankback. If you accidentally delete something, you can bring it back. In WordStar, if you delete something, it's gone.

Perfect Writer offers three types of underlining—needed in many academic and dissertation papers—and there is a pageheading option which, if one writes a novel or an article, the title, author's name and page number can automatically appear at the top of each page.

It is not, however, a true screen-oriented program. Because it offers so many print and formatting options, what you see on the screen is not necessarily what you'll get on the printed page. One of the more irritating aspects of this is that you do not know where pages end—a hindrance especially if you happen to be writing a screen- or a stage-play because dialogue cannot be interrupted in

the middle. Though there are ways to find where pages break before printing, the page-end indicator in WordStar is certainly more convenient.

The documentation with Perfect Writer is excellent, the finest I have read. Clear, well-illustrated, understandable, with occasional flashes of—would you believe it?—humor.

It is a first rate program, one worthy of your careful consideration.

Perfect Filer

This is the software that allows you to write a letter and then mail it off to 50 different editors, with each letter looking individual and personalized. "Dear Mr. Doubleday, I have this incredible book about my cousin Alfred, a shoe salesman," becomes "Dear Mr. Scribner, I have this incredible book about my cousin Alfred, a shoe salesman."

Once the letter is written, Perfect Filer can generate addressed envelopes to the same people. This is ideal for freelance journalists and anyone who wants to start a collection of rejection letters. (Ah, but that one letter in fifty that says "We would love to publish your story. It's the greatest thing since Hemingway. A check for $10.00 is enclosed.")

Perfect Filer also allows you to generate lists. People have used this to make a phone directory that lists, separately, the names, addresses and phone numbers of publishers, literary agents, magazine editors, theatres, friends in-state and out, and more. A most valuable and easy-to-use piece of software. (However, the documentation on this particular software is poor at times. It assumes things beginners would not know.)

MailMerge

MailMerge is to WordStar what Perfect Filer is to Perfect Writer. MailMerge does not have the list-making capability of Perfect Filer, but it is more powerful in generating form letters.

M-BASIC

There are dozens of programming languages around, from Fortran to Cobal to Pascal. BASIC was developed as a language most people could understand and could learn for the "basics" of programming. However, there is no uniform BASIC. Apple took it and made Apple-BASIC. Tandy scooped it up and made TRS-BASIC.

M-BASIC has become the most popular of the BASIC languages. M-BASIC comes from Microsoft. For those who want to learn how to program their computer, M-BASIC is a good way to start.

C-Basic and S-Basic

The BASIC languages can be divided into two groups: interpreters and compilers. An interpreter is designed for easy programming. The commands are simple to understand, and its design is quite straightforward. Hence, using an interpreter is a good way to learn programming. M-Basic is an interpreter. What you gain in user friendliness, however, you lose in execution speed. That is, running programs with an interpreter may take up time.

A compiler is more powerful. Though its structure may be more difficult to learn, it runs programs more quickly. C-BASIC and S-BASIC are compilers. S-BASIC has always come with KayPros, and is a strong program.

C-BASIC is simply a different dialect--the most popular one at that. It is the Corvette of compilers, and a worthy addition to the other software.

Profit Plan

For those of you who plan to turn their writing into a business (or have a business on the side), Profit Plan is an electronic spreadsheet. I am told Profit Plan is more difficult to learn, but more powerful than Perfect Calc.

Perfect Calc

This is another electronic spreadsheet, and comes with several half-hearted templates (Family Budget, Net Worth Statement, Cost of Goods, Expense Report, Accounts Receivable, Accounts Payable, Invoice Entry, Cash Flow Assessment, and Payroll Analysis), which are as close to worthless as computer programs come.

The electronic spreadsheet part of the program is easy to learn, though not as powerful as other spreadsheet programs. For the average person, however, it is sufficient.

Microplan

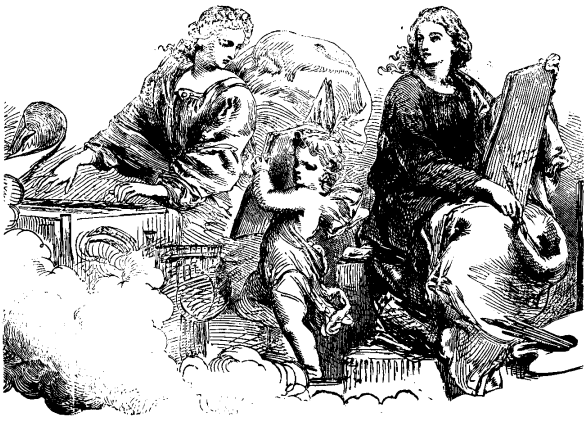
State-of-the-art, Microplan is yet another spreadsheet. It's as easy to use as Perfect Calc, and even more powerful than Profit Plan, I'm told. The software comes with good documentation.

Suprterm

Suprterm allows you to connect your KayPro to a modem, hence to other computers and data banks. I have not used this yet, but understand it works well, even allowing you to connect with others using different communications software. For those who want to buy Suprterm separately, it is $175. (You may want to look at Micro Link II and Lync, reviewed later in this book.)

Uniform

Although many different computers offer both CP/M and 5¼ inch disk drives, disks from different machines usually are not compatible with each other. An Osborne disk will not work on a Radio Shack computer, for instance. However, KayPro has partially worked around this problem with Uniform. On the new CP/M disks, Uniform makes it possible for your KayPro to read and write to disks using Osborne, Xerox, and TRS-80 formats—quite handy if you want to exchange or buy software for the other machines.



This early word processor required two adults and a small child to operate. The keyboard is left, video screen in the center, printer on the right.

Chapter Thirteen

A Brand Name Buying Guide

Although you could open a software store with the programs that come free with the KayPros, other software is available. We'll take a look at that in this chapter.

We'll also examine printers and peripherals that turn a KayPro into *your* KayPro.

Plu*Perfect

Plu*Perfect is a wonderful program that adjuncts the present 1.03 version of Perfect Writer. First, Plu*Perfect removes several bugs within Perfect Writer. For instance, gone is the cursor freeze-up caused when using Esc-K for deleting sentences several times in a row, and Esc-? is no longer a fatal error when no help file is on the disc.

Plu*Perfect has added several features: a one-keystroke switch to overwrite mode (good for numbers in columns); a command that allows you write to another disc without needing to warm boot; an automatic command that turns off drive motors after reading, writing and swapping; and small things such as turning the bell on and off, and splitting indented lines. A major benefit, especially for those learning Perfect Writer, is that the keypad keys have been turned into word processing keys. For instance, tapping the "1" key deletes a word; the "0" key sets a mark. A cardboard overlay for your keypad comes with the software. All this and more for an amazing $25.

Scriptor

Esquire Magazine a few years ago had a cover showing a monkey at a typewriter keyboard. The headline read: "Who in America is **Not** Writing a Screenplay?" For those who have joined the fray, screenwriting on a personal computer presents its own special requirements: pages cannot break in middle of sentences, and different margins are needed for dialogue, names and "CUT TO's". Also the word "Continued" sits at the top and bottom of pages (apparently for producers who don't know when to

continue). At times, screenwriting can be a cumbersome format.

Scriptor is a formating program. You write your script using your favorite editor (WordStar, Perfect Writer, etc.) and then use Scriptor to tidy up your margins, break pages in appropriate spots, add page numbers, and more. There are over thirty variables which the user can manipulate. Using Scriptor's User's guide—one of the best and most readable ones I have seen—one can manipulate the options easily.

