Conducted at the request of the Commonwealth Advisory Committee on Advanced Education, this study inquired into the attitudes of university graduates and technical college diploma holders toward the training they had received; the relevance of training to the work expected of them; and how employers felt about the graduates whom they employed. The sample consisted of ten average young graduates in training conscious firms in several fields, and eight senior officers of similar (but not the same) firms. A loosely structured, distant dialogue was encouraged between the two groups by means of a slightly delayed mutual feedback of views and comments. With the aim of improving the match between higher education and the working world, numerous implications were developed for counseling of graduates (especially the importance of interpersonal skills), for the role of colleges of advanced education, and for training and development within companies. Suggestions for further study were also offered. (The document includes a list of cooperating organizations, and guidelines for selecting middle managers.) (LY)
Training and Work

A Study in Employment Attitudes

L. R. PARKER

The Australian Administrative Staff College Papers — 2
TRAINING AND WORK
TRAINING AND WORK

A Study in Employment Attitudes made in 1967
for the Commonwealth Advisory Committee
on Advanced Education

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THE AUSTRALIAN ADMINISTRATIVE STAFF COLLEGE
The investment which modern communities make in education is very large indeed, and its effectiveness is a legitimate public concern. An educational system should of course aim to make its products richer and more cultivated people, but it should also fit them to do properly the work which must be done. In fact, the question of how well the educational system equips people for work ought to be under constant review by governments, educators and employers.

The interest of the Australian Commonwealth Government in these matters led to the intensely practical enquiry which is here reported upon by Mr. L. R. Parker. The College is glad to have joined in a process which will, I hope, increase the effectiveness of the link between what is learned in a university or a college of technology, and the skills and knowledge which are needed for useful and satisfying work.

Maurice Brown
Principal
The Australian Administrative Staff College

29 May, 1968
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td>v</td>
</tr>
<tr>
<td>Project Described</td>
<td>1</td>
</tr>
<tr>
<td>Views Expressed</td>
<td>5</td>
</tr>
<tr>
<td>Implications for the Future</td>
<td>22</td>
</tr>
<tr>
<td>Appendices</td>
<td></td>
</tr>
<tr>
<td>A Acknowledgements</td>
<td>29</td>
</tr>
<tr>
<td>B Selection for Middle Management</td>
<td>31</td>
</tr>
</tbody>
</table>
PROJECT DESCRIBED

The occasion

The community is busy establishing a new form of tertiary educational body—the College of Advanced Education. This leads us to enquire what is known about the way existing institutions have served the community. What are the views of the people most directly concerned—the graduates of universities, the diplomats from technical colleges, and the people who employ them?

This study of employment attitudes was made at the request of the Commonwealth, through its Advisory Committee on Advanced Education (the Wark Committee). It was carried out at The Australian Administrative Staff College in general consultation with the Principal of the College (Mr. Maurice Brown) and with Mr. D. R. Zeidler (a member of the Research and Investigation Sub-Committee of the Wark Committee).

The out-of-pocket costs incurred by the College in making the study were met by the Commonwealth through the Hon. the Minister for Education and Science.

The purposes of the study were to enquire into the attitudes of graduates and diplomates towards the training they had received, and to enquire whether it was relevant to the work their employers expected them to do; and to enquire how employers felt about the graduates and diplomates they employed.

The method

Basic to the method adopted was the decision to probe attitudes and expectations of a few people in depth, instead of testing larger numbers superficially. To do this two groups were assembled, one of young graduates and diplomates, and one of employers. The young people were encouraged to discuss their training and their work, and their views were passed next day to the employer group.
TRAINING AND WORK

for comment. The employers' comments were later passed to the 'graduate' group and so on. This loosely structured and distant dialogue between the groups enabled observers to note and record the opinions ventured and the attitudes expressed. The fact that it was done by personal encounter with the group allowed observers to watch group members testing their ideas, probing the strength of other people's feelings and their views under group pressure. The cycle was repeated after a fortnight's interval which allowed some re-thinking and adjustment of attitudes to take place: views expressed 'off the cuff' could be, and were, modified.

The main points of view which emerged are reported in this study.

The sample

The ten young people involved were drawn from training-conscious organizations in a variety of fields—banking, insurance, petroleum marketing, paper, motor vehicle and plastics manufacture, mining, electricity generation, horticulture and civil engineering. One man without tertiary qualifications was deliberately included.

Their employers had been asked to nominate men representative of their graduate group, rather than their best or worst.

The eight employers were senior officers of similar (but not the same) organizations, concerned with banking, insurance, retailing, steel, chemical and pipe manufacture, highway engineering and scientific testing.

As a cross-check on the ideas which emerged from these two necessarily limited samples, the views were sought of some members who were attending a session of the Advanced Course at the Australian Administrative Staff College at the time. Visits were also made to executives of fifteen training-conscious organizations in Sydney and in Adelaide in an attempt to offset the fact that the study was made in Victoria. (Appendix A lists the organizations which contributed to the study.)

The sample was restricted in a number of ways: all the people involved in the discussion groups were employed in Victoria, although several had Australia-wide responsibilities. They were all employees. They all came from large scale, successful and training-conscious organizations. The young men had not opted for higher studies, nor had they gone overseas. They were 24-26 years of age.

They had acquired vocationally directed degrees and diplomas.

These restrictions were accepted in the interests of adopting a method of approach which allowed attitudes to be probed in depth,
PROJECT DESCRIBED

which allowed the respondent to explain, modify and justify his point of view, and which allowed the observer to note both the degree of firmness with which a view was held and the emotional overtones which accompanied the expression of it. Scientific precision was deliberately set aside in the interests of observing the very human situation of people thumping the table to maintain their views.

Liaison with other research bodies

Mr. C. Williams of the University of Queensland, and Dr. R. V. Horn of the University of New South Wales, both generously provided helpful information from surveys they had conducted into graduate employment in recent years.

