

II. THE SENIOR OCCUPATION CENTRE AND THE PRACTICAL APPLICATION OF RESEARCH TO THE TRAINING OF THE SEVERELY SUBNORMAL

G. S. CLARIDGE, B.A., Ph.D.

Barrow Hospital, Barrow Gurney, Bristol.

Since the close of the eighteenth century alternating waves of optimism and pessimism have swept the field of mental subnormality. During each phase society's provisions for the care and training of the mentally subnormal have reflected very closely the prevailing opinion about the possibility and desirability of salvaging those unfortunate members of the community. During much of the last century the problem was seen as an educational one, emphasis being laid, particularly by French educationists, on the need to "train the senses" of the defective child. It was thought that any deficiencies in existing mental capacity could be corrected by intensive coaching of the senses. Although such methods have persisted to the present day in the Montessori approach to education and, less formally, in the techniques of occupational therapy, their application to the mentally subnormal led to the disappointing conclusion that sense training was of limited value and could do little to reverse a gross deficiency in mental ability.

From the beginning of this century until the end of World War II an air of pessimism prevailed in mental deficiency. Medical experts pointed to the irreversible nature of the condition, stressing its genetic basis and the dangers this held for society. The result was the mental deficiency colony where the mentally subnormal were housed under custodial care and mostly in an atmosphere of utter hopelessness. Such rehabilitation as was attempted consisted of training in trades which the patient was destined never to enter, or employment in the labour force of the hospital. Subsequently, the occupation centres, both inside and outside hospitals, achieved their aim of keeping the patients occupied, without attempting anything more positive in the way of rehabilitation.

The last twenty years has seen a return of some of the former optimism; not the unmodified enthusiasm of the early educationists, but a realisation that, up to the limits of their capacities, the mentally subnormal can benefit enormously from the right kind of training applied in the right kind of way. This new enlightenment is part of the general change in society's attitude towards mental health as a whole, a change fostered, in the case of mental subnormality, by research into the suitability of the mental defective for full social rehabilitation.

Much of this research has been carried out by psychologists, who have recognised mental subnormality as primarily a socio-educational problem, to which the techniques of psychological research are particularly applicable. In the early stages of this research attention was naturally focused on the largest section of the mentally defective population, viz., the mildly subnormal or feebleminded. The reasons for this are fairly obvious. Being only mildly impaired they were most likely to respond to any attempts at rehabilitation. Furthermore, it was in this group that the intellectual deficit was of least significance, when compared with the deficiencies shown in the emotional and social aspects of their behaviour. The pioneer work in this country of Tizard and O'Connor (1952) led to the establishment of the

sheltered workshop as a basic unit in the rehabilitation services preparing the feeble-minded patient for an independent existence in the community.

More debatable is the possibility of achieving complete social independence for anything other than a small proportion of the severely subnormal. In their case the deficiency in intellectual capacity plays a more prominent role than is so in the mildly subnormal. Even so, recent research has demonstrated that much can be done to improve the behaviour of the severely subnormal, if due attention is paid to the conditions under which training is carried out, particularly the kind of stimulation given to the individual patient and to variations between patients in their responsiveness to such stimulation.

Some years ago (1953) Dr. Gordon, a psychologist working at the MRC Social Psychiatry Research Unit, carried out some experimental investigations on the effects of incentives on the performance of adult imbeciles. It is fairly well-known that incentives will accelerate the rate of learning and increase the work output of normal individuals. At that time, it was not known whether the severely subnormal individual would respond in the same manner. Dr. Gordon investigated the problem by getting groups of imbeciles to work under various incentive conditions. In order to ensure accurate measurement of their improvement in performance he employed the patients on a laboratory task. This consisted of a wire-mesh frame into the holes of which the patient was required to insert small pins one at a time, working down each column before beginning the next. Patients worked for one hour each day on this task, the number of pins inserted during the hour being the measure of the patient's performance for that day.

In addition to a control group who received no incentive, there was a group who worked under what were called "goal" conditions and groups working under two types of competition. In the goal condition each member of the group was given a goal or target to reach, his target each day being based on his performance on the previous day. He was, in fact, asked to try and insert a number of pins which was slightly in excess of the number achieved the day before. The point he had to try and reach each time was signified by a coloured pin inserted at the appropriate place in the board.

The other two incentive conditions employed were group competition and individual competition. In the former, groups of patients were encouraged to compete with each other, while, in the latter, individuals tried to better the performance of others in the group.

All three types of incentive were found to produce better performance than when no incentive at all was used, although the setting of an individual goal was consistently superior to either of the other two incentive conditions.

The present author subsequently (1956) followed up Gordon's work and tried to analyse in more detail the optimum incentive conditions for training the imbecile to carry out repetitive work. In the first experiment that was carried out (O'Connor and Claridge, 1955) some of Gordon's original patients were re-examined after about a year, during which time they had not worked on the pin-board test but had returned to routine jobs around the hospital. On retesting they were asked to carry out the task as they had been taught by Dr. Gordon, but no incentives were used. The interesting fact emerged that, despite the long interval that had elapsed since their previous experience of the work, those patients who had learned originally under incentive conditions still performed better than those who had never received an incentive. This seems to be an important finding and to have implications for the practical training of the severely subnormal. It suggests that by applying

appropriate incentives in the early stages of learning, permanent improvement in the performance of the severely subnormal can be effected.

