

Forum

ECONOMIC AFFAIRS / Barbara R. Bergmann

A Threat Ahead From Word Processors

THE rapid spread of low-cost word processing and computing equipment represents a technological revolution that carries the potential of far-reaching changes in the structure of the labor market and the economy. This electronic revolution in the office may change who does what sort of work, create some jobs and eliminate others, and consequently affect pay scales considerably.

There is a distinct possibility that in the next decade or so word processing will simply eliminate a high proportion of the jobs for typists, secretaries and other clerical workers. Because about 20 percent of American jobs are broadly classified as clerical, the impact of such a change would be enormous.

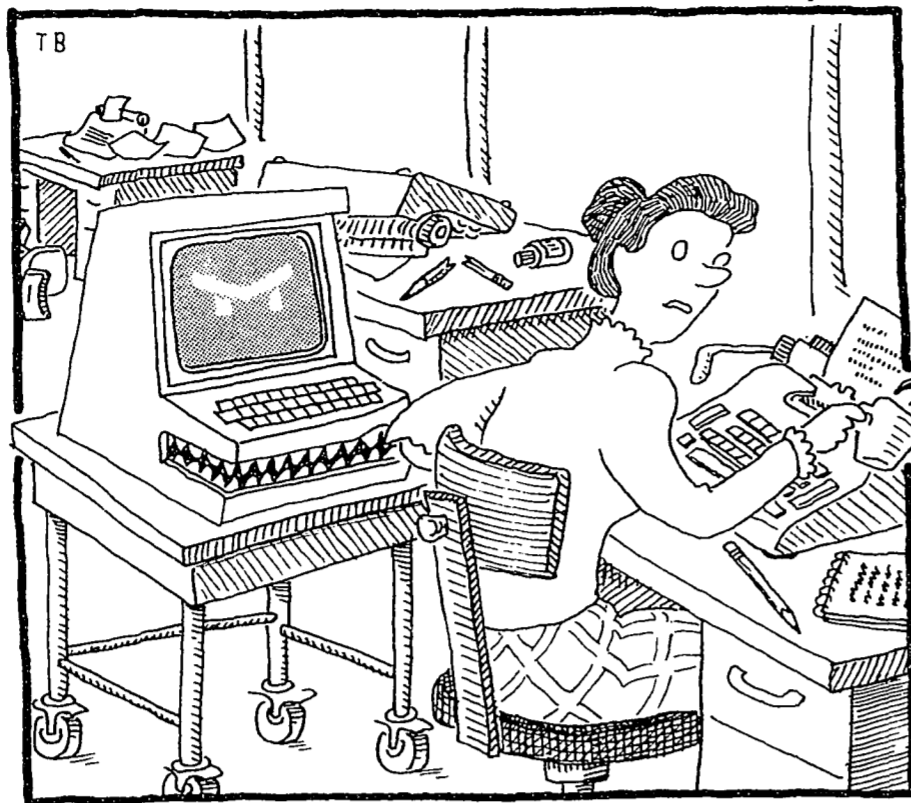
Esmond Lyons of S.R.I. International, the research firm, estimates that already there are about 2.5 million electronic work stations in white collar settings, and he predicts the number will grow to 17.5 million by 1990. That is more than the number of electric typewriters now in place, and virtually all of the work stations can be programmed for word processing.

The feature of word processing that is of most telling economic importance is that a text can be corrected without having to retype the parts that are not being changed. When a word-processed draft has gone through the correction process, the author has only to check the changes.

Because proofreading is a chore to high-status workers, they are pushing the purchase of word processors. Word processors, some of which are already selling for less than \$3,000, also increase the productivity of people who specialize in typing, because the work of completely retyping second and third drafts is replaced by less time-consuming editing. This is of some importance in the shorter run because it promotes the spread of the technology.