Similar work is proceeding in the University of Western Australia, and an exchange of information will be made in due course.

Liaison was also established with Professor S. S. Dunn of Monash University, with a view to acquainting him with issues which seemed worth testing in a broader context. He has in mind two substantial surveys in which he will test by interview and questionnaire opinions related to this field. He will, of course, have a proper regard for the problems of sampling necessarily ignored in this small and essentially exploratory project. His research team will be given full access to the basic data on which this study is based, including eight hours of group discussions recorded on tape.

General

In this study graduates and diplomates have been considered together, and are referred to as graduates throughout, except in those situations where the discussion revolves around the differences between them.

A limitation of the sort of dialogue between young graduates and management that was attempted in this study was that some comment was inevitably directed at training institutions and the sort of preparation they provided for young people entering the various professions. This comment often referred to the attitudes and expectations of graduands, and to the ability of lecturing staff to get their ideas across to their classes. A further study is obviously required to hear the views of the training institutions on the matters which were ventilated in this way. It seems unfair to form firm conclusions about them until this has been done.

The limitations of the method adopted in the study and of the sample of young people and their employers that were involved will undoubtedly be reflected in the conclusions reached. Nevertheless,
it was apparent that the popular stereotype of the restless, egocentric, unrealistic young graduate, who expects accelerated promotion to top management, had no counterpart in reality. At least our sample of graduates did not think so, nor did the employer group we consulted.
VIEWS EXPRESSED

The young graduate’s view of his work

It was clear from the discussions between the young men about their own careers, and from what they said about the views of others in their age group, that the young graduate has certain expectations of his job:

(a) He expects a chance to prove himself in the world of reality. He has been for years a student, a trainee, and, in the occupational sense, an onlooker. He now wants to prove that he can do something useful — to justify his place in the community on the grounds of his usefulness in the real world of work rather than because of his scholarly achievements in the protected world of the student. It is a discouragement to him if he finds that a further vista of mere traineeship lies ahead of him, where he is to be concerned more with familiarizing himself with the company’s operations than contributing directly to its success.

(b) He expects to be able to apply some of the training he has received at university to his first job. He recognizes readily enough that rarely will a man be able to apply all he has learnt directly, but does expect to be able to apply some of it, and at a level of intellectual effort which fully extends him. A different expectation could, of course, be encountered among men who chose their tertiary course to acquire social grace rather than a vocational skill. There were none like this in our sample.

(c) He expects a variety of experience on which to test and try the theoretical insights he has gained during his training course. He is aware of being some years behind the rest of his age group in direct experience of the world of work, and is concerned to get experience quickly. He tends to rate highly companies where he could transfer to a different sort of activity within his profession if he wished to, e.g. from civil engineering design to project work. He
seems to draw some feeling of security from this freedom to transfer but does not lightly avail himself of it.

(d) He sets out to develop his professional competence quickly, but tends to judge the value of the skills he builds up by whether or not they are readily transferable to other activities, in other companies. He sets considerable store on this portability of professional skills, and tends to withhold commitment to a particular sort of work within his profession, or to a particular company. This is not to say that he is 'footloose'. He is not. But it seems to help him to feel fully independent if he has a skill that would command respect elsewhere if he did decide to leave.

(e) They do not want to be 'owned'. Certainly they are prepared to do a full day's work, and to go the extra mile — to stay late, to take work home at night, to work over weekends — but, as they see it, the decision to do so should be theirs. They do not concede to the employer any right to demand it.

(f) They expect to be told by their employers the respects in which they are doing their jobs well and the respects in which they are not. They have no feelings of apprehension or resentment about regular appraisal of their performance, and are at a loss to understand the reluctance of their employers to tell them whether they are up to standard or not.

(g) They believe that, by and large, merit is what determines promotion. They are singularly inarticulate, however, about what constitutes merit. They are agreed that superior educational qualification should not guarantee promotion, and they concede that social competence could well be of importance in the top managerial jobs in any enterprise.

(h) They do not look far ahead professionally and have little idea of the sort of work that most professional people do in later life even when they work in enterprises with a fully developed career structure. They are quite unaware of the sort of demands which future jobs will make upon them as they rise through successive levels in the enterprise.

(i) They believe that management is quite right in placing such high store on articulacy in the young graduate, and on the quality of his interpersonal relationships. It seems, however, to have come as a surprise to them at first to find just how important the ability to deal with people is in the world of work — to encourage, to persuade, to correct, to conciliate, to inspire, to control.
(j) They do not initially expect to meet with resistance to logically sound ideas, and are somewhat surprised to encounter resistance to change, and occasional opposition to them just because they happen to be graduates. By and large they accept the situation, but appear unaware of having contributed to it. They seem quite oblivious to the insecurities they create in the older technologist whose professional skills have become eroded by the passage of time, or in the unqualified man who sees the young graduate as one who thinks he is 'walking on the waters'.

(k) They believe young graduates should choose their employers by the evidence of plans for the immediate future and by the quality of their training managers, rather than by their glossy recruitment brochures, or promises made on the campus. They are very conscious that companies with plans for expansion and diversification create challenging (and therefore by their standards interesting) situations for young graduates. They are aware of the importance to them of the company's attitude towards training. They are openly derisive of the appeal of superannuation schemes for young men, but are prepared to concede that such matters might have some appeal for ageing men of 35 or 40. They speak, however, with respect of companies which advance housing loans to young men whose service they value: this is no laughing matter.

(l) They believe that bonding cadets or employees to a company is ineffective, and that bonds indeed make a negative contribution to the psychological contract — the unwritten understanding that is established between employer and employee. 'Unnecessary if you decide to stay; ineffective if you don't' was their consensus.