In the next experiment we carried out (O'Connor and Claridge 1955) we tried to discover what it was about the setting of a target that made it such an effective incentive. Was it, for example, simply the fact that the visual target gave the imbecile something towards which he could work? Or was there something else about this particular type of incentive situation that motivated him to learn more rapidly? It occurred to us, for instance, that what may be important was the extent to which we encouraged the individual to reach his target and the way in which we treated his success or failure to do so. To study this we had three groups work again on the same task, under one of three conditions. One group had no incentive at all, while the members of the other two groups were given a target to reach each day, just as in Dr. Gordon's experiment referred to above. However, the individuals in one of these two incentive groups were given frequent encouragement to try and reach their daily goals. If on a particular day an individual succeeded he was praised; if he failed he was sympathised with and assured he would probably achieve his target the next day. Associated with the achievements of this group there was, therefore, a good deal of pleasure derived from the experimenter's attitude towards the individual's performance.

In contrast, a completely neutral attitude was maintained towards the achievements of the other incentive group. They were not encouraged while they worked, nor was any comment made if particular individuals either succeeded or failed to reach the targets set for them. Here the only motive the group members had to do well was the internal satisfaction of reaching their individual goals.

Of the three groups, that receiving no incentive at all showed the poorest average performance throughout the experiment. A slightly better performance level was maintained by those who were given targets, but whose achievements were greeted with indifference by the experimenter. Much superior at all stages of practice, however, was the group whose goal-striving was accompanied by sympathy and encouragement.

Contrary to some opinion, then, the severely subnormal person is very responsive to social approval of his achievements and incentives of the kind described here provide a convenient and potent way of improving the imbecile's performance. The fact that such incentives can have relatively permanent effects on his behaviour suggests that very much wider use could be made of them in practical training situations. That they can be so applied was demonstrated in an early study by Loos and Tizard (1955) of the imbecile's ability to carry out simple industrial tasks. They trained six severely subnormal patients to fold boxes and found that performance was improved if, as in the experimental investigations, they gave the patients visual goals to reach.

Quite apart, however, from specific incentives, the "work atmosphere" in which the defective is employed also has marked effects on his motivation. For example, the imbeciles studied by Loos and Tizard were subsequently moved to a unit where they were working in co-operation with higher-grade patients, who depended for a supply of work on their more severely handicapped colleagues. The latter responded very markedly to the atmosphere of co-operation and purpose that was injected into their work, a result which again illustrates the sensitivity of the defective individual to his surroundings.

The history and success of industrial training for both mildly and severely subnormal persons has been told, in much greater detail than is possible here, in the publications of O'Connor and Tizard (1956), Clarke and Clarke (1958) and

Gunzburg (1961). These books represent—to quote the title of one of them—a “changing outlook” in mental deficiency, a movement towards a more positive social rehabilitation programme for subnormal individuals. With an ease rarely seen in the social sciences, the gap between research and practice has been bridged by applying experimental techniques to the training of the mentally subnormal. Indeed, the emphasis in this new movement is on training, rather than on merely occupying, the defective. As Clarke and Hermelin (1955), in a classic paper on the topic, pointed out:

“Merely to keep the imbecile happily occupied—laudable though that certainly is—is not necessarily in his best interests nor in those of society. It is far from our intention to underestimate the value of the work done by occupation centres, which keep the imbecile occupied, aid his social adjustment and give some relief to parents and relatives. But a more positive approach is needed here quite as much as in other spheres of mental health where custodial care has given way to remedial treatment.”

The need to apply more progressive methods in the occupation centres has not become less in the intervening years since that was written. The introduction of working conditions giving greater incentive to the severely subnormal patient, the systematic use of rewards such as social recognition of success, and the infusion of a greater sense of urgency into the work carried out could do much to bring the role of the occupation centre more into line with recent thinking on the trainability of the mentally defective.

Of course, any practical training scheme is concerned essentially with the individual, with improving his or her behaviour, rather than with the behaviour of the group to which he or she belongs. It is important to know, therefore, not only that one incentive is superior to another, but also how individuals differ in their response to that incentive, or even how they differ in their basic ability to learn, whatever the conditions under which they are being trained. In the case of the mentally subnormal the too facile assumption has been made for too long that what determines such individual variations is purely and simply the level of intellectual capacity. Certainly it is true that there is an approximate correlation between intelligence level and learning ability, in the sense that a severely subnormal individual is unlikely to be able to learn the calculus. However, on tasks within their capacities (and these capacities are still ill-defined) the ability to improve with practice bears little relationship to tested intelligence. With respect to the improvement that one can expect to bring about, mental defect can no longer be considered synonymous with intellectual defect.

