their individual seating needs. It can be adjusted in all directions, the height and angle of the arms, the angle of the feet to the back of the chair, the height of the legs, and the front in relation to the back can all be adjusted. It was built essentially for assessment but it was found in using it that it became a valuable piece of equipment within the department; and if a manufacturer could produce it at a reasonable cost it would be a useful product, but so far it has not been possible to develop this idea. An industrial designer has studied the bath requirements of disabled people in the bungalow, by building a bath and lavatory out of polystyrene blocks with the idea that a series of experiments should be carried out. He has also made a prototype of a walking aid incorporating a parcel tray and a little shelf above, also a padded seat on which the disabled person can sit.

It is said that we are a nation of gardeners and there is no need for the disabled arthritic person to be deprived of the pleasure of gardening. Greenhouse cultivation is an interesting and rewarding hobby and can also provide occupation, with financial benefit. A raised flower bed can be made from paving slabs; the resulting container filled with earth brings the garden up to a more convenient level. At Mount Vernon there is a small amount of grass which all last summer was cut by various sorts of powered motor mowers, used by disabled people, it was necessary to reduce the speed of some of them so that they did not run away with the operator, but most of them the patients could manage. The manufacturers of garden tools have been interested in the studies that have been going on at the hospital, and have sent their designers down and as a result have now produced modifications to their standard tools with the disabled in mind which now makes gardening easier for anybody, not only the disabled. At the Chelsea Flower Show last year the Central Council for the Care of the Disabled had an exhibit of gardening for disabled people; including some wheelbarrows which are very useful as they serve as a walking aid having two wheels, and can be wheeled around with one hand. Bottle gardening is another cult of the moment, and can provide an interesting hobby for disabled people.

Rehabilitation and resettlement of patients suffering from rheumatical disorders

J. W. Daniel (*Resettlement officer, Royal National Orthopaedic Hospital, Stanmore*)

If I could take up Dr Ansell's point on motivation: early work assessment and plans for resettlement are particularly valuable for patients who have disabilities that are complicated to assess and understand, particularly by the layman, and are variable, with a prognosis that is difficult to predict.

All patients that come into hospital are initially concerned about their future. The majority are worried about their jobs—this is understandable. To the majority of working people work is something they get involved with at about 15 years of age when they leave school and, all things being equal, this involvement will continue for the next 50 years until they retire. To them work is a means to an end; it provides for the everyday things in life. Their assessment of this is measured in terms of wage earning ability. What is the maximum that they can expect to get in return for their labour and skill? It follows that when they leave their normal environment and are

admitted to hospital they think of their new disability not so much in terms of loss of a given function as in terms of the effect of that loss on their future as a wage-earner. Unless this disabled workman is given a practical goal to aim at from the moment he starts treatment there is a grave risk of a general lowering of morale, loss of initiative and ultimately lack of co-operation and interest in recovery. At the Royal National Orthopaedic Hospital we consider this is not a satisfactory state of affairs and it has been common practice at our hospital for many years now to provide a service to the patient, to the community and to industry. To this end practical plans for the patient's resettlement are put into operation as soon as possible after admission to hospital. From the outset treatment is concentrated towards this end, the ultimate resettlement of the patient back to work and back at home. This in turn necessitates co-ordination of the hospital departments, liaison between the hospital and industry and other outside agencies—in fact a rather specialized approach to the problem.

Example

A young man, 21 years of age, presented approximately eight years ago with a swollen, painful right knee. He was referred to our rheumatologist and director of physical medicine who diagnosed an early stage of rheumatoid arthritis. I was called in to the consultation, advised of the course that the disease might be expected to take and instructed to make arrangements for the patient's resettlement. This young man was a fifth-year apprentice monotype caster operator in the printing trade. His job involved lifting castings weighing from 9lb. to 56lb. The castings are stacked from the floor to the ceiling. His normal job, therefore, would be standing all day, bending, lifting heavy weights, climbing ladders—in fact everything that according to Dr Brewerton would ultimately be beyond his physical capabilities. The obvious type of work for this young man, if the training he had received in his apprenticeship was to be of any use to him, would be that of monotype keyboard operating. I visited his firm to discuss this idea with his employers but unfortunately I drew a blank because the firm carried no keyboard work. Another problem I encountered was the fact that in order to take up monotype keyboard work he would have to leave his present union, the Monotype Caster Operators' union and apply for membership to the National Graphical Association. In order to obtain satisfactory resettlement, therefore, three things would have to be done:

1. He would have to obtain the appropriate union card
2. He would need training in keyboard work
3. He would have to find a job.

As a result of the good relationship that the hospital has built up over the years with the unions all of this was achieved within a month of his first attendance at the hospital, whilst he was still under treatment. The appropriate union card was issued to him by the National Graphical Association two weeks after I applied for it. Following this and with the help of the union concerned he was enrolled for a three-month course of keyboard operating at Monotype House in London. Needless to say this not only gave the patient a great sense of security and reassured him about his future, but also gave him every incentive to get started. Shortly after this we were able to get him the promise of a job that he was to take up immediately he finished his course of training at Monotype House. Everything went according to plan. At the completion of his treatment he went straight to Monotype House, completed his keyboard operating training and took up his job that had been arranged for him. This all happened approximately seven-and-a-half years ago. In the first two-and-a-half years he was at work he lost 82 days because of his complaint. I had already been warned by Dr Brewerton of the likelihood of remissions and exacerbations in the early course of treatment and had been able to plan accordingly. At the time when I was negotiating a job for the

patient I was accompanied by a trades union representative and we were able to explain that this sort of thing would be likely to occur and the unions were able to give a guarantee that at any time when the patient was likely to be off three days or more he would be given temporary cover. This meant that although the patient was away for 82 days in the first two-and-a-half years the production of a department was not made to suffer. Eighty-two days off sick in two-and-a-half years may sound a lot but it should be remembered that two-and-a-half years on a five-day working week is 650 working days. This meant that a young man with early stage rheumatoid arthritis remained in production work for 568 working days. In the last five years at work he has never had to have a day off because of rheumatoid arthritis. He is paid the top rate for the job which is approximately £32 a week.

