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THE DEVELOPMENT AND OPERATION OF THE
EFFECTIVE INTERPERSONAL RELATIONSHIP SKILLS
RELEVANT TO CAREER DEVELOPMENT PROBLEMS
FROM STAFF ASSESSMENT AT AN
INDUSTRIAL RESEARCH LABORATORY

A THESIS PRESENTED IN FULFILMENT OF
REQUIREMENTS FOR THE AWARD OF Ph.D
AT THE UNIVERSITY OF ASTON IN
BIRMINGHAM

UNIVERSITY OF ASTON
8 APR 1977

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SEPTEMBER 1975.

SUMMARY

This study concerns the application of a model of effective interpersonal relationships to problems arising from staff assessment at I.C.I. Ltd. Corporate Laboratory between 1972 and 1974.

In collaboration with academic and industrial supervision, the study commenced with a survey of management and supervisor opinions about the effectiveness of current staff (work) relationships, with particular reference to the problem of recognising and developing creative potential. This survey emphasised a need to improve the relationships between staff in the staff assessment context.

A survey of research into creativity emphasised the importance of the interpersonal environment for obtaining creative behaviour in an organisation context. A further survey of theories of how interpersonal behaviour related to personal creativity (therapeutic psychology) provided a model of effective interpersonal behaviour (Carkhuff, 1969) that could be applied to the organisation context of staff assessment.

The objective of the project was redefined as a need to improve the conditions of interpersonal behaviour in relation to certain (career development) problems arising from staff assessment practices. In order to demonstrate the application of the model of effective interpersonal behaviour, the research student recorded interviews between himself and members of staff designed to develop and operate the dimensions of the model. Different samples of staff were used to develop the 'facilitative' and the 'action oriented' dimensions of behaviour, and then for the operation of a helping programme (based on vocational guidance tests).

These interactions have been analysed, according to the scales of measurement in the model and the results are presented in case study form in this thesis. At each stage of the project, results and conclusions were presented to the sponsoring organisation (e.g. industrial supervisor) in order to assess their (subjective) opinion of relevance to the organisation. Finally, recommendations on further actions towards general improvement of the work relationships in the laboratory were presented in a brief report to the sponsor.

ACKNOWLEDGEMENTS

I would like to acknowledge the considerable help of the many people at both the I.C.I. Corporate Laboratory, Runcorn, and at the University of Aston in Birmingham towards the undertaking of the work presented in this thesis.

At the I.C.I. Corporate Laboratory, apart from the many members of the staff who have volunteered to spend time with me in order to discuss their work, two industrial supervisors have assisted significantly during the period of project work; Mr. R.T. Cox and Mrs. L.P. Hoskinson (both Personnel Officers). Miss S.C. Carson (Assistant Personnel Officer) also helped considerably.

At the University of Aston in Birmingham, the other members of the supervisory team were Professor G. Scott (main supervisor); Mrs. M. Newton (associate supervisor) and Dr. A. Cochran (I.H.D. tutor).

As well as the people employed directly by these two organisations many other people have given valuable time and assistance to the researcher. I would like to thank them, and especially a colleague Mr. K. Greenhalgh, for the stimulation and support of the effort undertaken in this project.

PROLOGUE

"Experience, it is said, makes a man wise.
that is very silly talk. If there were nothing
beyond experience it would simply drive him mad."

Soren Kierkegaard.

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CHAPTER ONE

I.C.I. Corporate Laboratories and Problems of Creativity with Research Staff

Administration: In 1969, the Swann joint industry university committee urged bold experiments with the Ph.D. in the national interest. Aston University was, at that time, developing the Interdisciplinary Higher Degrees Scheme as an attempt to provide new means of post-graduate training, (I.H.D. department pamphlet).

Initially, the Aston scheme was funded by the University Grants Committee but, an important feature of the scheme was the intention that projects would be relevant and acceptable to outside organisations, who would co-operate with university supervision of the projects, as sponsors as well as supervisors. The sponsors willingness to use and support the scheme would thus serve as a measure of the scheme's success in training students in solving problems of immediate practical importance.

Another important feature of the Aston scheme was the interdisciplinary nature of project work. Thus, a problem might be tackled by the application of more than one discipline, and with the help of more than one academic supervisor. Although the generation of new knowledge was a hoped for product from project work, the primary aim of the projects was to serve practical rather than fundamental interests.

The Background and Preliminary Survey of the Problem:

The Sponsor: The formal sponsor of this project was Imperial Chemical Industries Ltd., (I.C.I.) However, the problem that concerned the project existed in a particular part of this company, the Petrochemical and Polymer Laboratory, (re-named Corporate Laboratory in 1972).

The main characteristic of I.C.I. is its size and complexity. The recent annual accounts (1973) provides some of the common statistics to describe this size and complexity, e.g. half a million ordinary stockholders; £1500 million of capital resources; 150,000 full-time employees, both at home and overseas; sales, by value exceed £2000 million per annum, a quarter of which are exported.

The company is principally a manufacturer of basic chemicals from natural feedstocks. These basic chemicals are either processed further by other divisions of the company or sold for further processing by other manufacturers. There is a developing interest in selling directly to the consumer.

The location of most of the original company sites is in the U.K. industrial regions, (e.g. N.E. and N.W. England,) determined most often by access and proximity to suitable raw materials. There is also an administrative centre in London.

The amalgamation of smaller manufacturing companies that created I.C.I. was primarily a response to the development in size and power of overseas competitors. However, a loosely federated structure of operating divisions has maintained considerable local autonomy in commercial decisions. Some administrative procedures have been centralised, and achieved a high degree of application throughout the company, (e.g. in the Personnel functions, the Haslam job evaluation system.)

The Petrochemical and Polymer Laboratory was formed in the early 1960's as part of the company's Head Office Research Function. At the time of this project, about 350 people were employed on the site, which is shared with a division headquarters in Runcorn, Cheshire.

The Laboratory, as the name suggests, was originally set up with the intention of developing specialised skills in the company's principal scientific areas of interest, enabling a more fundamental and longer term view of research needs in the company's business areas. However, this role has developed, and in 1972, the Laboratory was re-named Corporate Laboratory. This change in role has given the Laboratory a more central interest in other areas of science relevant to the company and now enables concentrated and high quality research into novel and developing areas (e.g. Biological sciences) as well as maintaining work in traditional research areas.

Work is organised primarily on the basis of projects in respective technical areas. Many working contacts are maintained by staff at various levels with research needs arising from a division, apart from the usual heirarchical organisation of relationships within the laboratory work teams.

The overall management of the laboratory is undertaken by a small "Policy Group". Projects in a particular technical area are administered by a "Group Head". The scientific staff in the laboratory, (e.g. about 130 with Ph.D. or above technical qualifications) are divided according to relative experience and technical qualifications. These scientific roles are research associate, (usually denoting the most senior scientists with company wide influence, and not usually based full time at the laboratory); research specialists (a laboratory role for senior scientists who would be involved in various laboratory projects simultaneously; senior research scientists (Ph.D. level and above); Junior Research Scientists (other technical qualifications) and Laboratory assistant (not necessary qualified). (See Tables 1(a) and 1(b)).

Table 1(a)

CORPORATE LABORATORY ORGANISATION

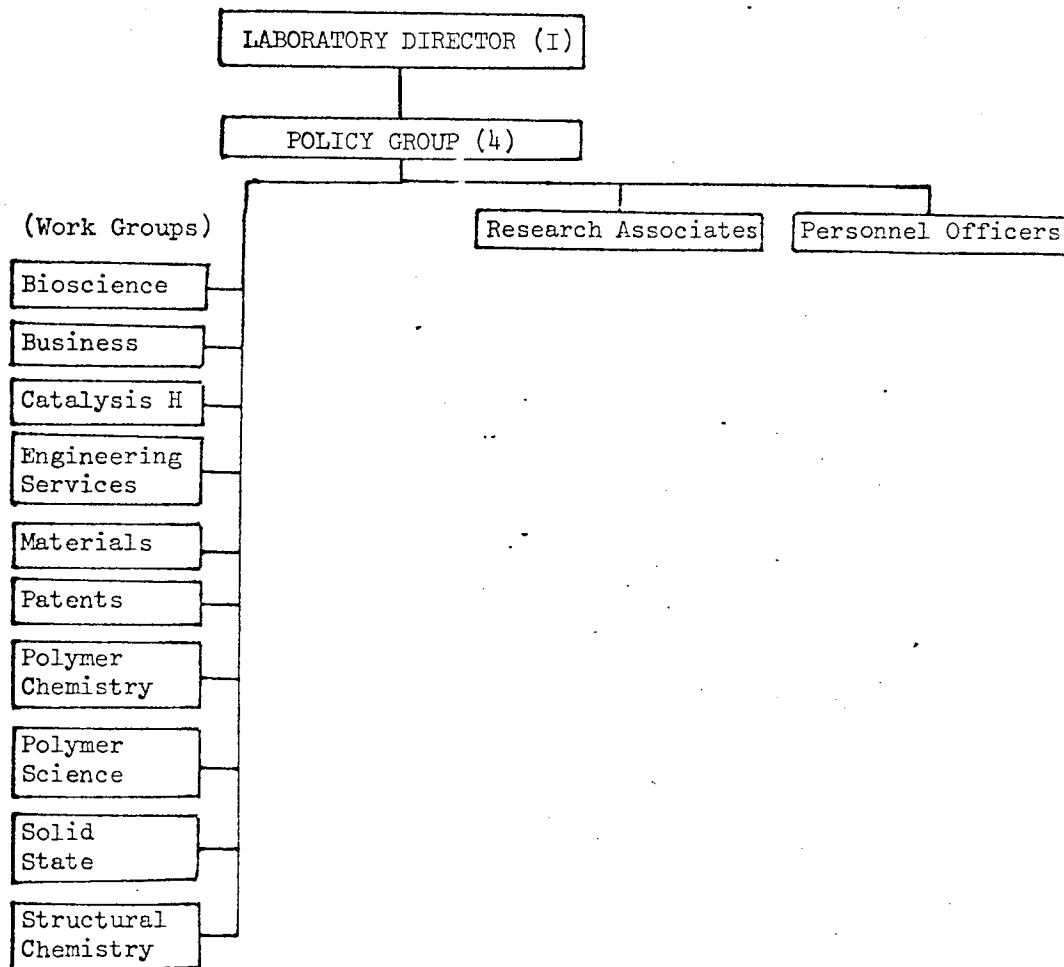
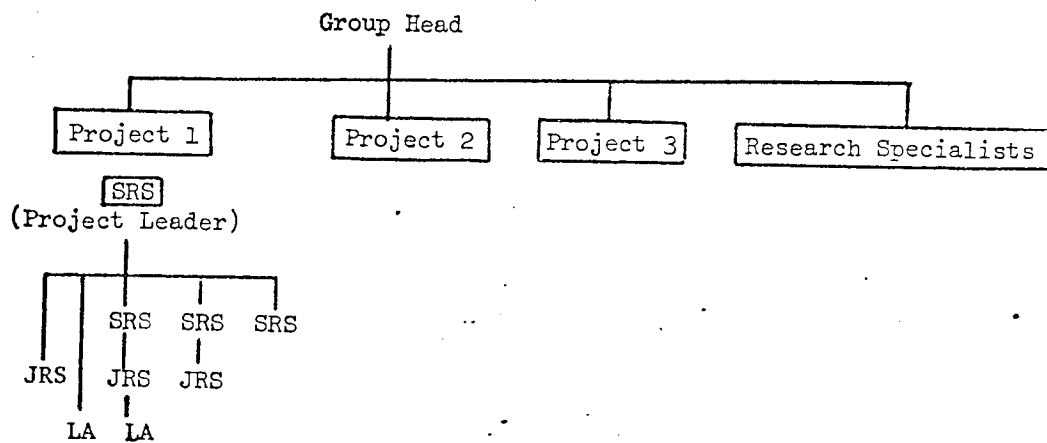


Table 1(b)

CORPORATE LABORATORY

A Typical Structure of a Work Group



The Outline of the Problem: The original form of the problem area was described in an I.H.D. department circular to prospective students as "The Relevance of Higher Education to (chemical) Industry". However, this broad definition, agreed at the earliest stage of contact between the sponsor and the university was later re-defined when the Petrochemical and Polymer Laboratory became - in effect - the sponsor.

As a result of discussions between the laboratory's industrial supervisor (a personnel officer) and the I.H.D. tutor concerned with the project, alternative interpretations of potential problem areas were defined as:

1. the problem of selecting and appraising staff in order to detect creative potential,
2. the question of university recruitment
3. post graduate training induction
4. follow up of staff who have left the laboratory

A decision on selection of the problem for attention was made after the selection of a research student to undertake project work, and the constitution of a panel of supervisors. Largely as a result of the recommendation of the industrial supervisor, the problem we selected was Number one above: "The problem of selecting and appraising staff in order to detect creative potential." This was

seen, by the industrial supervisor, as the problem of greatest importance to the organisation.

CHAPTER TWO

Opinions on the Different Aspects of the Problem

A Preliminary Survey of the Problem: In order to obtain a clearer definition of the problem situation, a survey was undertaken of 'key' staff in the laboratory. It had been made clear in informal discussion, for example, with the industrial supervisor, that there was an unsatisfactory situation at the laboratory - which was felt to be something to do with a lack of creativity. However, the supervisory team decided that the situation should be more clearly defined before any attempts towards a solution were attempted.

'Keyness' was determined by consultation between the industrial supervisor and the policy group. Two factors were taken into consideration in determining which staff to survey; one - "that they would have something useful to say," and two - "they could spare the time." (The words are those of a policy group member).

Seventeen people were selected; several people from each of the principal levels in the organisation where interest, and responsibility, for creativity was evident, (i.e. group heads, research specialists, and senior research scientists). The survey was conducted by a personal semi structured interview with the research student. It was

considered by the supervisory team and the research student that this form of survey would be most likely to obtain accurate and detailed information about the circumstances at the laboratory.

The research student was introduced by the industrial supervisor to the member of staff concerned in the sample. General details of the project were given, and, if he was agreed to undertake the interview, a time and location was fixed to suit the subject's own convenience, usually his own office in a week's time. Each interview lasted approximately one hour. Questions were introduced by the researcher on the themes already defined, (viz selection, appraisal, creativity) and the subject was asked to describe how he saw these as relevant and important to his job at the laboratory. From this basic structure of the interview, the interviewer attempted to obtain the personal opinions, of each subject, of the circumstances he experienced at the laboratory, by seeking as much specific detail as the subject was able to give, (see Ridge 1970).

No formal record of the interviews was made, except jottings and notes made by the research student of the main points raised during each interview. A summary of the main points raised is presented here.

1. Conflict between different work functions

Evidence concerning this aspect of the problem situation was given in almost every case. With some individuals, the strength of feeling was considerable and demonstrated quite frankly. Conflict arose most often concerning the specific issue of evaluation and support of research effort. For example, members of staff with a predominantly academic or scientific-technical experience often had difficulty in accepting or understanding decisions and directions given by the management staff, who interpreted research needs more from intangible commercial criteria. In an area of industrial research, anyway, conflicting opinions were probable. However, in this situation the conflict was considerable. The exact nature of the origin or cause of this conflict was not clear - e.g. that the nature of the laboratory's research role was shifting from more routine technical problem solving to more speculative longer term research. However, it was clear that some relationships were often deteriorating due to inadequate communication or understanding of the points of view of the different roles. This had consequences of preventing effective co-operation on research work.

Regarding the specific topic of creativity, there was also much evidence of conflict over what work was "creative". Notably, the management function gave evidence that every member of staff had a contribution to make towards the achievement of the laboratory's objectives, and each contribution was important and to be valued.

The interview, at this laboratory, was structured primarily, to obtain data relevant to the overall management of laboratory manpower resources. However, management staff saw the interview as having other purposes as well - concerning the general motivation and organisation of subordinate's work and development. In practice however, much evidence given concerning how the interview worked in practice suggested that, again, there were frequent conflicts or limited interactions concerning these potential issues.

Although most of the evidence concerning the operation of the assessment system was critical of supervisor supervisee relationships, some evidence was given of successful and effective practices.

3. The Anxieties of the Staff concerning Careers:

Another outcome of the interviews, and their relatively unstructured form, was much expression of concern about 'careers.' Quite often, this was a concern about 'jobs' rather than 'careers', i.e. was there going to be work at all rather than was the individual able to develop the nature of the work he was undertaking.

From the discussions, it was clear that various factors concerning the position of the laboratory were coincident at this time, and were threatening the confidence of staff regarding the availability of work. For example, the Laboratory, itself, had not been very successful, and there were rumours and fears that it might be shut down.

Other opinions, expressed most often by technical staff, indicated a pre-occupation with outstanding contributions only. Thus, on the one hand, a manager would value, a novel approach to a problem situation by a junior member of staff, even if the problem was routine to the more experienced manager, whereas staff with notably technical backgrounds and work responsibilities gave no indication of any interest in any creativity less than the spectacular - for example, a discovery such as the invention of nylon. This was further evidence of conflict regarding criteria of successful work performance in the organisation.

2. The Inadequacies of the Assessment System

Similarly, the evidence given regarding the assessment system in this situation was frequently critical. In many cases, individuals demonstrated strong feelings about the subject, either as for example, a supervisor who viewed it as an administrative nuisance of little help to him, or as a supervisee, who had to waste time going through the motions of a pointless exercise.

The 'Assessment System' consisted of a compulsory once - a-year - interview between boss and subordinate on the subject of the subordinates work performance. However, this annual interview was not intended as the only occasion for direction and decisions about work between boss and subordinate, but as an attempt by the organisation to ensure that it did happen at least once a year.

The Laboratory had a policy of "Flow through" whereby it expected the majority of qualified technical staff to remain at the laboratory from three to five years and then move to another job - usually elsewhere in the operating divisions of the company - ideally with a successful research project. The Laboratory was known to be under pressure to reduce its total numbers of staff. Jobs, however were not easily available at the moment, because of the general economic and other circumstances; the company, generally, was cutting down on numbers of staff.

All of these factors were mentioned by the members of staff - usually as an example of how the assessment system should be helping, in particular, to alleviate these problems, either to help a member of the technical staff to find some valuable work or project, to help a member of staff find alternative jobs in Divisions, (not necessarily research) or outside the company.

CONCLUSIONS to the Preliminary Survey of the Problem

The original definition of the problem "relevance of higher education to (chemical) industry" had suggested that this problem was concerned with the effectiveness of human resources, at work, in some manner. Although, at this stage, the situation had been outlined in a very general form, it suggested that a problem existed in an industrial organisation with the lack of effectiveness of staff who had received higher education, (notably Ph.D. training).

The definitions of problems agreed between I.H.D. tutor and industrial supervisor also confirmed that the problem lay in an industrial organisation's concern about the effectiveness of university trained graduates to perform work roles relevant to the organisations' - industrial - objectives.

This preliminary survey of the problem situation confirmed that these opinions existed in a practical situation - that staff with formal responsibility for the achievement of industrial objectives had difficulty in obtaining satisfactory cooperation from staff with predominantly technical training and experience.

This preliminary survey also indicated that, as far as this project was concerned, in practice, the sponsors of the project were the management staff in the organisation who held the formal responsibility for obtaining this cooperation and more effective performance. Apart from the formal responsibility in the form of the organisation, these staff also held the practical means for altering the unsatisfactory situation.

However, the means for changing the system - the assessment system, where decisions about performance and work, and their organisation and development were made, was not regarded as functioning effectively. This suggested a means of approaching the

problem, however, - rather than by examination of selection methods. The evidence indicated a greater willingness to change the situation by assessment and development than by some attempt to recruit different staff.

This survey further indicated that the term 'creativity' would require more careful attention, because of differing interpretations and opinions offered by various staff. It was clear, however, that the problem, in some way, lay with the opinion of management that graduate staff performed less effectively than they could potentially do so; and, it was the responsibility of management staff to take action to change the situation.

Finally, the problem, or rather - symptom - of career problems was seen to be further evidence of inadequate performance. As a result of these conclusions, a further survey was undertaken of the assessment system, in order to obtain further information about the problem situation - interpreted as inadequate assessment - and the opportunities for using this approach to the problem situation by the project.

CHAPTER THREE

The Problem of Staff Assessment

As a result of the conclusions drawn from the survey interviews, a detailed examination of the Laboratory staff assessment procedure was made with the help of the Personnel Groups at the Laboratory.

The procedure of "staff assessment" at Corporate Laboratory is based on originally a General I.C.I. policy regarding "performance appraisal" (see Appendix 1a). The Company policy stipulate a code of 'minimum practice' - for example, that boss and subordinate must discuss performance at least once a year, and that the subordinate should have access to another opinion if he desires. However, although this is the minimum practice required in the company, it is open to more detailed attention as and when desired. This was the case in Corporate Laboratory where the once a year discussion had been more formally structured and designed as a result of various years experience. The system at Corporate Laboratory was designed in order to suit the particular circumstances of the laboratory. The system or procedure often changed as a process of improvement from year to year. For example, a significant change that had recently been introduced was the self assessment form. This had been introduced (i) because of the particular emphasis on staff development at the Laboratory and (ii) because staff were judged to be competent to complete such a form.

The forms were constructed by the Personnel Group at the Laboratory, after consultation with management, and one complete set was distributed at the appropriate time of year to each assessment relationship, i.e. each supervisor received one set of forms for each supervisee.

The set of forms (see Appendix 1b) consisted of an introductory sheet (including the objectives of the assessment exercise and a summary of the procedure) and four separate "sections" - Section One - self assessment; section two - immediate supervisors comments; Section three - line manager's sheet, (i.e. the Group Head who usually carried out an interview of the supervisee); and Section four - career development and training. In addition, there was a Summary Sheet (including basic administrative information such as job grade) and an aid to performance appraisal (- a rating scale).

The procedure was undertaken in as informal - and relaxed a manner as possible. The Personnel Group set a deadline for completion and return of the forms; each supervisor had to arrange the completion of the forms to suit his particular circumstances. In some groups the group head might delegate much of the work to senior research scientists; in other groups, the group head might undertake to interview every member of his group. As the form suggests, a great deal of the detailed supervision of work was undertaken by senior research scientists.

Conclusions on the Survey of the Assessment System

The achievement of the objectives of this assessment system, stated in Section 1, (see Appendix 1b) was not formally quantified or monitored, either by the Personnel Group or management. However, despite the informal and loose administration of the system informal opinion, (e.g. of the Personnel Group and industrial supervisor) considered the system to be an important mechanism for directing attention to some important laboratory objectives, for example, agreement and definition of technical objectives; development of standards of performance.

The nature of the scheme, as it stood, placed a strong emphasis on the need for good judgement and interpersonal skills of both supervisors and supervisees. Thus, supervisors were required to decide on fair and accurate evaluations of individual performance in relation to expected standards, and decide, also on the relationship of this individual performance to a wide range of organisation needs, for effective work performance and achievement of technical goals and individual needs, such as training and development. Furthermore, supervisees were required to exercise skills in judging their own performance. This was considered to be developmental, in requiring each supervisee to take more responsibility for his own performance and development. However, differences of opinion, and conflict, were probable, as earlier evidence had indicated, as it was left for each member of staff to decide on the rating, and little help or training was provided in the rating of behaviour and performance.

As the basic statement of minimum practice indicated, much of the attention to the various aspects of this assessment system was optional for the particular members of staff involved. According to the Personnel Group, the most frequent use for the assessment interview was as a formal, written record of the individuals progress in the organisation, and as an opportunity to discuss career issues. Discussion about the technical work usually occurred 'at the bench', during the year, as and when occasion and opportunity arose. At this laboratory, where a policy of 'flow through' was exercised, some formal attention to career development was necessary, and the assessment interview usually provided the most suitable occasion.

It was now possible to conclude that an approach to this particular problem situation might be made by effecting some attention to the assessment system, the relationships between supervisors and supervisees and thus the basic problem of unsatisfactory performance of technical (graduate) staff. The assessment system was concerned - apparently with limited effectiveness at present - to examine and develop various aspects of performance (see the rating scale in Appendix 1b) other than technical. Thus, despite the project's (and research student's) lack of technical (chemical) knowledge, other areas of assessment (such as career development) might provide opportunities for improving the effectiveness of the operation of the assessment system.

CHAPTER FOUR - REVIEW OF PREVIOUS WORK ON CREATIVITY

At this stage of the project, attention was given to previous research relevant to the problem situation. A literature search was undertaken, primarily into work on "creativity". This approach was chosen as an attempt to discover and define the different approaches that have been made in various research in this area, in order to help define further the nature of the problem in this situation. As stated earlier, the definition of creativity by key staff had not been satisfactory. For example, it was not clear whether it was a single particular factor of behaviour, like an ability, and a separate category of behaviour as indicated in the rating scale used in the Assessment System, or, a term used to indicate general effectiveness and development of all factors of behaviour. In developing a solution for this problem it would be important to take into consideration the state of present research discoveries in relation to the various approaches to, or definition of creativity. Project work would have to be designed on practical considerations as well as academic. Some approaches to creativity might not be feasible in this project's circumstances, for example, the use of 'experimental' techniques may be limited by the constraint of minimum disruption to the normal operations of the laboratory.

It is important to emphasise that the emphasis on 'Creativity' was due to the enthusiasm of the sponsor (and industrial supervisor) and their belief that there was something relevant in current research into creativity, to the laboratory and the problems that had been presented to the researcher.