(m) They believe that moving from one city to another is an inevitable consequence of working in a large company or in a career service. They see this as a much greater inconvenience to the wife than to the executive concerned. 'You and the kids get out among people and make friends. It's not so easy for your wife. She's really been uprooted.'

(n) They see service in remote localities rather differently. It is something that should be weighed before joining that employer. It should be got over as soon as possible— as a bachelor, or early in marriage because housing is often provided and it seems to offer a chance to save. But service in remote areas should be behind you by the time the children are 14 or 15. The consensus was that it was a rash man who took his wife to a remote area if she was not fully persuaded of the wisdom of making the move.
The young graduate’s view of his training

The young graduates regarded the training they had received in tertiary institutions and on the job as adequate, by and large, for the first jobs their employers expected them to do.

They accepted the financial and social deprivation that tertiary education involved. They were sympathetic with men who had to give up jobs to undertake full time training — they remembered only too vividly the situation, e.g.

And so your mates with jobs go to supper at the Chinese cafe and you have a milk shake across the street.

But they accepted the risk they had taken, and believed it to be a good risk, e.g.

If I’d joined the P.M.G. as a clerk instead of studying to be an engineer, I would have held my own till I was 30. Then the engineer’s total earnings would have passed mine.

They reviewed the training they had received, were prepared to give due weight to the problems that face educators of young men, and did not complain readily. They nevertheless had some firm ideas about the training they had received:

(a) They believed that they had too often encountered lecturers who had a good knowledge of theory but who had had too little practical experience for their offerings to carry any conviction with the student body. They pointed out in contrast how effective the lectures of part-time staff can be because their theory lectures are backed up by a day-to-day familiarity with the application of the theory in practical situations.

They regarded for instance a Ph.D. in engineering backed by five years’ experience as probably adequate, and one year’s experience as certainly inadequate.

They suggested that this problem is more acute in universities than in technical colleges, and proposed as solutions the more extensive use of practitioners as part-time lecturers, and some system of exchange duty between industry and teaching institutions.

(b) They realized that their technical insights would in due course decay, and that they would need further training to bring them up to date with the latest advances in technology, e.g.

... not refurbishing, but finding areas where your education is lacking — things where your job now demands something new.
Views Expresses

10.

Things you find you now need. Things that were marginal when you did your course and are now of central importance.

They felt that technical colleges, universities and professional organizations would be best fitted to provide this 'recycling' training, but that for it to be effective a much closer link would be required between universities, research institutes and professional workers in industry.

It doesn't matter where you pick up the knowledge. It's important to sit and think what you're doing — instead of being pressed by the normal day's task.

They believed, indeed, that it would do training institutions some good if they had periodically to review their courses and decide (as they would have to do for a recycling course to be worthwhile) — 'what of significance has happened in the ten years since these men graduated?'

(c) They saw a tendency in universities to press more and more men on to higher degrees, even when the inclinations of the student and his academic record suggested otherwise. They suggested that areas of research are often chosen 'merely to compete with overseas universities — instead of applying research to problems of industry. We just keep guessing, year after year'.

(d) They saw a tendency in universities to play down, if not actually to denigrate, technical college studies and to hold out the university degree as the only appropriate training for the academic life or for entry to commerce, government administration or industry.

(e) Their training had given them no preparation whatever for the management of people, in which all of them were by this time to some extent involved. They saw a need to prepare the young graduate in some way for the managerial aspects of his work, as distinct from the technical aspects of it. This training should include some training in managing people, in interpreting financial documents and in communication. They believed that it would have little impact if done during an initial full-time course, and that it should be delayed until the graduate was engaged in full-time work and felt the need for it. They proposed, however, that a start could be made in the later years of a degree course with some of the basic disciplines which formed the foundation of subsequent specifically managerial studies — e.g. group dynamics and statistical methods.
They agreed that there was a place for at least two sorts of tertiary training in technological fields—one to cater for the practically oriented man whose interest was ultimately to hold an operating job in industry, and another which was theoretically oriented and prepared a man for research. The first would stress the practice of a technology in an industrial or commercial environment. The latter would lean to the theoretical side, and would prepare people for the intellectually and morally demanding task of pressing back the boundaries of knowledge. As they saw it, both sorts of persons were needed in the community, and they both required tertiary training. They believed the training institutions had not yet clarified what they were setting out to do—or if they had, it had not been made clear to their prospective students. An influential chief engineer said:

The universities have gone mad. If they believe they should only train research workers, they should say so, and send industry elsewhere for their operating graduates.

There was a feeling among them, moreover, that people chose courses for reasons that were irrelevant—a degree because of the status it conferred, or a diploma because they felt they could not cope with university training, or because the cost appeared to be less.

They believed that marriage would set a practical limit to the length of a full-time tertiary course, which should not exceed four years.

They pointed out that a new graduate is probably quite a good credit risk, but that he has had negligible opportunities to save even the small sum required for a Commonwealth Housing Loan.

They believed that most young graduates had some ideas, no matter how tentative, of going overseas to improve their technical insights, to study, or just for a look around before settling down. They pointed out substantial reasons for doing so now, instead of later. They referred to low cost air fares for young people, and to the problems of going abroad for more than a few months later in life. They observed that many people experience difficulty in settling down to serious study after a prolonged break. They believed that most employers take much too narrow a view of this desire to look around and consider that they should be prepared to grant leave without pay for substantial periods (say two years) to graduates wishing to travel, and that superannuation schemes should be designed to accommodate such an arrangement. It is the employer,
not the young person, who places such store on the superannuation aspects of the employment contract.

(j) They were aware that they had a lot to learn, and were embarrassed by graduates who made a parade of their qualifications:

It has taken me five years to be really useful to the organization — to take decisions within the organization and not take just routine functions. You need about this time to know where the theory is taking you and what you can use it upon.

[The young graduate] has to learn that learning has just begun. He is there to use knowledge, not to throw it around. A cocksure graduate gets it knocked out of him in twelve months.