Does one need Scriptor to write a screenplay? No. In fact a friend of mine got along perfectly well by manually whisking through his script and adding page-break commands where necessary. In my own consumer-reports way, I asked a screenwriter to format a ten-page screenplay and, using a stopwatch, compared his method of formatting to Scriptor's. It took an average of 2 minutes 52 seconds to use his method matched with Scriptor's 3 minutes 17 seconds. Manual had a slight edge over automatic. HOWEVER, Scriptor found two "CUT TO's" out of place and corrected them, numbered his pages, numbered his scenes, and straightened the dialogue margins on the right side. If he does rewrites to his masterful script (highly recommended), he will not have to reformat the whole thing. Scriptor will give him "B" pages. (These pages may be the cause of yellow rain.)

Considering Scriptor's $295 cost, one can easily get by breaking pages manually such as my friend does. However, for the professional under deadline pressures or for those who will be having to do continual rewrites for a producer, Scriptor can be a handy program.

Grammatik

This is a remarkable program that flags possible grammar and punctuation errors and even makes suggestions for correcting them. The effectiveness of Grammatik (pronounced gra-MAH-tic, as in "grammatical" without the "al") surprised me.

The text of this book has gone through two professional

copy editors, two nonprofessional (though nonetheless paid) ones, two nonprofessional nonpaid ones, my mother and myself. In addition, letters from kindly strangers pointing out errors in the first edition of this book were duly massaged into the text. And along came Grammatik.

I thought it might be cute if a computer program found a mistake or two in the book. Cute? This thing is vicious. Not since Freshman Comp has my writing been so marked-up and questioned. Actually I didn't mind — much. I was, in fact, amazed and delighted and only occasionally defensive.

It began in the third paragraph of Chapter One. It suggested putting a question mark inside a set of quotation marks. It was right.

Then it picked apart the beginning of the fourth paragraph, "In the last five years all of this has changed." It claimed that "all of this" is a wordy phrase and suggested that I simply use "all this." Again, it was right. "In the last five years all this has changed," is a better sentence.

Then it pointed out a misuse of "a while." (Should have been "awhile.") It said, "referred to as" is a wordy phrase and suggested "called." It recommended that I drop "of the envelope" in the sentence, "I must have received dozens of these, proclaiming on the outside of the envelope..." Again, it was right.

It pointed out that I am addicted to the word "very." Each time the word came up it was flagged for being a "vague adverb." I must have removed 30 "verys" from this book. It also flagged "upon," telling me it was "archaic." Well, my dictionary says it is "infrequently used" not "archaic," and I like it better than "on," so dozens of "upons" remain.

It tagged Xerox and Coke, told me they were trademarks, and suggested "photocopy" and "cola." (I like Xerox and Coke.) It said the phrase "reason why" was redundant which, of course, it is. It found a double "the" in a sentence ("it tells you that the the word...") that escaped everyone else. And on and on and on. Grammatik is responsible for more than fifty improvements in this book.

It was fun, though, to catch the taskmaster at its own task. It flagged the word "sort of" and labeled it a "wordy phrase." It suggested using either "somewhat" or "rather." If,

however, one were to use "rather," it would later be tagged by Grammatik as a "vague adverb."

Grammatik is available with or without a spell-check program. Although its spell-check program is good, The WORD Plus is better.

Grammatik costs $75.

Punctuation and Style

An even better program for checking punctuation and grammar is the latest brainchild from the creator of The Word Plus, Wayne Holder.

The program is divided into two parts. The first part is called CLEANUP. This checks for punctuation errors, double words, capitalization errors, and makes sure that quotation marks, brackets, and other things that *should* come in pairs *do* come in pairs.

The second part is called PHRASE. PHRASE will find over 500 overused or frequently misused phrases, point them out, and suggest alternate (or correct) substitutions.

The idea behind dividing the program into two parts is that, once learned, the PHRASE part of the program will seldom need to be used. However, the errors in CLEANUP are often typos, and even the best grammarian may want to run his or her every letter through CLEANUP.

Both CLEANUP and PHRASE, unlike Grammatik, will mark the errors you want to change in the text. (With Grammatik you need a printed copy to mark changes on, then go back and find the changes in the text.)

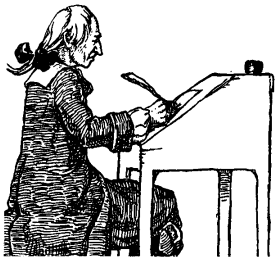
On the whole, Punctuation and Style seems a more complete, sophisticated program than Grammatik, and at $125, it is highly recommended.

Keep in mind, however, that no program can check the grammar in a sentence that requires logical (ie: human) analysis. Nothing will replace a reading or two of *On Writing Well*. Even elaborate programs on mainframe computers designed to "improve" the written word can't be fully trusted.

One of these programs at the Bell Laboratories

changed "Fourscore and seven years ago, our forefathers brought forth upon this continent a new nation, conceived in liberty and dedicated to the proposition that all men are created equal..." into "Eighty-seven years ago, our grandfathers created a free nation here."

Some things are best left to the word processor in the human mind.



SuperFile

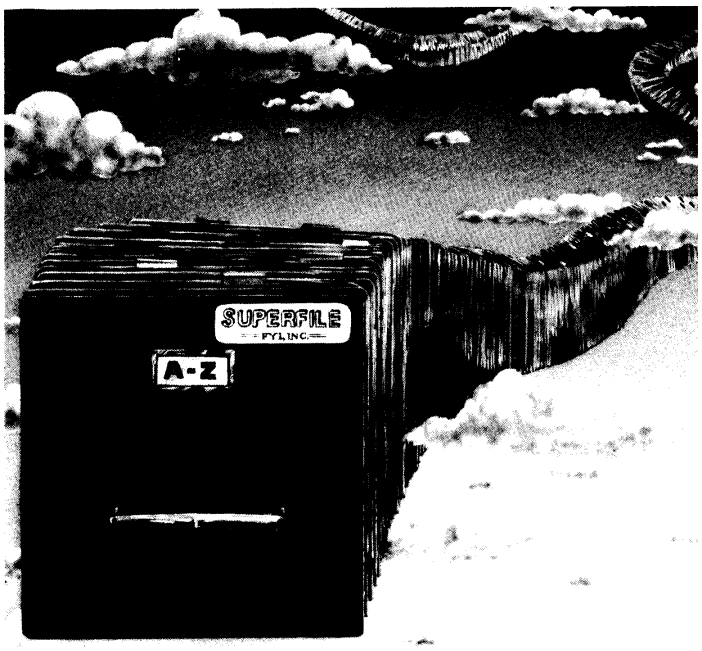
SuperFile is a remarkable program that lets you file any information — from a word to a book — under as many as 250 different key words.

You can file a letter under not just who it was to or what it was about or the date written or who wrote the letter, but under all four — plus 246 other classifications. *Simultaneously.*

An address can be filed under not just last name, but first name, occupation, city, state, zip code, area code, likes, dislikes, where you met them, whether you ever want to meet them again, and 239 other vital statistics.

Quotes can be filed under who said them, when they were said, and 248 different subject categories.

Books, articles, photographs, music — anything you would not want to, or would not be able to, put into the computer — can be numbered, and that number filed under as many as 250 key words. For example, "Photo #1256" could be filed under the key words "waterfall, Canada, color, nature, 35mm," and hundreds more.



Anytime you asked for photos of a waterfall, or scenes of Canada, or shots of nature, "Photo #1256" would be listed.

And now comes the best part. Not only does it file a bit of information in 250 categories simultaneously, it also allows you to combine key word requests. Only those bits of information that match *all* requested categories will appear.

If you were a classical music buff, Superfile could tell you how many hundred recordings of Beethoven's Fifth Symphony you had by simply asking for "BEETHOVEN *and* FIFTH SYMPHONY." The several you might have by Toscanini could be found by typing in "BEETHOVEN *and* FIFTH SYMPHONY *and* TOSCANINI."