Creativity

Definitions: There have been various approaches towards the interpretation of and research into the concept of creativity. Each discipline of the social sciences, for example, reflects a particular point of view. Thus Sinnott (1959) as a biologist, views creativeness "as a characteristic of all living matter", and its evolutionary development can be traced right up to, and including the human level. Whereas, Parnes (1963) describes how the stimulation of productive ideas, from an educational point of view, may be defined as "the facilitation of the expression of the preconscious imagination in a group situation, by deferring conscious critical evaluation." Similarly, Torrance (1962), from a more sociological viewpoint describes how lack of creativity is due to "the repression of creativity among children by the conformist pressures of American school teachers parents, and peer groups. The psychodynamic psychologist, however, is concerned to research the role of unconscious impulses in creativity, and thus Freud (1908) pointed to the relations between the work of the artist, ordinary day dreaming and children's play.

Other psychological approaches regard thinking as high level skills, for example, Bartlett (1958) shows that these are similar in many respects to complex psychomotor skills. Bartlett, like, for example Guilford (1959) distinguishes thinking processes as occurring in opposing forms - such as 'closed systems', as opposed to 'adventurous thinking'. Research based on this approach (e.g. Cropley (1967) has thus sought to identify

"the cognitive characteristics of creative thinkers", using concepts developed in modern learning theory and information theory.

Finally, research based primarily on clinical or psychopathological study has developed the approach such as Kubie (1958), who maintains that inspiration "originates at the preconscious level, and is more likely to be blocked by, than to derive from, neurosis". And, also, Rogers (1961) sees creativity as "a process of self realisation of the unusually sensitive and well integrated personality."

Various writers have investigated creativity without any overt theoretical reference. For example, from personal accounts such as Poincaré (1924), Spender (1946), Mozart (1789), writers have formulated an analysis of creativity as 'stages in thinking', (Wallas 1926). By the 'art' of thought Wallas emphasises the development of greater skill and effectiveness through self-training of one's 'natural' thought process. Many such analyses of creativity have been 'popularised' by other writers e.g. De Bono (1967) - 'lateral thinking'; Hudson (1970) - 'convergent and divergent thinking'; Rokeach (1960) - 'the closed and open mind'; Koestler (1958) - 'Biosociation'; Schon (1960) - 'the displacement of concepts'; Witkin (1962) - 'field independence'; Ray (1959) 'trial and error thinking'; Thouless (1952) - 'straight and crooked thinking'; Wertheimer (1961) - 'Productive thinking'; Wallach and Kogan (1964) - 'associative fluency'.

Indeed, from a historical point of view, Vernon (1969) emphasises the influence of popular social interpretation on the actual content

of research into creativity. Thus - in the late nineteenth century society was not primarily concerned with an analysis of its resources of outstanding ability but was more intrigued by the lives and tribulations of great artists, writers, scientists and leaders. General Social reform - the technological welfare society had focused interest in creativity as an ability - behaviour with particular social value.

Thus, Galton (1869), recognised as having undertaken the first major empirical work on the subject, was the first attempt at an empirical study of human abilities, which viewed men of genius, not as a kind of race apart, but as the extreme end of a continuous distribution. However, the emphasis of this work was primarily genetic, to the neglect of family upbringing and other factors. Terman and Cox (1947) gave greater recognition to the role of personality factors, of favourable environment and conditions of schooling. Similarly, as with Galton, the selection of the subject population for the research is a significant indicator of the developing social trend of interest in creativity. With Galton (1869), subjects were socially eminent judges, statesman, generals, poets, painters, musicians, divines and scientific men. With Terman and Cox (1947) the subjects were primarily children. Roe (1952) demonstrates the development of less wholly psychometric, more clinically based conclusions regarding the upbringing and personalities of eminent scientists, and other, more common occupations, such as lawyers, engineers, teachers, and journalists.

The factors examined in empirical investigations of creativity have been varied. For examples, heredity, childhood, adolescence,

adult personality, intelligence, perceptual processes, problem solving behaviour have all been considered in studies of creative behaviour. However, as Stein (1960) points out 'No one factor has been common to every study'. Stein (1960) continues "There are those who have designed experiments, or used psychological tests, or conducted interviews, or some combination of these approaches while others speculated about creativity on the basis of biographies they had read or experiences they had had. There are those who selected their subjects on the basis of scores on intelligence tests; others used number of citations or number of lines devoted to a person in histories or biographies of famous people; a third group utilised the judgements of professionally qualified people; a fourth group concerned itself with people of generally acknowledged eminence; and a fifth group have studied persons who were in professions that require creative behaviour."

This diversity of research may be seen in various comprehensive symposia or collections of articles on the subject, for example, within the last fifteen years, notably Anderson (1959), Gruber, Terrell and Wertheimer (1962), Wootney and Rajik (1967); Taylor (1964 a and b); Taylor and Barron (1963); Golann (1963); Barron (1965); Cropley (1967) and Tyson (1966).

In summarising research undertaken on the subject, Stein (1960) identifies three major areas which characterise the literature concerning

creativity. One, is the individual - his characteristics, and the process which he arrives at his creative product; "the environment" through its facilitating or inhibiting effect on creativity; and lastly the 'relationship of creativity to the transactions between the individual and the environment'. Although this summary emphasises creativity as being a very individual phenomenon, i.e. behaviour unique to a particular person, and the complexity of behaviour and its origins in interaction with environment, a further summary by Mooney (1967) added still further to defining the options for approaching creativity in this particular situation.

Mooney (1967), again, distinguishes various interpretations of creativity that have been adopted, and the consequences on the organisation direction of research work, thus "different strategies and their results will be relevant to different problems." ^{TABLE} 2 outlines Mooney's summary. In ^{TABLE} 2, Mooney relates the study of various 'aspects' of the study of creativity to the practical relevance of the approach. Thus a study of "the process of creating" is most relevant to those who are themselves creative. A study of 'the person of the creator' is most relevant to those with responsibility for selecting such persons. Further each aspect is studied according to different criteria, and different research methods.

Aspect number 4 in Mooney's Table (Table 2) provides a description of an approach towards obtaining creative behaviour by those 'who are responsible for the cultivation of personnel' - i.e. the supervisors in the sponsoring organisation.

TABLE 2 VARIOUS APPROACHES TO OBTAINING CREATIVE BEHAVIOUR (Mooney 1967).

CONSEQUENCES



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Conclusions

This review of the research into creativity provided a satisfactory understanding of the relationship of research on creativity to staff assessment problems. Staff assessment, primarily the (interpersonal) relationship between a supervisor and subordinate, and creativity which is the product of the interaction between an individual (subordinate) and his environment (supervisor). In order to examine means of improving staff assessment practices, research on creativity emphasises the need to study the interpersonal environment in which creativity comes about.

Much of the evidence concerning the organisation problems had concerned the interpersonal aspects of the organisation, for example deteriorative conflict between work functions, and unsatisfactory assessments.

Furthermore, this review of previous research into creativity suggested that a further review of therapeutic psychology might provide material concerning the interpersonal environment in which creativity comes about. Other psychological approaches concerned with individual (creative) behaviour were oriented towards other ultimate criteria, which appealed to different interest groups (see Table 2) e.g. psychometric psychology would be relevant to 'those who are responsible for picking individuals to fit particular positions'. Whereas, the managers and supervisors in this environment would have a concern for the greatest possible development of individual work behaviour. This concern had already been identified (see chapter three) as a key purpose of the staff assessment procedure (e.g. career development).

CHAPTER FIVE: THERAPEUTIC PSYCHOLOGY

Writing in the early 1950's, Rogers (1954) puts forward a "theory of creativity" to account for some of the symptoms of problems which he considered were resulting from "inadequacies in the organisation of society in general". To Rogers, many of the serious criticisms of the culture and its trends at this time could be formulated in terms of a "dearth of creativity". Thus, he makes the following points in order to illustrate this hypothesis:-

"1) In education, we tend to turn out conformists, stereotypes, individuals whose education is "completed" rather than freely creative and original thinkers.

2) In our leisure time activities, passive entertainment and regimented group action are overwhelmingly predominant, whereas creative activities are much less in evidence.

3) In the sciences, there is an ample supply of technicians, but the number who can creatively formulate fruitful hypotheses and theories is small indeed.

4) In industry, creation is reserved for the few, the manager, the designer, the head of the research department, whereas for the many, life is devoid of original or creative endeavour.

5) In family and individual life, the same picture holds true. In the clothes we wear, the food we eat, the books we read, the ideas

we hold, there is a strong tendency toward conformity, toward stereotypy. To be original, or different, is felt to be dangerous."

Rogers' explanation of creativity is defined at the level of 'process' and the theory put forward is concerned primarily with the conditions under which the 'process' occurs, and the ways it may be facilitated. Roger's definition of the creative process is "the emergence, in action, of a novel relational product, growing out of the uniqueness of the individual on the one hand, and the materials, events, people or circumstances of his life on the other."

The further definition of these conditions is made under the headings of internal and external to the individual person. Thus, the conditions within the individual which are most associated with a potentially constructive creative act are:-

- a) openness to experience.
- b) an internal locus of evaluation
- c) ability to toy with elements and concepts.

Furthermore, the conditions which must exist to foster and develop the internal conditions described are summarised as:-

- 1) psychological safety
- 2) psychological freedom.

In his exploration of the construction of these conditions, Rogers, and others, have focused especially on the "social" or interpersonal conditions that surround an individual, which reflect the nature of the psychological freedom and psychological safety conditions. More especially, the social conditions at the level of what Brammer and Shostrom (1960) have termed "therapeutic psychology."

Brammer and Shostrom (1960) summarise various other approaches - as well as Rogers - towards the problem of constructing the social interpersonal conditions in which creativity occur. Therapeutic psychology is primarily developed from studies of situations that border on the psychopathological - where breakdown of behaviour has occurred to the extent where an individual is behaving destructively or not at all in comparison with normal standards.

Indeed, much of the early research relevant to therapeutic psychology originates from psychoanalytic theory. However, Rogers, for example, maintains that the scope and scale of attention required for the development of behaviour is greater than the extremes of abnormality or breakdown that have become the province of psychoanalysis or psychiatry. Brammer and Shostrom use the term "actualisation counseling" in order to describe the area of behaviour that is properly the province of therapeutic psychology - as Rogers (1954) describes it "the desperate social need for the creative behaviour of creative individuals"

and Brammer and Shostrom (1960) describe "the need to help a person becomes one's true personhood, to realise all the potentials within one's self, to become actualised into a responsible, fulfilled human being."

Brammer and Shostrom (1968) summarise the theories that contribute to therapeutic psychology (see Figure 3) and present a summary of the main principles - or assumptions underlying the approach - which, as yet "lacks any one theory sufficiently comprehensive or systematic enough to guide the counselor through the multitudinous problems he meets in everyday practice."

These are presented as five - key - dimensions of the activity which they term - philosophical, structural, developmental, dynamic and research.

The philosophical dimension is an essential consideration because of the assumptions that are made regarding the existence of goals of actualisation or life and behaviour in its social context.

The nature of these goals may be summarised as

(a) uniqueness: even though a person shares much 'human nature' - especially at a physiological level - in common with others, the nature of life is such that behaviour at more complex levels (central nervous activity) develops according to experiences unique to the individual.

Table 3

The Emerging Eclectic Approach to
Personality in therapeutic Psychology
(Brammer and Shostrom 1968)



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(b) moment to moment: again, such is the nature of behaviour that the 'present' is the most important time modality. An individual is capable of different states of mind - of experience and purpose of different times - according to circumstances. Any counselor must focus on the 'here and now' state - the conflict.

(c) freedom to choose: whereas behaviour is often determined largely by person history and forces beyond his control, there is an implicit assumption about an individual's opportunity to influence his own future by his own actions.

(d) Responsibility: the burden of action to influence events must be carried by each individual for himself. Even though growth occurs in a social context, the individual is ultimately responsible for his life circumstances.

(e) learned behaviour: while some - primitive - behaviours are reflexive or genetically determined, and some are the result of chemical or neurological events beyond the control of the individual, much behaviour is learned and is also primarily a consequence of social influence.

A Structural dimension is another element necessary for actualisation or therapy. At any point in time an individual will exist in a state of personal conflict between needs and desires and

external environmental mastery of conditions required to meet the needs and desires. A key feature for actualisation is the reconciliation of these forces - of the realities of living in an environment of real people, objects and institutions, and creating the behaviour (or structure) for effective adaptation to external and internal conditions.

A developmental dimension is an element concerned with the understanding of the implications of psychological conditions beyond the individuals control on the actualisation process - for example - death, and factors of (physiological) maturation. Thus various stages can be isolated as common to individuals, which will influence his attention at particular stages during life. Thus:-

(a) dependency (birth to 2 years) during this 'helpless' stage of human life the child is dependent on his environment (parents) for the organisation of the gratification of his needs.

(b) independence (2 to 3 years) increasing physical autonomy introduces opportunity to learn and differentiate elements of the environment, and thus to seek to influence more effectively the events surrounding him.

(c) role taking (4 to 6 years) curiosity and exploratory activity expand in many directions - the social organisation of behaviour begins to become important (e.g. sexual roles).

(d) conformity (6 to 10 years) the child encounters new social environments where other behaviour is emulated in an attempt to understand and explore.

(e) Transition (9 to 13 years) the major developments occurring at this stage are efforts to promote separateness and individuality more fully (e.g. in relation to parental influence) and maturation of sexual function.

(f) synthesis (13 to 30 years) rapid body growth and genital maturation - and approach of adult responsibilities bring increasing pressures and restrictions. Within this framework, the youth relives early conflicts and experiences and new conflicts in his struggle to find himself and his life.

(g) Experimentation (20 to 35 years) For the first time, the young adult is completely on his own - testing out areas of relationships and work.

(h) Consolidation (35 to 50 years) Energies, interests and values have taken direction, in many cases some reformulation is required.

(i) Involutional (45 to 60 years) physical and psychological deterioration may commence, which may either create new problems or re-introduce old - ignored conflicts.

(j) Evaluation (60 to death) Retirement and loss of income, loss of spouse, and degenerative illnesses may promote pre-occupation with a retrospective view of the individuals life - a concern for memories of happier times.

A Dynamic dimension attempts to outline another vital aspect of behaviour that therapeutic psychology recognises as fundamental to actualisation counseling and psychotherapy. This dimension is primarily concerned with the forms of interactions between the individual and his environment, the ways that re-structuring of behaviour occur. A common dynamic of personality is a defense system, such as protection "which is an attempt to attribute to a present, by false, source material which really exists at a deeper level within the personality. The personality is unable to tolerate the painful experience of seeing that which is within itself"; e.g. the difference between actual and desired environmental mastery. (Brammer and Shostrom 1968).

A Research dimension is essential in the attitude of therapeutic psychology, and practitioners, in order to overcome "anecdotal accumulation of therapeutic wisdom, (which) at its worst reverts to the occult and mystical" (Brammer and Shostrom 1968). "Although there are pressing ethical and scientific obligations to validate

results with the best experimental means possible, scientific methods have not previously been completely adaptable to counselling settings," (Brammer and Shostrom 1968). More recent research in this area (see Carkhuff 1969) has attempted to specify more effectively the nature and effects of various interpersonal processes where the various personality theories have been examined and evaluated as to the practical consequences of their respective approaches.

Thus, the psychoanalytic approach stresses the importance of the client's life history, the influence of impulses (instincts), a "life energy" (e.g. libido), the influence of early experience on later personality sources of much of human behaviour. A significant feature of this approach is the general postulate that the origin and solution of human problems lie deep within the personality, (rather than within the perceptual organisation) and require such techniques as abreaction, free association, interpretation of resistance, dreams and transference material).

In contrast, self theory and more phenomenological approaches emphasise the client's creative responsibility for re-perceiving his problem. Thus Roger's position became known as "non directive" because it was counter to the traditional counsellor centred methods (e.g. psychoanalysis) of solving client's problems. The principal method of the self theorist in counselling is to help the client to examine the areas of his experience which may be either accepted, distorted or denied. More specific techniques for achieving this are counsellor attitudes of honesty, trustworthiness and genuine concern,

in an attempt to build and maintain a non threatening anxiety reducing relationship.

Although the dynamically oriented theorists seek to understand conscious and unconscious conditions through inference, the behavioural group concentrates on objective study of client behaviour and the learning process in particular as the source of hypotheses about counseling. Gestalt theorists, similarly, stress learning and systematic behaviour observation. Carkhuff (1969) summarises the varying research approaches in Table 4.

Recent developments in therapeutic psychology can be traced from various evaluations of psychoanalytic approaches, (e.g. Eysenck 1952, 1960, 1965). Important conclusions were drawn regarding the lack of congruence between psychoanalytic systems and the experience of the people treated. Thus, for example, other practitioners, (e.g. Shafer and Shoben (1956); Rogers (1957), began to make formulations that were more relevant to the experience of the person with whom they were interacting. This nondirective mode of treatment has been developed into a comprehensive model in which "helper and helpee are assessed on the same dimensions and in which all sources of learning the didactic, the experiential and modeling, served to influence the helpee to function more and more in ways structurally similar to the helper" (Carkhuff 1967). This model has been developed further from

Table 4

DIFFERENT APPROACHES TO TREATMENT FOR BEHAVIOUR CHANGE
(CARKHUFF 1969)



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this base (Carkhuff 1969) and offers yet further opportunity for development towards its prime concerns - demonstrable human benefit, as well as the scientific concern for effective understanding.

CONCLUSIONS

Research developments in therapeutic psychology emphasise the difficulty of establishing a theoretical model that identifies the core dimensions of effective interpersonal behaviour, whatever the situation. Previous theories have had limited effectiveness; psychoanalytic theories have been most effective in the situation of outpatient clinics (see Table 4); trait and factor theories have been most effective with some categories of situationally distressed normals (e.g. college students).

A model proposed by Carkhuff (1969) proposes a set of core dimensions for effective interpersonal behaviour in any situation; this model would be relevant to clinics, counsellors and any situation where one person - a helper - is seeking to provide a relationship to a second person - a helpee - with the aim of influencing the helpee to change his behaviour to become more effective in the helpee's environment.

In the practice of staff assessment, a more knowing manager or supervisor has the responsibility for influencing a less knowing supervisee towards coping effectively with his work environment. The Carkhuff model which proposes a means of providing effective interpersonal conditions offers an opportunity for evaluating and improving the interpersonal relationships in the laboratory's staff assessment system.

CHAPTER SIX: THE CAR KHUFF MODEL OF EFFECTIVE INTERPERSONAL RELATIONS

The model presented here, in proposition form, is adapted from Car khuff (1969). It attempts to outline the variables and their necessary inter-relationships relevant to behaviour change as occurring in the processes of adaptation and maturation. Whereas both maturation and adaptation occur at various behavioural levels (e.g. biochemical as well as cognitive), the model develops the concepts of growth and developments at the 'whole organism' level i.e. between the individual and his life situation rather than between particular systems of the organism and the relevant environment (e.g. visual perception).

A key assumption of the model presented here is that the inhibition to growth may be removed by a significant and effective human relationship capable of discriminating and communicating the nature of the block to the person concerned, in such a way that the person is able to change (adapt) his behaviour to the preferred mode.

6.1. Three Propositions on Growth and Development

According to Car khuff (1969), the ultimate goal of life for the human organism is conceived as the full development and growth of its physical, emotional and intellectual capacities. Prevention of growth may occur, and this deterioration may be the result of a number of factors, both internal and external to the person concerned. Whereas, when conditions are meeting the needs of growth and development, the individual is freed to make and act upon further sensitive discriminations of his physical, emotional and intellectual environment both internal and external. Three propositions of the model, which seem relevant to the present study, are stated and discussed in the next three sections.

6.1.1. Growth and Deterioration are physical, emotional and intellectual (Proposition 1)

The conditions for growth may be summarised as physical (e.g. the need for food and shelter), emotional (e.g. the need for understanding, love, respect) and intellectual (e.g. the need for a functional assumptive cosmology). The actualisation of resources is dependent upon the developmental stage of an individual. Growth is reflected in the individual's increasing ability to:

- . understand his physical, emotional and interlectual worlds
- . act upon these worlds, both internally and externally

Similarly the deterioration of resources is dependent upon the individual's stage of development and is reflected in the individual's decreasing ability to understand and act.

6.1.2. Physical, emotional and intellectual growth are dependent on First Person (helper), Second Person (helpee), contextual and environmental variables. (Proposition 2).

The conditions affecting the physical, emotional and intellectual growth of an individual may be influenced as the result of significant human relationships. The effectiveness of this relationship on the process of growth (and deterioration) may be described in relation to First Person, Second Person, contextual and environmental variables.

The facilitative dimensions of behaviour are:-

- . empathy: the extent to which the helper adds to the expressions of the helpee
- . respect: the extent to which the helper generates regard by the helpee in himself
- . genuineness: the extent to which the helper can communicate an honesty or spontaneity of his own experience
- . specificity: the extent to which the helper can guide exploration to specific feelings and their exact nature

The action oriented dimensions of behaviour are:

- . self disclosure: the extent of which the helper can communicate significant information about himself in the helping situation
- . confrontation: the extent to which the helper can communicate discrepancies in helpee behaviour to the helpee
- . immediacy: the extent to which the helper both acts upon and directs the actions of the helpee immediately to the situation
- . concreteness: the extent to which the helper can lead a thorough examination of all aspects of a helpee problem situation

The facilitative and action oriented dimensions of behaviour are defined further in a set of scales (numbers' one to seven) in Appendix 2.

The Second Person variables, mentioned in Proposition 2, and relevant to the construction of a helping relationship may be categorised either as independent or as a consequence of the helping situation.

Independent variables include:

- . the various demographic or actuarial characteristics of helpee populations
- . helpee level of functioning as measured by traditional indices and diagnosis categories (emotional-intellectual-social/interpersonal-vocational)
- . other helper variables not readily identifiable by traditionally available techniques - helpee set, expectations and motivation

Consequential variables are those describing what the successful helpee does during helping:

- . helpee exploration (see Scale 8, Appendix 2)
- . range of problem expression
- . immediacy of experiencing and relationship

The Contextual variables of proposition 2 relevant to the construction of an effective helping relationship refer to all aspects of the setting within which helping takes place. Although there are potentially a great many such variables, a few may be selected as specially prominent, and categorised as physical or personal.

Physical contextual variables include:

- . the location within the community at large; the internal and external characteristics of the setting (e.g. clinic or hospital)
- . the appearance of the actual setting (e.g. furniture, decor, lighting, music)

Personal contextual variables include:

- . helpee's experience with all of the persons associated directly or indirectly with the helping agency.
- . arrangements surrounding the helping programme (e.g. payment terms, appointed schedules, waiting experiences)
- . availability of different methods of treatment (e.g. modes, duration)

The Environmental variables in helping refer to the conditions from which the helpee comes and to which he must return after help. As with contextual variables, a great many may be relevant; a few may be isolated as especially prominent and categorised as physical or personal.

Physical environmental variables include:

- . those relating to physical nourishment (e.g. food, shelter, rest, comfort, security)
- . those that have to do with physical support (e.g. community or organisational facilities)

Personal environmental variables include:

- . significant reference groups (e.g. family, friends, neighbours)
- . the home-work-school environments (e.g. colleagues, superiors)

6.1.3. The Critical Categories of Variables in the construction of a helping relationship are the helper offered dimensions of behaviour, and the helpee behaviour arising during the process or occasion of helping (Proposition 5)

In general, the helping relationships may be described as a cycle of expression of experience between helper and helpee. The effectiveness of help depends most on the interaction between helper and helpee during this process. In general, help will be most effective when the process is oriented towards the particular needs of the helpee, and expressed by the variables arising during the helping process. Helper behaviour should offer facilitative dimensions of behaviour in response to helpee behaviour, whereas the action oriented dimensions of behaviour are initiated by the helper during the process. The pattern of interaction that is most effective in the construction of helping relationship may be further described in terms of stages in the cycle. The two basic phases of the helping process may be described as:

INWARD, representing the stages of exploration and understanding, and OUTWARD representing the stages of emergent directionality and action that results from achievements in the Inward phase.

The duration of the cycle of the helping process will depend on the state of the helpee, and the ability of the helper to relate facilitative and action oriented dimensions of behaviour. This interaction is further described in Tables 5 and 6.

REVIEW OF APPLICATIONS OF THE CARKHUFF MODEL

The development of the model proposed by Carkhuff (1969) has taken place in research done in the U.S.A. For example, Carkhuff traces his own work to a Wisconsin University Schizophrenic project (see Carkhuff 1969 P 192) which was attempting in the late 50's to establish the effectiveness of the non-direct mode of treatment with schizophrenic patients. The project discovered significantly greater variability in its treatment group than in its control groups, and the investigators were able to trace back the recorded cases and establish the differential processes that lead to differential effects: counsellors and therapists who were functioning at high levels of empathy, unconditionality, and congruence had patients who demonstrated positive outcomes on a variety of indices, while counsellors and therapists who were functioning at low levels had patients who demonstrated negative outcomes (Truax and Carkhuff 1967).

While the number of patients was small, and the significance of the investigation not considerable, other studies produced results consistent with this analysis (Barron and Leary 1955; Cartwright and Vogel 1960; Mink and Isaksen 1959).

Later work by Carkhuff (1966a, 1966b, 1967, 1968) extended the analysis of significant helper activities towards the assessment of facilitative conditions he or she offers, and the consequent level of helpee process involvement. Thus, the helpees of psychoanalytic, or client centred, or existential, or trait and factor or behaviouristic helpers who are functioning at high levels improve in functioning on a variety of change indices with perhaps little regard for the helper's particular cognitive map of what is taking place and where it is going, (Carkhuff and Berenson 1967).

Widely different orientations to counselling and psychotherapy have emphasised the critical nature of the counsellor's empathic understanding and respect for the helpee, his genuineness in the therapeutic encounter, his specificity in emphasising emotional

experiencing, his concreteness in problem solving, his ability to confront the helpee when appropriate, and his ability to interpret the immediate experiencing of the helpee's relationship with the helper. (See Carkhuff 1969).