... depends how you handle yourself. You can't keep throwing it up.

You have to watch it — because you're likely to have unqualified men above you — just because of the changing pattern of education.

Graduates (as distinct from diplomates) are the worst offenders. They don't seem to appreciate the feelings of others in their environment ... too detached ... they don't appreciate in the first twelve months the feelings of other people.

The employer's view of the young graduate at work

The managers' discussion group, and other employers consulted in this study were, in general, satisfied with the quality of the graduates they recruited. They seemed all to have thought constructively about the relationship between the young graduate and his job. Their views are summarized below:

(a) The employer sees the young graduate as a person who has established his ability to absorb unfamiliar complex information quickly. This is regarded as a very valuable asset in a world of rapidly changing technologies.

(b) The employer expects to have to carry the graduate for a year or two whilst he absorbs the environmental information specific to his particular industry.

(c) The employer expects young technologists to bring to the enterprise new ideas, new theoretical insights which can help keep up to date the older established technologists with whom they work. Thus the young man entering industry is very much the learner in respect of information relating to the detailed application of his technology in that industry, but he is an informal trainer of his older
colleagues and supervisors in respect of recent theoretical developments in their profession. This dual role makes demands on the tact and patience of all concerned, and points up the need for a carefully designed induction process to ensure that the expectations of both sides are met.

(d) The employer believes that he must watch carefully from the beginning the quality of the young graduate's interpersonal relationships, as these give a most important indication of whether a man should be moved more and more into managerial activities (and further away from the detail of his profession) and how soon this can be done.

Employers saw as important the quality of the cooperation evoked by the young man from fellow workers, and, when he had been put in charge of a small project, how effective he was at getting results through the people under his control.

They felt that some new graduates were not tactful enough when dealing with customers, or with established older employees. Several companies made a rule of having new graduates work under the personal supervision of older graduates of a similar profession, and one dealt with the problem more specifically:

We make sure the young graduate knows just what to respect the foreman and older workers for.

This problem seemed hardly to arise in companies which took on cadets for two years part-time study and then transferred them to full-time study to complete their degrees. They claim that their cadets in the first two years become sufficiently familiar with environmental conditions and technical practice in the industry to get real value from vacation employment, and that their theoretical studies are more meaningful against this background of practice. Furthermore they learn, in these two years, the importance in the industrial setting of developing personal skills in dealing with people — supervisors, peers and members of the workforce.

(e) Once employers have identified the people who they believe can be developed as managers, they set about exposing them to a variety of managerial experience and often, in addition, to specific training aimed at developing their managerial skills. This group are destined to become less and less concerned with the detailed practice of their profession, and are increasingly preoccupied with specifically managerial activity. Some will ultimately go into general
management and the professional activities for which they were formerly responsible will then be but one of the divisions which they lead.

Those men who are not selected for an increasingly managerial role will remain in their profession in a specialist role. They will nevertheless require training periodically; first, to keep them up to date with new developments in their profession which could conceivably have an application in their particular commercial environment; and secondly to familiarize them in a general way with progress in technologies other than their own that have relevance in their enterprise.

In most commercial and industrial enterprises this differentiation into emerging manager and specialist non-manager groups began to take place within three years of graduation. In certain government instrumentalities it happened more slowly. A man was often committed to a career in management, because of the increasing managerial content of his job, without a decision ever having been taken (by him or his superiors) that he was more suitable for managing people and affairs than for practising the specific skills of his profession. Among research scientists the choice was long delayed and a man was often in middle age before a decision was taken as to whether he should be in the managerial or specialist stream. Clearly there is a need to ensure in periodical assessments of a man's career that this important decision should be taken deliberately by his employers instead of allowing it to happen by mere effluxion of time.

(f) Most employers reported a reluctance on the part of the immediate supervisors of young graduates to tell them frankly their merits and shortcomings. This was so even in companies where it was the practice to submit detailed appraisals to higher management of the young man's performance:

The appraisal scheme is accepted by young graduates in our organization, but not so readily by the appraisers.

You really have to push the supervisors to do it.

By and large we're a gutsless lot.

(g) Most employers commented on the importance of being able to communicate one's ideas. Many graduates fall short of their requirements in ability to discuss technical matters intelligibly, or to report orally or in writing the outcome of investigations. They believed this was a situation that could and should be corrected in the high schools, or at worst before graduation.
(h) Employers were not very articulate themselves on one issue — how they identify the people on whom they will load heavier and heavier managerial responsibility. They were agreed that it was not a mere process of elimination but that in practice a man was positively identified for management. They were agreed that the man usually selects himself; that the quality of his interpersonal relationships was important; and that he should already be achieving what was expected of him and appear to have capacity to spare. Beyond this they seemed to find it hard to put into words what characterized a promotable man. This is an area in which much more research is required.

Issues that the writer believes to be of importance in selecting men for middle management are listed in Appendix B. A research programme designed to test their relevance would make an important contribution to management practice.

*The employer's view of recruiting young graduates*

Recruiting is only one part of the link between graduate and employing enterprise, but a very important one, and merits special mention.

(a) By and large, employers were finding it difficult to recruit graduates in the industrial and commercial technologies but graduates in Arts were not hard to come by. They did not expect their problems to be solved by the increasing numbers coming forward from universities but by the more efficient use of those they did recruit.

(b) Several organizations commented on how the increasing use of technicians to underpin the work of their technological graduates acted as an effective multiplier of the latter's output. They commented, too, on the fact that the technician's skills decay quickly, because he has been trained in *how* to do his job at this one point in time, without fully understanding *why* it should be done that way. In consequence it was necessary for industry to plan to retrain its technicians a number of times in their working life.