You could ask SuperFile to search through your electronic address book and find all of your FRIENDS living in CLEVELAND who own a COMPUTER. Only those entries with the key words "friends," "computer," and "Cleveland" would be presented.

Further, a file can be created from a sorted list that allows you, using certain word processing programs, to add the information, automatically, into form letters. (WordStar is one of them. You can contact the SuperFile people for details on others.)

SuperFile is easy to use and, compared with other data base management programs, inexpensive. ($195.) It carries an unprecedented 30-day money back guarantee. Use the program for 30 days. If you don't like it, send it back for a full refund. With the ease of copying a program disk and Xeroxing an instruction manual, it's nice to see a software company that actually *trusts* its customers.

The Random House Thesaurus

But don't lose any sleep over Grammatik's lost glory. The Grammatik people have now joined Dictronics, and Dictronics has come out with an excellent program that has, thus far, no competition. This is a beautiful (handsome, comely, seemly, attractive, lovely, pretty, fine) program. It is well thought out, intelligent (bright, clever, alert, discerning, shrewd, smart), yet simply presented.

I have not used a thesaurus five times in the past fifteen years, and yet I still find myself excited (ruffled, discomposed, perturbed, stimulated, agitated, eager, enthusiastic) about this program.

To use the Random House Thesaurus (Random House has no connection with the program, other than the money they make from their license to Dictronics) one places the cursor within the word that needs, uh, thesaurusizing, pushes the ESCAPE key twice, and within a second or two the top of the screen is filled with synonyms.

Select the synonym you want, move the cursor to that word, push the ESCAPE key again, and the program automatically replaces the original word with the newly

selected word. If the original word was the best, the RETURN key returns you to the word processing program with nothing changed.

That it works as well and as effortlessly as it does covers the positive aspects of the word "excited" (stimulated, eager, enthusiastic.) The negative aspects of my excitement (ruffled, discomposed, perturbed, agitated) stem from the limitations of the program.

As I see them, the limitations are two. The first is that The Random House Thesaurus currently works only with WordStar and PeachText — fine for WordStar and PeachText users, but what about the rest of the universe? (Soon to be released is a version that will work with any word processing program running on the IBM Personal Computer.)

The second limitation is that the full thesaurus takes 240K of disk capacity. Hence, to place a dictionary program *and* a thesaurus *and* a word processing program on one disk (assuming the second disk drive would be used for document files), would require a disk with more than 500K. And I remember when I thought 340K per drive was ostentatious.

The Dictronics folk are working on adapting The Random House Thesaurus to other word processing programs, and if I were them, I would have chosen WordStar and PeachText, too. They are, after all, the most popular and widely used word processing programs in the world.

There doesn't seem to be much way of getting around the disk capacity question. They fit a 60,000 word thesaurus into 240K, and that's pretty good. (They make special smaller versions — with less words, of course — in forms as small as 80K.) Those of us who want it all may have to bite the bullet and get large capacity drives, or even a hard disk.

In the meantime, I leave the thesaurus on the same disk as the word processing program, put my document files on another disk drive, and switch disks when it's time to spell-check. (The thesaurus is used throughout the editing process, the spell-check program less frequently.)

The Random House Thesaurus is $150.

Smartkey

Smartkey allows you to make any key on your keyboard any other key. It is great for the Dvorak keyboard, or inventing your own keyboard arrangement. You can also program any key to become a whole series of instructions. The "[" key, for example, can become a series of commands that resets both left and right margins. The "]" key can return them to their original locations. This allows screenwriters, secretaries, accountants, etc. to reset margins with one keystroke.

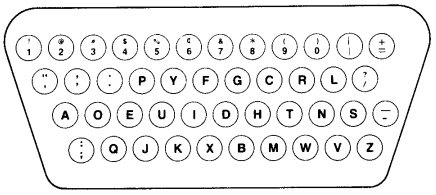
Each key can be made to represent up to 200 characters, so that short, frequently used phrases (book titles, names, addresses, etc.) can be assigned a key. This means that hitting one key can enter your name, address and phone number—complete with carriage returns—providing it's under 200 characters. Smartkey is $60.

K-Key

K-Key is a bit like Smartkey—you can change keys to become something else. Any of the keypad characters can become a string of commands or words, no longer than 32 characters each, and no more than 123 characters for the whole pad. This is less than Smartkey's power, but should cover most people's needs. K-Key, which is just for KayPro II computers, also enables you to, among other things, specify how long you want the disk drives to remain spinning after inputting, control keyboard click, and define how long you want your screen to stay on before it shuts off. Although this last option may seem odd, there is purpose. If the same characters are on the screen for a **long** time (several months), they can actually become permanently "burned" into the screen—a problem with early video games. K-Key automatically turns the screen off for you if you don't use it for a few minutes. Hitting any key will bring your material back on. (You don't need to buy K-Key for this, however—just turn off your computer if you're not going to be using it for a few months.) K-Key costs $29.95.

A Brand Name Buying Guide

Dvorak Keyboard Software



It seems that back in 1873, there was a major problem with typewriters: people typed faster than the machinery could handle. This resulted in a frequent, and annoying, mangling of keys. There was some serious talk of abandoning this newfangled contraption altogether.

Christopher Latham Sholes to the rescue! Chris Sholes did not invent a more efficient typewriter. He invented the *least* efficient placement of keys on the keyboard. He placed the most frequently used letters under the least used fingers. (A and E, for example, under the little and ring fingers of the *left* hand.)

With this intentionally difficult placement of letters on the keyboard, typists seldom overloaded the meager capacity of these early typewriters, and the Machine Age entered the office.

As typewriter mechanisms improved, the keyboard did not change. Mr. Sholes did a good job: his intentionally inefficient keyboard has plagued typists for more than a century.

In the early 1930s, August Dvorak introduced a "simplified" keyboard, one that placed the most often used letters under the most often used fingers.

Following World War II there was a lot of talk about the Dvorak keyboard, but the typists who knew the old keyboard were, for the most part, unwilling to learn a new one — even one that promised to increase the speed

and ease of typing. The Simplified Keyboard fell into disuse.

There has remained a small but loyal following of Dvorak users, much like the Esperantists. One of their main problems was a lack of typewriters. (For the Dvoraks, not the Esperantists.) For a while only Smith Corona made a typewriter with a Dvorak keyboard.

Personal computers, however, might bring the rebirth of the Simplified Keyboard. With the right software, the keys on almost any personal computer can be reprogrammed to conform to the Dvorak standard. Rearranging the plastic keys, by pulling them off and replacing them or by gluing new letters over the old, completes the transformation.

Many people attracted to word processing on personal computers have never typed before. They must learn *some* system of typing: might as well be the Dvorak system as any other. Further, these people are generally not concerned about using their typing as a marketable skill. They are therefore not concerned that learning the Dvorak keyboard will not help them get a secretarial job.

I do not use the Dvorak keyboard. I am a hunt-and-peck typist, and I hear that we are the hardest to retrain. (Touch-typists can relearn the Dvorak keyboard without major trauma, I am told.) The idea of the Dvorak keyboard makes sense, though, and the evidence convincing. Were I learning typing for the first time, I would certainly consider learning Dvorak.

For more information on the Dvorak keyboard, you can send $6 to Philip Davis (*Box 643, West Sacramento, California, 95691*) and ask for a reprint of the article "There is a Better Typewriter Keyboard," and a sample copy or two of his quarterly Dvorak newsletter *Quick Strokes*.

For information on software that will turn your personal computer into a Dvorak personal computer, you can contact Nick Hammond at FBN Software.