Other sources of research have variously supported dimensions such as self disclosure, openness and flexibility, confidence, commitment, and other more dynamic personality characteristics. Many of the dimensions, especially empathy, respect, genuineness, concreteness, confrontation, and immediacy have been related to constructive process or outcome or both in hospitalised schizophrenics, including those in both individual (Berenson and Mitchell 1969; Rogers et al 1967; Truax and Carkhuff 1967) and group psychotherapy (Truax and Carkhuff and Kodman 1965) as well as with outpatient psychiatric populations (Pagell, Carkhuff and Berenson 1967) and outpatient neurotics or situationally distressed populations (Barrett Lennard 1962; Berenson and Mitchell 1969; Carkhuff and Berenson 1967; Halkides 1958; Pagell et al: 1967; Truax and Carkhuff, 1967). This accumulation of studies offers substantial support for the relationship of these core facilitative, and action oriented dimensions to client and patient outcomes.

These findings also constitute a response to the challenges of such works as Eysenck (1965) Levitt (1963) and Lewis (1965) concerning the control factor in research in this area, i.e. that the treated helpee may ⁹ be both 'better' and 'worse' than the controls. The effective ingredients of counselling and psychotherapy may not be what have traditionally been considered to be the critical dimensions of therapeutic interpersonal processes. Facilitative conditions may be available to the control group clients and patients from other than the professional helper, i.e. the control group may not be a control group. Thus, clients under control situations may benefit from a facilitative relationship with persons selected from those in the group around them (Bergin 1963, Frank 1961, Powers and Witner 1961).

CONCLUSIONS

The Carkhuff model emphasises the complexity of variables that can influence the outcome of an interpersonal relationship. Research has focused on the 'helper' and how this variable can change, as much as the 'helpee' and how different behaviour requires various 'helper responses' before help is effected. As well as the complexity of helper - helpee interactions, context and environment offer greater complexity when decisions on helping and its effectiveness must be made.

However, by drawing from all contemporary research, and undertaking extensive research on the generalisations that were developed concerning what lead to effective interpersonal behaviour, the Carkhuff model, itself, has developed a considerable degree of sophistication, and a history of effective testing.

On the basis of the detailed explanation and definition provided by Carkhuff (1969), the model could be used to evaluate and operate helping conditions at the industrial laboratory. The staff assessment procedure already provided a clear emphasis on the 'more knowing' and 'less knowing'. The purpose of staff assessment clearly emphasised the need for effective relationships between the two parties, in various areas, thus the context and environment at the industrial laboratory could be clearly interpreted in the terms of the Carkhuff model.



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Table 6. The Stages of the Individual Dimensions Within the Phases of Helping (Carkhuff 1969)



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CHAPTER SEVEN: RE-DEFINITION OF THE PROBLEM

With the aid of the constructs and theoretical model outlined earlier (ch. 6), it was now possible to define more fully the objectives of the project. Although the objective had been stated generally at an earlier stage of the project, such as the solution of a particular problem of concern to the sponsoring organisation, in order to undertake project work for the achievement of this aim, it was necessary to state the problem in a manner which enabled the project to undertake specific (operational) actions.

Definition of the Problem: The initial survey of the problem, the problem as seen by those responsible for the situation in the sponsoring organisation, provided evidence of conflict between different work functions; anxieties concerning careers and employment; and concern about the ineffectiveness of the staff assessment system. Further investigation of available research literature indicated that this situation could be interpreted in terms of the organisation environment, in particular the inadequate conditions of interpersonal behaviour between members of the organisation. The interpersonal conditions of concern to this project could be further specified as the (heirarchical) relationships between supervisor and supervisee that existed as the formal organisation of staff at the laboratory, and, also, could be seen to operate in the staff assessment system, which was intended to be a formal description, and means of operation of the various aspects of the employer/employee relationship in this situation.

The objectives, and potential issues, involved in the assessment

relationships, were wide ranging and complex both technical (chemical-scientific) and non-technical (legal). For the effective operation of this staff assessment system, high levels of accuracy in both the discrimination and communication of the potential issues were required by both supervisor and supervisee. However, in these circumstances, where little formal training, other than 'on the job' or 'trial and error' was available, mistakes, and consequent deterioration in the effectiveness of the working relationship was a possible consequence. Again, the evidence of the initial survey tended to confirm this analysis.

Some of the issues in the assessment interactions had been specifically mentioned in the initial survey of the problem. For example, performance ratings by the supervisor often differed with the performance rating, the self assessment achieved by the supervisee. These differences in ratings were often difficult to reconcile, and the issue was often felt to be vital to the supervisee, perhaps because of the impression (mistaken) that a supervisee's performance rating was related to financial reward. Again, decisions concerning the organisation of the supervisee's work had sometimes been poorly communicated, for example, sophisticated and complex objectives were imposed with little concern for the needs of the supervisee concerning his understanding of the requirements. These various inadequacies in the conditions of interpersonal behaviour could lead to conflict, and the deterioration in the working relationship between a supervisor and a supervisee, and, also, on the effectiveness of the supervisee's own work performance.

According to the theoretical model outlined by Carkhuff (1969) effective conditions of interpersonal behaviour would be a principle means of obtaining improvements and changes in the behaviour of staff that was the particular problem, at present, in the organisation. The (operational) objective of the project could thus be defined as "to improve the conditions of interpersonal behaviour at the laboratory".

The Plan of the Project Work : In order to achieve the general objective of the project, "provide improved conditions of interpersonal behaviour at the laboratory," project work was organised to take into account the particular circumstances of the project (e.g. resources) and the sponsoring organisation (priority of this particular problem). The condition that most influenced the plan of the project work was the need to avoid disruption to normal work operations in the laboratory. The situation was sensitive, especially towards 'experimentation' with issues of deep concern to the various members of staff. In order to overcome this problem, the project chose to demonstrate improved conditions by as limited an intervention as possible. Thus the research student would provide the improved conditions; (rather than attempting to change or train present supervisory staff). Furthermore, the project would attempt to provide improved conditions for a small sample of staff, on one particular staff assessment problem e.g. career development.

The development of the levels of functioning of helper conditions of behaviour was organised into separate stages, in order to provide reasonable developmental stages for the research student concerned.

The first stage involved the facilitative dimensions of helper dimensions of helper behaviour. The second stage in the development of helper behaviour would involve interactions concerning action oriented dimensions of behaviour (as well as facilitative dimensions). A final stage of the project, with a different sample of staff, would enable the operation of a helping programme, where improved conditions of interpersonal behaviour would be provided.

The Redefinition of Creativity: It is important to emphasise at this stage how this process of defining the problem has focused on particular aspects of creativity.

The original definition of creativity (during the original survey) focused on creativity as a form of behaviour at the level of the organisation (i.e. behaviour consistent with the creative objectives of the laboratory, e.g. a scientific invention).

In order to define a problem for the purpose of this research, the project focused first of all on the creative behaviour of individuals in the staff appraisal context (i.e. towards the objectives of staff appraisal not the (larger) objectives of the laboratory).

Eventually, a specific helping programme was operated in one particular area of staff appraisal objectives, (see Chapter three) career development.

PART TWO - THE DEVELOPMENT OF A HELPING PROGRAMME

Chapter eight The Helper - Facilitative dimensions of behaviour

- 8.1. Purpose
- 8.2. Design
- 8.3. Results
- 8.4. Conclusions

Chapter nine The Helper - Action Oriented Dimensions of Behaviour

- 9.1. Purpose
- 9.2. Design
- 9.3. Results
- 9.4. Conclusions

8.1. Purpose

The purpose of this first stage in the development of the project may be described generally as an appraisal of the major variables involved in the problem situation, i.e. helper, helpees, context and environment, where these variables were tested in relation to the research student's adopting the role of potential helper.

The appraisal, at this stage of the project, was necessarily of a simple nature, due to the need for the research student to begin to develop the relevant dimensions of behaviour in relation to this potential helpee situation. (e.g. empathy required the development of discrimination and communication regarding the nature of this helpee populations problems; although as a graduate himself, the research student already possessed some relevant experience).

Thus in order to appraise the potential for applying the helping model more fully, it was necessary to attempt and evaluate interactions between helper and representative members of the helpee population where the interaction was at a level that could be managed by both. At this stage, the helping programme was intended as an interview - where the helpees were asked to help the helper.

In terms of the Carkhuff model, the objectives of the formal work or sample interviews, at this stage of the project may be defined

as:

- (a) Primarily, to develop and appraise the level of helper

skills relevant to the helpee population to the minimum levels of the facilitative dimensions of necessary helper behaviour (i.e. not too high levels of empathy, even if the sample helpee commences a high level of exploration, because environmental factors would be critical towards the effective exploration of some concerns. As yet these were not involved in the design of the helping programme, as they would need to be).

(B) and secondarily to appraise and develop the project's ability to manage other relevant variables necessary to operating a helping programme e.g.

The Helpee : what were the observable characteristics of potential explorers that might be used in the eventual operation of a helping programme.

The Context : what was the best way of managing the physical aspects of the intended helping programme e.g. the tape recorder.

The Environment : what were the observable characteristics of a potentially helpful environment which might thus influence the choice of a helpee population later in the project.

In operational terms, the primary objective may be stated as to attempt to obtain high levels of self exploration in a sample of the helpee population - at least as high as the minimum level required for process movement.

8.2. Design

The means of achieving this objective was designed as a set of tape recorded, semi-structured, depth interviews held with a randomly selected group of the helpee population, i.e. the graduate staff at the laboratory of all levels, research specialist, senior research scientist and junior research scientist.

The Sample : Fourteen subjects were selected at random from the staff list; five RS's, five SRS's and four JRS's. ^cOne selected, the subjects were approached individually by the research student by calling at their office. The research student introduced himself and general details of the project - "on creativity" and asked "if I could have some of your time to ask you about your own work at the laboratory". Various assurances were also given about the name having been randomly selected, and that the discussion would be totally confidential. This approach obtained an adequate response (13 out of the 14).

The Interview : Two separate interviews were conducted, with each subject, each of approximately one hour's duration, at times of convenience to the subject (i.e. to fit in with his work schedule). The interviews were to be conducted generally in offices made available by senior laboratory staff being absent from the laboratory - usually on a visit. The offices for group heads, policy group or research specialists were not shared, and therefore would not be liable to

interruption or inconveniencing other members of staff.

The interviews were structured in order to enable a relative comparison of subject response (see Table 7a and 7b). The structure of each interview was intended to provide equivalent helper conditions at both content and process level (see Table 7b).

The content of the interview was designed in order to allow the subject sufficient opportunity to develop both confidence in the interviewer and some confidence in his own ability to respond to some of the depth aspects of the interview.

The first interview was thus conducted primarily on content and themes that the subject - in this work context - would find relatively easy to respond to - about the facts of his own organisational situation. The structure was based on a system of task classification developed by Singleton (see Ridge 1970) (see Table 7b).

The second interview was conducted primarily on content and the themes where response would depend primarily upon the individuals own opinion or attitude or judgement, i.e. where personally relevant material (see Carkhuff self-exploration scale) was required.

The tape recorder used throughout the project was a Sony TC800 with internal condenser microphone. Although a sizeable machine

(15" x 13") using 5" spools, the internal condenser microphone enables the tape recorder to be used anywhere (ie unobtrusively) within the room, (it adjusts automatically to the sound level) and without the encumbrance of throat or or other external microphones and wiring.

Table 7 (a)

THE DESIGN OF THE INTERVIEW PROCESS USED
IN THE DEVELOPMENT OF HELPER
FACILITATIVE DIMENSIONS OF BEHAVIOUR

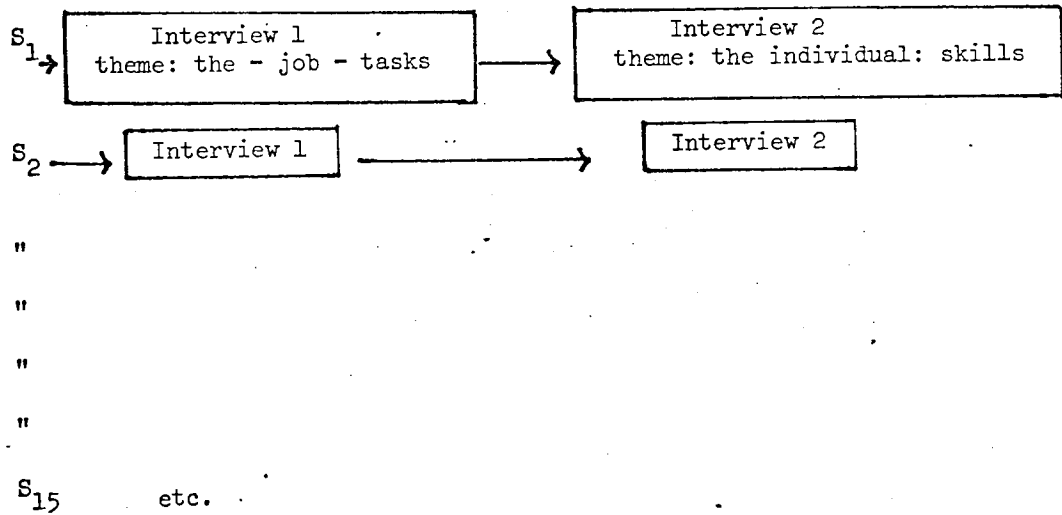


Table 7 (b)

The Structure of the Interview used in the
Development of Helper Facilitative Dimensions of
Behaviour

<u>INTERVIEW 1</u>	<u>Sequence</u>	<u>Topic/Theme</u>	<u>Usual Question Form</u>
	1	Time	"how do you spend most of your time?"
	2	Career History	"would you give me a pen picture of your career to date in the lab?"
	3	Environment	"what sort of a Laboratory is this?"
	4	Input	"what are the raw materials of your work?"
	5	Output	"what are you trying to do exactly?"
	6	Control	"what help do you have available?"
<u>INTERVIEW 2</u>	7	Most Valued Experience and Rest of Career History	"what is the most important and most valued experience in your career?"
	8	Method of Work	"do you have any particular pattern of approach to problems?"
	9	Future	"do you have any idea what you would like to do in the future?"
	10	Magic Wand	"what would you do with a magic wand?"
	11	Hobbies	"what do you do with your spare time?"
	12	Criticism	"How do you react to criticism?"

8.3. Results

The results of this set of interviews are analysed in relation to the descriptions of the purpose in 8.1. The achievement of this purpose is assessed by applying the relevant Carkhuff scale to selected samples of data.

In the case of the primary objective - analysis and development of helper behaviour, the data selected consists of a complete interview transcript, (plus another complete transcript in Appendix 3) and a comparative analysis of the whole range of responses in the sample to one particular theme. This is intended to demonstrate how the general model operates in the interview situation as a whole, and how the data in relation to one particular theme may be assessed in relation to the specific point about the levels of exploration that were achieved by the overall interview process.

In the case of the secondary objective - analysis and development of other relevant variables, a summary of conclusions is presented, with individual examples of data where necessary.

Primary Objective: Helper variables

Some results may be presented at a general level of achievement, for example, that 13 of the 14 subjects, volunteered and satisfactorily completed the interviews can be taken as some indication of effective Helper behaviour. The one who did decline will be discussed later (see Helpee Set).

However, the intention of the project was to demonstrate in some detail the nature of the construction of an effective interpersonal relationship, and in order to do this, the interview results are analysed in two ways.

A by analysis of the total interview transcript of the subject (with a comparative transcript of another presented in appendix 3).

B By analysis of the self exploration demonstrated in response to one Question theme by all the subjects. (The method of work Q8 in Table 7(b)).

A

The total transcript presented here, (and in Appendix 3) consists of the two separate meetings between a subject and the research student.

The structure of the interviews (see Table 7b) was intended to present a particular theme (Problem Area in Carkhuff terminology) and then to attempt to facilitate as much exploration of that theme as possible.

The themes introduced in the first interview concerning "the job" were generally answered more readily than those introduced in the second which focused on "the individual". In the sample presented here, the subject is able to present a fairly detailed account of the events in his career at the laboratory, however, in the second interview when asked to give an account of his past career in more personal terms, the responses are not as detailed, and require greater facilitative behaviour by the interviewer. Despite the discrepancies expressed by the individual regarding his work situation, no action oriented behaviour by the interviewer was introduced.

In the transcript, 'S' refers to subject, and 'I' to interviewer.

A Sample of the Total Interview of Subject 6

After initially clarifying the objectives, and conditions, relevant to the interview, the subject (page 2) is asked to describe the way he spends his time, during a typical day. In order to further develop the ease of response of the subject, the interviewer then asks about the history of his work at the laboratory (page 3), and also previous to the laboratory. The subject is, by this means, able to begin to talk freely about his situation, whilst also introducing material relevant to his own feeling about his work situation (e.g. page 6). Eventually, discussion of his own present project leads naturally to greater detail concerning his work situation (page 8). By page 10, the conversation develops with special regard to one particular aspect of his work environment, his relationship with his boss, where he has further personal feelings concerning the situation. By page 14, the interviewer avoids too detailed exploration of this area, returning to the topic of 'Output', and repeating some exploration of previous areas. Eventually, by page 20, the subject is beginning to share more of his experiences of working at the laboratory, which is later developed further in the second interview.

In the second interview, held approximately one week later, the introduction is far quicker, and the subject begins to express himself freely, if not with greater ease, as questions now require more personal insight. In this case, the subject immediately, (page 1), presents a particular concern he has concerning his career. In these

circumstances the interviewer develops this particular theme, (page 3) in some detail, and to some length, including the topics of 'future' and 'magic wand'(up to page 7). In order to 'rest' from that particular problem area, the topic of criticism is introduced (page 7) Here, the subject can use non work experience to develop an answer. Similarly, hobbies are introduced on page 8. And then, the topics more closely related to the work situation are re-introduced, e.g. method on page 8. Eventually, the interviewer presents the subject with an invitation to return any of the probing if he desires to do so.

RESULTS : A

Subject 6 : Interview One

the actual tape to make sure it's rubbed off - whatever you want - you know - it's your pigeon. It's in my interests to make sure it is confidential. Unless you feel free to speak your mind and - you know - and say what you want, I might as well pack up and go home. Uhm, so, yeah, it will be strictly confidential. In fact, any of the replies that I actually want to write up, I will ask you if you mind these being used. They won't be attributed to you by name. They will be 'a particular person who was being interviewed', but you know there's some chance that you might be recognised and not want to be -

S Sure.

I - and again I'll check on this.

S Yes.

I - before anyone has a smell at it.

S Aah, that's OK then; that's fine.

I That's fine then. I tend to take this for granted. I'm sorry that I didn't get it over - thanks very much for asking about it ... Anything else?

S I can't think of anything at the moment!

I Well ... I'd like to try and look at the situation you're faced with in terms of an environment, which you find yourself in, and the sort of usual inputs, and outputs that you are - in fact - faced with; and the - sort of - control you are allowed over it. Uhm, for example, if we could start off by thinking how you spend most of your time - in a typical day.

S Uh huh.

I Does that make any sense?

S Er ... Yeah, I guess so. Uhm ... I would say - dividing my day, I would probably spend 60% of my time in the lab working on the bench ...

I Yeah.

S and about 20-25% reading in the office - literature - circulation. Er ... and the rest of the time, a mixture of probably ... time that's wasted, and, talking to other people - whether it's about chemistry, or - communicating with other people in the group - or other groups, which may or may not be relevant to the work.

I Ah, it works ... Great! Now, presumably, I've got to clarify what this is about.

S Yeah - creativity, and that's about it.

I I'm associated with creativity?

S Yeah.

I I suppose that's what I ought to be because that piece of paper said it was a creativity project didn't it?

S Yeah.

I It's a dangerous word! What I'm really here to try and do is make a nitty gritty ... take a nitty gritty look at how ordinary people work here - by having a fairly deep chat - by bringing in some theoretical ideas about people, and how they work - some fairly new ways of thinking about it - especially about more complex jobs like mental working - as opposed to bricklaying!

At the moment, I'm taking a rough sample of people working at the Laboratory and wonder if they would put up with my asking all sorts of questions.

As opposed to what it is exactly, I'll feed it back afterwards; I don't want to influence your replies too much.

S Uh huh; sure ...

I So what I'd like to do in the first session is try and look at the sort of raw materials you are given - in the laboratory - when you come here as a sort-of particular human being - and are faced with some sort of situation - to get at this situation. And then in the next interview I'd like to get at what the hell you do about it! OK ... does that get across ...

S I think so; yeah.

I Roughly ...

S Yeah, Yeah.

I Are there any particular questions you've got in mind - you know - that you would like to ... ask, and I'll see if I can clarify. You can always ask anything you do want to ask afterwards.

S Yeah ... presumably this is confidential.

I Oh christ! Yes, I'm sorry - yes. This ... no-one will hear this. No "management" will get anywhere near it. This is my own research, and it's strictly Doctor-patient sort of thing. I don't agree with certain doctors who think it's in the patient's interests to tell parents ... anyway. Yeah ... If you want the tape back, or if you want it rubbed off that's fine. It will be rubbed off eventually. But if you want

I Hah! You weren't tested to find out how far you could go - sort of thing - in the technical field.

S No!

I Uhm!

S As far as I remember, it was 3 1/2 years ago - or 4 years ago - I think (X) asked me one technical question ...

I And did you answer it?

S And I ballsed that up ... hah!

I Hah - yes - excuse me!

S I don't think this is terribly unusual; at that time, it may have altered now, but I have met other people who have ... you know - it seems that ICI are more interested in the fact that you can - sort of - get along with your mates, rather than your technical expertise ...

I Well, there's something to be said for that ...

S Oh! sure. I ... If this was the policy they've applied over the last - ICIs a reasonably successful company ...

I So how in fact did you originally choose to apply here in the first place?

S Er ... well, you know, I got my PhD in Brum. I went to the States. I had made preliminary contacts before I went. And these had - sort of - been maintained - with ICI.

I Which? With one of the Divisions?

S I think I came up to see P and P itself before I left ... before I left for the States - sort of - at that time it was circularising your particulars to the Divisions - I think it had started - maybe it hadn't.

I I came back, and did a Cooks tour sort of - round the Divisions ... Maybe I should say there was other reasons for ... well, I came back from the States, I was only going to stay for 2 years ... Er - which - influenced what sort of job I took, and where it was. Uhm, since that time - well; immediately when I came back, they altered the immigration restrictions into the States. Prior to that there was unlimited quota from this country. About a month after we got back, they cut right back, and immigration to the States was virtually impossible without a long long wait.

I Well, well well! - you were actually going to emigrate over there.

I How long have you been in the lab?

S Er ... 3 1/2 years.

I How long did it take you to feel ... Uhm ... at home?

S Er ... I'm probably ... I probably still don't feel at home!

I Hah! ... Yeah.

S You know, we're here on a temporary sort of basis anyway and - er - I don't feel that I've - sort of - made my mark. Comments have been made at assessment time etc. You know, I get the feeling that the sooner I'm out of it and get a permanent place in a Division, probably the better for me ...

I What group ... this is (Pol Chem) Group.

S Yeah.

I and that's (Gp Head) is it?

S Yeah. I've only been there for ... Oh - when did I move? I forget whether it's last July or last July-12 months before. I think I've been there about 18 months; and I was with (a senior research scientist) before.

I Were you! You were with him on a project?

S Yeah, that's right.

I That's what you were primarily recruited for? Or - that's not the way it works is it!

S Er ... No, ...

I You get in and then choose something that you want.

S More or less, yeah. I, you know, I wasn't really recruited ... I - if you want to talk about that I will -

I Yeah, fine ... I do ...

S To me, there didn't appear to be any selection process at all when I came here for interview. There was a general sort of chit chat to see whether you were a reasonable guy that would get on with the fellow that worked on the bench next to you. There wasn't any attempt to find out - you know - my technical ability.

I No penetrating questions in the interview?

S ... Well, if there were, they went straight over my head!

S Oh! Yeah .. I had ... I was given the choice of two ... two fields; either with (JL) or with (IG) and - prior to coming here, I was an (X) chemist - I had done nothing else since (X) since, and I wanted to sort of get away from it. So, I thought it would be a good idea if I plunked for (IG) in (Y) chemistry. Er, unfortunately, the 2 years I spent working with him I spent doing (X) chemistry! Er, but that was probably my fault more than anybody else's.

I What happened to that project? What happened to the work that was being done ... What was the conclusion?

S I - you know - I got nowhere in 2 years. And - it's ... it died when I moved groups.

I I see. And you've been on something now for 1 1/2 years - a project now for a year and a half.

S Oh No! Oh No! hah! It's (A) and his anti Midas touch. I joined it ... hah ... well it came up to (NG) and I joined a team - a fairly large team - their's 1-2-3-4 - 4 or 5 T0s and the usual numbers of E0s and LAs. One section made them and I processed them, hydrolysed them, and passed them on to somebody else to test. And this had been going - about a year - and we came to the conclusion that - you know - we were getting nowhere, and we told - we went to tell (NG) this and he sort of agreed, and the whole thing was wrapped up.

I Since then?

S Since then ... there was a short topic that I didn't really sort of. I was asked to work on it and ... One doesn't have the nerve to say - well, I don't anyway. And I wasn't really committed to it. It was a 4 or 5 months topic. Er - which again came nowhere. Er - after that, um, that's right - yes - I then went on to (P) topic. I don't know you've heard about this. Now this went reasonably well - in fact there was a lot of contact between us and (Pharms) - I think the only reason it went well was that it didn't involve a lot of - new - creativity ... I didn't have to ... sit down and think of new ways of preparing anything, it was more or less a straight copy of an (American) product, and we had to develop - adapt our system to this - which - you know - which I did, and it worked quite well. But now that has just got the chop as well! hah.