(c) They commented, too, on the fact that some men with a diploma were real technologists (who understand 'why') and others were technicians (who only understood 'how'). There seems to be a real need for training institutions to agree on what label is to be applied to the qualification of a technologist and for a quite readily distinguishable title to apply to the technician. Could this perhaps lead to certain words being reserved by law as titles for people with
VIEWS EXPRESSED

...specific qualifications — as with the term 'ingenieur' as in Germany?

(d) Several large organizations frankly admitted that in the past they had over-recruited in both quantity and quality. Their prestige had allowed them attract more graduates than they had real work for, and better graduates than they needed. In consequence they had wasted first class research talent in comparatively undemanding work (in the intellectual sense) in operating jobs in industry, and had also experienced an expensive turnover of technologists:

We recruited all the school captains and duxes and had an appalling retention rate. They all went on to higher degrees . . . wanted to work in atomic energy; in fact, to do anything but make [our product] . . . we consciously put on paper what we wanted — men in years to come who could take on executive appointments and we dropped academic standards.

We [still] seem to go for really top fliers when selecting young men for scholarships and cadetships in production engineering . . . tend to give cadetships for the honours men for Met:ic and first year, yet that chap on graduating doesn’t want to work in a factory. He wants to go on for a higher degree.

In one large public instrumentality there was a deliberate policy of recruiting more graduates than were required in long term by the organization. This allowed some margin for those engineers who would leave to join municipal councils, shires, or constructional contractors. It was felt that providing effective training for these people in this way was a social obligation that the instrumentality should in the national interest accept.

It is noteworthy that some compensation would be available in the United Kingdom when training is carried out, but somebody else gets the benefit. Some arrangement similar to the Industrial Training Act of 1964 is certainly desirable in Australia.

(e) A number of enterprises in the insurance, banking, retail and woolbroking fields, which had traditionally drawn their recruits from the senior school leavers, commented on the declining quality of their recruits. They had hitherto been able to obtain sufficient talent in this way to ensure a supply of middle managers, and even to rely on it for actuary trainees and, ultimately, for top managers. It appeared to them no longer to contain enough talented people to meet this need. Some had decided, in consequence, to recruit graduates — not because they needed their knowledge, but because this would ensure that they continued to get a share of the talent in that
age group.* Progressive denudation of the school leaver group will add to the problems of enterprises which do not see the need to take protective action, e.g. woolbrokers, some insurance companies, some banks. Some companies are recruiting undergraduates who have failed their courses and are encouraging them to graduate by part-time study. Not enough appear to be prepared to take on women graduates straight from university, or to recruit on a career basis mature woman graduates whose families are established.

(f) The employer group felt that one consequence of providing tertiary training for a greatly increased segment of the talented people of the community, and thereby withdrawing them from the technician group, was that manipulative skills of the sort provided by plumbing contractors, automobile repairers, building and electrical contractors would become much more expensive. This appears to have happened in the U.S.A.

(g) Almost all the employers consulted have abandoned any system of bonding trainees. Those who still retain it do not appear to be convinced of its value.

(h) Most emphasized the importance of the induction of the young worker to his first job. Some pointed out that the morale of a young diplomat could be ruined by a graduate section leader making slighting reference to his qualifications. They indicated that at this stage of a man's career effective leadership could make a great deal of difference to his work attitudes and to his ultimate usefulness in the enterprise.

(i) Some employers used young graduates and diplomats interchangeably; some inclined to use diplomats as operating personnel and graduates in research, but did not make a firm rule on the matter; some had made a policy for the future but were unable to point to its consistent application in the past, e.g.

Diplomates are concerned with the improvement of existing activities; graduates with the projection of the new.

Several employers pointed out that in their own (large) organizations it was difficult to say who was a graduate and who a diplomat amongst men over thirty.

The consensus was 'You are known for the work you do, not for the institution you were trained at'.

*Note that in 1954 about 7½ per cent of the 17-22 age group were in tertiary training of some sort. The figure is now about 13 per cent. It is expected to be 17½ per cent by 1975 . . . and will be much higher if males only are considered. Martin Report, Vol 1, paras. 2.51, 2.52.
They did see initial differences between graduates and diplomates:

Diplomates are more immediately usable — they have done some growing up in the work situation.
Diplomates seem better initially on the human relations side.
Diplomates are prepared to wait for opportunities of promotion to come up. Graduates are not.

By and large they agreed that diplomates were to be preferred in the supervision of plant activity, plant maintenance, or as section leaders in design work, especially where it is concerned with physical plant. They claimed that graduates were required in research departments, in project management, in important design posts and in computer work.

Although nowadays the distinction between the two has become minimal by age thirty, they believed that the degree and the diploma courses are now diverging more than they used, and that this divergence will continue and perhaps extend.

(j) Employers in general found some difficulty in manning static jobs in remote areas. They had, however, devised systems of compensation and fringe benefits which ensured that enough young graduates accepted the shortcomings of life in isolated communities.

In the country:

It is difficult to get young engineers to go to the country. Houses are the bait. Very often a young graduate who wants to marry will go to the country to get a house.

In really remote areas:

. . . Nice house provided . . . A young man as chief engineer of a small plant has authority and responsibilities he wouldn’t otherwise have at that age . . . Some look for the experience. Our policy is 2-4 years in these areas, then out.

In the bank:

. . . for three years usually, with good allowances. We don’t have trouble filling these. It’s a chance to save some money.

(k) The itinerant professional worker presented a different problem:
... young geologists expect to go prospecting. Six or seven months in the field, then to central office for report writing. We arrange these more according to season... avoid the wet.

But:

... many young men express their dependence by remaining at the university for higher degrees rather than getting out and obtaining field experience in geology and geophysics... I have noticed an increasing reluctance of young men to undertake the very necessary field work in their profession... In an exploration company I prefer strongly men with pass degrees and plenty of field experience... they are three months in the field and a month at home.