COMMUNICATIONS PROGRAMS

A communications program connects the modem to your computer. It allows you to send files and programs back and forth, connect to data banks, send and receive electronic mail, and store any transmitted information on disks. Some communications programs even remember your friends' phone numbers, and will automatically dial them for you.

Micro Link II

This is an easy to use, inexpensive communication package for almost any computer. It allows one computer to transfer information to and from another computer, or allows one computer to hook up to data bank services through a modem.

There are a great many communications programs around. I include this one because of its simplicity and price ($89).

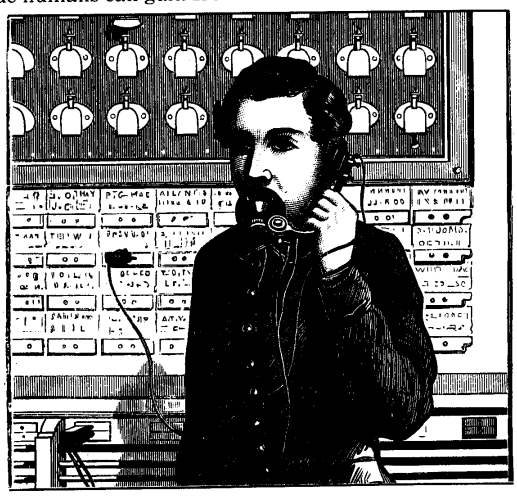
LYNC

Another fine communications program is called LYNC. LYNC costs more than Micro Link II, ($155) but it is easier to install, and far easier to use. What more can one ask of a communications program? Well, accuracy, for one. LYNC has one of the most precise error checking routines of any communications software. This insures that what you send will be received exactly as it was sent. This may not be important for chatting (if an S becomes a C, so what?), but it's crucial for transmitting typesetting files, financial documents, programs, and any other data which must arrive letter (and number) perfect.

LYNC will remember phone numbers and dial them, providing you have an "auto-dial" modem. It will allow you to transfer information between two "hard-wired" (directly connected by cable, not by modem) computers at the astounding rate of 19,200 baud (bits per second). The documentation on LYNC is complete and easy

to understand. All commands are in English. ("Send" "Fetch" etc.)

When two computers are connected using LYNC, they are automatically in a "chat" mode. This means that whatever you type onto your screen will appear on the other persons' screen, and vice versa. This may not seem very exciting, but it opens new horizons to the millions of hearing impaired in this country. For the deaf, it is as though the telephone has just been invented. They can call anyone with a computer, a modem, and a compatible communications program, and talk. I mention "compatible" communications programs. LYNC, because of its error checking protocols, requires that both computers be operating LYNC. For more information on telecommunication, might I recommend *The Complete Handbook of Personal Computer Communications—Everything You Need to Go Online with the World* by Alfred Glossbrenner. (St. Martin's Press, New York.) It is a clear, concise, amusing view of how to get computers to talk to each other, and the value humans can gain from that interaction.



PRINTERS

The next consideration is that of a printer. There are two kinds, dot matrix and letter quality. Dot matrix printers cost less to buy and print faster, yet the quality of the printed text, while readable, leaves much to be desired. Letter quality printers cost more to buy and print more slowly, but the quality of their finished pages rivals that of the best electric typewriters.

Which is best for word processing? Clearly, letter quality. Correspondence, manuscripts, term papers—almost anything but in-house financial statements and invoices—look unbearably chintzy when printed on a dot matrix printer.

But which letter quality printer? There are basically three kinds: daisy wheel, thimble, and converted typewriters.

Daisy-wheel printers are so named because the printing element is a metal or plastic circle with "petals" Salvador Dali might mistake for a flower. Similarly, thimble printers use a print element that resembles a thimble, providing that the tip of one's finger is two inches wide. (Who names these things anyway?)

Metal daisy wheels give better print quality than do plastic daisy wheels, but plastic daisy wheels print faster than metal ones. Thimble printers combine maximum speed (55 characters per second, or about 450 words per minute) with maximum print quality. Thimble printers tend to be slightly more expensive than their daisy wheel cousins.

If money is a major factor in your decision, you can save quite a bit of it by buying a daisy wheel or thimble printer that prints at 25 or 35 CPS rather than at 55 cps. Everything will take about twice as long to print, but you'll initially save almost $1,000.

Looking at my mail, one of the most popular questions is "Can I use my electric typewriter as a printer?" Yes, but if you have a Selectric or other ball-type ("typing element") electric typewriter, I would advise against it. These machines, when subjected to the full-tilt

demands of computer printing, tend to be unreliable. My suggestions: sell the Selectric before prices drop on used Selectrics, and buy a computer printer, *or* keep the Selectric for notes or labels or for old times sake, and buy a computer printer.

If you have an old-style electric that has a separate piece of metal for each letter (like a manual typewriter with a motor added), the cost of converting that to a computer printer can be a lot. When you are done, you'll have more reliability than the Selectric-type (probably), but is the total cost really worth it? It might be better to spend a bit more and get an inexpensive printer.

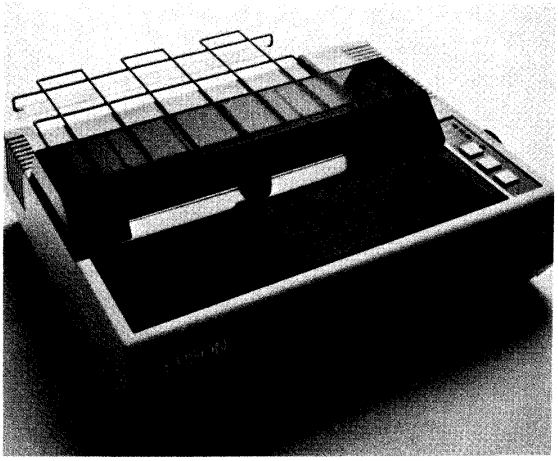
Many of the newer electronic typewriters, the kind that use daisy wheels, make reliable printers. Many were designed, in fact, to hook up to a computer, and these generally work fine. The speed of any typewriter-turned-printer is about the speed of a good secretary.

My screenwriter friend connected his Adler Electronic to his KayPro II, and overall he was quite pleased, except for one point. Though the computer store assured him that his typewriter would do underlining and everything else, it does not. Determined to get the underlining working, he has called KayPro, Supercord (the cord which interfaces the two machines) and Perfect Software. They all blame the others for it not working.

Meanwhile, he keeps hacking away on his play. With the Adler, it takes 5 hours to type the revised drafts of his 50 page play, while it takes only 1 1/2 hours on a Comrex, and perhaps 20 minutes on a NEC. For perspective, though, it took him three days to type the first draft manually, so he is more than satisfied. (He is saving up for a printer because he wants the underlining and because he never imagined he would do so much printing.)

One last thought on the subject: if connecting an electronic typewriter—daisy wheel or no—to a computer voids your typewriter warranty, I wouldn't suggest it. The typewriter company knows something about its machine as a computer printer that we don't, and that something might be that the typewriter, when used as a printer, is not too reliable.

Epson



The Epson MX-80 is generally considered to be the best dot matrix printer in its price range ($500 - $1000). Of all the inexpensive dot matrix printers available, IBM chose the Epson as the printer for the IBM Personal Computer. The label says IBM, but the printer is Epson MX-80.

A dot matrix printer, for the reasons I gave above, should be considered for word processing only if the final appearance of printed copy need not look impressive.

Another reason for a dot matrix printer, particularly the MX-80, is that it travels well. Compact and weighing only twelve pounds, the MX-80 could be slipped into almost any suitcase. The MX-80 combined with one of the more portable computers listed below makes a great on-the-road word processor with full printing capabilities.

The MX-80 uses pins to feed continuous form paper. If you want to use letterhead stationery or single sheets of paper you'll need to buy the MX-80 FT.

