

DURING the last couple of decades there has been extensive automation of the packing lines in the food and pharmaceuticals industries. Most of these changes are taking place in the packing sections, where a large number of women are employed. Women form a section of the workforce especially hard hit by the current wave of automation. A leading member of the Parke-Davis employees' union suggested this study of the effects of automation on the workloads of women workers.

In the course of the study, we had discussions with women workers in 20 pharmaceutical and two biscuit companies. The unions arranged for us to visit the plants and observe the actual operations in the packing and injectibles departments. We also held discussions with the union office bearers and, wherever possible, with the managements. Finally, some of the workers who had helped with the study came together to discuss their work experiences and potential demands.

The Work Women Do

Women work at different jobs depending on the level of mechanisation of the packing lines.

Some women work on purely manual jobs, manually packing boxes, tins and cases, hand labelling, counting and filling tablets into bottles, checking. This work is largely repetitive. Some operations like case packing require considerable muscular effort. On conveyor belts, there is great pressure due to the workers, lack of control over the pace of work, which is often excessively fast.

A worker says: "Hand labelling is very fatiguing. We pass the labels by hand over a gum pot covered with a cloth or a roller. We paste the labels manually on the bottles. We have to work so fast that sometimes one of us sticks only one edge of the label on the bottle and the other adjusts the labels on the bottle and sticks the rest of the label."

Making The Workplace A Better Place For Women

Another comments: "Manual checking causes a great deal of eye strain. We pick up one or more bottles, depending on the size, shake them or turn them upside down. We view the bottles against a strong light, against black and white backgrounds to detect foreign matter. We check more than a bottle a second."

The other work is also strenuous: "Case packing involves making cardboard cases, inserting the cartons full of bottles into the cases, closing the cases and taping them. It is very tiring. Our hands, feet and shoulders ache. There should be more rotation and more workers." Says another: "Biscuit tin packing is extremely, exhausting. We have to lift the heavy tins hundreds of times every day, day after day."

Some women do manual jobs on hand or foot operated machines. The work done may be manual filling of liquids or ointments, manual sealing of bottles, tins or vials, manual spooling of adhesives. This sort of work is also repetitive and has to be done continuously. There is a moderate degree of muscular exertion but the same muscles have to be used continuously.

"In the manual spooling of adhesives, the operator mounts rolls of plaster on the machine and pulls by hand till the plaster reaches the spool. She then has to stand

on one foot, and pedal with the other to spool. At the same time she guides the plaster and finally cuts it when the required length has been reached. If the roll is tight, continuous pulling by hand is very strenuous. Continual cutting results in corns. Carrying rolls causes chest pains."

"In the hand sealing of vials", says another worker, "we put the rubber plug and the metal collar manually in the mouth of the bottle; then we hold the vial in place on the sealing machine and seal the vial by pressing a hand lever or foot pedal. Hands and legs ache due to the foot pedal sealing."

Women also work at jobs on semiautomatic machines, filling liquids, ointments and tablets into bottles, optically checking and labelling bottles.

These jobs are highly repetitive, and sometimes have to be performed very fast to keep pace with the machine. The muscular effort involved is low compared to the purely manual operation but some strenuous, operations remain like the filling of heavy bottles. Some operations like checking require very high concentration.

"In semiautomatic optical checking, the bottles pass on the belt in front of the checker with a strong light shining through them. We have to remove the rejects by hand. It is difficult to keep pace. We need more checkers."

"In semiautomatic filling, the flow of the liquid stops automatically after the required amount is filled, but we have to hold the bottles. When the bottles are big and heavy, the filling and sealing operations are very tiring. Our hands and feet ache. The filling machine operator also has problems keeping up with the speed of the line."

Women also work on feeding the automatic machines. They feed tablets into strip sealing machines, ampoules or vials into automatic labelling machines, biscuits into packing machines, ointments and tubes into filling machines. This kind of work is moderately repetitive. The muscular effort involved depends on the weight of the material, the height of the hopper and the speed of the machine.

"The workload increase is hard on the women who fill the hopper. The hopper should be larger so that the filling frequency is less." "The hoppers are so high that each time they have to be filled, women have to stand on stools to do it. There is constant danger of falling down with the heavy tray."