I Has it really?

S Yeah! Through no fault of mine I'll say this time. Uhm - the legal experts in Head Office - it's a long and involved tale - I don't know whether you want to know, it's probably not too relevant.

I Yeah ... that's fine ... Blimey! ... In each of - in each case of your movements have they been put to you or have you decided - you know - what's the freedom?

S Er ... well I've only moved groups once. Are you talking about moving from topic to topic?

S I was going to go back, Yes. On reflection, I think it's probably a good job I didn't. I think I'd probably be out of a job. Er - you know - the only job I can do is research. Well, 6 years at University - well 3 years ... You know.

I Yeah.

S Three years postgraduate, 2 years postdoc - You come back and you merit a particular salary level. And - you know - they want some sort of return for this - the field they are most likely to get it is in research. But, um, my main objective now is to find myself an avenue out of research.

I You - You um - this short run stay that you are aware of, were you made aware of it or is it part of the grapevine or ?

S Oh No, No - everything was open and - No I was - everyone said when I came here it's of a temporary nature and then we move you out to a Division. Which, at that time seemed a good idea. It's a good central place to be in. You've got contacts with all the Divisions, and you find out what's going on - but it doesn't quite work out like that though.

I Oh! Oh Dear! I'd never have come if I'd known!

S Hah!

I I see ... You spent 6 years at Birmingham did you!

S Yes, 3 years BSc, 3 years PhD.

I Then there's postdoc, and then 3 1/2 years here ... And the (IG) - You came here first 6 months and presumably had a look around -

S Er ... well - No I say 6 months, I came back from the States in September, and went on my interview trip and I think I started here end of November - which is 3 1/2 years ago, I guess.

I Uh huh - and how long did you ...

S - And I worked with (IG) for 2 years ...

I And you settled in with the thing he was doing at that time fairly immediately?

S Settled in fairly ... ?

I Immediately.

I Yeah - I think in terms of the actual projects - the project number - you know - moving from one project number to another, using that as the sort of ...

S I see ... You mean - sort of - have I any choice whether I'd like to work on it or whether I'd like to work on something different.

I - or whether it's time to move, or whether it's time to wrap it up or - er - I suppose I'm trying to find where the responsibility lies for the taking up of the project.. for the

S - Yeah, I think - I think one has ... quite a large degree of power in wrapping up a topic. You know, I, I think management will listen to you.

I Yeah!

S Uhm, - regarding taking up topics - uhm - maybe I've not spoken out as I should, but I more or less accept what I'm given - it's the lazy way out. You know, if I don't accept it they are going to come back and way, well, think of one for yourself.

I Yeah! Yeah! especially when ... No! No comment - never mind ...!

I see, So, how do you spend most of your time in the actual lab? Could you go into that in a bit more detail.

S I ... I ... I don't quite know what you mean - apart from running experiments.

I Well! - yeah - I'm fairly naive about the sort of experiments that you'll be running. Can you sort of -

S - Well it's sort of setting up pots, and doing the actions - reacting polymers - ... making them or changing them in some way; isolating them and drying them - seeing if they are any good and sending them off for testing.

I How much is this done within the laboratory or how much do you have to go outside the laboratory to get these experiments done?

S Entirely within the laboratory.

I Entirely within the small laboratory you actually work in? Or within P & P Lab.

S Oh, I see. Well ... 90% within the small laboratory. You know, I mean, physical testing is obviously done by the specialists in the various departments. But the actual experiments that I run are virtually all done in the lab. Occasionally, we have to send them over to Wellington for high pressure experiments or something.

I Fine. What sort of patterns of - uhm - talking - talking around with other people do you have? You know - in the laboratory is there much - in your particular laboratory, is there much talking about particular experiments or do they keep to themselves in the work that they are doing?

S Uhm ... well I - you know - I'm not the best of communicators. huh!

I I know the problem!

S I guess ... I think ... One other guy in the lab certainly isn't either, and, you know, I think we keep pretty much to ourselves - on a day-to-day basis. We know generally - overall - where he's going although (S) changes from day-to-day so it's difficult to keep up with him. But, as far as individual experiments go ... there's not much known from one to another.

I Presumably you have a laboratory with half a dozen other people in it - is that the case, or is it just you and one other bloke?

S Oh No, there's 1-2-3-4-5-6-7-8 - 8 people about in our lab.

I 8 people, and that's all SRSSs?

S No - there's only 3.

I 3 - and the rest ...

S About 3 EOs and a couple of lab assistants.

I I see. And are the 3 SRSSs in the same office?

S Er, No, 3 different offices.

I 3 different, - 3 separate offices, I see.

S All in the same (PC) group.

I So the 3 offices are in the same area?

S Yeah, there's ... they're not next door, but almost

I Uhm, does this - how many other SRSSs are there in (PC) group?

S Who's an SRSS? Oh, I see, an old TO.

I Yeah.

S Er, how many ...

I I'm trying to train myself to use the latest jargon ...

I How often do you see (NG) - is he your immediate boss?

S That's right; Er ... I see him most days to say good morning; that's as far as it goes a lot of the time. I've had more contacts with him now over this tie up with (Pharms). But, you know, this has really been of an admin. nature than - a technical -

I You made the comment before about type of feedback you've had from him - at assessment times.

S Yes.

I What sort of ...

S Well, this was just one - He's only assessed me once. This was last August.

I Has there been any other assessment things that have gone on before?

S Er - well, I've had 2 - 2 before that, which were very harmless - "well, you're settling in".

I This is (IG) is it?

S No this was (EH).

I Hah!

S You know, he didn't - sort of - say a thing. I knew I wasn't doing very well but, he didn't tell me that.

I Did he know you weren't doing very well?

S Presumably, yeah. (NG) told me so. When (NG) assessed me this was the first time anybody had told me to my face.

I Did you know about it beforehand?

S Er ... well I knew myself ...

I - but you didn't know that everybody else knew! sort of thing ...

S You know - I thought ... they must be either blind or ...

I This was what they wanted anyway! ... OK. Can you go into this one in a bit more detail, the assessment.

S Yeah, if you like.

I Did he just call you into his office one day?

S Well, everyone goes through this at assessment time, with Neil. You know, a timetable is put telling you when you're going to be assessed, and what time. And you come in, and hear what he's got to say. And -

S 1-2-3, 4-5, 6-7, 8-9-10, 11-12, 13-14.

I Fine, that's quite a lot. How much do you actually meet the rest of them? Is it once every 6 months in a group meeting or do you ... Is there a fairly frequent interchange on what the (PC) group ...

S - I guess I meet 75-80% of them every day. Er.

I - to discuss actual matters of - current problems.

S Er - Yeah - Yeah.

I Can you give me an idea of what sort of - an instance of the sort of thing you might actually spend discussing?

S Phew! Well, one of them - say someone may want to get hold of a particular chemical, and I may have been the last one to have it - to use it, you know. He will ask me whether I've got it - er OK what you going to use it for? OK, well that's interesting, perhaps we could use it - for a similar sort of use sometime - instances such as that.

I Is there any discussion about more technical matters?

S Uhm.

I As opposed to where are the chemicals!

S Not too much, as far as I'm concerned. Discussions like this do go

I - where - where! How?

S Well, with other people, I'm talking about from my point of view.

I You say it's typical for these sorts of discussions on technical problems to take place quite often? - in your - experience.

S Er - that's difficult ... I suppose ... reasonably often, I guess, reasonably often.

I This is presumably in the offices, or the lab.

S That's right, yeah.

I What formal mechanisms have been set up for people to actually meet and discuss.

S What formal mechanisms?

I Perhaps there aren't any ...

S No, I don't think there are ...

I And how did he introduce it?
 S Er ... How do you mean - how did he introduce it?
 I Well, you walk into the office with a certain expectation - trepidation presumably ... what's his style - does he just say ...
 S Oh! He ... you're sat next to him at the front of the desk ... sort of thing.
 I Next to him?
 S Oh yes.
 I Very interesting! The variations on where you sit while you're doing an interview are fascinating. People have spent - done - PhD theses on where they sit ...
 S Yes, I would much prefer him to sit at his normal place and just carry on. But, no, we have to have two chairs at the front of the desk.
 I My God!!
 S You know, I guess it's supposed to put one at ease or something - rather than master behind the desk and servant standing on the rug in front sort of business. But - you know it's a bit too obvious.
 I Yeah - a bit bad ... Anyway, go on.
 S Yeah... Now, I've sort of ... I've forgotten where the ... the punch line is what he writes down ... you know, he writes down ...
 I as he goes along?
 S No, this has all been written down before.
 I I see.
 S - and he more or less reads it out. He has written this down before you come to the office, and he more or less reads it out -
 I Yeah - I see.
 S - to you, and adds a few comments, etc. But before this - I can't remember whether it's before or after, you get a lot of paperwork - all these MHO forms that you've got to go through - last year - next year. It takes a fair amount of time. And, you know, you also talk about career development a bit, I guess. He tries to ask you where you think you're going, what you want to do.
 I Yeah, anything else ... How did he introduce the final criticism?

I you know - most of what he said - ALL of what he said - I think - was reasonably fair. It was a bit shattering to hear it - nevertheless. You know - absolute lack of initiative - and - you know - producing nothing new, I was bad at communicating with him, and one or two other things.
 I And he blamed you for this did he?
 S Well, you know, I was sort of a bit perturbed about the lack of communication, cos communication's a two way thing. I explained - to him - I thought I was communicating to him everything I thought he ought to know - you know - anything new or interesting I would come in and tell him. Now, because things weren't going too well, I guess - well I didn't see him very much.
 I Yeah.
 S Now, there are guys in the group who - well they don't exactly run in and explain every experiment - but it's verging on this - which ... is not - my way of carrying on.
 I Oh dear! ... So how long did it last - the assessment, how long was the chat?
 S Well there was a lot of ... (NG) is trying to introduce MHO.
 I Is he!
 S Oh yeah - I say trying! And at assessment time, you write out your key task etc, etc, your objectives that you hope to meet over the next 12 months. Then you shove it in your drawer and nothing's done about it until the next 12 months and you take it out, read it, and then - cries - you know! And then (NG) goes through and ticks it or marks it right or wrong where you've met 'em - you know - it's a bit like a school exam really!
 I - is there anything hanging on the result?
 S Uhm - well, we had a number of group meetings when this was introduced - you know - and - how did he put it - it's still in an experimental stage, and when and if we see that it's working, it will be used - at assessment time. Now, I mean, whether he uses it at assessment time now - only he knows.
 I Yeah ... it wasn't used in this particular one last August?
 S I don't really know - you know - I mean - whether it influenced him about what he wrote down or not, I can't really say.
 I Well, how long did the interview last?
 S About - I guess - about 40 minutes.

S Nov, I do yeah ... I half hankered, at that time ... I made enquiries about ... After the first degree, there were courses available for - 1 year XSc courses in accountancy, or something like this. I guess I probably lacked the initiative to follow these up. And I suppose there was a bit of glamour attached to the PhD.

I Yeah ... OK ... well, we'll go into that a bit later. What would you say your output was ... you know - even a negative output is an output. Even if you decide ... what sort of decisions do you - are there any papers or experimental results that you - give over - or what.

S Uhm, as far as written evidence of my presence here - there is very little - you know!

I Hah!

S - I think I've worked hard - as hard as most people - if not harder as far as experiments performed, and work in the lab ... OK, now, whether these are the right experiments - you know - it's open to debate, I guess. But, er...

I So, do you keep a notebook?

S Uh huh

I What happens to it? Who sees it?

S Well, the ordinary lab notebook, nobody sees.

I Except you? And do you - sort of - store them somewhere?

S Oh yes, sure, they're handed into the office here and ...

I - they're all filed away.

S Oh yeah. There are ... I've written a couple of reports - on topics that have folded. I mean, with (IG), during that couple of years, I said, presumably you want this written up, and he said "well, I don't know, don't bother". So, as far as those two years have gone there's no record at all.

I Anything else, apart from the notebooks and reports?

S No, you know, at this place it seems that - you know - it's these yellow back reports that are the only way management knows you are there - sort of thing.

I Have you ever had to write REMS?

S No, I've never written an REM.

I ... Uhm ... Can you think of anything else? ... that would show that you've been here!

S Oh yeah - he did try and apologise for it a bit. "Well (T) he said, I'm afraid this year I've given you - rather a bashing" or words to that effect anyway! - hah!

I I see ... bloody hell! Or rather I don't see ... but, I do.

S Hah!

I So, what were your feelings afterwards? What er ...

S Well in some ways I wasn't too surprised. But, it still left me feeling a bit shattered - you know - when I heard it from his mouth. It seemed to me - that - you know - a lot of things could have been pointed out to me - during the twelve months rather than waiting - waiting for assessment time - and - er ... You know, and since then, I haven't had any message about whether he has noticed any improvement, or whether he thinks it's the same or not ... I don't really think it's my job to go and ask him.

I Incredible! Yes - excuse me. He didn't suggest anyways you might get round this? He didn't suggest any training or anything - going on a course - or whatever? ... Or has it every been mooted?

S No... Yeah ... You know - I think - when you're talking about technical ability now - which - a lot of it is hinged on - I think - lack of ... you know, projects folding up when (T) gets his hands on them!

I Hah! Oh dear!

S I don't really think it's going to help by going on a course for two weeks. You know, I've - one's done PhD training, and postdoc experience... One ought to be ...

I Isn't this rather a defeatist attitude?

S I suppose it is, yeah ... and maybe I wouldn't be so defeatist if I was more interested in it; but I'm not really.

I Yes - well - bloody hell - that's quite understandable!

S In fact, if you want to go way back - In retrospect, the foolish mistake I did was to stay on and do a PhD.

I Yeah ... Yeah ... it figures ... as you're only fit for research whereas ...

S At that time it was the easy way out, and like a bloody fool, I took it, you know. I had to work damn hard to get my 21 at Brum, and I thought, if I get accepted for it it's a dead cert I'll get one - 99.5% it is - certainly in chemistry at Birmingham anyway. Er, and, I had three more pleasant years at University. It also got me a ticket to the States for two years, so there are a lot of pluses on that side. But, er ...

I You feel that missed out a lot.

S One can, I suppose one can talk in generalities about planning one's work for the next 12 months, but ... it doesn't seem to mean a lot to me.

I Yeah. Can we go back to the sort of information you try and search for. Um, you know, there's a system set up here to get you the right technical information, and another to get you supplies. So - is the library up to the sort of things you want? How easy is it to use it? Do you go outside?

S For technical information, I go down to the library and find it myself. Usually, it's chemical abstracts. As far as I think I gave you some % of my time as spent going through ...

I 20-25%

S That's right, yeah. This is looking at the rubbish which gets circulated - which - you know - 95% of the time spent is wasted. It's ... I mean ... somebody saw a prime example in a list of ICI reports - the title of one was "the length of cigarette ends in the German republic".

I Hah!

S It was connected with Nobel and their tobacco replacement, I imagine, anyway - it was a Nobel report.

I And this gets circulated all around?

S No, the report didn't get circulated. It was one on a list.

I Oh, I see. How many journals would you say you read? Apart from the abstracts.

S Well, this is going down every year actually! I used to - well I say read - turn the pages - of ... about half a dozen - this was last year - and I read the little pages of about a dozen more.

I Yeah. These were all chemistry?

S Yeah - general inorganic chemistry and so on. But, just recently I'm becoming ... well, the (project) work is purely development work, and I spend less and less time doing this.

I Yeah. That's interesting, can I ask about the (project) work. What form did this take? It was the American product, that was made ...

S This involves a lot ... It was further removed from chemistry really. It meant - sort of - going out and looking for suitable (materials) and finding it; and going out and chatting to the guy that made it, and getting him to make it properly and er - going over to (a company) and getting them to wrap it up in proper (materials).

I ... Uhm ...

S No! I think the yellow back reports are the only ... OK, well you can shove out meaningless bits of paper, if you like which ...

I ... that nobody reads or listens to ...

S Yes - PPR memos or something. You can circulate anything with your damn name on I suppose, if you really want to. Some people do - it's not my ...

I You said you'd written 2 reports.

S Uh - Yeah - they are still waiting to be issued or whatever ... You know, they're topics which have folded and nobody is really interested.

I Yeah ... Yep.

S Do you have anyone who, at the moment, is working with you?

S Yeah, I have an Indian guy.

I This is an LA?

S No, he's an EO.

I What sort of working relationship do you have? How do you handle this?

S Well it's ... er ... I suppose it's ... I come in ... Well it's not quite coming in in the morning and saying what shall I do but - we don't plan ahead more than a week anyway. Er, OK, we know what we are going to do during the week and we come in in the morning and say what part of that work are we going to do today and then we just - sort of - divide it up between the two of us and get on with it.

I Yeah ...

S - You know - I'm going to be away for 3 weeks coming and I think he is getting a little worried about what he is going to do. Like me, he doesn't show too much initiative. You know, I can't expect that, er, seeing as I don't ... It's a bit ...

I So what will you do?

S Well, you know, I'll have a chat. I'll work something out.

I Stoke him up ...

S Sure ...

I How far ahead do you plan your work.

S Probably only a week - er - depending on ... depending on - you know - the results that week, or, the following week's work. You know, I'm talking about reasonable details now.

I Yeah.

S I had to communicate with Nobel to get them to make this (chemical).

I Well, well, well! So it was starting with a straightforward analysis of what that product was, and then how can we make it ourselves - and different enough to get away with it.

S Yeah.

I And this entailed a fair bit of travelling around the country?

S Well, a fair bit from what I was used to, yeah.

I That's fine! ... In the typical way you spend your time, how much do you spend in the lab, and how much, around about?

S Well! I'm going to a course at Plastics next week. I shall probably - say 5%. What's that in a year ... I suppose an average ... 7 to 10 days away.

I That's one particular day you'll go away somewhere - to (a company) and have a chat, and that'll be it?

S Yeah.

I Is there any data coordination that has to be done on those sort of things? You know, like administration, and sending exchange of information?

S Er, well, these particular trips - no - because I was on the acreunge, or, going to put an order in - you know, it was just a matter of getting them to make the stuff to our specifications.

I Uhm ... How much tramping round the Divisions do you do?

S Ooh, none.

I None?

S No.

I Do other people? Do a lot of tramping round?

S Some people do, yeah ... A typical SRS, I would say ... well it depends on what group you're in - it depends a lot.

I What groups would go most?

S Fibres and Films seem to spend a lot of time travelling round, - probably because there is quite a close tie up between Fibres Division and Fibres and Films Group. I - you know - don't quote me - but that's a feeling I have.

I Yeah! Fine! Whereabouts ... the sort of system for getting things done, getting things from the stores, getting odd bits of things that you want, you find you can get fairly easily?

S Oh yes. No trouble ... And money really is not much problem either - in buying small pieces of equipment.

I What, say up to £50?

S Yeah.

I Uhm. Is there any particular control on what you spend, on what you do? Are you aware of any temperature being taken ...

S Oh yeah, every so often, towards the end of the month, they say so easy on such and such a number because we're overspent, or something - this is the sort of thing you ...

I Yes. This is merely financial control.

S Yeah.

I Is there much ... exchange of equipment, or does everyone keep very much to themselves?

S Uhm.

I You know what happens to pieces of equipment you no longer want, does it go to a central store, or what - in the corner until it's needed again ...

S ... I guess ... Certain pieces of equipment go to a central store - there is a loan pool - for mainly electronic equipment ...

I Is this local?

S Yeah, it's over here - in the huts. But on the other hand, there is a fair amount of stuff that - sort of - sits around - until (FS) comes around and says we've got Duncan Davies coming round, clean the labs up.

I Hah!

S And then it gets chucked out, or ...

I Yeah, yeah, fine ... Is there anything you think I've missed? You know there are often things I've missed - that are obvious to you - like project numbers or account numbers - formal bits of the system - any admin or paper pushing ...

S I don't think so, no.

I Do you have any control over the accounts, any budgets you control yourself?

S Uhm ... well, you know there's ... I've not written one, but we're all working under an REM. OK, now the fact that you've asked me what REM I'm working under now, I couldn't tell you!

I Hah!

S No - wait a moment, perhaps I could - yes I could. But, every month, we get a sheet come round and we have to say how many days we have spent on that number, and how many days our subordinate has spent on it. Yeah, we might spend our time on two different topics. So we divide it up. And you get the graph going up - towards the line - of money you've been allocated ...

I I see, sort of man years thing?

S That's it, yeah.

I How many people are there working under the same REM?

S Having just thought of the REM, I can now answer that ... there's - I guess - you mean total, or just SRS's.

I Let's say SRS's.

S Well, there's just ... it's complicated (a project) has gone to another group.

I This is (X).

S No, it's gone to (Y).

I Oh, I see.

S One of their guys was half on and half off ... I guess it's about three guys.

I And they have about 2 or 3 people under them do they? On average - 2.

S I would say the average was a bit less than 2.

I So - 4 in all.

S Yeah.

I Fine. Are there any ways that you could think of that you would like to improve the system? ... Is there anything that's stuck in your gut, so to speak?

S Er - No, not particularly, because I've got the overriding factor that I don't consider myself good at the game, and I want to get out. You know, that's the main, my main course rather than being irked by spending 5 minutes waiting at the stores sort of thing. You know, it's no longer important to me, that sort of thing, niggly things.

I Are there any technical courses you go on to?

S The one at Plastics I'm going on to is reputedly a technical course. It's supposed to be polymer chemistry and science for new starters and (the group head) sent me on it! Now, it wasn't a lot of use. We've been to two so far, of 2 days each, and I would say one of those 4 days was useful or interesting.

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I What sort of use?

S It was discussing Plastics Division's products, how they started, how they were made, what troubles they had had, etc, which is really something I ought to know about but which I think very few at P & P do.

I Yeah, um, what about the rest of the people in P & P, like Policy Group, personnel and management. Do they ever come within your compass?

S In fact, I have a feedback that our (project) was big stuff - you know it was going to solve all ICI's profit problems in the future - sort of thing - but - er - none of the management have ever talked to me about it ...

I What sort of grapevine is there? You know, does a lot of feedback come via the grapevine? - chatting with the other SRS's and someone says something.

S I suppose a fair amount - yeah - hah! I've just thought of something I heard yesterday.

I Can you say what?

S Yeah, if you like. It was apparently a meeting that ... there's a big machine in Block 6 - a solid state extruder, and, this was heard - no - that's right - apparently had made the decision they were going to sell it, and the best and only offer they'd had - they'd valued it at £15,000 - was £5,000 from (X) University and made the decision that in order to foster good university-industry relations, we'll sell it to them.

(X) heard about this and "over my dead body" and (Y) and the chap who was using it apparently went in to see - and - the meeting had gone on for about a minute, when said - "I realise what you're here for - I realise what you're trying to do. I've made my decision ... get out!"

RESULTS : A

Subject 6 : Interview 2

I Well - now - yeah - I'd like to go a little broader - wider - the questions may appear a little less relevant, but I assure you they aren't. I'd like to ask you a bit more about how you personally try and cope with the situation you're faced with - for example what in your previous experience do you value most in doing what you're doing at the moment?

S What in my previous experience I value most? You mean what in my previous experience have I found most useful in my present job? Or ... is this what you're trying to get?

I Yeah - yeah
 S Uhm .. that's a bit of a tough one, that is. I don't know that - you know .. Obviously I wouldn't be able to sort of - cope with my present job without the educational - you know - environment and all that goes with it, that I've previously been through - with the educational training that I've had.

I Fine, OK
 S It doesn't really answer your question.

I It does! It says its an unanswerable question and I appreciate that. Let me put it in another way .. uhm. There might not be an answer to it. If you had to do it all again, is there anything you might miss or anything you would have more of? ..

S Yeah, well, obviously, I mean if I had to do it all again I wouldn't be where I am now.

I Can you expand?
 S Yeah, I wouldn't be in my present job; I wouldn't plonk for this job.

I What would you? ...

S I think I would like to be - have more involvement - more involvement with people - more relationships with people - and whether I succeed or fail I can tell by the person I'm dealing with's reaction - something like medicine. OK, so I'm just pushing pills - but it matters to the old lady who I'm pushing them to. In my present job, if I didn't come in from 9 - 5, on one particular day a week, no-one would know, no-one would care, nothing stops - we don't stop making polythene.

I Yeah, I see; I interpret that as meaning that - the fact that you did good chemistry wasn't appreciated - even though that is all that one can do. One cannot guarantee making an invention yet you are judged on something which is impossible really to do.

S I don't think - I'm not inventive - I'm not very good at innovation I don't think.

I Why not?

S I don't know.

I You were telling me you've had some success.

S Well, this has come from somebody else. It wasn't my .. it was being applied to something else, and somebody else found it and developed it.

I OK, why do you say you're not enamoured with yourself?

S I don't think I've really invented anything at P & P.

I Does that mean you're not an innovator?

S Uh, no, it doesn't necessarily; but, you know, inside, I think I'm not. The way the experience in the States Post-Docing, and at University, the good ideas always come from somebody else and I always latched on to them. Very few originated from me, I think.

I And you think that unless you have the original idea, recognition of that idea isn't innovation?

S I reckon so, yeah.

I OK, you're the patient - I mean, you're the customer, sorry! Uhm, OK, uhm, so you'd like to push pills at the old lady?

S Yeah, yeah

I Can you see an actual step where you might have trodden differently to get this?

S I guess so, yes, back in schooldays when you don't really realise the importance of decisions you make then. Er, no, OK you come back and say you could have jumped off the line at some stage, sort of thing, but, I think, you know, that's where it started, back at school, I didn't think, or, it wasn't put to me ...