Faced with the finding that the severely subnormal differed widely in their learning ability and response to incentives and discovering, in company with other workers, that neither of these bore any relationship to intelligence, the present author set out to determine what accounted for such individual variability. One factor which it was thought might be relevant was that of personality or temperament. It was already being realised that, in people of normal intelligence, the rate of learning was associated with personality type. Up to that time, however, very little attention had been given to personality in the severely subnormal. Admittedly, some experts had suggested that one could distinguish stable and unstable types of defectives. And, of course, those coming into daily contact with large numbers of defectives were aware that, at a simpler level than in normals, personality differences did exist in persons of low intelligence. No attempt had hitherto been made, however, to determine the role played by such differences in determining the trainability of the severely subnormal.

In order to study this a rating scale was devised (Claridge and O'Connor 1957) to measure various aspects of what was called "excitability." The patients who had taken part in the incentive experiments referred to earlier were all rated on such characteristics as sociability, emotionality, aggressive response and so on. Their excitability scores were then compared with their performance on the pin-board task, under both incentive and non-incentive conditions. It was found that when no incentive at all was used, imbeciles rated as being placid and plodding in temperament improved their performance on the task more rapidly than their more excitable, distractable colleagues. On the other hand, under conditions where the goal incentive was used, this relationship tended to be reversed. In other words, excitable imbeciles responded more than apathetic individuals to being given a target and being encouraged to reach it. Indeed, excitable subjects seemed much more dependent on such encouragement. This was shown in an experiment where after working for a long period under incentives, the latter were suddenly removed. The excitable members of this group showed a rapid decline in their performance, while the more placid subjects tended to continue improving.

Subsequently (Claridge 1959) the concept of "excitability" was examined in more detail, because it was felt that it referred really to two quite different aspects of personality—emotional stability and sociability. Further analysis of the original results demonstrated that it was the degree of sociability, or extraversion, which was related to improvement. In other words unsociable defectives improved more than sociable ones without incentives, while the opposite was true when incentives were used. Emotional stability bore little relationship to performance, although this aspect of personality is one that deserves further study in the subnormal individual.

These results are interesting because they confirm similar findings with people of normal intelligence. Here it is the extraverted individual who becomes rapidly bored on a monotonous task, due, it is thought, to his greater tendency to develop inhibitory factors which interfere with his performance. Incentives would be expected to offset this; hence the greater response of extraverts to incentives.

There is evidence, therefore, that even at the intelligence level of the severely subnormal, temperament partly determines the outcome of training. The successful application of incentives in a practical situation will clearly depend, therefore, on an adequate assessment of personality factors in the individual. Of course, the measurement of personality in the severely subnormal is in its infancy and more research needs to be done in order to disentangle the complex motivational and temperamental factors that determine each subnormal individual's unique response to training. Even now, however, the use of relatively crude rating scales of the kind described here could help those in charge of training to select incentive conditions that are maximally beneficial to each individual.

Indeed, perhaps we might go even further than this and suggest that the occupation centres could provide an ideal setting for research of all kinds, including the development of refined methods for measuring personality and allied factors in the subnormal.

The recent history of mental subnormality has seen a close link being forged between theoretical research and practical application. The task of strengthening this link is now a challenge, not so much to theoreticians as to those concerned with the practical problems of training and education. If this challenge is taken up perhaps we may look forward to the day when it can universally be said that training the subnormal is no longer the mere occupation of idle hands and idle brains.

References

- Claridge, G. S. (1956). **Factors affecting the motivation and performance of imbeciles.** Ph.D. Thesis, Univ. of London.
- Claridge, G. S. (1959). A re-analysis of "excitability" and its relationship with improvement in performance of imbeciles. *J. Ment. Def. Res.*, 3, 116-121.
- Claridge, G. S. & O'Connor, N. (1957). The relationship between incentive, personality type and improvement in performance of imbeciles. *J. Ment. Def. Res.*, 1, 16-25.
- Clarke, A. M. & Clarke, A. D. B. (Eds.). **Mental deficiency: the changing outlook.** London: Methuen & Co., 1958.
- Clarke, A. D. B. & Hermelin, B. Fleiss (1955). Adult imbeciles: their abilities and trainability. *Lancet*, 2, 337-339.
- Gordon, S. (1953). **Some effects of incentives on the behaviour of imbeciles.** Ph.D. Thesis, Univ. of London.
- Gunzburg, H. C. **Social rehabilitation of the subnormal.** London: Baillière, Tindall & Cox, 1961.
- Loos, F. M. & Tizard, J. (1955). The employment of adult imbeciles in a hospital workshop. *Am. J. Ment. Def.*, 59, 395-403.
- O'Connor, N. & Claridge, G. S. (1955). The effect of goal-setting and encouragement on the performance of imbecile men. *Quart. J. Exp. Psychol.*, 7, 37-45.
- O'Connor, N. & Tizard, J. **The social problem of mental deficiency.** London: Pergamon Press, 1956.
- Tizard, J. & O'Connor, N. (1952). The occupational adaptation of high-grade mental defectives. *Lancet*, 2, 620-623.