Out west the young veterinarians suffer from professional loneliness. They have no-one to talk to on even terms — to share their successes with; to talk over their failures.

The employer's view of the training scene

The employers consulted in the study were encouraged to discuss steps taken to train the graduate, since this was clearly so important to the younger group. Their views are summarized below.

(a) The employer group regarded training as a continuous process — begun in an institution, continued on the job throughout the working life. The increasing rate at which technologies are developing suggests to them that in the future professional workers will periodically return to full-time institutional training — in some cases to learn what is new in their professional field, in other cases to become familiar with the new capabilities of their own or other professions. Some of these would also undertake purely managerial studies (as distinct from professional studies).

They suggested periods of three to six months as being roughly the order of magnitude of the time required to up-date men who had ten to fifteen years in the practice of their profession. They pointed by way of illustration to the large proportion of those now attending the Massachusetts Institute of Technology who were there for the second time.

They proposed tutorial methods, applied to groups of about ten, as the most suitable method of instruction for professional people in their early thirties undergoing 'recycling' training.

This would of course be a very demanding activity for the training institution — to determine what of significance had happened in the
time since these men had graduated, and to give it to them by small
group techniques.
It would be expensive, and universities and colleges of advanced
education could hardly be expected to provide it without direct sup-
port from user industries, professional institutes or specific govern-
ment grant.

(b) The employer group had all had experience of men under
full-time training and of part-time cadets. Several had now decided
to depend for their graduate recruitment on trainees on full-time
scholarships. They felt they had a better chance to recruit the
numbers and quality they wanted in this way, and the trained men
were available sooner. It was however a mixed blessing; only about
half of those who graduated remained with the company, and they
proved harder to integrate into the professional work force than the
men who had formerly been trained part-time.
The group expressing most satisfaction were those whose cadets did
two years' part-time study and then settled down to complete their
degrees by full-time study. They believed they had extracted the
best out of both systems of training without sacrificing much in the
process.

(c) They pointed out the problem of attempting to recruit men
late in their training. They were more mature by then, and more
decided on what in general they wanted to do, but perhaps as many
as 80 per cent were committed to their future employer by the time
they entered their final year.

(d) They spoke of the need a young man has to get into real work
quickly — to test his worth in the professional role:

To prove to himself he's worth feeding.

In consequence some companies offer the graduand the choice of
a cadetship (where he will get a trainee's insight into several depart-
ments) or a direct appointment as a professional worker.

(e) All regarded this initial period of on-the-job training as most
important in the young graduate's professional growth. It was now
that he found, usually for the first time, how important interpersonal
skills are in the world of work. It was suggested that now is the
time to provide training in basic managerial techniques, e.g. how
best to communicate one's technology to others, how to interpret
financial documents (in the case of non-accountants) and in the
dynamics of human behaviour. It was agreed that some appropriate
foundation studies could be done in the later stages of a technological degree, but that the subject matter would tend to lack impact unless the trainee had felt a need for them. This he certainly would feel in his first few years in the world of work.

(f) They agreed with the young graduates' contention that some university lecturers lack the practical experience required to make their offerings convincing to students.

They pointed to the efforts made over the last ten years by The Broken Hill Proprietary Co. Ltd. in inviting university staff to visit their plants as guests of the company, for three days at a time. This is felt to have a most useful result for both parties, but does not, of course, provide the depth of experience that is desirable for young lecturers.

In one state some bitter criticism of the quality of lecturing in tertiary institutions was voiced. It is noteworthy that there was no educational research unit, devoted to upgrading the quality of educational effort, established in those institutions.

(g) Like the young graduates, they were uneasy about the way universities seemed to be pressing more and more men on to take higher degrees.

(h) On the other hand they pointed to the difficulty encountered in arranging for men to study for a Ph.D. in Australia. The proposition was put forward, indeed, that a man with Australian research experience in industry would get much greater consideration if he were to seek enrolment in an English university.

(i) They suggested that it would be in the best interests of universities and of industry, if lecturers and men from industry could be readily exchanged. It was felt that universities were unduly reluctant to permit such exchanges.

(j) They discussed the problem of allowing substantial periods of leave to young men to travel overseas, or to study. By and large they were prepared to agree to study leave propositions, so long as they appeared to be in the interests of the employer. They were reluctant to agree to a man's undertaking studies which would lead him to expect accelerated promotion to levels for which he had already been judged unsuitable. They had reservations about the M.B.A. degree, not on the grounds of its acknowledged quality, but because it was felt that the men who qualify will quickly be wooed away by outside management training institutions —

... complete vacuum of management teachers, so universities, etc., will snap up the younger bright people who have the M.B.A.
There's a great danger of losing them. They're terribly vulnerable when they're going through all their teething troubles.

(k) Some employers arranged as a matter of course a period of residence abroad for their most promising men. In general, however, men who wished to travel abroad for experience had to resign from their positions to do so. Once again the pension scheme was usually the problem. Employers saw such resignations as a good opportunity to tell young men the degree of welcome they would be likely to encounter if they re-applied for a position on return from overseas—

...no guarantee of their job back, but we drop some heavy hints.
IMPLICATIONS FOR THE FUTURE

Since the commissioning of this study springs from a desire to improve the fit between tertiary education and work, it will perhaps be useful to draw together the lessons learnt in the enquiry as they affect the groups principally concerned, namely:

(a) Counsellors of students and graduates in tertiary training institutions;
(b) The training institutions themselves; and
(c) Employers.

Implications for the counsellors of young graduates

The closest possible contact should be maintained with the world of work by student counsellors at both universities and at colleges of advanced education. Industry and commerce would welcome such contact, and the case load should be arranged to ensure that the counsellors can maintain it. Counsellors will thus be able to evaluate the professional climate which the young graduate will encounter in each individual enterprise and advise his student clients accordingly.