I Yeah, can you point to a specific ...

S Er, well, the lack of career guidance, I guess. You know, a guy comes in once a week - well, it wasn't even that, I guess I chatted to him for about thirty minutes during the 6th form. But this is really laying it on somebody else's doorstep when it should really be on mine.

I Difficult. Interesting problem that. How much should you expect a child to know?

S Well, yeah, you know it would have been easier for me to jump off the line further on - or you know - where the responsibility was mine - say after a 1st degree or ...

I That's - well - that's fairly difficult though - in this day and age it's not easy to parcel five years down to good experience.

S Ho, it's risky. OK, you jack it in and try 5 years somewhere else and OK you may get kicked out, or you don't make the grade, or ...

I - there is that as well, yeah! Were you actually aware of the possibility you would have liked to have done this at that age?

S Ho, no, I wasn't, I .. you know, it was put to one but at that time I thought I'd be quite happy working in a chemistry department playing around with the chemicals.

I Were you happy playing around with chemicals at that age?

S Yeah, I was. Now, why I was I don't know. Maybe it was because I got

I good marks at it. That seems to be the criteria most people use in choosing their career. And as it happened, it was either chemistry or maths. This guy who came in for 20 minutes pointed out that there would probably be more opportunities for chemists than mathematicians.

I Really! Fantastic!

S On the basis of that really, I chose chemistry over maths.

I Goodness gracious! Mind-bending! Yeah, yeah ...

S Now, you know, it's the maths coming in again now. You know, I talked a bit last time about operations research and numbers and figures coming in again. Now, OK, it doesn't put one on a doctor-patient relationship sort of job, but I could ... if I was more satis ... more happy in the job, I could sort of, at least it would be sort of satis ... a step up anyway, rather than being, er - well I guess, as unsatisfied as I am at the moment anyway.

I Yeah, fine. Do you see your future career in any way?

S Huh! Yeah, I hope I've made a few futile attempts ... thinking along the lines of, sort of, going into this sort of operations research thing ... I don't know. I've got a book out of the library at the moment about management accountability, something like this. I don't quite know what steps I've got to make to pursue this any further; but, er, I've got to tread a bit carefully, if I'm going to make, what seems to me, quite a radical change. You know, Christ, look at this guy, he's ballised up research and now he's come here. You can only make a few mistakes before people start er ...

I Huzh - er - sorry, I was wondering again why you feel you've ballised up research. You don't feel you've invented something. You don't feel you've been recognised as having invented something, or you don't feel that you've contributed anything towards the solution of a problem.

S I don't think I've made too much contribution.

I Have you done any work?

S Oh yeah, I think I've worked quite hard. Maybe it was misdirected - by me.

I Why, in what direction did it go?

S Er, how do you mean exactly? I mean it's - this is my opinion, and this is my boss's opinion.

I Well, you say it was misdirected, which means to me that ...

S Well, maybe I was working along the wrong lines, or maybe I was along blind alleys sort of thing.

I Yes

S Rather than doing a particular type of work not relevant to the problem.

I Uh huh

S You know, I was doing the wrong type of experiments whereas a guy who is brighter than I am would work out the right experiments to do.

cont'd ...

I Do you, umm, do you mind me harking on this?

S Carry on ...

I You recognise that there's a certain type of person who sees things that succeed that you don't seem to be able to do to the same extent in such an area. Is this what you were getting at?

S Yeah .. Yeah .. umm .. Yeah, I get the impression ... I compare myself with a guy who's really done well. And I get the impression that if our topics were changed round and he was working on what I was working on, then he would be successful and I still wouldn't.

I Umm ..

S It all boils down to the fact that I don't consider I'm a very good chemist. You know, maybe this is, and, probably, I've lost interest in it, that's why.

I Why do you say you're not a very good chemist? Can you say that sort of chemist you ought to be? I imagine it to be a matter of ...

S This was first brought over to me when I was in the States. I went into seminars; this was with graduate students - as post doc I was supposed to be on top of all this; they were answering questions there I was floundering.

I What sort of questions?

S Technical questions - how would you synthesise compound A, how do A & B react - stuff I ought to know.

I Well, where do you feel your abilities lay?

S Huh!

I When you were faced with an examination to take, what sort of way did you try and approach?

S The examinations were such, or they were in my day, anyway, at Birmingham you could easily get a 1st class honours degree by reproducing lecture notes.

I Well, you were able to reproduce lecture notes?

S Oh sure, I mean, isn't anybody?

I (smile) therefore you were able to sit down with a page of lecture notes and in fact memorise them.

S Virtually - yes - you know, synthesis of complicated compounds it's just a matter of sitting down and ...

I You say you have a fairly good memory?

S Well, yeah, probably for certain sorts of things. If it's, umm, ... for logical types of arguments - step A, step B - I think I've got a reasonable sort of memory for that, yeah.

I But you were attracted to certain particular types of information or

cont'd ...

You know, I don't think I should have got a 2(1) and I shouldn't have been accepted to do research. Quite frankly. And if that had happened I wouldn't find myself in the position I am now. You know it would have made me sit down and think - where do I go from here. You know, do I, sort of, accept the standard I've got and use this, or ... do I try and enlarge on my field.

I Do you feel quite a home with maths?

S I've not really done any since school. It was ...

I Did you further yourself at all when you were at University?

S No ... I didn't.

I If you had a magic wand - what would you do with it?

S Er .. huh .. I think I'd probably .. yeah, I'd probably take myself back thirteen years, if not thirteen years, I'd take it back to the end of the first degree, and er, take an accountancy course or something ...

I Yeah, yeah .. do you think .. have you tried to follow up the medicine, in anyway? Have you tried it out in any sense?

S Er, you mean literally, or do you mean the feeling of being needed that I spoke about?

I Uhm, I suppose I mean - both.

S Yeah, I suppose I could winkle my way into a job outside ICI, that was more of this type of nature. I guess (X) is doing it, he's taking up Personnel. I guess this is something along those lines, um .. I haven't really thought of anything similar .. maybe if I found myself in production; I'm sort of working with guys on the plant or something like this, or ...

I Yeah, yeah

S I feel I could probably communicate, or get on better working downwards than upwards, do you get what I mean?

I Yeah, I know the feeling.

S Maybe - I may be wrong! but, er ...

I - the pushing pills to the old lady is to ensure you own relevance to what you're doing is this what it is .. you mentioned medicine which may be a desire to - help people - which may be a desire for this relevance. But you mentioned that it was the desire to feel relevance that was uppermost in your mind - you see it's embodiment in medicine.

S Yeah, that's the example that first springs to my mind anyway.

I Any idea what you had in mind - or what you had in mind when it came? ..

S Er ..

I Any idea what you based this idea on?

S No, I don't know why I thought of medicine. It just seemed to be the

knowledge - to do with - what - the synthesis?

S Yes, that's right, the questions in the exam were sort of descriptive, and essay, I steered clear of, and kept to the step-wise type of answers.

I The close-ended problems?

S Yeah ...

I You see, I steer clear of close-ended problems! which makes me .. so the lecture notes you could reproduce for an exam?

S That's right, yeah

I When it came to the PhD, what sort of work did you do for that?

S This is, you're given a research topic. You don't have to hunt around and find one. Well, at least, for the 1st year, I was given a reasonably easy one, and I had close supervision from the member of staff in charge, who was a post-doc - between him and me, and er, it was probably - in the last six months - thrashed out half of my thesis, and I had 2 1/2 years to scratch around for the other half. Which I did really. It was a bit of a struggle to get the other half, to get the results. But, er, you know, I don't think anyone in the organics side of Birmingham ever got refused a PhD. They may stay on a 4th year to get results. So it's a foregone conclusion .. that you'll get the appropriate 3 letters ..

I And that's all ..

S And a ticket to the States ...

I That's automatic as well?

S It was in those days. Which was very short-sighted of me to look at it in that way ..

I To have actually gone ?

S No, to look on it as 3 years and a ticket to the States. That's as far as I looked in those days.

I I should think that's as far as anybody looks.

S But, er, I guess there's a certain amount of - Christ - Dr (X) you know, this sort of ...

I Yeah, yeah, can we go now to the graduate class you mentioned, you found yourself in certain difficulty .. difficulty with regard to what .. you had questions posed of a certain type - that you were ill equipped to answer.

S Exactly, yeah

I Can you say more about what type they were?

S Yeah, they were .. they were questions of a different nature obviously to questions in your final exam where you have half an hour to write. These were shorter questions but of a similar sort of material - that - maybe if they had asked me on the morning of the exam, I'd have made a better attempt at answering some of them. Although, I doubt it because, you know, I explained I got through the exam by reproducing lecture notes. These things hadn't been talked about in lectures. This is how exams ought to be ..

I don't mind hearing that at all - er - it's when the boss says it to me I don't like it.

What about when the mother-in-law says it?

Er .. hah-hah! I don't think I mind that too much because I can come back on an equal footing!

Come back on an equal footing - you mean - put her in her place?

Well, not exactly, but er .. I can sort of ..

Hold up your own?

Yeah, I can sort of come back with criticism of my own or something, but I find it easier to do with the boss.

Yeah yeah. OK. What sort of hobbies do you have?

Uhm, sport, mainly. I play rugby .. gardening, photography, well, only in a - sort of - you couldn't really call it a hobby I don't develop my own films or anything - I've just - I've got a camera, and a lens!

You like to take care in how you take photographs?

Sure

How did this originate?

Well, I was always mildly interested before I went to the States, and the standard of living was such there, and camera equipment was cheap - and I was able to obtain some reasonably good equipment. As you say - take care in taking photographs, I guess.

Do you join a club or any such ..?

No, no, it's not that strong an interest.

How do you spend your spare time?

I like working with my hands, I guess. I like woodworking.

Do-it-yourself sort of thing?

Yeah - just messing about the home - put up some shelves. It's a sense of achievement you see - that I don't get at work - it's - sort of - crap awful job, you know, but I get a kick out of doing it.

Yeah

It's - sort of - I had to - well, my father teaches woodwork I have had something to do with it. And I had to - hah! - now don't laugh! Give up woodwork to do chemistry at school!

.. thereby hangs a tale! (laughter) .. Goodness gracious .. yeah .. uhm

I help run a scout group in (X), it takes up a couple of evenings a week - you could call that a hobby I guess.

Is there any particular approach to problems that you have sort of developed?

cont'd ...

obvious sort of example of .. er .. you know .. I don't know .. huh ..

I Yeah - I think you got the essence of it over beforehand. The immediacy of the relevance - person to person - the old lady - would recognise your existence whereas here you walk in and walk out and ..

S Yeah

I Yeah .. fine .. well, I've cleared that up in my mind. I don't know whether I've helped clear it up in yours. I feel as though I've left you - sort of ...

S No - no .. I'm not, sort of, the world's best communicator or .. expessor of ideas I'm afraid.

I Well - I get the message fine. Could I ask what your reaction to criticism is?

S Er, yeah, sure. I guess I don't like it really.

I Uh huh

S Yeah, when was it .. this is harking back to a couple of years ago - before my last assessment. You remember me talking about assessment last time?

I Yeah

S Well, I wrote a report on some of this work. And .. it had just been issued or something - and there was a lot of .. hah! .. sort of comments and .. well, they weren't very complimentary to me anyway. And the boss sort of called me in .. he sort of .. "Well, Fred" he says, "I've got to kick you in the balls" or something "about the report". There was various peoples' comments on it, about the standard of the work, the way the report was written, etc. Er .. and, I think probably most of the comments were justified but, er, I still didn't like hearing that.

I Are there other forms of criticism which you find yourself have to take? What about personal criticism or, you probably took that as personal criticism.

S Er .. personal criticism as distinct from technical criticism, is that what you mean?

I Or criticism of work, or your person.

S Well - "he's an awkward sod to work for" sort of thing or criticism outside work ...

I Yeah .. Yeah, I don't know that I get too much of it! .. I don't mean to sound big-headed but .. you can't give me a sort of naive example, can you?

S Well, it's quite conceivable that you don't get any! Well, you know, if someone says they don't like your particular views on a subject, or they think you're a "Midlands" type, whatever.

I Yeah - well, it's not too much outside work .. I think it's the sort of boss-subordinate, uhm, that I don't like hearing .. you know, if one of the bright lads in the Lab comes along and says "What are you doing this for Fred" - this sort of business - well, I think that's great -

cont'd ...

S Er - problems in general - is this what you mean?

I No, I was thinking of work problems, although I suppose there will be some similarity.

S Uhm! .. I don't .. maybe I have got a technique, but I don't know how to describe it or .. uhm .. on the - on the other hand, maybe I haven't got a technique and that's partly the problem!

I Huh! I think it's far more likely that you do have a technique and don't know how to put it into words.

S Yeah - a bit automatic - and, er ..

I It's difficult to think of it - answering all these damn fool questions that I come and ask you ..

S Uhm ..

I Well, you sounded as though you might have something to say about general problems.

S Er .. no, I think if I can reduce something to numbers I'm a lot happier, and if I can, I will. Er ..

I How? Can you give me an example? I bet you're a wizard with tax forms aren't you?

S Yeah, I like filling my tax form in.

I You must sub-let your services, I'm sure you'd make more money.

S I quite enjoy doing that, you know, maximising my tax code etc.

I Bloody hell! Is that what you're supposed to do?

S Oh yeah, the higher your tax code, the less tax you pay.

I Yes! Go on!

S I don't know that I can.

I OK, well, you're going to take a photograph, how do you reduce that problem to numbers?

S Well, apart from getting the numbers on the camera correct, I guess I don't. You know, I go through the motions and get the right numbers on the camera, and then it's just general - artistic - sizing things up.

I Yeah, OK, you're given a problem, by the boss, which is probably pretty general - you know, a work project, and you're given a point to start at presumably, do you reduce any of that to numbers?

S Not really, no. Uhm, well one sort of naive trivial example, I suppose, is after this meeting with (plums) and they quashed us for coming out with a copy of this (life cast) we had to come out with other ideas, and we had three ideas, and er, he asked me to do a critical path analysis for each one - you know, that's a bit trivial, but I quite enjoyed doing that - you know, putting times to the - whether it was useful or needed or not, I'm a bit doubtful ..

I Have you had any other experience of doing anything like that?

S No, it's just a matter of giving a talk or reading a book, that's as far as it's gone. I can't really see how to apply it in my present job.

I Yeah .. what would you do in a situation like Northern Ireland?

S Uhm .. Christ! .. I guess - yeah .. I would .. having the - read newspaper reports, I guess I don't know what the problem is. The trivial problem is that the Catholics and Protestants don't seem to be able to live together. But without going into it and a lot more deeply, and, living with them I guess, I .. this is probably what I would do, go over and live with them for 12 months or something.

I What, and go into it all more deeply?

S Yeah

I .. In what other ways would you go into it more deeply?

S Reading a hell of a lot of the history, I suppose, of how it's developed and, er - what's happened over the ages. You know, the .. I guess it all stems from centuries back, the same as the States, the slavery days - er ..

I Yeah .. would you feel -

S So - I probably haven't answered your question!

I Oh that's OK. Would you feel confident that you could do something useful?

S I don't .. no, I don't think I would be confident. I got the impression that there are guys who are a lot more competent than me trying to do this for years, you know, you can glibly talk of new approaches, and fresh minds, but you're a bit disillusioned with yours!

I Yeah! (laughter) Uhm! Yeah! What about apartheid?

S Now, what are you asking me to do? Are you asking what I would do to solve it? You asked me a question about Northern Ireland - what would I do to solve it? - Er, is this the same question about apartheid - or -

I Er, yeah!

S Phew! .. Oh dear, I don't .. I don't know - you can - sort of - talk about - ostracising the regime, and this sort of business, I don't know how effective that would be. I don't .. I can't really see the relevance of stopping the South African cricket team sort of business, but, you know, when you read - when you read about - Hay? Hain? He's the guy - Peter Hain - stop the cricket tour - when you read history, I can quite sympathise with his views and why he does it .. I'm talking about the question and not answering it!

I No - that's OK.

S Whether people - you can argue that this is a start, and you've got to start somewhere, well, OK, I suppose you can, I don't know ..

I Would you live in a South African country?

S No, I certainly wouldn't consider emigrating to South Africa.

- 11 -

- I OK. What about your political views?
- S They're pretty A-political actually.
- I A political?
- S Yeah .. er .. you know, it seems to me I'm always voting against the Government in power.
- I Great!
- S Which, you know, seems a bloody stupid way to go about things. It's .. how many times have I voted .. twice - I've voted twice - both times against the Government in power .. there is .. I find a lot to be said for the ideals of both parties .. and quite a bit that I don't agree with as well!
- I Yup, fine
- S I also, you know, probably the stupid view that oen vote is not going to count for too much anyway, but er ..
- I Very human! Yeah, OK
- S Would you like to ask me some questions now. I've finished with my lot. So is there anything I can say about what it's been about?

B

The second sample of data presented in order to illustrate the achievement of the primary objective, at this stage of the project consists of all of the subject's responses to one of the Question themes of the interview.

The theme is concerned with "method of working". This was usually introduced towards the end of the second interview, when the individual had had as much opportunity to develop his exploration and understanding of himself in his work situation. This theme attempted to elicit self exploration (e.g. self understanding) by the subject of his dominant form of problem solving skill - resulting from his being involved in a particular level of job (e.g. RS? SRS? or JRS). It was expected that much maladjustment would originate from the individual being involved in a problem situation that either made too much or too little demands on the particular skills of the individual concerned, and that the problem existed due to the individual's inability to understand and act on this (see Ridge (1970) for the relationship of Tasks to Skills in work situations). Similarly, this underlying maladjustment could form the origin of career problems, (see Carkhuff 1969).

The Results, or samples of interviews transcripts are presented in alphabetical order in three groups - RS (S₁ to 5), JRS (S₆ to 10) and LA (S₁₁ to 15) and are analysed in relation to the Carkhuff scale 8 - levels of Helpee self exploration in interpersonal processes. The rating that is given for each subject is a rating of the evidence given

by the subject of self exploration of their present work situations,
while responding to the question theme.

RESULTS : B

: Individual subject responses to "method of working"

S1

In this case, the subject only responds directly to the theme after some initial exploration of the question. Even then, exploration is emotionally remote and mechanical. The individual appears to be introducing personally relevant material regarding his usual approach to work situations, albeit in a hesitant and unsure manner. (Level three of self exploration).

Q How easy is it to say that the other part of the work - the scientific work - is a matter of fact?

A It's not always a matter of fact. You've got to extrapolate, certainly, lots of times when your facts, which you've got - to different situations. One's got to use .. guesswork I guess. One's got to make .. a decision; how far you can extrapolate you know, how valid it will be ... In the main I think one is dealing from the hard facts which you know are right, one is extrapolating from them. One has got to use some ... some judgement. At least your ground is firm, you know. They are either experiments you've done, or experiments that other people have done, that you know - you feel - you can trust. And you are taking A) information and you are pushing it around and doing this that and the other and ... I think ... O.K. one is pushing, you know, at times, you know the matter is extreme, but ... I'm not saying .. I mean ... you certainly make wrong decisions. One says there facts lead me think this, and lo and behold it leads to the opposite of what you in fact said. And one has to go back and say, why? what went wrong, and one can usually then, eventually, rationalise it, and say - that extrapolation wasn't valid because ... of something else which you may or may not have realised had an effect, which has interfered, and so, O.K., it's gone off on this Tangent, gone that way. I find it relatively easy to say, these are the facts we've got, we've got to make some extrapolations, this is the extrapolation we made, and this is the judgement we've come to. If that extrapolation is wrong, O.K. then that fact will be wrong you know But, I don't find any difficulty in saying - Ah, well you know these are all the facts we have got, we have got to make some extrapolations, working out what the possibilities are, and saying O.K. this is most likely so we'll do it. O.K., it turns out wrong lots of times, but that's never worried me, you go back and say where you have gone wrong - that's the next step. To me, in a way, research works like that. You have a certain set of facts, you make a jump from those and you see whether your jump is correct, if so you carry on, if not, you go back to square one and say where did our logic, our thinking go wrong. They may point you in another direction and that's the way research develops, I think.

S2

In this case, the subject, again, asks for further information about the nature of the question. However, he eventually responds quite freely - and with some evidence of emotional proximity and inwards probing to discover new interpretations of ideas. (Level Four of helpee self exploration).

Q Do you have any particular style of work?

A Now, you mean?

Q Yes; I imagine it may have developed out of some experiences beforehand, e.g. university.

A (pause) 'I am not sure what ... what I am trying to answer'

Q Presumably when were taking your exams, you arranged your work in some way; can you take that as an example? Do you have a photographic memory?

A No, I don't have that. What I do find is that .. hmmm .. you know, looking back on such work that I'm best please with, I think one can see the origins in that much further back. It may have been information that I'd picked up when browsing ... which has lain .. in the back of one's mind. When one comes to a problem, one seems able to recall a bit of information - not information in photographic detail - but one knows where to go and look for it.

One can do that, and ... uh ... things seem to tie up, and I can start of a reasoned and logical research program, and this is what one does. But the initial starting point very often comes from trying to analyse it ... on paper, and see what approaches one could do, but the intial starting points comes after you've been staring at the paper somewhat blankly for some time ... a piece of information that one has met before - and is not deliberately looking for, as a solution to your problem - pops into your mind, and starts you off. At least on a different train of thought. This has happened a number of times. I think it is a reasonable pattern of how things DO happen.

What I like to do is to read background material and absorb it; it very often acts as an unconscious bank of information to be tapped when you need it.

But there are other problems where one cannot use a logical approach one starts searching for a new approach - forget preducices and hobby horses - this is what a research chemist ought to be able to do. I don't think it is the way to have a chance of finding any dramatic new industrial proces^s, but it does contribute a few pieces of useful information.

S3

In this case, the subject simply presents his response to the question with little evidence of exploration. However, after further attempts to interpret (empathise) the response the subject begins to explore a particular aspect of his work situation with more emotional proximity, as though he is faced with an unsatisfactory work situation, although this is not explored further. (Level two to three helpee self exploration).

Q Is there any particular way you go about solving problems that come up in the scientific field ... is there any particular pattern?

A No I don't think so, I treat each problem on its own merit. Well, if you take two problems I have been presented with this week, where I think it might lead to very important commercial innovation, this guy came to me and said ... "Could you do such and such a thing?" well he said ... "I have had a wild idea could you - can you think of a way to do such and such a thing?" and - after thinking about it for half an hour or so, I gave a very specific suggestion as to how he could do it. Discussing it with others, we have actually devised a few experiments to actually ascertain whether we can actually do this ... so that, this advance, if it turns out, is based on knowledge that I have actually got at this moment. Now, that's one way it can happen.

The other enquiry I have just received which came in was a vaguer type of enquiry, but nevertheless, after rooting around in the literature bit, I was able to come up with a suggestion and point him in a particular direction, which he has agreed he will try Does that help?

Q I get the impression that you have the facts at hand, and on the other side there is the problem - what about the area between - fitting one to the other.

A Umm. Yes - well I think this is different to define really - how does one get ideas, but .. I mean, this is what makes a man rather than a system.

Q You mentioned that you found other people very helpful in getting ideas going, can you say a bit more about this?

A Yes , I find it very difficult to work in a vacuum. The basic problem with our position is that we need to have the opportunity to comment, and this requires more formal contact between people in the lab.

S4

In this case, the subject voluntarily introduces personally relevant material with both spontaneity and emotional proximity. (Level four helpee self exploration).

Q Do you find there is a particular pattern of work that you have, a routine ...

A No, I don't think I have got any routine at all really, ... no ... The nearest approach to routine is ... that I sort of get ... if left entirely to my own resources, you know, I sort of fiddle around, and go sort of broody, finding an idea for hatching, and then all of a sudden This means virtually doing nothing - just meandering around and not really appearing to do anything - any work at all. Without really knowing ... well, not exactly not knowing what I'm doing, but, nothing very important, put it that way. Then, all of a sudden, something happens, and I get galvanised into a period of very rapid action, when I try out whatever it is I want to try out. And there will then be a sort of pause, and another rush attack. You see, the first one, the first idea - and it works - and then there will be a time lag after that while I congratulate myself, really, while I am thinking of the next move.

It is a much more calculated move the next one. The first one isn't calculated, the second one is much more calculated. The second one is laying out a design; what am I going to do with it, whereas the first one was - I wonder what would happen if I do that.

I think they can follow one on top of the other. They can follow out simultaneously without having tried out the idea. But, usually it can ... it usually happens ... well it does happen that way. Anyway, you have this gap when you try out the idea initially.

Or ... you're doing something, you're seeing something, or some problem that you've noted that interests you, and then you have a think gap. This is a genuine THINK gap; not the other type of INVENTING gap. And then the second stage, that could include inventing, but it also has a think attached to it, a LOGICAL THINK, not just an INVENTING THINK, a LOGICAL THINK ...

S5

In this case, the subject voluntarily introduces personally relevant material with both spontaneity and emotion proximity. (Level four helper self exploration).

Q Is there any particular method of working that you have for tackling problems?

A No ... I don't think so ... It's difficult, you see, if you take a rigid and fairly closely defined problem, then one adopts the normal procedures of, sort of ... finding out what information is available, see what everyone else has done ... co-ordinate it, analyse it, make predictions, test it. It's almost an instinctive routine that one has learnt to do. But because problems don't usually occur in these forms - or - the problems I have tackled have not usually occurred in those forms. You see, when you say what you did with a problem, the problem might well be maintaining confidence in (an area of work in ICI) that is a problem. That is the real problem. The narrow one - how you actually set up the particular (work), or how do we develop (the work), this doesn't worry me as much. Ultimately, I am sure we can do that. I'm never sure that we can do the first and ... that is the challenge. So when you say how do I tackle a problem ... I suppose that, in essence, one tackles it in the same way as the scientific way - find out as much as you can about what is going on. how the situation developed, why it developed ... People ... I suppose it's not too dissimilar. One is doing an ordering in your own mind. You aren't using scientific jargon - you are using a diffuse jargon, a series of information that you could not easily put into words.