Smith-Corona TP-1

The Smith-Corona TP-1 is made by one of the largest manufacturers of portable typewriters in the world. The TP-1 is Smith-Corona's first venture into the world of personal computer printers. Not surprisingly, the TP-1 resembles, in look and quality of construction, a portable electric typewriter with the keyboard removed.

The Smith-Corona TP-1 prints at the unspectacular speed of 12 characters per second. It does, however, use a daisy wheel (eleven type styles currently available) and prints sharp, uniform letter quality letters.

A letter on a 55 cps NEC Spinwriter might take a minute to print. That same letter on the TP-1 would take

almost five. It is also not in the same league as the NEC in terms of rugged construction.

The TP-1 is, however, relatively inexpensive. It retails for $895, and is frequently discounted to somewhere between $500 and $600. In other words, it is a letter quality printer at a dot matrix price.

For the writer on a limited budget who needs to print only letters and occasional manuscripts, the TP-1 would be a good choice. For a business, or for a large-volume writer, the TP-1 might prove too slow. (The hourly cost of someone standing over a printer chugging away must be considered.)

Weighing only 18.5 pounds, the TP-1 would make an excellent traveling companion. (NEC Spinwriters weigh 45.5 pounds.)

If money is limited, and quality output is important, the TP-1 is a good choice.

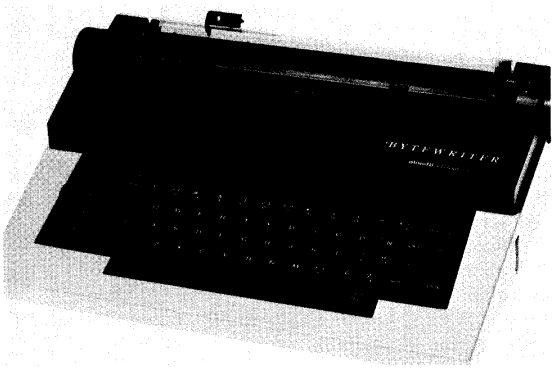
Brother HR-1 (also **Comrex CR-1**)

The Brother HR-1 (also sold as the Comrex CR-1) is a bit faster than the Smith-Corona TP-1 (17 vs 12 characters per second), a bit quieter in operation, and, naturally, costs a bit more. ($1,150, although, like the Smith-Corona, it tends to be discounted.)

As of this writing, this is the least expensive letter-quality printer that will work with WordStar. (WordStar does not have a printer driver for the Smith-Corona, and Smith-Corona has not emulated any of the printers WordStar supports.)

The Brother and the Comrex will do double strike, bold, and underline. They will not do proportional printing, super scripting or sub scripting.

Bytewriter



The Bytewriter is an Olivetti Praxis 30 electric typewriter with an interface that makes it a computer printer. It prints at about 10 characters per second. The cost is $695.

When not printing, the Bytewriter functions like the Olivetti Praxis typewriter it is.

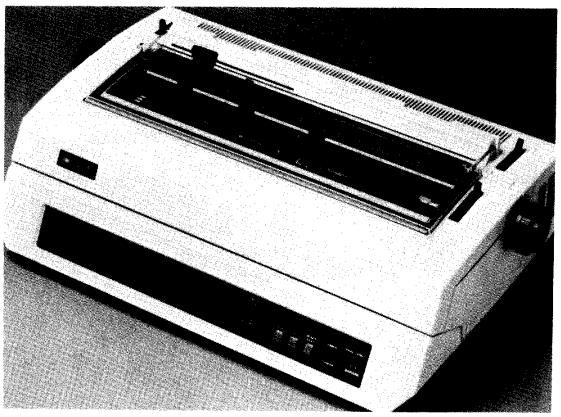
If you need a typewriter *and* a printer *and* you're on a budget, this would be the printer to get.

Diablo and Qume

While Diablo and Qume both make fine printers, if you're going to spend that much money, my suggestion is to buy an NEC. This is based upon the superior reliability of NECs over the years. The NEC is a workhorse.

If, however, you need a special feature offered by Diablo or Qume, or if you can get it for a special price, you will not be displeased with either printer.

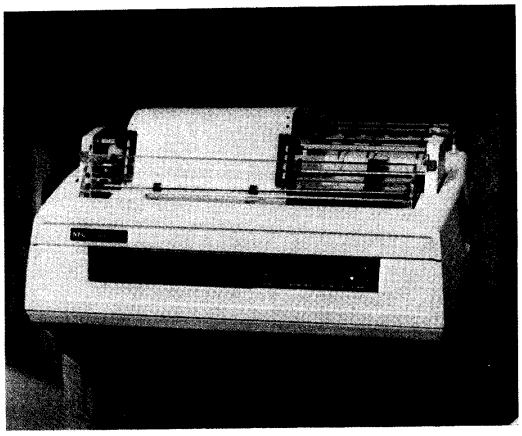
Daisywriter



The Daisywriter is the least-expensive full-featured letter quality printer available. It will do true proportional printing, microspacing, superscripts, and subscripts. The Daisywriter retails for $1,495.

The Daisywriter features a 48K buffer, which allows you to enter the file to be printed into the *printer's* memory. While the printer is printing from its memory, your computer is free to be used for other tasks.

NEC



The NEC Spinwriter is a letter quality printer with an excellent reputation for print quality and durability. Time and time again I have heard unsolicited praise for the Spinwriter from people who know printers and have no vested interest in NEC or any other computer printer.

The Spinwriters print at a top speed of 55 characters per second, the fastest rated speed of any letter quality printer in its price range (around $2,500). A 35 CPS model is available that has all the Spinwriter features except speed, and this retails for about $1,700.

Printers and software are the most frequently discounted part of any personal computer system. Even if a dealer does not give discounts on the computer he or she will frequently take something off the printer.

All the above NEC prices include a device known as a tractor. A tractor pulls the paper through the printer by little pins on the left and right side of the page. This special perforated paper is known as **tractor paper** or **continuous form feed paper**. It's relatively endless so that page after

page can be printed without stopping. It's good for rough drafts and for printing invoices, checks, and so forth.

Tractor paper is usually not of the best quality, but high-quality stationery can be glued or tipped onto standard tractor paper. This allows letter after letter to be printed without stopping to change paper after each sheet. This tipping process costs about $50 per thousand sheets and will work with envelopes, too. It's a good compromise between hand feeding and the expense of an automatic sheet feeder (about $1,500-$3,500).

If you don't mind feeding the sheets you print one at a time, rather like loading a standard typewriter, you can get the Spinwriter without the tractor and save about $200. If you're planning to use the printer for business applications right away, a tractor is recommended. If you might or might not use one eventually, the tractor can easily be added later.

PERIPHERALS

As with anything successful, KayPro computers have their share of "after-market goods." (Alka Seltzer is an after-market product for McDonalds.) People come along and invent items to add on to the computer to make it even better. There is a growing market of these items. What follows is a glimpse at some of them.

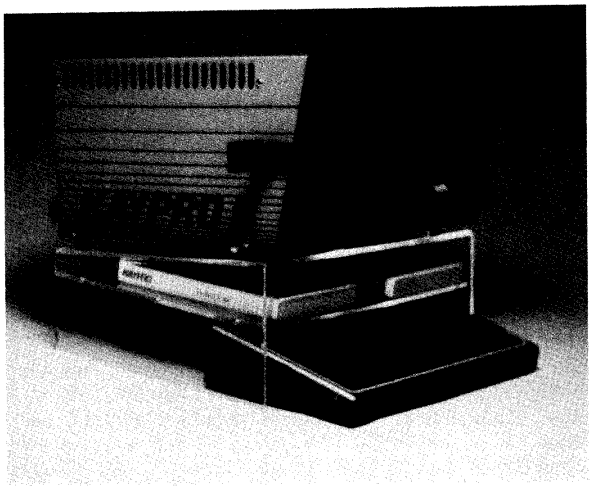
Battery Power Pack

Gamma Research makes batteries and chargers, both AC and DC, to run your KayPro computer "in the field." Their models will give you anywhere from 12 amp-hours to 24 amp-hours. (An amp-hour refers to battery capacity. A 24 amp-hr battery can provide 1 amp continuously for 24 hours or 24 amps for one hour.) The KayPro draws a maximum of 6 amps per hour, so what this means is you can run your KayPro for a minimum of two hours with the 12 amp-hour battery or fours hours with the 24 amp-hour battery. (It's "New Math.") The cost, depending on battery size, goes from $250 to $300.

