

COMPUTER WOMEN *by Maureen Eppstein*

"APPLICATIONS are invited from women for posts as programmers." The words are new for the scientific appointments pages of the Sunday newspapers.

Only in the past few years have computers become standard equipment for large industries and commercial concerns. And only in the past few years have the universities in Britain turned out women science graduates in any appreciable numbers. This coincidence has provided a good opening for women in a field where demand far exceeds supply, and probably half the programmers, and even more of the computer operators, employed in Britain now are women.

The programmer's job is to provide the computer with a set of instructions broken down into their simplest possible form. Most computers have to be asked questions that can be answered by yes or no. For example, part of a typical instruction might be: "Is this number larger or smaller than a certain other number?" The computer must be offered alternative instructions, such as: "If it is smaller, add one to it; if it is larger, hold it in your memory store." Several shorthand code languages have been developed to make these detailed instructions simpler to write. There are several methods of transmitting the instructions to the computer, but the most usual is by means of punched cards or punched paper tape.

This is where the computer operator takes over. Her job is to tend the computer, to keep it fed with punched cards, and to see that its dials are correctly set.

The programmer and the operator between them can replace a team of clerical staff. By buying a computer—current price between £80,000 and £500,000—and by seeking expert

help to programme and run it efficiently, firms can do away with all the day-to-day drudgery of the office, and even save money, as the computer can do several jobs at once. It can be made to remember when Mr Jones's premium falls due, or can analyse massive statistics on insurance trends.

A computer operator needs to have "A" level maths. Programmers are usually recruited from the universities. Maths, and science graduates are preferred for scientific work, as programmers need to understand the calculations that they are asking the computer to do. In many cases they will also require to take a postgraduate course in programming. But for commercial work graduates are accepted from all disciplines.

The main qualification is that of personality. It is a job that requires patience and tenacity and a common-sense sort of logic. Much of the work is tedious, requiring great attention to detail, and this is where women usually score. Many find the job boring; others become fanatics about it.

One of the fanatics is Mrs Steve Shirley, of Chesham, Buckinghamshire. A mathematics graduate who considered herself "merely competent" at research mathematics, she has found in computer programming an outlet for her artistic talents in the working out of logical patterns. She describes the qualities required as "the ability to see both the wood and the trees."

Now retired, with a young baby, she has found that computer programming, since it needs only a desk, a head, and paper and pencil, is a job that can be done at home between feeding the baby and washing nappies. She is hoping to interest other retired programmers in joining her in working on a freelance basis.