The work of the hospital rehabilitation officer

As hospital rehabilitation officer my main function is to provide a direct link between the hospital and industry. In fact I now spend approximately 50 to 60 per cent of my time actually in industry on the shop floor working closely with management and unions. The rest of my time is spent in the hospital attending ward rounds, clinics and conferring with doctors, patients, nursing staff, physiotherapists, occupational therapists, medical social workers and all members of the rehabilitation team. Patients who will be referred to me are those with a prognosis of a disability which might ultimately have an adverse effect on their employment prospects. Once a patient is referred I will go and see him in the ward, talk to him about his job and at this stage we will get down to the fundamentals about the work—what the job entails, what skill he has and also discuss his hopes and his fears. By discussions of this kind at such an early stage of treatment the patient is being given an opportunity to make a clear and positive assessment of his own future working prospects. Experience has shown us over the years that patients really welcome this opportunity to take an active part in working out their own future. More important he is able to gain confidence from the fact that in many cases his future is not anything like as bad as he had originally envisaged; he is in fact being provided with the stimulus to co-operate with treatment. It follows that as his future becomes more assured so he will get more incentive to return to work. Following this interview with the patient I will visit his place of work and my initial interview with the firm is an offer on behalf of the hospital to place our combined knowledge and expertise at the disposal of the management for the purpose of getting their employee back to full employment capacity—this after all is what firms are interested in, production. Furthermore as this interview takes place at such an early stage in the patient's treatment I am in the happy position of being able to offer to help them with the problems of their employee. I am not applying to them for assistance in placing our patient (there is an important fundamental difference here). Following this discussion I will be given permission to study the job ergonomically on site, take photographs where necessary and bring my findings back to the members of the rehabilitation team who meet weekly at the resettlement clinics.

If we were to consider a number of different jobs, it can be seen just what kind of movement is required for each one.

Motor mechanic. He is required to stretch, bend, work in narrow, awkward and confined spaces and has to use a variety of hand functions ranging from the power grip right down to the pinch or precision grip. He has to be muscularly strong.

Engineer and machine operator. This type of workman has to use his hands in a way very similar to that of the motor mechanic. A slide showing a skilled engineer fettling at a bench was shown to demonstrate the important use of hands in this type of work.

A navvy. Apart from having to be muscularly strong this man must be able to withstand all weathers and climates. Furthermore when we observe the type of ground he is walking over all day it is obvious that this is not the job for the flat footed.

Assembly work. Generally speaking there are three main types of assembly work: Belt assembly,

line assembly and individual assembly work. When recommending a patient for placement in repetition assembly work very careful assessment should be made of the patient's ability to maintain regular speeds and efficiency for an eight-hour day. Should there be any doubts at all in this connection placement should be aimed at individual assembly work only. In line or belt assembly all employees are on a shared bonus scheme and it should be remembered that when placing a patient in this type of work it is necessary to pay attention to the details of being able to keep up the pace of the other workers in the line or on the belt; otherwise not only will the firm suffer because of production loss but there is always a risk of an internal dispute because the slow worker will jeopardize his colleagues' bonus potential.

By presenting this type of information to the experts at resettlement clinics it can be decided at this early stage of treatment whether the patient will be able to go back to his former job. If medical opinion suggests that this is possible then the physical medical staff will have a good measurement to work to and treatment will be related to functions in this particular job.

For those patients who are considered incapable of returning to their former job I will make other investigations to find alternative work and to ascertain the standards required. The rehabilitation programme will then be modified to include either an educational programme, a works sample or a retraining programme according to the need.

Continuity

The basic aim of all hospitals should be to discharge patients to conditions where they can enjoy the greatest possible measure of good health and at the same time have the opportunity to attain or even surpass their accustomed standard of living. If we are to achieve this aim we must realize that personal contact and continuity in the work of resettlement is of paramount importance. I have touched on the personal contact side of the work and I would like to conclude with a few words on continuity.

Once patients have been resettled into a job I will follow up at the firm and will continue to do so until I feel confident that the patient has settled down. This is vitally important—not only are we paying attention to the patient's welfare but it is also a demonstration of our interest and concern for industry. In fact it is good public relations work which is necessary if we are to consolidate not only the right sort of conditions for this patient but also to establish contacts for any of our future patients. Apart from this I follow up every patient by questionnaire for a minimum period of five years. The information that I receive from my monthly follow-up replies is distributed to various departments of the hospital. As a result slight recurrences of complaints which might otherwise have gone unreported—social or domestic problems probably arising from the disability, or difficulties in adjusting to industrial conditions are immediately brought to the attention of the departments concerned and the appropriate course of action can be taken with due expediency.

Finally I would like to say that having practised this method of rehabilitation and resettlement at the Royal National Orthopaedic Hospital for 16 years we feel that it has certain advantages over other methods that are practised elsewhere. I have listed here what I consider to be the five most important:

1. The patient is encouraged to take an optimistic view of his future as a wage-earner right from the start of treatment.
2. Employers are encouraged to keep jobs open for patients.
3. Any modifications or alterations to the job can be taken whilst the patient is still in hospital under treatment, thus avoiding any delay after discharge.
4. By returning to his own place of employment in his normal working environment he is provided with an ideal nursery slope back to full productivity and wage earning capacity.
5. The time spent off work drawing non-productive social security benefits is cut to the minimum.