As part of the student counselling programme, young people should be made aware of what is valued in the world of work, and of some of the demands that will be made upon them, e.g.

(a) That co-operativeness will be valued as well as professional competence.

(b) That promotion will come as a result of observed ability to lead people rather than from superior professional expertise.

(c) That articulacy both on paper and in face-to-face contact is most important, and that the responsibility is borne by the professional man to communicate rather than by the receiver to understand.
IMPLICATIONS FOR THE FUTURE

(d) They should be aware of the importance of persuasion in getting co-operation. Mere logical proof has no cogency in moving people to action.

(e) That there are certain conventions (for example, of dress and personal grooming) in each institution which it would be wise to follow.

(f) They should be encouraged to adopt an attitude of humility and willingness to learn, rather than of superiority and condescension when dealing with older practitioners and subordinates. They should know that there is frequently some very good reason to value the opinion of some older (and perhaps poorly educated) members of an enterprise; and that it is worth seeking out what this is.

(g) They should be warned that they will encounter resistance to change and should be counselled not to interpret this necessarily as personal opposition to them — rather to see it as an attitude characteristically encountered in people who for some reason are defensive.

(h) They should be made aware that they will on graduation use directly in their professional work only a small percentage of the knowledge and skills that they have acquired. Their professional training as a whole will form their frame of reference for judging what data comes to them on the job.

(i) They should be encouraged to believe that their professional training is not complete on graduation; that indeed their on-the-job training in their first position is an indispensable continuation of it.

(j) They should know that it is wise to try and determine just what the managers of an enterprise are seeking to achieve and to align one's activities in such a way as to assist, or at worst not to hinder.

Implications for colleges of advanced education

These observations spring from comments made by both groups. It has been suggested elsewhere that existing tertiary training institutions should be consulted about them.

(a) Advisory boards of studies should be chaired by men from commerce or industry and the decision to convene the advisory board should not be left to the academic members.

(b) The staff of colleges of advanced education should be actively encouraged to grapple with the problems of commerce and industry by engaging in paid consulting work. The teaching load should be arranged to make this possible.
(c) Colleges of advanced education should ensure that close contact is maintained between their student counsellors and the executives in commerce and industry.

(d) Each college of advanced education should include a studies research unit charged with the task of ensuring that the best educational techniques are being practised.

(e) There should be a substantial salary loading to recognize above average teaching skills in the staff of colleges of advanced education.

(f) Colleges should keep professional associations and white-collar unions continuously informed of their activities to ensure complete and early acceptance of graduates by union as well as by employing authority.

(g) Courses of study should be arranged in such a way that the equivalent of the first year of full-time study can be carried out if desired by two years' part-time study.

(h) Colleges must ensure that their graduates understand the importance in all professional work of interpersonal skills and decision taking. They should be exposed to some theoretical background studies in group dynamics and mathematical statistics to raise their potential proficiency in these fields.

(i) One of the important considerations in the study of interpersonal relations should be the reaction to change of individual people, and groups of people. Young graduates will find themselves very quickly working as agents of technological change, and will normally encounter some resistance by older people to the changes they propose. They should be armed with some understanding of the dynamics of the situation they face as well as with insights into the technology they propose to institute.

(j) Colleges must ensure that their graduates can communicate their specialty both in writing and orally in such a way that it can be understood by intelligent non-specialists. They must accept personal responsibility for communicating their ideas effectively instead of leaving it to their hearers.

(k) Colleges should make deliberate provision in planning their staffing and finances to conduct recycling courses for graduates of about ten to fifteen years' standing. They should press professional institutes to support and perhaps sponsor these courses. An ideal approach would be to have the colleges conduct the courses and the institutes pay for them.
Implications for employers of young graduates

These points have been made in earlier sections of this report and are now summarized for the convenience of employers.

(a) In larger companies the training superintendent should occupy a key role in the graduate recruitment programme. He can offer what the young graduate wants—a chance to develop readily marketable professional skills.

(b) It is wise to press technical departments to justify any requests for honours graduates. There is evidence to suggest that there has been substantial neglect of the pass graduate and the just-failed man.

(c) Bonding young graduates appears not to make any useful contribution.

(d) The training of technicians (sub-professional people) should be taken as seriously as the recruitment and training of graduates. They multiply the work effectiveness of the graduates.

(e) At the recruiting point the company’s attitude towards promotion, study for higher degrees, service in remote areas and leave for overseas travel should be frankly discussed. Superannuation should be mentioned but not stressed. Housing or housing loans, if any, should be mentioned.

(f) A young graduate’s first job should be real work. It should require him to use at least some of his professional skills from the very beginning. He should not be put in a spectator role nor should he be asked as his first task to supervise older people; in particular, he should not be called on to supervise elderly people who are very familiar with the organization and the way it works. He should be allowed to taste some success before facing up to a role as difficult as this.

(g) Young graduates tend to withhold commitment to a specific employer or indeed to a specific work type. This should not be regarded as disloyal behaviour. It will be found that they quickly become committed to companies and to areas of work where they find success.

(h) The development of young people is essentially self-development. The employer can provide the opportunity and the facilities for people who wish to develop themselves; he cannot carry out the process for them. He will observe that they respond best when self-development schemes appear to them to make their skills more readily marketable. This is not to say that they will leave the company that provides the training, but they feel much better about staying if they have developed readily saleable skills.
(i) Young graduates are quite unprepared to meet resistance to new ideas and to new technologies and are prone to interpret resistance to their ideas as being personal opposition to them. Accordingly, it is wise to make the young graduate responsible to an older graduate even though it is not always possible to place him under the supervision of a man whose technological background is closely similar. Young graduates are genuinely anxious to know whether they are performing effectively. For this reason periodical counseling by their superiors is highly desirable and can effectively reduce the settling-in period. (Their superiors may need some training and encouragement before facing up to this difficult job.)