Women also operate automatic machines which perform filling and sealing operations. These jobs are not repetitive and there is almost no muscular effort involved. However, continuous attention is required. There is considerable nervous tension when several operations have to be supervised simultaneously. "When only one operator has to supervise both the filling and the sealing operations, the work becomes very exhausting"

"The filling operator has to stand all day. One more operator is needed."

Automation Of Packing Jobs

Automation has resulted in the reduction of packing materials and simplification of the packing process in some plants. There has also been a systematic increase in speed. In some lines, the number of women has been reduced. In a few cases, this reduction has occurred

without any changes in machinery. The general outcome of all these changes has been a fantastic increase in production accompanied by a clear reduction in the number of women workers.

On the liquid orals line in the seventies with the exception of a few plants like Pfizer, even filling was done manually or was semiautomatic. Today, most plants have automatic filling on the liquid oral lines. The operation of capping and sealing has now automated in the majority of plants.

Optical checking is one of the least automated operations. Only May & Baker



-Ira

and Parke-Davis have semiautomated optical checking. Labelling operation has been automated in 16 out of the 22 plants we studied. On the other hand, case packing and box packing are automated or semiautomated in only three plants, even though these operations involve heavy manual work.

This suggests that the operations at the start of the packing line, the operations which determine the speed and pace of the entire line, are automated while the other operations which follow the filling

and sealing are still manually done. This has specific implications for the women doing these jobs.

When operations are automated, there is almost always a reduction in the physical effort required to do the work. Sandoz workers said; "After the automatic machines were introduced, work has become easier. Before automation, shoulders used to ache and there was more strain." Even if the speed of the machines increases, adjusting and supervising a machine which automatically fills and seals bottles involves less physical effort than holding the bottles and pressing a lever or pedal to fill each one.

There are, however, some cases where operators have trouble with automatic machines when two or more operations which were previously separate are now combined and given to the same operator: "Now in our liquid orals line, a single operator has to attend to filling as well as sealing. We have to check that the volume of liquid is correct, fill the caps into the hopper, check that the sealing is taking place properly, all this at high speed", says a Parke-Davis worker, "The operator suffers considerable tension having to cope with all the tasks, and also suffers from exhaustion because she has to stand all the time."

Her tension and exhaustion will be reduced considerably if there is an additional operator so that the tasks can be shared, and if the job is rotated among all the women packers on the line.

A Glaxo worker says: "On our Betnesol ampoule line, there has been an increase in production from 22,000 to 60,000 per shift in just seven years. The labelling machine is a faster one. Yet there is only one label checker. The result is that the label checker feels dizzy due to the speed of work."

A worker at Burroughs Wellcome says: "On the Antepar line, production increased from 8,000 to 50,000 in a period of 11 years due to the introduction of

automatic filling and labelling machines. The optical checkers however increased from two to only four.”

In these cases, checking and packing have remained manual while the preceding operations, of filling, sealing and labelling, have become automated or newer and faster machines have been introduced and there is a greater bulk of products to be packed. Unless the number of packers is correspondingly increased, their workloads will increase as has happened in many of the lines.

In short, when only preceding operations like filling, sealing, labelling, are automated, the effects on those directly affected are in most cases, a reduction in workload, a considerable increase in production, and a reduction of workers on each operation. The effects on those not directly affected are in most cases, an increase in workload, and an increase of workers on each operation.

Designed For German Men

“These modern machines that are brought are good and save a lot of effort. But they are made for tall, big German men and then are used by smaller Indian women”, says a worker in E. Merck. Perhaps the most striking example of inappropriately designed machinery is the new capsule filling machine in Parke-Davis where women filling the hopper found it so high that the management had to build platforms for them to stand on. The rings of the machine are also too heavy for the women.

In Hoechst, “On the optical checking machine in the Baralgan oral drops line, the light shines straight into the operator’s eyes, making checking very difficult. Our eyes hurt a lot.” At Geoffrey Manners: “On our Anacin line, the strips emerge on the belt in lumps which the packers have to disentangle. In the resulting confusion, our hands get cut on the sharp edges of the strips. Our arms and shoulders ache.” The Anacin strip packing line, where three machines feed into one single packing line,

reflects a completely irrational organisation of machinery.

Problems of this sort could be minimised or avoided altogether if those who actually work on the packing lines were to have a say in the design and layout of the machinery. Women workers have concrete suggestions. A worker in Glaxo

been to get management to sign a “no retrenchment” clause. However, this clause covers only permanent workers so temporary workers are the first to be hit.