Gamma Research also offers automobile converters for $160.

Speed-Up Boards

For the computer addict who wants the latest in technology, a firm called Data Management offers 16-Bit boards for the KayPro. Sixteen bits make the execution of commands faster, but because word processing is not as complicated as, say, computing the energy ratios of different beta particles in a gram of radium, there is little difference in speed. A 128K board retails for $499, and a 256K board retails for $799.



Computer and Printer Stands

SGW Enterprises makes a stylish, clear-acrylic KayPro stand which angles the screen toward the viewer

and allows the keyboard to slide underneath. It also has a shelf for your reference cards or instruction manuals. Where desk space is at a premium, the stand is especially useful. SGW also makes printer stands where continuous paper can sit underneath.

Anti-Glare Screens

Advent Products manufactures anti-glare screens for the KayPro II and 4 (the KayPro 10's screen is anti-glare). The idea of the screens is to eliminate the reflections on the screen's glass. Personally, I do not notice the reflections, as I do not notice them on my regular TV set. I also find these screens cut down on character sharpness and contrast. However, if you would prefer sharpness and contrast loss in order to eliminate the reflections, then these screens will do the job. Suggested retail is $37.95.

Adjustable Legs

"How can you use KayPro's detachable keyboard to full advantage when you're using it to prop up the rest of the system?" asks the Computer Center's advertisement. Good question. I use two or three fat books, but it always looks precarious, primarily because it is.

For $19.95, you get two metal runners that attach to the bottom of your KayPro II or 4. (The KayPro 10 comes with its own collapsible stand.) Though it looks like your KayPro is resting on skis, these legs work well and install simply. They collapse when you pack up, and add only one pound to the overall weight.

Newsletter

Though you do not get a decoder ring or an Ovaltine coupon as with some other newsletters around, you do get a membership card when joining the KIPS newsletter and Users Group. KIPS does not stand for "Kremlin Intelligence and Police Service." It means "KayPro Information,

Peripherals and Software Group." (Shouldn't that be KIPSG?) KIPS's newsletter includes a listing of available KayPro-compatible software, tips on computer or program bugs, members' letters and comments, and an offering of add-on items at discount prices.

Also included by joining is evaluation and potential marketing of member-developed software packages and hardware, conversion of your CP/M software to KayPro's format, and free games on disks.

What does this all mean? It means that for $14.95 a year you can be a member of a club and learn as much or more than you ever wanted about your computer.

Highly recommended.

Multi-User Adaptor

Custom Electronics, the same people who run the KIPS service, also manufactures a multi-user adaptor which allows the installation of an additional three to ten keyboards-and-monitors to the KayPro II. Several desks in an office, therefore, could be wired for a small price. However, the system is not intended for simultaneous use. One person on the system locks the other keyboards out.

This system would not be convenient if heavy use by more than one person was needed, but is good for several people who have occasional needs or for instructional situations. The kit is $500, keyboards are $149, and monitors can be as little as $99.

A much more powerful networking system—apparently the most advanced one for any micro-computer around—will soon be offered by KayPro. I won't be surprised to see the system on the cover of InfoWorld or Popular Computing. For $195 above standard prices, KayPro has networking versions of their computers. In consort with Centram Systems, KayPro's network version will allow an office to connect up to sixty machines together. All machines, II's, 4's and 10's, will still work independently of each other, but they can also work in harmony. This is to say, you will be able to read disk files on the disk drives of any other machine, you will be able to

send files to another machine, and even use a printer attached to another machine.

One way an office could use this system is to have one KayPro 10 where often-used letter formats could be stored, and then have KayPro II's at several other desks. When office workers need a standard letter, they could call it to their local station over the network and modify it for their specific use. The copy of the letter could then be stored back on the hard disk or stored locally on a floppy.

"The Web," as Centram calls their system, supports a function which allows anyone on the network to send "mail" between stations. You can check your "mail box" for incoming messages simply by typing the word "mail." If you have no mail, the computer says "MAIL BOX IS EMPTY." Wonder if they'll have electronic postage due.

The Web has built in seven levels of protection and three types of file-locking to assure maximum security for sensitive or critical data.

In the near future, I am told, KayPros will be able to be linked together with computers of other manufacturers and even with mainframe computers. This puts KayPro into a whole new market. For those of you who presently own non-networking KayPros, soon you will be able to have yours modified for probably a little more than $195. Contact Centram for more information.

D-Cat Modem

When it came time to transmit the text in this book from my computer to the typesetter over telephone lines, a modem was needed. I felt duty-bound to try the least expensive modem advertised, which was $99. If it worked I could recommend it. (Modems are very straight forward. They either work or they don't. Nothing very subjective about them.)

Well, for three painful days I tried to get the $99 modem to work on either of two computers I have. Nothing. The people at the $99 modem company were very nice, but everything they suggested failed to work. (I must have heard the man say, "I can't understand it" more times than I heard

Nixon say, "I am not a crook.")

Deadlines were broken left and right. The typesetters were very kind, far more patient than I. Finally I called for help outside the $99 modem company. Brian, my technical ace in the hole, arrived, and plugged in a D-Cat modem. It worked perfectly first time. It has continued to work perfectly throughout the transmission of the entire text.

D-Cat is made by Novation, a company that has been in the modem business for a number of years. They know modems.

The D-Cat is $199. After what I went through with the $99 modem, I can recommend — with not only enthusiasm but gratitude — that you spend twice as much for a D-Cat.

I-PROTECT

If you are concerned about radioactive baddies creeping out of your video screen, here is a solution. It's called I-Protect. (The pun I am sure is intentional.)

I-Protect is a quarter-inch thick piece of lead-impregnated plastic. Somehow, they have arranged it so that you can see through lead. The I-Protect screen is, in fact, quite transparent. The lead, however, blocks all of the x-rays and most of the ultra violet rays emanating from the video screen. (This type of plastic is used for windows in nuclear power plants.)

The only problem with I-Protect is that the plastic is about as reflective as the Joy-washed dishes that you can see yourself in. ("And that's a nice reflection on you.") This may be valuable when writing self portraits but, save that, reflected glare is about as troublesome in the short run as radiation might be in the long run.

The I-Protect people are about to solve this problem by laminating a Polaroid filter to the I-Protect shield. In the near future, and for less than $150, you should be able to have the best of both worlds: protection and Polaroid.

I have no idea how real all this radiation danger from video screens is. It will take years of statistical analysis to come to a conclusion. In the meantime, if all it takes is $150 to avoid becoming a statistic, I find that inexpensive insurance. Like my morning handful of vitamins, I may not

need any of them during a given day, but I take them anyway, just in case.

Keyboard Templates

If the handy reference cards that come with Perfect Software are not handy enough for you, a company called Creative Computer Products have put all the codes for Perfect Writer, Perfect Filer and Perfect Calc on large plastic cards which overlay the KayPro II keyboard. The cards retail for $19.95 each. I find the keyboard templates easier to use than the reference cards, but some people may find all the information spread around the keys distracting.