If I have written down 'he is an oriented person whose motivation is this that and the other,' I could find myself in trouble, because when I actually come to talk to him, what is required is an instinctive response to him - a feel for what I should do ...

S6

In this case, the subject has some considerable difficulty in responding with personal material relevant to this particular question theme. However, with the use of high levels of facilitative conditions a response of some emotional proximity is obtained and some initial exploration and self-understanding. (Level two to four helpee self exploration).

- Q Is there any particular approach to problems that you have developed?
- A Problems in general?
- Q I was thinking of work problems. Although I suppose there will be some similarity .
- A I don't ... maybe I have a got a technique, but I don't know how to describe it, or talk about it. One the whole ... on the other hand ... maybe I haven't got a technique, and that's partly the trouble.
- Q What about general problems?
- A No, I think if I can reduce something to numbers, I am a lot happier; if I can I will.
- Q Can you give me an example? I bet you're a wizard with tax forms aren't you?
- A Oh yes! I like filling my tax for in; yes, the maximising of my tax code etc.
- Q Has this had any application at work?
- A No really, no. Well, a naive, trivial example, after this meeting with Pharms, we had to come out with other ideas, and I was asked to do a critical path analysis for each one. I quite enjoyed doing that.

S7

In this case, the subject introduces personally relevant material and demonstrates some probing to discover new formulations of the material, eventually relating the material to feelings and experiences in general.
(Level three to four helpee self exploration).

- Q What about your personal method of work?
- A Oh, nobody ever told me anything about that. I am one of the world's most inefficient people at organising my time! ... I find one of the most helpful things, although perhaps it's a compulsive thing with me is to write down every day what I have done - you know - just in a rough note-book just to write down what I've done - partly to convince myself I have done something.
- Uhm. certainly I have found this very useful in the past. I

I started doing it when I was a postgraduate student. I found these notebooks very useful then. You know, a formal working in a thesis don't tell you everything you have done, and you can look back in the diary and find out what went on when you actually did the work. This kind of thing is very useful to refer back to.

Q Did you have any particular way of approaching exams?

A No, nothing special. I suppose I was a rather naive student; I just took what I had been told I ought to learn, and learned as much of it as I could and hoped for the best.

Q You sound as though you have a good memory.

A For some things - yess - but I haven't got the type of mind that can absorb a large amount of homogeneous information ... the sort of thing I imagine history students have to do. I tend to ... I have a convergent sort of mind - which wants to pick on an idea which can be applied to a number of situations - it may be a mathematical equation - and really understand this - and go and apply it to ... a few things. The things that interest you are much easier to remember than the ones that don't.

S8

In this case, the subject introduces personally relevant material, but only with difficulty, in a mechanical manner and with little evidence of emotional proximity. The subject also suggests that probing for new formulations of ideas, and thus new feelings and experiences also comes with difficulty.
(Level two to three help self exploration).

Q Would you say you had any style of working? ... any routine of working now?

A I think I try and work very slowly and methodically, well I work slowly, hopefully it's methodically.

Q Can you put words to what the method is?

A Uhm ... well, I try to get it fairly clear in my mind what I am trying to do; and then try and do experiments which will give me as much information as possible about the system that I am looking at, and hope that I can tie all this together in one, and look to find the answer in there.

Q Where does this approach come from - originate?

A It's probably basic - sort of - education of doing physics, which is a fairly logical subject ... it isn't logical as much as understanding. And this is probably one of the aspects of the general education, nothing specific ... this is all part of the whole.

Q You also mentioned slow - own pace?

A Yes

Q You think slower than average?

A Yes to find each step, to get it clearly in my mind, if I go any faster I tend to get a bit lost.

Q Clearly in mind refers to picture - pattern?

A ... trying to work out the last bit of work that I did, and what it actually means ... possibly try and put it in the context of everything else. But, it is trying to understand that particular bit ...

S9

In this case, the subject introduces personally relevant material, with some attempts to probe into new formulations and expressions of the material. There is not, here, any demonstrable evidence of emotional proximity.
(Level three to four helpee self exploration).

Q Have you found any training valuable for solving problems?

A When I first came, we had a few days lectures on the background organisation of ICI a general introduction to ICI, rather than anything specific on how to carry out research, and, what would be the best way of doing it, and ... how to look for ideas this, one has to get out of books from the library.

Q Do you find you have any method of turning things over in your mind, in your work?

A Well I try to gradually ... reduce problems into more and more specifically into one single problem. I have to solve one specific question, and I try to think as hard as I can how can I answer this question If during the work ... No ... it has to be ... if ... personally I feel if I am to come up with any answers, I have to ask a question. If I can't ask a question I just can't find the answer. Maybe it is too difficult to get the answer but the question has to come first.

I have to select out of various possible - suppose we were looking for a polymer system that would satisfy certain requirements, I still have to ask the question, what is it I want from this before I can start answering the question. So, I have to start, and it keeps on narrowing down - to very detailed questions. I cannot solve problems in general in generalities ... you know.

Q How did this develop?

A Well, it was by experience, of previous projects ...

Q What - in your own experience has been of value to you?

A ... I think ... there is, in some ways ... there is a limited amount one can do with experience really. It is a characteristic feature of scientific research is less reliance on previous experience, than there is in everyday life. Techniques change, and we have to keep up with the times.

Q Is there any particular way in which you go about this up-dating?

A We are obliged to keep up with reading current literature And then one searches out specific information about the project that you're on - or uhm - another way, a lot of times of course is spent on trying to find experts ... instead of trying to read up one tries to contact people If there is some experimental work, I just continue with this - until some data is collected where one can start drawing some conclusions, and then you go back to the the literature and see whether they have been reached before, or whether they have to be supplemented by some scientific background ... or can be made - pushed still further by knowing that scientific background.....

S10

In this case, the subject introduces personally relevant material with ease, and spontaneously seeks and probes alternative formulations of the ideas.

(Level three to four helpee self exploration).

Q Is there any particular way you have of approaching a work problem?

A uhm ... yes ... what I try and do is get an ... go to the library or ... get as much information as I can, but a lot of it might be irrelevant. Have that at hand for a start, and then I like to get into a practical situation, and ... mainly it's the practical side of things I like; and then, having got the practical situation, I can see which parts of the information are going to be more relevant than other parts - write a few notes - you know on what the main points are, and ... being in the typical situation

and also find out from the people who perhaps know more than I do. There is a lot of cross-over between their knowledge and my knowledge - I like to find out from them - you know - see if they can ... put on the board ... something fairly simple. Papers are usually very complicated. If you've got somebody already in the field that you can just have an hour with to take on ... to give you some pictures - some physical picture - it's a great help.

So talking to someone, getting a lot of reading matter, and ... uhm doing a few experiments. Those are the three things when starting off on an experiment.

S11

In this case, the subject introduces some personally relevant material, but with some initial difficulty. However, eventually he demonstrates with some spontaneity and emotional proximity his tendency to explore some areas at a high level. (Level three to four helpee self exploration).

Q How do you go about your work?

A Well, I find that often it is just a matter of asking (X) X sits down with a piece of equipment and thinks, and waits until something comes out, and says what ... what we can do with that type of thing. I'm not quite as far away as that, really ... I like to have a little more of a ... you know ... well - perhaps we ought to make something for the car industry - you know X gets sidetracked, and either comes up with a completely different idea than the first ... or her original thought anyway - after a week locked away in the laboratory. I like something a bit more ordered

Q How do you set about doing it?

A A lot of it depends on the work anyway - you know, you might have, say ... well, not hard and fast rules but you might try to work to a set pattern and then find that you can't.

Q So what do you do when you can't find any rules?

A Well I normally play it by ear as it were, just see what's what.

Q How far have you been involved with (a project), how far do you understand it all?

A Ah .. there's a lot to understand about (a project). There's a lot - but - it gets a bit too technical for me as well. I enjoy getting into the workshop and using my hands.

S12

In this case, the subject has some difficulty in articulating and expressing personally relevant material, but, eventually achieves some expression of his self understanding with both spontaneity and emotional proximity.

(Level three to four helpee self exploration).

Q In terms of experience that you have had so far, what do you think has been most valuable in helping you to do your work?

A Uhm - I shall have to think about that .., Finding out - you know - just where everything is in the lab. and ... er ... getting to know people. If you know people in various labs then you can get something done - very quickly ... I think that's a help to ... er ... actually get things done. I've been lucky with the poeple I work with. They've all been very helpful, quite willing to spend time to help me along ...

Q What skills do you think you've got as a result of your experience at P & P?

A I am much better at practical work than theoretical work. I don't know why; it's just something that happens, you know.

Q Any idea what experience you have that on?

A I find that I can use my skills a lot better in development - where I know what the end product is going to be ... and it's not a question of developing something where I don't know what the end is going to be ... I find I can do much better at that than pure research.

S13

In this case, the subject barely introduces personally relevant material, situations are often described impersonally and mechanically. The subject responds remotely to attempts made by the interviewer to probe for information of a personally relevant nature.

(Level two to three helpee self exploration).

Q Can you think of a typical everyday problem that crops up ... can you give me an example?

A Well, in this proces, you have to watch the level of various things ... if you stop thinking, you can let air in which causes trouble ... if you're not careful. Things like this. We are used to it now. It happened in the lab. but down here we do it on a bigger scale. You've just got to get used to the controls, and how to operate these things. It can happen ... it does happen, you know - especially if you've got a new operator come over, and you've got to get him used to it.

Q Any others?

A Well ... part of the reaction is done at a certain temperature - cooled by ice ... if you're not thinking, the ice can melt - you know, if you're busy in some other part. You have got to keep your eye on these things all the time.

Q Do you have a check list or something?

A Oh no - it's just a matter of experience, and knowing that a certain stage of the process this thing is likely to - can happen.

Secondary Objective: Other Variables

It is not intended to present here detailed evidence concerning the development of the project's ability to manage other relevant variables described by the Carkhuff model. However, a general record is presented of some significant points that arose during the achievement of the primary objective, the development of helper dimensions of behaviour.

ENVIRONMENT : As has already been suggested in the definition of this particular problem, it was not expected that environment (as defined here) would be the origin of many factors that would affect a potential helping programme in this situation. For example, individuals were not expected to be suffering significant dietary problems. However, it was foreseen that some individuals may be experiencing difficulties at home. Although this had not yet been the case, potential subjects were first cleared with the Personnel Group for any information they might have regarding such significant factors.

CONTEXT : Much of the relevant context to the development of the helping programme has already been outlined - the function of the laboratory, the role of the assessment system, the function of supervision. As far as possible, interviews were conducted according to the convenience of the subjects, in either their own, or an office freed for that occasion. The individuals in the laboratory were well

used to the office environment. Similarly, the tape recorder proved to be no significant distraction. If and when possible, offices were used which were better rather than sparsely furnished; (a group head's office chairs are well upholstered.) Other office chairs were usually hardback.

HELPEE : Similarly, much of the relevant helpee characteristics have already been defined (e.g. graduate staff). Indeed, although some qualifications, it was found that with the lesser qualified staff, problems of articulation lessened the value and benefit of discussion. Furthermore, other helpee variables of set and expectation were suspected of influencing the possibility of an effective discussion. For example, one subject in this sample declined to be interviewed on the grounds that he thought that the social scientists that he had experienced to date - including those who had previously worked at the Corporate Laboratory "were all useless". It was also considered possible that the undergraduate background of the research student tended to put off some of the more practically oriented staff before any attempt was possible to establish some contact at a more personal and facilitative level.

CONCLUSIONS

The interviews conducted at this stage of the project provided an adequate means for the development of Helper (research student) facilitative dimensions of behaviour.

As intended, no action-oriented dimensions of behaviour were used by the research student in the interviews. The interaction was designed primarily to obtain impersonal information about an individuals circumstances with no attempt being made to obtain helpee/subject self exploration by the introduction of relevant helper/research student behaviour (e.g. confronting a subject about his real desire to alter some discrepancy between his present situation and his desired situation).

The subjects had been generally quite willing to take part on this impersonal - information basis and did not seek to obtain such help from the researcher.

Although the results of the interviews have been analysed here on the basis of the evidence as related to the Carkhuff scale of self-exploration, other criteria were available for an indication of the effectiveness of the interviews, although not formally recorded or presented here. For example, most of the subjects reacted favourably to the interaction in terms of offering further help, volunteering as a subject again if required. Similarly, these results, (excerpts) were presented to the group heads for a reaction. This reaction was generally favourable, consisting of such comments as "how it is important to get people talking like this" and how different people do seem to develop very idiosyncratic approaches to problems, like this"

Chapter nine The Helper - action oriented dimensions of behaviour

9.1. Purpose

9.2. Design

9.3. Results

9.4. Conclusions

9.1. Purpose

At this stage of the project it was intended to focus effort primarily on the action-oriented dimensions of behaviour relevant to this potential helpee situation. In more detail this may be described as the development of the discrimination and communication of the problems relevant to career development that arose in staff assessment situations in the laboratory.

Thus, the general intention was ^{to} examine and understand the issues of career development for the graduate staff in order to enable the eventual operation by the researcher of a helping programme designed to help with career development problems, and thus demonstrate how the general hypothesis of effective human relations could help improve the operation of the staff assessment system overall.

In terms of the Carkhuff model the objectives of the work at this stage of the project may be defined as primarily to appraise and develop the levels of helper skills relevant to this helpee population to include action oriented dimensions of behaviour, and further developments of facilitative dimensions of behaviour, and secondarily to continue to appraise and develop the project's ability to manage other variables relevant to the eventual operation of a helping programme,

e.g. Helpee : again, the observable characteristics of potential Helpees that would aid in the effective operation of a helping programme.

Context : To examine more closely the characteristics of the immediate supervisory context to which a potential helpee would have to return to after help, and the implications this would have for the operation of a helping programme.

Environment : To examine the use made by the individuals concerned of other helping agencies in the environment (e.g. Professional and Executive Recruitment register) that might influence the nature of the intended helping programme.

In operational terms, the primary objective may be stated as to attempt to obtain the necessary discrimination and communication skills relevant to the maximum levels of subject self exploration possible in the chosen problem area of career development arising from the assessment situation.

9.2. Design

The means of achieving this objective was designed as the observation of a sample of actual assessment interviews, at all levels of graduate staff.

The Sample : As this was considered to be a more threatening intervention, or experiment, a fairly high refusal rate was expected. Thus, a fairly large sample of assessment relationships was initially approached. Some six weeks prior to the commencement of the annual assessment interviews, a random selection of assessment relationships was made. First, four work groups were selected from the total list of the exploratory (not service) groups (see Table 1 (a)) and the respective group heads were approached with the general proposal of "observing the actual assessment interview". Second, with their acceptance of the proposal, eight assessment interviews from each group were then selected at random, (a supervisor could be involved in more than one assessment) by choosing - again at random - various supervisors in the group (including the group head). The respective supervisors were then approached. Finally, the respective supervisors were approached either by the researcher alone, the supervisor alone, or both (see Figure 8 (a)).

The Observation : In detail, the proposed observation was to be primarily by tape recording the actual assessment interview - i.e. without the physical presence of the researcher - to enable the researcher to analyse the interview later.

In addition, it was proposed that the researcher would interview both parties to the assessment interview separately both before and after the actual assessment interview. (See Table 8 (a) and 8 (b)). Again, confidentiality was assured.

The Interviews : As Table 8 (a) outlines, the interviews involved in this observation are categorised as pre-assessment, assessment and post-assessment.

The pre-assessment interview : This interview between either the researcher and supervisor, or researcher and supervisee was primarily similar to the interviews given earlier in stage one of the project. It was, however, a single interview and general of an average 3/4 hour duration. As well as including questions by the researcher on topics of spending time at work, career, and work method, the researcher asked about expectations of the actual assessment interview, and generally probed more specifically into the individuals feelings regarding his work situation (e.g. what do you enjoy about your work).

The actual assessment interview : When supervisor and supervisee arranged the time and location of their meeting, the researcher brought along and set going the tape recorder at the start of their interview, and provided instructions on how to turn the recorder off, and which office to return the recorder to.

The post assessment interview : apart from at the occasion of the initial request for participation, the post assessment interviews were not specifically mentioned or arranged by the researcher. However, some informal attempt was made to meet the individual concerned - usually in the corridor - or by calling at his office to ask briefly "how did it go". In some cases further contact might then be requested by the supervisee or supervisor.

Table 8 (a)

The Design of the Interview Process used in the
Development of Helper Action Oriented Dimensions
Of Behaviour

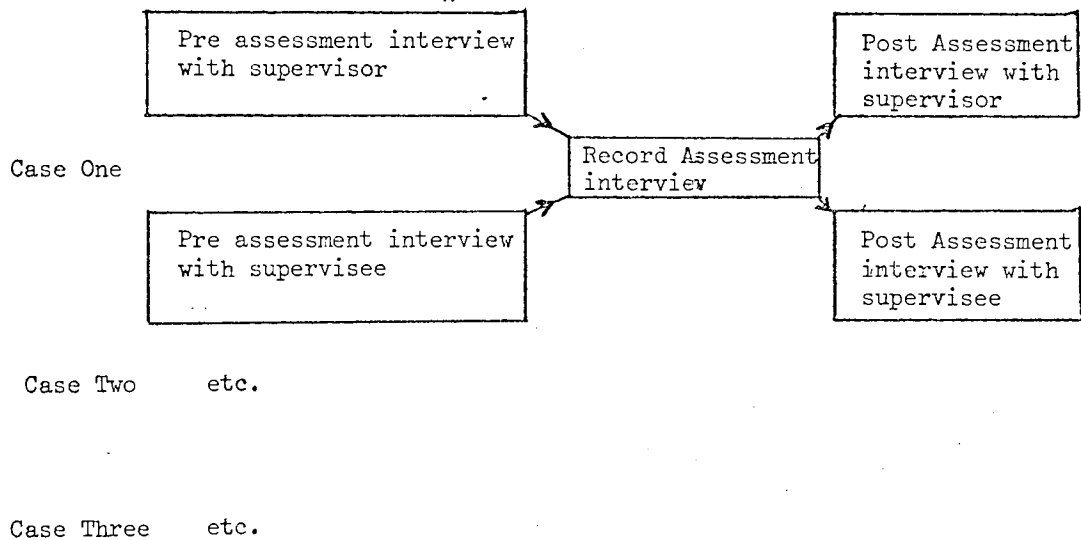


Table 8 (b)

The Structure of the Interviews used in the Development of Helper
Action Oriented Dimensions of Behaviour

<u>Interview</u>	<u>Sequence</u>	<u>Topic/ theme</u>	<u>Usual Question Form</u>
1. Pre Assessment- (with supervisor)	1	Time	see Fig 7 (b)
	2	Career History	see Fig 7 (b)
	3	Enjoyment	("what do you enjoy most/least about work?").
	4	Magic Wand	see Fig 7 (b)
	5	Assessment Intentions	("what are you trying to achieve in this assessment interview?")
ii Pre Assessment (with supervisee)	1	Time	see Fig 7 (b)
	2	Career History	"
	3	Method of work	"
	4	Enjoyment	see above
	5	Magic Wand	see Fig 7 (b)
	6	Assessment Intentions	see above
2i Post Assessment (with supervisor)	1	Reactions	("Any reactions?" - and explore each one fully).
	2	Outcome	("What do you think will happen as a result of the interview).
ii Post Assessment (with pervisee)	1	Any reactions	see above
	2	Outcome	see above
	3	Other help	("is there any other help you would have liked to have had?")

9.3. Results

The results of this series of observations are analysed in relation to the description of the purpose in 9.1.

The primary objective, at this stage was the development of the action oriented dimensions of behaviour by the examination and understanding of the issues of career development for various graduate staff. To this end, eleven assessment relationships were fully observed.

One group head declined to have assessments in his group tape recorded - but invited the researcher to take part directly in the assessment interviews. Although the results of these interviews do not form part of the formal data presented here, the researcher did take part directly in these assessment interviews, and the experience was useful - generally for the development of the project.

Another group head had decided to delay the career development section of his assessment interviews for several months (see the operation of a helping program) and so no observations were made of assessment interviews in this group.

The individuals who declined to participate in the observation in every case put forward grounds of privacy - most often due to the importance of the issues to be raised, and the fear that the intrusion may cause some harm to their cause.

The remaining eleven assessment interviews are analysed here according to:-

- A : the results of the facilitative dimensions of behaviour offered by the researcher in the pre-assessment interview.

- B : The results of the facilitative and action oriented dimensions of behaviour offered by the supervisor in the assessment interviews.

The Secondary Objective : a summary of conclusions reached regarding other relevant variables from these observations is also presented.

The PRIMARY Objective :

The data for presentation in order to demonstrate the achievement of the primary objective is selected from the pre-assessment interview between researcher and supervisee, and the assessment interview. The samples are presented in the form of a case-study in alphabetical order, of each supervisee, and the development of the respective variables of level of exploration, range of problem expression, and immediacy that are consequential of the (helping) process between supervisor and supervisee.

Three samples of data are thus presented for each case-study.

A : One from the pre-assessment interview between researcher and supervisee on "what do you expect from the assessment"

and B Two from the actual assessment interview, one being the initial moments of the interview which best demonstrates the facilitative conditions offered by the supervisor, and the second excerpt being selected from the end of the assessment interview to represent the action oriented conditions that the assessment achieved.

Some selected total transcripts of these interviews are presented in Appendix 4. of both pre-assessment interviews between researcher, supervisor and supervisee and also of actual assessment interviews.

Although some post assessment interviews were actually held, some being recorded as some supervisees used the opportunity to seek help from the researcher to explore more fully some of their problem situations (e.g. requests for vocational guidance). This is not presented here as formal evidence of this primary objective.

In the transcripts presented in each case study, 'S' refers to subject, and 'I' to interviewer.

RESULTS : PRIMARY OBJECTIVE

: Case Studies

CASE STUDY ONE

This assessment was by a group head of a senior research scientist.

The initial level of supervisee self exploration achieved in the pre assessment interview by the researcher was between levels 2 and 3 on the Car-kharrf scale of self exploration. Although there is a great deal of expression by the supervisee, it is predominantly of a mechanical nature. Personally relevant material is introduced into the discussion, regarding the forthcoming assessment, but with difficulty (Case one a). Similarly, inward probing to discover a new interpretation and understanding of his problem situation only seems to come with difficulty (e.g. "maybe I feel stranger in that the problem seems to be getting worse").

The range of Problem expression that this supervisee brought to the assessment situation concerned almost exclusively this concern he described as "I can't find something reasonable to move into" (career development). Although, he also expresses concern regarding assessment of performance during the previous year.

The level of process movement achieved during the assessment interview was not considerable. The supervisor and the supervisee had been involved to a considerable extent before this occasion in attempting to solve the problems involved (primarily career development). This

interview lasted a long time (approx 2 hours) and the supervisor only offered action oriented dimensions of behaviour on a limited number of occasions. From the extract presented (case one b), it was clear that personally relevant material was often avoided, and effective discussion by the supervisee of his situation came only with difficulty. Case one C demonstrates the predominant attempts at action oriented dimensions of helper behaviour - attempting to direct the supervisees exploration towards a more constructive attitude to his situation.

Similarly, case one d demonstrates the typical communication in more detail. The supervisee does not demonstrate any evidence of discovering new ways of looking at his situation - despite supervisor attempts to elicit specificity. These attempts at developing more specificity of self exploration might have been developed further, however, the supervisee's 'set' was more concerned with the expectation that 'thersp could solve this particular problem.

The eventual level of supervisee self exploration achieved by the supervisor in the various problems of concern to the supervisee did not exceed the initial levels achieved by the supervisor, or the researcher in the pre-assessment interview.

This supervisee did not seek any further contact with the researcher, although many further discussions were held between supervisor and supervisee subsequent to the assessment interview regarding the particular problem situation.

Case One (a)

S Oh! ... well ... there's not a simple answer to that ... the background to my assessment, this year .. is .. this time last year I was riding exceeding high as the .. leader of a project - or an almost project .. with about 6 or 7 people working for me .. and that .. eventually died the death .. around September - October time .. and .. there was a period of .. withdrawal .. of quickly disbanding, and loss of empire .. until Christmas .. and since Christmas, I've been back in the exploratory area, trying to make a new start, essentially .. um .. this had been a fairly difficult period really .. one thing we did between Christmas and Easter was a left-over exploratory option to the project, which .. was - sort of - obvious to follow .. and we didn't have anything else .. in way of ideas .. from March to about now, we've got a new .. area .. where we're .. trying to wind up the enthusiasm .. for this .. a completely new area .. so I spend a lot of time going around Divisions, literature work .. trying to assess it commercially .. maybe we'll write an R.E.M. in another 3 months or so ...

I Yeah

S So that's .. a potted history of the work background .. under the personal problems .. I .. er .. I think .. God knows what (group

...assessment of the performance will be .. I don't think it's been a very good year .. it's been a painful experience .. however logical in terms of lab strategy/ ..

I Well .. it wasn't your decision, was it

O No .. No .. I can see things I did wrong .. but .. there are always divergent views .. One has to be fairly thick skinned .. not to go off into a little self examination about how one might have played it differently .. too much ..

I Yeah .. Yeah

O But .. from being a nice manager .. having a feel of power .. over people and organization .. and then somebody taking it away from you .. -

I - Yeah .. Yeah

O this is .. or .. this is unfortunate..