Management also uses other methods gradually to reduce the workforce, for instance, they introduce voluntary retirement schemes, they leave vacancies



says: “Right now, the materials to be taken to every department have to pass through the liquid packing section. Many people have barely escaped severe accidents. The slope should be built as it is in the medical department.”

Workers Thrown Out

In Pfizer, Richardson, and Parle, management has declared that due to automation of the packing process, large numbers of employees are surplus. “In our company”, says a Parle worker “this problem was solved by throwing out several hundreds of temporary workers, mainly women.”

The most widespread union response to increases in the level of automation has

unfilled and so on. Thus the total strength of permanent employees has considerably in certain companies, from 2,414 in 1973 to 2,056 in 1983 in Hindustan Antibiotics, from 1,436 in 1975 to 1,035 in 1983 in May & Baker, from 1,531 in 1976 to 1,089 in 1983 in Pfizer.

A related tendency is the absolute and relative decline in number of women employed in some of the companies. The most dramatic decline has taken place in Roche. In 1962, there were 85 women in a workforce of 150. In 1983, there were only 32 women in a workforce of 350. The decline is from 67 percent to nine percent women left in the labour force.

Another reaction of management when

they think workers are surplus is to keep shifting them from one department to another. A group of women packers in Pfizer voiced their frustration at this loss of identity experienced when they are converted into "floating staff": "Every day we are sent from one line to other like *badlis*. We get all the worst jobs and people treat us like outsiders, although we have worked here for 25 years or more."

Who Creates Surplus-Machines Or Managers ?

A second, less widespread union response to increasing automation is opposition to the installation of machinery itself. Most machines, especially those that reduce fatigue, are welcomed by the workers. And it is obvious that it is not machinery that renders the workers "surplus" but the use that managements make of the machinery. The women who work on the new machines could, with the help of their unions, challenge the decisions that managements make about the ways in which machinery affects the workforce.

Is it true that workers really are surplus? If they are, then why is it that in Richardson where over 40 workers are declared "surplus", a major grievance of the workers, especially of the women, is that their working hours are too long ?

"It is dark when we leave home in the morning and dark by the time we get home in the evening."

In Pfizer, which is supposed to have a very large surplus, workers say: "On Corex line and Becosules capsule line, the work is very tiring, especially case packing. We need more people and also rotation."

The work that used to be done in the company is now contracted out. Thus the problem of "surplus staff" exists only when you accept certain ways of organising work and certain forms of decision making. Why should people have to work nine hours a day when the number of workers is supposedly more than the amount of work ? Why should managements be allowed to contract work outside when they continue to complain about "excess staff"?

Why should some people exhaust themselves every working day just because management has decided that only a fixed number of people will perform each operation ?

Union Attitudes

The initial response of the unions to the issue varied from welcoming it as an important union issue: "Women are the most affected by the increase in workloads on packing lines. Women in any case bear a double burden of work so it is necessary to think of concrete solutions to the problems", to patronising indifference : "Workloads of the packing girls ? Do they work at all ? Where is the question of their being overworked ? If you want to talk to some of them, of course we will help you."

The unions helped the study in various ways from arranging plant visits in office time to arranging special meetings of women workers after working hours or introducing us to the women so that we could interview them in their homes. Office bearers of the unions were often present during our discussions with the women. Some of them said that they found the discussions useful as they had not previously heard about these problems or considered them as bargainable issues. A few unionists found it uncomfortable to admit their ignorance and said the women were exaggerating their problems.

When we gave the typed interview sheets to the unionists for their review, a few more attitudes were discernible. Some unionists felt confident that the women would give the correct information, as it was they who were working on the jobs and experiencing the problems. Some others were hesitant in the face of management dissatisfaction with the data and requested us to withdraw the information, saying "The image of the company will be spoiled." Some thought that the management would act tough with the union if the union consented to the publication of such information.

The underlying indifference of some unions to the issue of increasing

workloads of the women packers may perhaps be based on the feeling that unions are merely concerned with bargaining over pay and related employment conditions. This attitude and the practices related to it express an industrial relations situation wherein management "prerogatives" are strongly emphasised though not always explicitly. Union and management share the view that certain issues such as introduction of machinery, fixing of grading and production standards, allocation of work, are no business of the trade unions but are purely management functions.