Head Cleaner

Cleanliness is vital to the correct functioning of disk drives. Not only must the disks be kept free of fingerprints and coffee spills, the read/write heads must be occasionally cleaned for optimum performance.

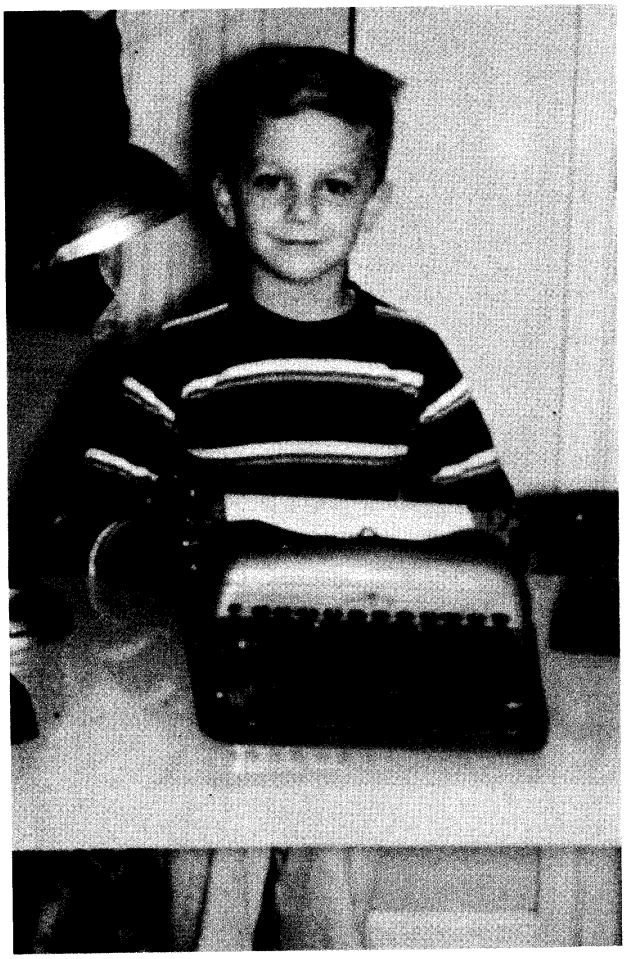
Head Computer Products sell head cleaning kits that are half the price of everyone else's. A normal liquid head cleaning kit costs about $30. The Head kit is $15. I can't seem to find any difference in quality so, as they say on TV, why pay more?

Free Flier

No, this is not a free paper airplane, but a catalog of KayPro add-ons, including those which have been documented in this chapter. For your free flier, send your name and address to:

The Systems House
1736 Whitewood Lane
Herdon, Virginia 22070

Also, may I point out that your local KayPro dealer may have the add-on items you desire. The names listed in the back of this book are not the dealers, but the manufacturers.



The author with his first word processor
Christmas, 1956

About The Author

There's little point in being coy and writing a biography in the third person. "Peter A McWilliams was born in Detroit, Michigan..." That sort of thing.

I was, indeed, born in Detroit, Michigan in the summer of 1949. My first writing was at the age of four. It was more plagiarism than writing. I faithfully copied the squiggles and wiggles in a book I found, having no idea what any of it meant. I showed it proudly to my parents.

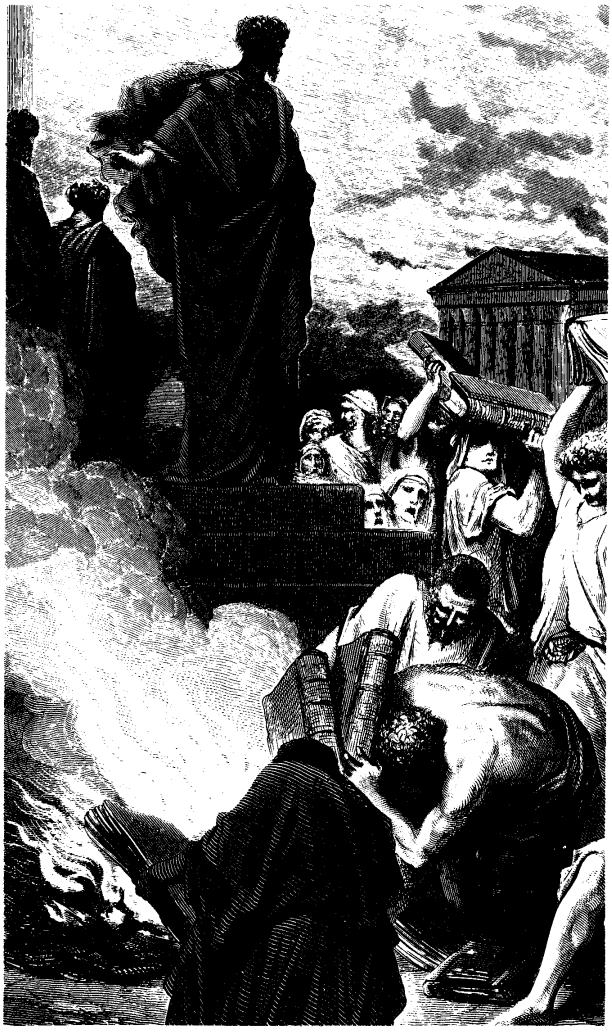
Thinking I had authored the piece—no mean feat, as I had not yet learned to write—mom and dad were favorably impressed. It was, in fact, the most enthusiasm shown me by my parents since the arrival of my younger brother one long year before. Why for even a moment they thought I had written, "Scarlett O'Hara was not beautiful, but men seldom realized it when caught by her charm as the Tarleton twins were." is beyond me.

After learning I did not originate the piece they were duly disappointed, but it was too late. Somewhere in my four-year-old mind I decided to become a writer, and the rest of my life fell into place.

My love of the written word was such that on Christmas, at the age of seven—when most young boys were petitioning Santa for baseball bats and football helmets—I begged for, and received, a typewriter: my first word processor.

I self-published my first book in 1967. I was seventeen. There were two books actually, a gathering of love verse and a collection of poems on society. The love poems sold better. They sold so well, in fact, that a few years and a few thousand books later I had become, "The best selling poet in America under thirty."

And then, in the same dark month, I became thirty *and* I learned that Richard Thomas (John-Boy Walton, for heaven sakes) had sold more poetry than I. For a while I toyed with the idea of billing myself as, "The second-best selling poet in America under thirty-one," but decided eventually upon, "One of the best selling poets in America."



There are currently nine volumes in the poetry series in print, and they have sold more than 2,500,000 copies.

In 1975 I co-wrote and published **The TM Book**. This rode the popular wave of interest in TM to the top of the *New York Times* bestseller list, where it remained #1 for four weeks. Ours was the first book in more than a year to surpass **The Joy of Sex** in sales. I was expecting the headline "TM is Better Than Sex," but it never came.