I Yeah

O Now the other major thing that is apparent .. is .. the fact that I'm .. that I've been pretty keen, since .. I think, had I not been involved in this project situation about a year ago .. I

would have said .. I want to move .. and I probably would have moved .. several contemporaries have moved .. Now, I was expecting to move .. into this last project .. leadership position .. Now, in my last assessment .. it was agreed that I should .. think about moving .. in this last year .. and especially when the .. project died .. I didn't really want to start again at .. back at an exploratory end .. Now, that meant the crunch .. setting in a pretty big way - coinciding with lack of job availability in divisions .. in spite of a fair amount of effort on my part - miscellaneous interviews .. both inside, and .. in fact, outside the company, I haven't been able to engineer a move, and - of .. maybe I feel stronger in that the problem seems to be getting worse .. in that I'd like to move .. but .. I can't find something reasonable to move into .. that .. that is going to feature fairly strongly in the assessment this year ..

that you were .. but I'd always had the impression from the beginning that you weren't

See - No ..

Ser ... So there are no real problems then ... for those two

See No .. we must make sure we get the follow up right .. in career development ...

Ser ... O.K., then .. let's start on you .. um .. you've come with your usual page full of notes ..

See - I don't .. I'm usually not that organized .. I'm more organized than I usually am .. Have you got a copy?

Ser Yes .. I've got a copy ...

See .. well ... um ...

Ser What do you want on the agenda

See .. yes .. everybody is keen on agendas, this year .. well, lets talk about the assessment .. what you've written to begin with .. and then about training .. and then about career development .. I don't think the training will take very long ..

Scene One (A)

Ser - Hang on it's too far away from me .. can you move it a bit nearer to me ..

See - um ..

Ser ... Right ...

See (name) completed this for you

Ser - including the little tear off slips about career development?

See Yeah ...

Ser ... That's a good vocational guidance counselor, isn't she ..

See Oh, yes .. you want to have a look at the other one .. its positively embarrassing .. it seems like .. yeah .. I don't - er .. um ...

Ser ... get a new job for you, then ..

See Yeah .. um

Ser It's a .. mistake .. about whether you were doing anything about it .. It's assumed .. I'd assumed, if I didn't hear anything about

Case One (c)

Ser .. well .. what you've given me is .. a - sort of - standard agenda .. are there any specifics within those points .. that you can give me?

See Nothing that stands out .. I mean, the career development is probably going to take longer than anything

Ser - yeah - what use do you want to make of form 1, you're the first one that's filled one out .. that suggests that you want to use it.

S'er I mean .. I've always had the impression that you want to get on .. and .. you're not incredibly choosy about whether you pick up your "14" or "15" at the moment ..

S'ee Even less choosy than I was last year.

- and things .. but - you know that's all getting second and third hand .. But, if you can - take (colleague's) example .. get (policy group member) to go along and see (division department head) - who's the guy that is actually going to employ him .. and say - how's about taking this guy on - when you've got a slot ..

S'ee Yeah .. uhm ..

S'er - that to me is infinitely preferable to doing it through a central personnel thing ..

S'ee ... Yeah, uhm ... there's a circular argument going on - here

S'er all I'm asking is - where do you want us to do the probing .. if you can help us by telling us where you want us to probe - we can help by .. perhaps .. doing the probing ..

S'ee Yeah .. then .. the development end of R & D .. the training end of Personnel Department

S'er ... can you think of others

S'ee .. I think so .. for a personal approach, I think those are the two where I was most inclined .. the thing I'm concerned about is that this won't exclude any others .. I want to get that clear

Case One (c)

S'ee .. It seems to me .. it .. that one might as well approach it from there on in on the basis of .. who do we know best .. and .. and whose arm might .. might .. it would be easiest to twist .. Er .. because .. I'm not inclined to stick out for any strong preferences .. which hopefully would give us more room for manoeuvre .. in terms of who to approach - a Division .. or an individual ..

S'er so we're saying that R & D is .. the function we should focus on ..

S'ee .. it's probably the one where we've got most going for us .. but .. I really don't think it matters very much .. uhm ..

S'er - well, it matters from the point of view of who the hell do you probe ... I mean who do you go to in a Division and say (S'ee) wants a job somewhere in this Division .. you know .. I just don't think that's an approach you can use .. you've got to be a bit more specific .. you've got to go .. I suppose - actually pick out a guy who can actually do something about it

S - uhm

S'er - you know, personnel department can't actually do much about it .. what can they do - they can tell all the head of departments

CASE STUDY TWO

S'ee it doesn't exclude the others .. it's much more difficult to get at the others through this channel

This assessment was by a Senior Research Scientist of a Junior Research Scientist.

S'ee .. Yeah

The areas of problem expression demonstrated in the pre-assessment interview conducted by the researcher concerned performance appraisal (Case two (a) - 'the main thing is the grade', there's two criticisms) and career development ('I might go up another Haslam'). Also, in the pre-assessment interview the supervisee demonstrated a considerable concern (emotional proximity) regarding these - connected - problem areas ("the one - bad thing on the assessment). Without further specific data it was not possible to understand the level of self-exploration in relation to this problem.

S'ee - Yeah

S'er - who have then got to work through their departments.

However, from the very commencement of the assessment interview the supervisee demonstrated a high level of communication skill - the immediacy of "I don't really see the need for the interview". This was met by high levels of facilitative behaviour on the part of the supervisor (in Case two (b) the accurate empathy of "you feel there's no need .. because ..") and considerable attention was then paid by the supervisor towards developing understanding of the supervisee situation by the supervisee.

Thus, the eventual outcome is that the supervisor achieves a continued high level of supervisee development (self exploration) in the

Case Two (a)

particular problem areas (see Case two (c) "written work and oral work" and a plan of actions to be undertaken in order to solve the problem.

Informal comments by both parties subsequently indicated that both were satisfied with the outcome.

I .. Do you know what you want to get out of the assessment?

S ... the main thing is the grade ..

I - the main thing is the grade -

S Yeah

I do you think that is the same for everybody?

S No .. No .. well, you see, I've seen my assment - this year - but I've not had the assessment interview ... sorry, were you referring to the whole assessment - or just the interview?

I well, the whole assessment, actually .. but the interview is the central focus of it all, really ..

S uhm .. Yeah ..

I so you've seen it

S Yeah .. I'm fairly happy with it, really, there's two criticisms

I Yeah .. uh-huh ..

Case Two (b)

S one .. I can accept .. and one .. I can't, really ..

I Yeah

S So, the whole interview .. in my opinion, will be centred around .. the one .. bad thing, on the .. assessment ..

I Yeah .. Yeah .. so there's the grade ..

S Yes, the most important thing is the grade

I .. and then there's another thing .. a criticism

S uhm ..

I .. anything else?

S No .. in my case, I won't be recommended for further training .. I might go up another Haslam .. but that was wholly dependent upon the grade ..

I Yeah .. O.K. ..

I O.K. that's on .. never mind, we can always edit the tape afterwards! .. right now .. well, have you had a think about it?

S -Yes -

I - is there any major thing you would like to discuss?

S uh-huh

I Right then, what are they ..

S ... well, I can't say really that there is that much I want to discuss, but ... what ... what I wouldn't mind talking about .. is .. the relevance of this interview .. bearing in mind that .. you suggested a rating .. Keith endorsed it .. well, as far as I'm concerned, that's it

I Yeah .. you're satisfied with that

S Yes .. so, you see, I don't really see the need for the interview ..

I ... Ah, yes .. right .. well .. you feel there's no need for the interview because you're just training at the moment .. and your career .. had been dealt with adequately .. by our relationship in the lab

I - because .. you can't stay the same .. you've done well ..
got a good grading .. but how .. can you improve ..

S Yeah.

I Now, the assessment is first of all to say what you did last
year .. second, to say, in the short term, to improve .. the
poor points in your assessment .. O.K. .. 'cos it's not all
good .. and that's the purpose of this interview .. to plan
what you're going to do next .. and what I'm going to do ..

S - uhm -

I - in terms of your career in the short term .. and if we can do
anything for the long term ..

S ... uhm, yeah .. I agree .. I agree ..

I So .. you can devide it into the rewards side .. which is a
very important thing - you know - how much money can you take
home .. but also .. there's the very important side of how you're
going to continue to get good gradings ... and in that way ..
progress through the Haslam gradings .. because .. if you
performed last year as you did this year .. it's almost certain
that you wouldn't get as good a grading ..

I - would you say we've got a reasonable relationship?

S oh yeah

I - and that's been dealt with anyway

S Yeah .. and no matter what .. happens here now .. this interview
is not going to effect the final grading

I oh, no .. it's not going to effect your grading .. the thing
that will affect your grading is your performance over the past
year..

S .. so this interview has got little relevance

I it's got little relevance as to your last year's work .. because
that's been done .. and your last year's work has been good ..

S well .. it wouldn't influence it anyway if it had been bad because
all I could do then would be to disappear -

I - Yes, but .. that's to date .. but what about next year .. what are
you going to do next year

S uhm .. yeah

S Oh yes .. yeah ..

I So .. is there anything else you've got down?

S ... Yeah ... only that you've been changing the work so many times .. it's a bit unsettling -

I - Yeah - Yeah .. it is

S but then, again, you've suffered that yourself ..

I - myself .. yeah .. that's the nature of the work, really .. how do you feel about that - you don't feel insecure in your job?

S No .. I feel I'd like something more long term .

I Yes .. you feel the work's being done superficially?

S what do you mean superficially

I well, that .. umm .. we're not necessarily going deep enough -

S - or long enough

I yeah ...

S ... you know .. if we had a target .. just one target and, this year we've had three .. and we've never really spent much time on any of them ..

I Yes that's .. that's true you see ..

S'er Yeah .. now .. I tend to do it .. almost on a daily basis ..

you know

S'ee Yeah

S'er - I feel that, assessments .. this is the interview to sort out the points ..

S'ee Yeah .. since the last assessment, I've been consciour of it all year .. I don't think there should be just one interview .. we should stop .. consider .. and mention it soon

S'er before Christmas

S'ee Yeah

S'er - and this is - other than reviews of our work

S'ee Yeah

Case Two (c)

S'er Now, written work and oral work .. you've sorted out the problems on the oral work .. you know what you want to do there, now, are you quite happy about that?

S'ee ... uhm, well .. I don't know whether it'll crop up again next year .. just have to make sure it doesn't .. I think .. I think I know what I've got to do ..

S'er .. and written work?

S'ee well, I don't see much problem there .. not that experience won't cure

S'er more practice - huh?

S'ee Yeah

S'er and the professional knowledge .. so we've got a good few things to do this year ..

S'ee .. yeah .. a few things have come out ..

S'er Yeah .. now .. would you like to review these points

S'ee .. Yeah .. I'd like to review the .. whole performance

CASE STUDY THREE

This assessment was by a Senior Research Scientist (project leader) and a Laboratory Assistant. This assessment was thus in addition to the initial performance appraisal conducted by the immediate supervisor in the work situation.

The areas for discussion - where personally relevant material was liable to be introduced concerning this supervisee were described in the pre-assessment interview as (Case three (a) "work during the past 12 months .. environmental factors .. personal factors.") Most supervisee concern apparently existed in the latter area "the career development side". The level of self exploration in this problem area was high - a fair amount of emotional proximity and concern to explore the problem - possible alternative solutions already considered - problem isolated and defined.

The supervisor in this area was not expecting much helpee exploration of the assessment situation and provided a strong action - oriented approach, immediately in Case three (b) "lets put some structure into the interview alright", although there was also a demonstration that the 1st person was concerned with the personal attitude of the supervisee.

The supervisor provided his own structure of problems for attention "Case three (b) - "past year's performance and frustrations stroke .. limitations" and career development" ambitions and the next few years.

Eventually, the supervisee introduces his most concerned problem "repetitive" work.

Towards the conclusion of this interview, the supervisor is acknowledging the inadequacy of his action oriented dimensions of behaviour and - accepting the S'ees concern "I was getting a little worried last year" and a need for the Sor to help. The main action is to go into the - See's work situation more thoroughly.

In this case, the supervisor requested the researcher to indicate whether he could help in any way with this situation. Various interviews were held separately with supervisor and supervisee. The supervisee requested whether some vocational guidance might be possible in the light of the supervisors eventual encouragement to think widely about alternative work. This was undertaken by the researcher with the supervisee. The nature of the helping programme is described in more detail in Part 4.

Case Three (b)

S'er .. uhm .. assessments ... let's put some structure into the interview .. alright?

S'ee - uhm .

S'er - Ill call the interview 'assessment' ... I'll suggest a structure .. and anything we're not covering .. you can tell me .. right?

S'ee mm

S'er the first one .. let's call it 'historical' .. in other words what your past year's performance has been .. good things .. achievements .. right ..

S'ee uh huh

S'er and things like .. frustrations .. stroke limitations .. O.K. .. well we'll cover that .. o.k. .. then secondly we'll look at a broad area, which we'll call development .. and this section .. we're concerned with things like .. life goals .. in other words .. what your ambitions are .. what you want to do in the future .. then .. we'll try and put this in the context of the next few years .. and try and sort out what might be in the future .. Right ..

Case Three (a)

I .. Yeah, Yeah ... what - er - coming back to the assessment interview .. is there anything you are going to ask to get sorted out?

S .. well .. I just write a precis .. meet three main headings .. work during the past 12 months .. the second section is environmental factors .. and third is personal factors .. so, in the first I'll just say what I've done .. the second, I won't say a great deal .. and the last section .. I didn't say very much except that I was a bit frustrated with the career development side .. I think that's my biggest problem - not having H.N.C.

I You think you would solve the career problems - having H.N.C.?

S well it would be very useful

I Yeah .. Yeah .. what do you think is going to happen?

S .. I don't know, really .. I don't know what they are going to do .. I think there must be a shovel waiting for me down at Castners!

I Not a broom - a shovel?

S - something like that .. I think one approach is for people to do some sort of plant work.

S'ee uh huh

S'er So .. is there anything else you want to cover?

S'ee well, I'd like to say something about certain things I'd like to look into

S'er Yes .. well I wanted this list .. really to cover than - You know - things like .. education .. and alternative opportunities ...

So ... how shall we start .. how do you think your last year's work has gone? .. have you read that

S'ee - mm .. fairly well, fairly well, it's just a continuation of the year before ..

S'er how do .. how do you feel .. do you feel you're doing anything different?

S'ee I'm learning more about the same .. topic

S'er uh huh .. do you think you're as interested, now, as you were before?

S'ee er .. I hope so, yeah .. I hope so

S'er have you found .. you know any problems down there .. either with .. the people .. or the (chemistry) .. I mean both environmentally and er .. I mean is there a good work attitude down there?

S'ee .. I think it's er .. repetitive .. what you might call - repetitive .. I suppose you can say any job's repetitive really ..

S'er how do you feel about how much you know about why the experiments are being done .. do you find that a limitation?

S'ee er .. well, I found these Monday morning meetings very useful .. because .. I learned a lot about .. er .. other people .. in the group..

S'er Yeah

Case Three (c)

S'er so .. in terms of being a member of the team .. over the next three years .. I can see you as a member of that team .. a flexible team - member .. the type of work .. I don't know .. possibly some plant .. some (experimental) some (technique) ..

S'ee uhm

S'er - one thing you have to do .. is keep interested .. but you are interested, (name)

S'ee - Yeah .. Yeah

S'er uhm .. finish up on this note of where I think you can improve .. in communication .. you've got to be stronger in communication .. we'll try and get you a chance to make a presentation .. on how .. you think the works going .. right?

S'ee uhm

S'er - in the meantime, you're responding to (colleague) in the longer term, probably (colleague) .. but don't be frightened to go and talk to people about the work ..

S'ee - I think now's the time when I've really got to push ahead

S'er - Yeah .. this form, here - I'll fill it in, and come back to you .. because I think we've got to have a second go at this..

S'e - uhm - Yeah

S'er I can fill the form in .. but in terms of finding out what can help - what will happen to you .. we can set up various things that .. and determine .. which of the paths we examine .. we don't have to make any decision just yet .. alright?

S'ee Yeah

S'er .. in other words, the laterative will be explored and various ones will be presented to you .. and you will be the one to decide ..

S'ee .. Yeah ..

S'er ... I was getting a little worried last year, because you only had one line - I'll be honest .. you were doing it very well - but you've done that, now .. right?

S'ee uhm

CASE STUDY FOUR

This assessment was by a Senior Research Scientist of a Junior Research Scientist.

The problem areas, as regards the introduction of personally relevant material by the supervisee was concerned, from the pre-assessment interview were performance review (e.g. Case Four (a)) "we'll talk over last year's work) and career development (e.g. Case Four (a)) "I've put something down about .. further education". The level of supervisee self-exploration in the work situation thus could be rated as high.

As regards the level of conditions offered to this particular supervisee, these were generally high - as indicated in Case Four (b) Supervisee concerns were included from the start (e.g. "Yes, this is mostly that I want to talk about, I think") and the eventual outcome of the discussion provided satisfactory solutions to the relative problems for both parties (see Case Four (c)).

Again, both parties were quite satisfied at the outcome of the interview. The supervisor, in this case, requested some informal feedback on how he had managed the interview.

- I what .. what are you .. expecting to happen, with (supervisor)
- S umh .. well, we'll talk over last year's work .. where, the where the group, as a whole, could have done better .. where we did quite well .. where I could have done better .. I'll point out to him where he could have done better, occasionally!
- I You what!
- S - if I get the chance, yfah ..
- I do you think he will offer you the chance?
- S Yes .. I think he will, yes .. if he doesn't .. I propose to tell him anyway ..
- I Yeah
- S .. I guess I've got - now - my future to think about .. now that I've finally finished Tech .. I haven't thought much about it till I finished Tech -
- I - very wise -
- S - cross one bridge at a time ..
- I Yeah ..

S and .. well, I guess I've got a few years left here .. if I wanted to stay .. and, then .. then I should have plenty of time to start thinking about .. what next ..

I So you'll bring this up

S well .. If I don't, (supervisor) will .. I've put something down about .. further education

Case Four (b)

I O.K. have you had any ideas on how we might play this interview? ... any ideas on format ...

S uhm ... well, after reading this .. you know, its .. I wouldn't say that I'm very please with it ...

I .. Yeah ..

S .. There doesn't seem to be much we can talk about rather like last year .. I'd like to talk about the work .. but that isn't what we're here for is it ..

I uhm .. I don't know .. we can talk about last year's work - if you want to .. in your case .. it might be a bit hard to talk about the actual work content of it .. unless you wanted to go into it .. in some detail .. uhm .. I think we ought to set out some sort of agenda ..

S mm

I - so we can check up as we go through - you know - see if we're on course ..

S - Yeah .. Yeah

I uhm .. what I thought of doing was have something under headings like .. performance .. potential ..

S -Yeah -

I .. and future .. both short term and long term

S - Yeah .. this is mostly what I want to talk about, I think

I - uh-hmm .. uhm .. now I don't mind which order we talk about these, really .. I just thought it might have been logical, like last year, to talk about them .. the present .. and the future

S Yes .. Yes ..

I .. So that's future .. short term .. longer term ... training, which may well be tied in with the future ..

S - Yeah

S .. And .. anything you like to talk about regarding our relationship

S Yeah ..

I - you know - uhm .. in other words .. a bit of assessment in reverse, if you like, .. because an opportunity for that, I think, should be given in these .. uhm .. I don't know really

what we'd call that .. let's just call it 'ourselves'!

S Yeah!

I And that will at least give us some sort of scheme to stick to .. I suppose the best place to start as regards performance .. is these forms ..

S uh huh

I uhm .. now are there any points you want to bring up .. concerning what I've said about your performance in the present job? ..

S .. uhm .. well, I'm very please with what you've said .. I'm glad to see that the weakness you pointed out .. last year .. has been remedied ..

I uh huh .. Yes .. uhm -

S - I guess this is just through a feeling of greater confidence .. Greater experience

I - Yeah -

S it takes a long time to get accustomed to opening your mouth a lot .. I mean .. from when you're a lab assistant

Case Four (c)

S'er I think I've got most of the key points down, here .. under performance, the need for you to take on a bit more responsibility from me .. seek ways of doing that .. and we've mentioned patents .. and reports ... my - not planning too much detail .. our need for - in terms of planning and review - although I see you and (colleague) informally, we could have a full work group meeting prior to (name) visits at frequent intervals

S'ee .. Yeah, Yeah

S'er - Yes .. and the comments we made about originality .. your general knowledge of the job area .. and what you can do .. about those .. in terms of my feeding you data .. and requesting summaries of it ..

S'ee Yeah

S'er .. umm .. we've outlined the possibilities for the future .. you've outlined your .. possible desire .. for plant manager job in the future .. and -

S'ee - umm .. yeah - that's just - one idea I fancy .. there are other jobs about .. that I know nothing about at the moment

S'er .. Yes, alright .. so there's a need for me to provide you with some information .. about other job possibilities .. and I can do this initially .. through the CURV booklet that I've got -

S'ee - Yeah -

S'er - which talk about the different functions - open to graduate staff .. in the company

S'ee Yeah .. Yeah

S'er .. the short term future - (project) - yes, you'll stay with it .. when that's finished, you're quite happy to look at a broader spectrum of work ..

S'ee - Yeah -

S'er - within the group .. we don't see any problem in the next 3 years in the group; but you've got to perform .. well .. and you've got to seek these opportunities .. for Haslam 10 .. which may involve a move from the group

S'ee .. Yeah ..

S'er .. and we're talking about Haslam 11 in six years as a minimum

CASE STUDY FIVE

S'ee uhm

This assessment was by a Group Head of a Senior Research Scientist.

S'er .. uhm .. this then seems a reasonable course of action to you .. You then mentioned chemical engineering .. and we agreed the need to get some data on the open university particularly on that -

The initial level of supervisee self-exploration in the pre-assessment interview, in this case, was fairly low between levels two and three. The exploration that is achieved is articulate (see Case Five (a)), but it is generally mechanical or with little voluntary attempt to explore issues. However, as Case Five (a) suggests, this level of self-exploration may be due primarily to contextual variables rather than researcher or supervisee variables.

S'ee - Yeah -

S'er - and we say that as a better possibility than Bio-chemistry -

S'ee - Yeah -

The level of supervisor offered conditions tended to match these low levels of supervisee exploration. For example, in Case Five (b) "Yes .. but .. you want me to do something about these other things .. don't you" was stated in an evasive tone of voice. Eventually, the supervisor tries to confront the supervisee regarding the low level of self-exploration - in Case Five (b) "I mean - this is a statement", however, the communication is not very effective in confronting the supervisee with his responsibility to manage the problem himself.

S'er - at the moment ... Er .. and so that is the main action under training .. and that more or less summarises the interview .. as I can see it .. I will go away and write this up .. and present the document to you .. for your comments

S'ee Yeah .. O.K.

Faced with what this supervisor regarded as a difficult communication problem, the supervisor does attend to one particular problem area with considerable attention, and action - if not facilitative dimensions of behaviour, (see Case Five (C)), although he does pause

occasionally to allow the supervisee an occasional - "Yes". As it happens, the supervisee, in this case, was satisfied that this met some of his prime needs ("now I see my horizons expanding again".) In this area of problem expression, the supervisee is fully and actively focussing upon himself.

When the researcher sought out the comments of either party subsequent to the assessment interview they were evasive and brief. Some problems had not been resolved satisfactorily for either party, but some had.

Case Five (a)

- I What are you expecting to happen in this assessment?
- S Nothing - the same as happened in last year's assessment.
- I Is that as you'd like it?
- S No really. I've got very little faith in the assessment system as a whole, to be quite honest .. I can't really see what it achieves. A lot of the things that one puts down are never acted upon. Uhm .. when all comes to all, I think its left to the individual an awful lot, as to what you actually want to do - as far as forward career planning - I don't think there's any mechanism, although they have started producing a vocational guidance system, I don't know a great deal about it. So I think that its a system where you have got to help yourself. To be quite honest, managers who give you your assessments, they have got their own jobs to do, and I don't suppose they have got time to look after 14 or 15 T.O.'d career prospects, over the next few years. They just can't do it. So there's bound to be a lot of responsibility to get things off your chest - have a gripe. A manager who was worth his salt would never let it get that far. He would see things copping up - as they came along, and solve them then and there, rather than waiting for a once a year blow-out! .. It solves some of the

problems I suppose ...

- I How would you change if if you - had the opportunity.
- S Well, first of all, I would have to ask do you need an assessment and once you have answered that question yeay or nay then you can go - have to find how you are going to do it .. it depends. I find .. my own views are that some sort of assessment in order to clear out deadwood - uhm .. but I find, that most of the people, I know, are willing to work hard.
- I And not everyone is given credit for some of the work they do. So, even the ideal assessment system, unless you have someone who is very technically competent, you may never be able to realise someone's capabilities .. because Fred Smith down the corridor spent a year doing some brilliant research, but his project didn't quite make it .. I think sometimes he is still thought upon as a failure. He didn't get the project to go .. You're not talking about the chemistry any more, your talking about the nature. It's no good waving a cross over a reaction flask cos it doesn't go, because it doesn't work, I'll tell you!
- I So .. Given there's a need for for some form of feedback.
- S I .. I would have a continuous system .. It depends .. It depends on the relationship between the manager and his .. the people underneath him , I think .. I regard it as a continuing system,

where you have a frank and open relationship with your manager, so that things which are problems can be discussed there and then. As to career guidance, which is a problem in this place, I would have that done separately by somebody else .. with help and recommendations jointly put forward by the manager and supervisee. But as for .. get things off your chest lads .. once a year ..

I Do you think you've got this sort of relationship with your present manager?

S - a frank?