What Women Feel

When we discussed the question of union attitudes with some of the active women, they seemed to react in two ways. Some of the women seem to agree with union office bearers in considering the union only as an agent for bargaining over pay issues. The unions continue to function according to this conception while the women too do not go to the union with any other problems or suggestions. Thus the status quo continues.

How then do the women deal with their problems on the shopfloor ? "We fight with the supervisor or the management over every small issue. We have to." Another says: "Every day we come in the morning and check the machine speed. It is placed higher than the speed at which we are supposed to work. So we get them to reduce it."

It is clear that shopfloor problems are deeply felt and are dealt with. But the discussion of these problems and their solutions does not become generalised amongst all the departments let alone all the plants. Each problem is dealt with or not dealt with piecemeal, depending on the relative strength of the set of workers in a particular department.

Some women reacted by saying : "The unions have not paid sufficient attention to vital issues. They don't think such issues are vital. Look at the timings of union

meetings. How can women attend? Women are, in any case, discouraged by their husbands. If the union meetings are held at difficult timings, and vital issues are not discussed, how will women come?"

And if women do not come, how will issues that affect them be taken up? This seems to be a vicious circle.

Some Suggestions

In the course of discussions with active women unionists who work on the packing lines, certain suggestions were made. One was that shopfloor departmental committees of workers from different lines be formed. The union committee could have systematic weekly meetings during working hours with these departmental committees. Each committee could vote its own representatives into the union committee.

Besides, women could form a separate women's committee which could meet at times convenient to the women involved. The women's committee should also send representatives to the union committee. Women who represent an already discussed opinion of a group of women may be more effective in guarding women's interests than a couple of women who are voted as part of the union leadership in their individual capacity.

Some demands that women workers could ask their unions to press for were also suggested :

1. The company should be made to agree to maintain a certain level of employment of workers and a certain proportion of women over an agreed period of time.
2. Reduction of the working week to 40 hours, and to 35 hours in companies where it is already 40 hours.
3. Employment of a larger number of workers on all operations where workers experience fatigue.
4. Recalling of all work contracted out.
5. Where there is a problem of "surplus" staff, four shifts of six hours' duration each could be instituted, and women could be employed on two out of four shifts, instead of on one out of three, as at present. Thus the positive potential of automation would

be realised better, especially for women, as more strenuous jobs have become lighter and the range of jobs that women can do has potentially increased.

If such demands were taken up and implemented the general level of employment as well as that of women



would not decrease, and also work would be made better and more rational.

The Quality Of Life

Any device which replaces physically strenuous and arduous work with work that is lighter and less unpleasant is potentially a means of emancipation from long working hours, industrial fatigue, coercive work routines and rigid sex stereotyping. Such devices are always more than welcome to the people who work on them and who benefit from them.

Whether automation ever has this emancipating effect will depend on the way it is introduced which, in turn, depends on how much control the people who actually work on the machines have over their introduction and use. If the changes made are completely under management control, the chances are that workloads will increase, employment will decrease and people will lose any sense of stability in their jobs resulting in more stress and strain.

So far, the unions have been slow in taking up these issues. If the workers, particularly women, since they are worst affected, are to have some control over the automation process some mechanism has to be introduced at the departmental level.

Representatives of each department and of sections which are most affected, namely, women must be integrated into decision making. These representatives could form a committee whose task would be to recommend priority areas for automation, like strenuous or hazardous operations, draft the most acceptable type of rotation schemes, fix workload limits for each operation as the basis for calculating the speed of the process and the number of people to work on it, examine and suggest design of equipment so as to ensure maximum ease of operation, make proposals for redeployment so as to avoid the creation staff surplus.

These changes in the structure of the bargaining mechanism in the plants would bring about a change in the bargaining perspective. Women have realized that an improvement in economic level should not be offset by a decline in the duration and quality of life : "We will age faster if work in such conditions. What is the use of getting better pay now if we become incapable of working in a few years' time?"

Most women workers in our country are in jobs and industries where the pay and the general working conditions are subhuman. In the industries we studied, women are relatively better paid and their working conditions are above the average that is available to the mass of women.

Yet their problems are indicative of the problems that women in modern industries would face in the future. Our exploration has been limited in many ways. Yet our partial survey of the situation suggests that though pay issues are important and will remain so in future too, they should not be emphasised at expense of work issues which affect all workers and also affect women in a very specific way. □