Electronic editing does more than cut down on proofreading and retyping, however. Of far greater importance, it completely eliminates the need for a typist who is meticulous and skilled enough to produce a con-

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ventionally typed page that looks good and is error-free.

This means that if the professional, technical and managerial authors type their first drafts directly into word processing machines — even in a bumbling, inaccurate way — they are 95 percent of the way toward producing perfect copy. If enough of them learn to do it and are willing to do it, the typing specialists will be obsolete.

If a manager or a professional has prepared a handwritten or roughly typed draft or has dictated one, it would be a poor use of that person's time then to type it into a word processor. However, for every author or letter writer who can be trained and persuaded to compose his or her first drafts directly into a word processor, an office establishment will save from one-third to one-half the salary of a full-time professional typist, with little or no loss of professional time.

If this were to happen on a large scale, the initial effect would be to put downward pressure on wage rates,

particularly wage rates in those occupations in which women predominate. The share of wages in the national income would decrease and the share of profits would increase.

Will high status people be willing to type their own documents in the future? Many journalists and some academics are already doing so. Harvey L. Poppel, senior vice president of Booz, Allen & Hamilton, the consulting firm, says that 58 percent of managerial employees already admit to knowing how to type by touch, and about 25 percent are willing now to type their own texts.

A GREAT deal of resistance can be expected, however, particularly from older men. This is one of those areas in which economic factors are at war with sociological factors. For the better part of 100 years most jobs that required typing carried low status and low pay.

Though the stigma runs deep, the spreading use of the computer for tasks other than word processing may

succeed in removing the stain from the activity of typing on the job. The writing of computer programs is being taught as early as the sixth grade. Whole populations are being introduced to the use of programmed software. These uses of the computer make touch typing a convenience. The skill has already been rechristened "keyboarding," with all the inviting connotations of the computer age.

The promised advent of machines that produce written text from oral dictation will further reduce the number of jobs for typing specialists. Mr. Poppel sees these as only five to 10 years away.

If the logic of technology wins out, it soon will no longer be possible for millions of women to make a living by specializing in typing someone else's texts. Is this good news or bad news? The answer depends on whether traditional bars to integrating men and women into the same occupations are coming down, and on whether enough new jobs are opened up as typing jobs disappear. If we could be sure of both of these, then we would have to regard the elimination of specialists in typing as a very good thing.

Technological advances increase output per worker, frequently by reducing the number of boring and dispiriting tasks that human beings have to do. At least as frequently, though, they have eliminated the skilled worker as well and made the task more boring by dividing it into innumerable steps, requiring next to no skill.

The technological advance represented by word processing will be a net benefit if a good fraction of the women freed from the boring and dispiriting, albeit skilled, job of typing someone else's text over and over again can be integrated into more interesting jobs.

People who specialize in office organization, such as Mr. Poppel, tend to be optimistic that enough new and better jobs will be created. If, however, women have to move into even worse jobs at even lower pay, and if there is a severe overall shortage of jobs, then the spread of word processing will create large problems of dislocation, and will increase the burden of poverty and dependency among women.

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Computerization as the independent CAD/CAM leader is spending almost as much on new-product development as it was grossing six years ago. National Semiconductor has just announced a 16/32 bit microprocessor set—five of which can emulate a VAX-class supermicrocomputer. VAX-developer Digital Equipment is speeding up its own systems and introducing a highly sophisticated \$5,900 word processor, while Schlumberger's Fairchild arm has formed a partnership with National to introduce peripheral support devices for the new microprocessor line—which cost \$35 million to develop. Today's central speculative question in hi-tech sectors is whether new products coming on stream will alleviate interim recessionary profit pressures before continuing nervous market evaporation harms share-price structures; and in weekly "Escalating '80s" reports we're examining short-side traffic jams which in key cases may hold the line or even generate fresh advances while turnaround engineering continues at the corporate level. Newest report chart-illustrates our CVN and NSM projections; and we'll be happy to send you one plus further complimentary studies upon receipt of the coupon.

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