(j) Employers should encourage young graduates to learn all they can from older employees, and should give them a lead in this by telling them just what they should respect the older people for.

(k) Once young graduates have tasted success they can be offered the chance to try themselves out in several fields. They prefer to do this in the one company, but, if they find themselves unable to do so, they may leave, not from dissatisfaction but with a view to getting breadth of experience.

(l) Young graduates will find that they are managing people much sooner than they expected. They have usually not been told to expect this nor prepared in any way to meet the problems involved. They are now, and only now, ready for training in supervisory skills. The contributions of the social scientists will be of considerable help to them at this stage.

(m) If they are required to work in remote areas, provision should be made to ensure that professional loneliness does not retard their development.

(n) They should be helped to understand the promotion system in the enterprise. If it is based on merit they should understand what in that setting constitutes merit.

(o) Organizations which have hitherto relied on the school leaver population for their recruits should look carefully at their future requirements. It is just likely that the talent they require will not be available from this source for much longer.

(p) Provision should be made for training professional people with a view to:
   i. Improving the managerial skills of those who are called on to manage.
   ii. Familiarizing them with new techniques which they should know about but will not be called upon to practise.
IMPLICATIONS FOR THE FUTURE

iii. Re-skilling professional people whose activities are primarily technical rather than managerial. They will need training in concepts and techniques which have been developed since they graduated.

Suggestions for further investigation

There appear to be a number of areas in which further research is desirable:

(a) What are the views of people in tertiary training institutions on the students they train and the employers they serve? (They have been criticized in this study, and their point of view should certainly be heard.)

(b) Why do some students elect to stay on for a higher degree whilst others elect for the world of work? What are the expectations of the man with the M.B.A.? What is the community evaluation of the colleges of advanced education compared with the university? What do parents say? What do teachers say? What do employers say?

(c) What can be done in the colleges of advanced education to improve the competence of young people in communicating their ideas?

(d) What can be done to ensure that technologist instructors with adequate work experience also become competent teachers?

(e) What can be done to ensure that people emerging from colleges of advanced education are numerate as well as literate?

(f) What can be done in the colleges of advanced education to prepare young people for the role of manager? In particular, how can a foundation be laid on which to build effective interpersonal skills?

(g) How can employers approach more systematically the problem of identifying the men with the best potential for managerial, as distinct from technological work? (Appendix B refers.) Can something be done to improve the preparation people receive in their companies for the job of identifying prospective managers?

(h) How can we distinguish early in his tertiary training the man who should be a research worker (who aims to press back the boundaries of knowledge) from a technologist, who aims to apply it?

(i) Is there an identifiable body of knowledge and set of skills appropriate to people who will man the non-specialist ranks of public instrumentalities (or for that matter other kinds of enterprise) at the lower and middle levels? If so, should a course embodying these things be presented in colleges of advanced education?
(j) What can the colleges of advanced education do to prepare mothers whose families are now at school to enter the professional or sub-professional work force—possibly for the first time?

(k) How can we get early warning of a technological society's needs for specialized manpower?
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APPENDIX B

SELECTION FOR MIDDLE MANAGEMENT

On page 14 the writer proposes a research programme to improve the precision with which people are selected for managerial responsibilities. The following questions in his experience provide useful indicators of success in the managerial role.

(a) What has he done with the opportunities he has had? To what extent has he put to use his own natural talent?

(b) Do other people concede authority to him? Do they permit him to take the lead; to act as their spokesman?

(c) Does he back down too easily, or does he persist and do full justice to the merits of his argument?

(d) Does he use his authority to the full? (It might indeed be considered a good fault if he takes a little more authority than he is entitled to, to get a job done.)

(e) Can he tolerate insecurity? In particular, can he tolerate the insecurities generated:
   i. by having really talented people working under him;
   ii. when he lacks authority or has to operate in an ill-defined situation, e.g. 'down the crack' between two departments;
   iii. when confronted with unfamiliar situations;
   iv. when short of resources, e.g. manpower, materials or time;
   v. when he has taken a chance and has to sweat it out.

(f) Is he recognized as a source of new ideas? Is he capable of accepting new ideas from other people, e.g. subordinates, rivals and people outside his division.

(g) How widely do his ideas range? Does he think purely in the tactical arena or does he look well ahead and think through the broader implications of his actions?

(h) How well does he communicate his expertise, especially to lay people?
(i) Is he concerned to develop the skills of other people even though they may in time become his rivals?

(j) Does he keep up the morale of those below him? This will be seen especially when he has to reject the bright ideas of a subordinate, or can give him only half the resources they both believe he needs, or has to convey (and be identified with) an unfavourable decision from above.

(k) Does he align his activities so as to act in concert with other departments so that all may pursue effectively the objectives of the enterprise?

(l) Has he the fault of cornering more resources than he needs?

(m) Is he too frequently or too rarely in conflict with his associates? How constructive or destructive are these conflicts?

(n) How quickly does he recover from a rebuff? Does he harbour resentment? When he discusses an issue, does he keep throwing up what happened on some other (irrelevant) occasion?

(o) What is his energy level; his durability?

(p) Has he clearly worked out what he stands for — what he is committed to? Is this also evident to other people?

(q) Does he recognize the state of ‘health’ of the organization and its management? Is his view superficial or in depth?

(r) Can he come to realistic terms with any tendency towards perfectionism in himself or in subordinates?

(s) Can he keep control of his personal time?

(t) Does he have activities outside the enterprise, or is his time so fully committed to the work situation that he cannot ‘take up the slack’ in an emergency?
When technologists graduate and enter the world of work they expect certain things of their work and their employers. Their employers in their turn have certain expectations. This study relates how a distant dialogue was set up between a group of young technologists and a group of employers, and what the interchange revealed. It sets out in summary the implications for employers, for institutions of tertiary training, and indicates areas for further research.

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