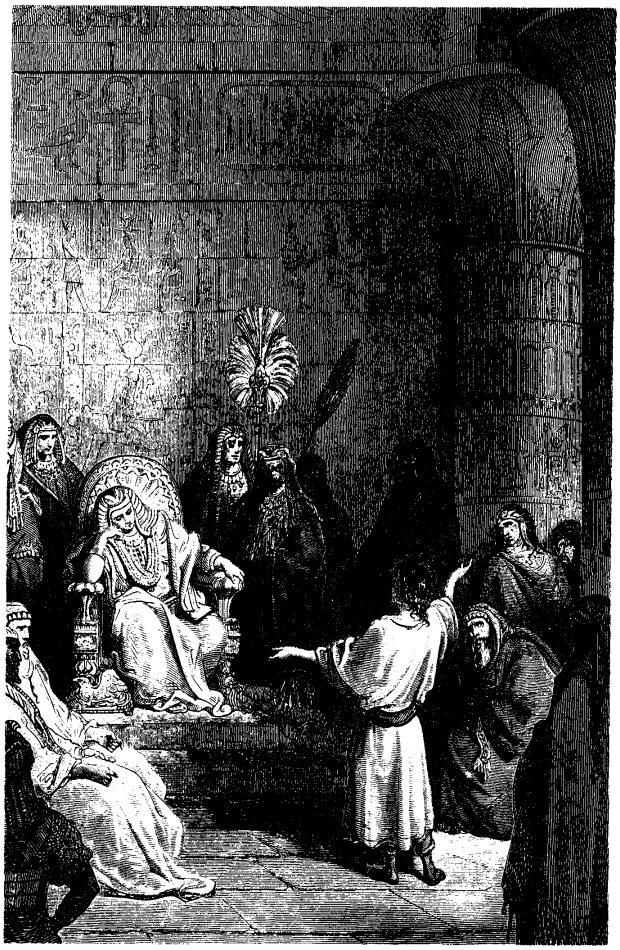
In 1976 I revised—-with a psychologist and a psychiatrist — an earlier book I had written. The earlier book, published in 1972, was called **Surviving the Loss of a Love**. The expanded edition I published as **How to Survive the Loss of a Love**. It still sells 8,000 copies per month.

After a disastrous attempt to publish a line of greeting cards, I repaired to California for a few years to lick my wounds. It was there that I studied at the feet of the silicon masters and learned all that I know about word processing—almost all of which is in this book. **The Word Processing Book** is my first book — other than poetry — to be published since **How to Survive the Loss of a Love.**

The publication in late 1982 of **The Personal Computer Book** earned me the title (bestowed by *The Houston Post*), of "The Dr. Spock of Personal Computers." My word.

All of the above adventures are painstakingly detailed in my autobiography **In Dubious Talent**. It has yet to be published. It has yet to be written. Finding the time to write these few words was difficult enough. Without my trusty word processor I never would have attempted it.

Thanks for reading **Word Processing on the KayPro.** It was my joy to share it with you.



The author extols the virtues of word processing to an attentive AT&T board meeting

Addresses

Here are the addresses of the manufacturers mentioned in this book:

Advent Products
965 North Main Street
Orange, CA 92667
(714) 997-0800
(Anti-glare screens)

Aspen Software
Box 339
Tijeras, NM 87059
(505) 281-1634
(Grammatik & Random House Thesaurus)

Bytewriter
125 Northview Road
Ithaca, NY 14850
(607) 272-1132

Centram Systems, Inc.
P.O. Box 511
Camp Hill, PA 17011
(717) 763-1198
(Networking KayPros)

CompuServe
Available at any Radio Shack
Computer Center
(Data Bank)

Computer Center
1420 North Front Street
Mankato, MN 56001
(507) 345-1750
(KayPro adjustable legs)

Creative Computers
P.O. Box 85152-MB134
San Diego, CA 92138
(800) 231-5413
(800) 523-5441 (CA)
(Keyboard Templates and Dust Covers)

Daisywriter
3540 Wilshire Boulevard
Los Angeles, CA 90010
(213) 386-3111

Data Management
4209 North MacArthur
Oklahoma City, OK 73122
(405) 789-7339
(Speed-Up Boards)

Digital Marketing
2670 Cherry Lane
Walnut Creek, CA 94596
(415) 938-2880
(Micro Link II)

Discount Software
6520 Selma Avenue
Suite 309
Los Angeles, CA 90028
(213) 837-5141
(Software at discounts)

Dvorak International Federation
513 South Pacific Avenue
Suite #2
Glendale, CA 91204

Dynax
333 South Hope Street
Suite 2800
Los Angeles, CA 90071
(213) 260-7121
(Distributor of Brother printers)

Epson America, Inc.
3415 Kashiwa Street
Torrance, Ca 90505
(213) 539-9140
(Epson dot matrix printer)

FBN Software
1111 Saw Mill Gulch Road
Pebble Beach, CA 93953
(408) 373-5303
(Dvorak Keyboard Software)

FYI
Box 10998
Austin, TX 78766
(800) 531-5033
(512) 346-0133
(SuperFile)

Gamma Research
6253 Hollywood Boulevard
Suite #711
Los Angeles, CA 90028
(213) 463-2345
(Back-Up Batteries and Chargers)

Head Computer Products, Inc.
18533 Burbank Boulevard
Tarzana, CA 91356
(213) 342-9600
(Head Head Cleaner)

InfoWorld
375 Cochituate Road
Box 880
Framingham, MA 01701
(800) 343-6474
(Computer Newsweekly)

Kaypro Corporation
533 Stevens Avenue
Solana Beach, CA 92075
(619) 481-4300

KIPS
Custom Electronics
3134 North Palm Avenue
Fresno, CA 93704
(209) 442-1816
(newsletter)

Langley-St. Clair
132 West 24th Street
New York, NY 10011
(212) 989-6876
(I-Protect Radiation Shield)

Lifeboat Associates
1651 Third Avenue
New York, NY 10028
(Software Distributor)

MicroPro International
1229 Fourth Street
San Rafael, CA 94901
(415) 499-1200
(WordStar and other software)

NEC Information Systems, Inc.
5 Militia Drive
Lexington, MA 02173
(617) 862-3120
(Spinwriter letter-quality printer)

Norton-Lambert Corp.
P.O. Box 4085
Santa Barbara, CA 93103
(805) 687-8896
(LYNC communications software)

Novation
18664 Oxnard Street
Tarzana, CA 91356
(800) 423-5410
(213) 996-5060
(Makers of D-Cat modem)

Oasis Systems
2765 Reynard Way
San Diego, CA 92103
(619) 291-7121
(The WORD PLUS & Punctuation and Style)

Perfect Software, Inc.
702 Harrison Street
Berkeley, CA 94710
(415) 524-1926
(Perfect Writer)

Plu*Perfect Systems
P.O. Box 1494
Idyllwild, CA 92349
(714) 393-0411

Popular Computing
P.O. Box 307
Martinsville, NJ 08836
(Magazine)

Puck Software
526 East Smith Street
Suite #294
Kent, WA 98031
(206) 852-8106
(K-Key)

Screenplay Systems
211 East Olive Avenue
Suite 203
Burbank, CA 91502
(213) 843-6557
(Scriptor)

SGW Enterprises
722 Genevieve Street
Solana Beach, CA 92075
(619) 755-8324
(KayPro acrylic stand)

Smartkey
Heritage Software, Inc.
2130 South Vermont Avenue
Los Angeles, CA 90007
(213) 737-7252

Smith-Corona
65 Locust Avenue
New Canaan, CT 06840
(203) 972-1471

The Source
1616 Anderson Road
McLean, VA 22102
(703) 734-7500
(Data Bank)

Supercord
Cord Ltd.
2815 Junipero Avenue
Building #102
Signal Hill, CA 90806
(213) 595-4446
(Cord which connects computers to electronic typewriters)

The Systems House
1736 Whitewood Lane
Herdon, VA 20070
(703) 435-3355
(Free Flier)

WordPlay Document Processing Center
9037 Melrose
Los Angeles, CA 90069
(213) 859-1221
(They rent word processors by the hour)

WP News
211 East Olive Avenue
Suite #210
Burbank, CA 91502

For information about **The McWilliams Letter** ("Some's News, Some's Not"), an informal ten-times-per-year update on the world of personal computers, please write to:

Prelude Press
Box 6969B
Los Angeles, California
90069

We'll send you a "descriptive brochure" (as they say in the travel industry).

Thank you.

The Pharaoh's daughter finds a word processor floating in the stream.