I - and open -

S - No, I don't think anyone can .. reasonably frank, yes .. you learn when you tell (x) something and when not to tell him .. Play him 'cannily' as my wife says.

I - as your wife says?

S Yes, my wife - canny is a North-east word-

I Yes - Yes .. the sort of word a woman knows well about.

S .. Yes! probably a good way of handling a woman's problems.

Case Five (b)

I bah! .. Would you tell him you feel you are being exploited.

S .. if I felt that I was really being exploited, I think I would .. its very difficult .. when you are organising a research department, its' very difficult to get new ideas, and get new areas of research going - without exploiting somebody .. its' very difficult for one person to think up an idea which involves bringing in information from all different angles - different fields, that are going without exploiting somebody .. I've got to go to a polymer chemist - pinch his ideas, and put them all together .. you just can't. No one man has got the technical capabilities to run a project through different boundaries - through different subjects .. so - exploitation - is bound to occur.

But when it becomes 'blatent' exploitation, then I think it's a bit ..

I So .. there are supervisors comments on your performance .. creative chemist able to work in a variety of fields .. including (chemistry) .. I agree with your self-assessment .. you have achieved a considerable amount in the previous year .. and have a natural ability as a research worker .. enthusiastic .. always after something different .. I'll give you an 'A' rating .. what you'll have to do now .. is to go through some of these things .. because .. in your .. your self-assessment .. you've taken the opportunity to say .. many more things than your colleagues have .. uhm .. uhm .. we're very pleased with some of the nice things you've said .. but let's not spend too much time on that ..

S - that's important

I - Yes .. but .. you want me to do something about these other things don't you

S Yes

I .. You would like to go to more conferences .. I think thats something we can arrange .. I'm a bit surprised that I've stopped you going to a conference

S - You did one -

I when was this?
 S this has happened a few times .. in (Division) regarding fluorine chemistry .. and - er - to be quite honest .. these people didn't know what they were talking about
 I Yeah - yeah ..
 S It's very difficult to put over your ideas .. when you're automatically questioning their validity to receive the ideas.

I when we were busy recently ..
 I oh, yes .. well, you should have come back to me .. there are some I want to discourage but I don't think I want to discourage you - right -
 S Yes

I "I'm not satisfied with the training" .. "I could do with some development of extra skills" well we can deal with that .. I'll deal with that in a moment .. "I find myself becoming more sceptical about the abilities of mid-management in the research departments throughout ICI" ... phew ... sympathy - you know .. come cry on my shoulder .. but .. what are we going to do about it
 S Yes - yes ..
 I I mean - this is a statement ..

S I find it certainly effects the way I have to try and put things over -
 I - where is this .. can you give examples?

Case Five (c)

S'ee .. it sounds very .. exciting ..

S'er - I've got £20,000 to spend on that .. and I really want you to make a start .. in the autumn ...

S'ee ... now I see my horizon's expanding, again ..

S'er .. You see, (name), I think what I really have in mind for you .. part of your horizon's contracting .. I really have made up my mind that the job I want you to tackle is the (chemistry)..

S'ee .. uhm ..

S'er - Now, we have a commitment to do something here .. - now, this is a real number one job, in my opinion .. because it would break ground in (chemistry) in a way .. phew .. - now, this is a job and a half .. - now if you want a target .. that would excite .. now this something that is out of all proportion to anything .. that we're doing at the moment .. now, a lot of people think -"oh, it's just being high flouting" again .. trying to confuse us - getting us worked! - hah!

S'ee hah! - yes ..

S'er - and they're probably right! .. now it may still be an unsound area .. now, you're an (area) chemist .. you know about (chemistry) .. you know about (chemical technique) .. you've worked in this area .. you're probably all set to do this .. and that's what I really have in mind for you ..

CASE STUDY SIX

This assessment was conducted by a Group Head of a Senior Research Scientist.

The initial level of supervisee self-exploration achieved in the pre-assessment interview could be rated generally at level 4 (see Case Six (a)). The subject introduces personally relevant material, with some evidence of emotional proximity. The problem areas that were of concern this subject concerned performance appraisal ("it's always useful to have confirmation that one's on the right lines") and career development ("I ought to be leaving").

The initial levels of conditions offered by the supervisor were highly facilitative (Case Six (b)). However, these levels were difficult for the supervisor to maintain as the assessment progressed, (Case Six (c)). The supervisor, in this case, was unable to help the supervisee resolve a problem of performance appraisal, and the eventual outcome of this assessment interview was to undertake the interview again at a later occasion. The level of self-exploration in this problem area by the supervisee maintained a high level "I'm pretty much on the defensive" in Case Six (c) which, in fact, helped to highlight the real issue underlying the conflict "some guy is going to look at this and think I'm a clown". With this disclosure, the supervisor was able to offer some action oriented dimensions of behaviour that helped to resolve the issue.

Both parties later expressed to the researcher their agreement to continue the discussion. Eventually, an informal post assessment discussion was held between supervisee and researcher, informally, and generally around the problem area of career development.

Case Six (a)

I .. what are you expecting from the assessment? .. (with group head).
S ... uhm .. well, I hmm .. well .. what am I expecting, yes .. you mean what am I expecting to get out of it, or .. what am I expecting him to say about my performance?
I .. can you say both?
S .. aah .. well .. I expect him to say it's been a reasonable performance .. I don't expect anything special .. on either side .. if my performance had been especially bad, I don't expect I'd be talking to you .. er .. what am I expecting to get out of it .. well, er .. a commitment to helping me find a job .. within the next 6 months .. I feel that there's .. a slight double pull here .. because .. starting a new project, as I am, and in which I do actually have some faith in .. I'm a bit leathe to leave it .. so near the beginning .. but .. er .. I've made up my mind to go, I think .. so .. I'm hoping to persuade him that I ought to be leaving, too ... uhm ... I always find - so far, anyway - that assessments tend to be a bit of a morale booster .. I'm not particularly hot on self-confidence .. er .. this time of year I'm usually especially low .. you come back from holiday, and think, christ - am I doing anything, really .. so one hopes that .. he's going to

feel I've done a reasonable job ... do you get my meaning?
It's always useful to have confirmation that one's on the right lines
I Yeah
S .. I .. would hope that he would pinpoint places where he thought my performance was weak ... I haven't found assessments too goof, actually for that .. the group head's view - well, he actually doesn't see that much of you .. the first criticism .. that I got back .. was .. in my .. second assessment .. I was told I was inflexible ... I think I grumbled at the closing of the (project) my attitude being - bloody hell, what makes it less worth doing now than it was three or four years ago when you'd started the project .. I was a bit annoyed that I'd wasted 18 months .. I suppose that was a bit immature though ..

I why
S .. well, there was no way of telling that it was worth doing or not .. it was worth doing, but not to be carried on as long as we did ..

Case Six (b)

S'er have you got some more tapes just in case?!

S'ee Yes! ...

S'er o.k., well, lets start by deciding what we want to talk about .. what's major .. and minor .. issues

S'ee Yeah ..

S'er what sort of things have popped up out of your system? ..

S'ee .. well .. thinking about it beforehand .. I didn't think it was going to be very much .. but, having read your think .. I've sort of summed up quite a lot .. the miniature things are .. well, the grading .. I'm very disappointed with that .. apart from that .. the major problem is leaving .. you know, when should I leave .. when is about the only thing to discuss, really, because I've made most of the other decisions ..

S'er Yeah .. yeah ..

S'ee that's it .. that's all I've got under the .. major headings

S'er .. was there anything in the training area?

S'ee No, I don't think so .. uhm .. I've thought about this and .. I thought there wasn't anything that I could .. justify in the training area, if I was .. considering leaving .. within say, the next 18 months ...

S'er ... the comments .. I .. I've got down .. one was .. three topics in a year .. and what .. what effect that has .. on performance one was .. your odd comment about .. about scribe and coordinator .. which .. you know - I -

S'ee - about the R.E.M. -

S'er - Yes .. I thought .. you'd under-rated your value .. sort of thing .. and I .. related that to comments about your self confidence that I .. I was saying there

S'ee - uhm -

S'er You know .. it jumped out of the page and hit me .. your comment about scribe and coordinator .. as though it was a .. menial task .. you did

S'ee .. Yeah

S'er ... a comment about .. what future was there coming out of your self assessment .. which appeared to be a very major item ..

Case Six (c)

S'ee - Yes ..

S'er .. and .. there are a couple of comments .. I've made ..
about self confidence .. and potential ..

S'ee uhm ...

S'er interpersonal skills .. where does that arise from. Well,
we'll come back to that .. alright .. so we've got various
items there .. do you want to take the past year first ..
and we'll get round to the other things later?

S'ee uhm .. yes

S'er - get that out of the way, first.

S'er .. we've not in any way tried to - .. we've got so bogged down
in arguing about last year .. we've not asked ourselves the
question - whatever you're rating this year .. what could
modify it .. next year

S'ee Yes .. yes .. well, .. I've got other questions on that but ..
perhaps we'd better have another session .. on that ..

S'er .. I don't know how far we need another session .. would we
need another session if I agreed with you? or .. if I stuck to
my guns ..

S'ee well .. well, if you have any definite thoughts on areas for -
or are capable of improvement .. then I'd like to know .. er ..
but my feeling is that .. at the moment .. I'm pretty much on
the defensive about this rating .. and I'm liable to counter
everything .. you say - with - I think I've done alright, there
.. just to defend my position

S'er uhm .. well, it would appear that the sensible thing for me to
do then is to .. rethink this .. and .. I don't know whether I
should talk about it again .. uhm .. which way would you like
it? ..

CASE STUDY SEVEN

This assessment was by a Senior Research Scientist (Project Leader) of a Junior Research Scientist. This assessment interview supplemented the initial performance appraisal by the immediate supervisor in the work situation.

The initial level of supervisee self-exploration achieved in the pre-assessment interview could be rated at between level 3 and 4. The subject introduces personally relevant material, with some evidence of emotional proximity, but with some difficulty in articulation, and effective exploration (see Case Seven (a)).

With this individual, the supervisor is able to offer high levels of conditions from the start of the assessment interview (see Case Seven (b)); for example "what points don't you understand, then" and "How do you feel we can help you".

Eventually, in Case Seven (c), these conditions are continued, e.g. "I should think (colleague's) job is an interesting job" although the level of specificity in the supervisor offered conditions may not be tested as far as the supervisee could manage, or benefit from. However, these high levels of conditions are continued into areas of career development, in an attempt to integrate the individual supervisee's particular life interests and goals with the development of future work plans.

Both parties expressed their satisfaction at the outcome of this assessment.

S'ee ... I don't know .. I'm genuinely worried about this .. I've got a feeling in the back of my mind that I'll be going for a job soon and some guy is going to look at this and think I'm a clown .. or something

S'er No .. don't worry about that .. they wouldn't see this

S'ee wouldn't they?

S'er No .. the only thing seen outside is .. a rolled up summary

S'ee .. eah .. I didn't realise that .. uhm .. well .. I don't think we need to write anything down .. let's talk about it ..

S'er I think the best way .. is probably .. to have another talk about last year .. that's the best way to do it

S'ee O.K.

Case Seven (b)

Ser - Assessment ... I've been through .. what you've written ..
I'm quite pleased with what you've written actually! it
was quite good .. it started getting a bit heavy, towards the
end .. this bit, here .. where -

See - I devoured it a bit

Ser devoured! .. Yes

See well .. I thought .. while I've got the paper .. I might ..
as well write .. throw it all in ..

Ser Yeah well, let's review last year .. since you joined
.. the reason we got you in was that you were good with semi-
tech work .. you know .. previous experience .. and, you know,
I've always thought of you as a good, and careful, analytical
worker .. you've had a good year .. and .. you've done everything
you've been asked to do .. and, you've .. made progress .. so
... in terms of reviewing your performance .. we should review
in terms of .. past achievements .. and where we go from here ..
past achievements .. you've acquired new skills - without any
problems .. the one and you've been reasonably responsive ..
you've put yourself out - and you've got L.S.D. for it ... well
.. let's go through (supervisor's) comments ... uhm ... he's of
the same opinion I am .. "the works been of a hard and sustained
nature" ... "performance away has been good" .. from your last

Case Seven (a)

I .. what are you expecting from the assessment?

S .. uhm .. I suppose .. to find if .. my boss agrees .. with ..
well, I have to write an assessment of myself, and I hope that
the .. my idea of the work I've done agrees with his idea of
the work .. you know - performed .. er .. well .. I would ..
sort of - clarify what my future position is, because this year
is more important to me than other years, really .. because
I'm on my maximum .. so that .. it's quite important to find
out where I do go from here .. because if the job goes .. or
if the job doesn't go .. you know ..

assessment, I can't understand why it was so bad in certain areas .. (your Group Head) gave "comprehensive knowledge of (polyolefine) technology" ..

See well, I just depends on whether I need to know the knowledge quick or not .. to me .. with the work I'm doing .. it only limits me in the - er - suggestion area .. a little there, like

See Yeah .. I think I've put that down myself

Ser Yes .. you've put that down yourself .. how do you feel

See well .. you know .. obviously, with the work presasure, I just pick it up as I go along ..

Ser -uh huh - ..

See .. you know .. unlike (supervisor) who's been at it 3 or 4 years, and .. you know .. I can pick up the process side of it .. but the actual .. polymer-technology ..

Ser - what points don't you understand, then? ..

See - it's not that I don't understand .. it's all the .. er .. catalyst support work and .. er .. you see, that's new to me

Ser is it

See and - er - these are things I just have to .. er ..

Ser -well, how do you feel we can help you?

Case Study Seven (c)

Ser I should think (colleague's) job is an interesting job

See oh - yeah .. I'd prefer a job a little bit like (colleague's) where you've got .. to be on your toes, a little bit .. know the job inside out .. rather than -

Ser - pressing buttons -

See Yeah

Ser .. well, that's reasonable, yeah ... so .. let's generalise a bit .. I mean, in terms of life .. what do you do outside of work .. what do you want of life, you know ..

See - outside of work

Ser uhm ..

See ... well .. I want a good standard of living .. I've got quite a fairly good standard, now ..

Ser - Yeah -

See I like to - you know - I'd like to have a bit more time in the future .. I don't mind working now, because I'm working to set myself up, you know ..

Ser - Yeah -

See .. once I've set myself up over the next two or three years -

Ser - you'll ease back

See I'll ease back, yeah ..

Ser Yeah

See I think everyone's got to go fairly steadily - I mean, if they want anything, they've got to go for it ..

Ser - Yeah ..

See .. that's fair enough with me .. I think another three or four years should bring .. ease back a bit .. and getting a family

Ser yeah .. family life's the - sort of - goal ..

See uhm ..

Ser ... have you got any interests, but you haven't developed them yet?

See Not really .. er .. I used to be very sporty .. I like to play a bit of golf .. which I manage to do three or four times a week ..

Ser - you'd like to do a bit more of that?

See - I'd like to play a lot more .. yeah ..

Ser .. yeah .. well .. what I'm trying to get is a picture of what you want .. to make sure that the picture I've got, of what you want .. you've got to have some ideas of what somebody wants when you're planning

See - Yeah

Ser .. well .. I've got a reasonable idea ..

CASE STUDY EIGHT

This assessment was by a Senior Research Scientist (Project Leader) of a Junior Research Scientist. This assessment interview supplemented the initial performance appraisal by the immediate supervisor in the work situation.

The initial level of supervisee self exploration achieved in the pre assessment interview could be rated at between level 3 and 4. Personally relevant material was introduced, and with some emotional proximity such that relationships were in some danger of deterioration unless the supervisee received what he considered to be suitable supervisor behaviour in the situation (see Case Eight (a)).

The conditions offered by the supervisor, initially in the assessment interview were strongly oriented towards concreteness. The facilitative conditions offered were not high (see Case Eight (b)). Towards the conclusion of the assessment interview this pattern was continued. From the tone of voice, as well as the limited supervisee self-exploration (limited to successive "yes's" in Case Eight (c), it was doubtful whether the issues that the supervisee would explore had been explored. Thus it was doubtful whether behaviour in the particular problem area would change either. Indeed, subsequent to the assessment interview, the supervisee gave an apathetic response of "don't care" about the situation. The supervisor may have been accurate in his own understanding of the need for the supervisee to change his behaviour, but this had not been communicated to the supervisee very effectively. The supervisor was satisfied with the outcome as shown in Case Eight (c).

Case Eight (a)

I .. what are you looking for from the assessment .. that's coming up? ... any ideas? ... have you thought about it beforehand?

S .. in terms of what? .. in terms of what sort of assessment, or ..

I .. yes ..

S ... it will be pretty much the same as last year, I think ..

I .. and what happened last year?

S ... oh .. quite a satisfactory assessment, I suppose ... I think the idea of assessments is wrong really .. management should already know you well enough without you having to tell them about .. yourself .. they should already know ..

I .. Do you think somebody can know you well enough .. to make vital decisions about how .. you

S -well, you see .. the chappie directly above you should know you fairly well ..

I because .. he's got to work with you

S em .. and .. the results all go back to him ..

I and you should be judged on your results?

S - partly .. it depends on the difficulty of your work ..

I Yeah .. Yeah .. Yeah ..

S .. Really, I object to (supervisor's supervisor) doing MY assessment because he's had very little contact with me .. in the last 12 months

I Yeah .. Yeah

S I know what he'll say this year .. the same as he said last year .. you know .. when .. you know, there's one column for weakness on the assessment

I - Yeah -

S - well .. he'll say - one "you can't communicate with people" .. and two - "your written work is weak" .. I know very well he hasn't seen any of my written work in the last 12 months .. and I intend to say so to him!

I Bah!

S - he said that the last year .. and the year before that ..

I bah! .. would you tell him that

S I'll tell him this year, because I know definitely he hasn't seen any of my written work .. since he told me that I had difficulty communicating with people, I've taken notes .. and I don't really have any difficulty talking to people ..

I what do you think it means, then

S ... the only time I have difficulty communicating is when people don't listen .. he wanted to send me off on some training course, or something

I so .. you're not .. prepared to hammer people over the head .. with a message that you're trying to .. get through to them

S .. uhm, yes .. that's right

R when you want to stop it - just press that - O.K.?

Ser ok so it's going now

R Yes

Ser OK ... Right (christian name) .. well, you .. you've gone through this exercise before ..

See - yeah -

Ser - so you know .. some of the rules of the game .. whether you know all of them, I don't know .. just to put you in the picture about all these sheets of paper .. uhm .. besides from these two which you've seen .. there's a section on career development .. uhm .. which is necessary .. we can make certain recommendations about ..

See O.K.

Ser - depending whether you feel certain aspects of your job require further development .. and .. uhm .. a section on .. describing the session today -

See - Yeah -

Ser - summarising what you've written .. and what .. (supervisor) written .. and there's a front sheet .. which summarises .. the whole exercise .. OK?

See - Yeah -

Ser So .. probably the first thing we should do is discuss what (supervisor) has written .. and what you've written .. uhm .. about your .. essentially your performance since you came back from college last year .. well, first of all, have you seen (supervisor's) written copy? ..

See No

Ser well, here ... have you any comments on - that assessment?

See .. I would have said it's pretty fair ...

Ser ... how do you like working for (supervisor) ..

See .. well, he's a good person to work for .. a very easy person to work for ..

Ser this is the first time you've worked for him, isn't it

See No .. I did a 12 months spell with him before I went to college -

Ser - on the same type of work?

See on (chemistry)

Ser uhm .. so you've been doing the (chemistry) work for a year .. right?

See Yeah

Ser before that you worked on (other chemistry)

See Yes

Ser I just wondered if you can remember how many years you've spent on (chemistry) compared with how many years you've spent on (other chemistry) .

See .. the first year I spent in (chemistry) lab ..

Ser .. The second six months I spent doing (chemistry)

Ser Yeah .. you spent some time with me

See Yes .. when I came back - after - college - I seemed - I didn't seem to do much at all for a couple of months .. just odd jobs here and there ..

Ser Yeah

Case Eight (c)

See - and I worked for you on (chemistry)

Ser Yeah

S'er ... Yeah .. the other thing we have'nt covered is this bit which almost got hidden by (supervisor) .. "pleasant to work with .. makes a good team member .. projection of his ability would benefit if he was a little more aggressive .."

See and then I went to work on (chemistry)

S'ee uhm ..

Ser .. O.K. ... so you've had quite a bit of experience .. on different aspects of polymers ..

See Yes

S'er what have you got to say about that?

S'ee .. I think that's true .. as well ...

Ser Nov .. you have done a vocation job with (name) ..

S'er ... do you go rushing about the lab saying - "I've made this, I've made that"

S'ee No ... It seems pointless to put forward .. ideas .. 'cos nobody listens .. They take no notice - forget all about it .. you know - shout your ideas, to make sure they'll listen

S'er Yeah - you've probably got a lot to contribute, you seem but .. er .. if you stay quiet .. you don't really do justice to yourself ..

S'ee - uhm .. Yeah ..

CASE STUDY NINE

S'er you see .. you know quite a lot about (chemistry) .. you think what you're doing .. you work hard .. O.K. .. and - er - there's probably a lot to be gained .. in your term .. if you do talk more about what you're doing

S'ee ... Yeah ...

S'er you know - don't be afraid to say something even if you do feel it may be a bit ridiculous ... it might spark off an idea in somebody else ...

S'ee ... uhm

S'er So, I think if you could be a bit more outward looking .. this would help a lot

S'ee uhm .. Yeah ...

This assessment was by a Senior Research Scientist (Project Leader) of a Junior Research Scientist. This assessment interview supplemented the initial performance appraisal by the immediate supervisor in the work situation.

The initial level of supervisee self-exploration achieved in the pre-assessment interview could be rated at between level 2 and 3. In this case, too, the supervisee is reluctant to introduce personally relevant material, although, eventually, in Case Nine (a), some is introduced - "now I've settled with education .. trying to think of a career." However, as the supervisee suggests, he does not see the assessment interview as potentially helpful - "I can't think of any that have been .. helpful .. at all".

The level of conditions offered by the supervisor was low. The procedure required by the system was put forward with little attempt to facilitate supervisee self exploration (Case Nine (b)). Indeed, the supervisor discovers something on this occasion that could have beneficially been acted upon beforehand, "would you have preferred to have had a study topic".

Towards the conclusion of the assessment interview, this pattern of low facilitative conditions continues - e.g. Case Nine (c). The issue of the individual's future is mentioned, introduced by the

Case Nine (a)

supervisor, and similarly dealt with by the supervisor "I know you haven't thought too much about this", and another topic is immediately introduced. Eventually, supervisee exploration seems to be totally undermined - in Case Nine (c) - "Er .. I dont know .. of anything, really ... can't think of anything .." and the last statement is made with a very glum tone of voice, although the words politely conform to maintaining the supervisor's conclusion.

The supervisor was satisfied with this interview. The supervisee mentioned that he thought that it had gone "as he'd expected".

- I .. what are you expecting from the assessment? ... what are you expecting to .. er .. happen?
- S .. very little, really .. I don't know .. there doesn't seem to be much point in it .. much come from it .. perhaps .. er ... well, you know how you're going throughout the year, really .. you know that .. you've done reasonable .. that I've done reasonable, because .. someone has .. told you so .. you don't wait for the full year .. basically, all I find that it discusses is .. what you have done for the full year, and you've already discussed it throughout the year .. so, I find there's no use in discussing it in this - set period - again
- I uh-huh .. so you'd do away with it?
- S virtually yes .. I mean .. I'm sure my supervisors could write the report without having the int - er - the assessment ..
- I Yeah .. Yeah .. and this has been the same with all .. past assessments ..
- S Yes .. Yes .. I can't think of any .. that have been .. helpful .. at all .. er .. earlier on .. I don't suppose it mattered .. really .. whether you got a good one .. or a bad one .. I suppose it does, now .. being .. semi qualified, anyway .. I don't know .. It might change, now I've settled with education .. trying

Case Nine (b)

to think of a career .. rather than trying to think of exams
.. and such like ..

Ser .. Right ... Right, well, the ... the procedures a bit
different from last year .. I don't know whether you know?

See I didn't know much about it last year .. I'd only been here
about three weeks ..

Ser I see .. who did your assessment last year?

See (name)

Ser did he? .. I see ..

See As I say .. I don't think I wrote one of those things last year ..

Ser oh .. OK .. well .. this year, you've written the usual self-
appraisal

See Yup

Ser and (immediate supervisor) has written the usual .. umm ..
supervisors assessment ..

See Yeah

Ser now .. there's also the .. 'description of the interview' which we've had in previous years

See - Yes -

S'er where I write something down while we're talking ..

See Yeah

Ser there are some recommendations which have got to be discussed with staff department if you feel you want anything in the way of career development ..

See -Yeah

Ser O.k.

See and there's a summary sheet .. on the front .. er .. which summarises everything that's been discussed .. that includes your .. grading .. any career development .. any salary revision .. etc. etc.

See Yeah

Ser So the important things, really, are to discuss how you feel you've performed this year .. to discuss what your supervisor says about your performance .. OK ..

See Yeah

Ser .. to point out .. strengths and weaknesses .. and whether we agree on strength and weaknesses .. OK ..

See Yeah ..

Ser .. if you've got strengths .. well, hopefully, you'll be able to use these .. in your present job .. if you've got weaknesses .. then we'll try and do something to improve the situation

See Yup ..

Ser .. alright?

See Yes ..

Ser .. Now .. I can't remember the exact timetable of things ... Have you read this, at all? because I got it before you went off sick ..

See - I've read one - yeah .. that looks like it .. yeah ..

Ser .. have you got any comments on what (immediate supervisor) has put down? .. about your performance .. over the past year ..

See .. No .. I find this .. about right ...

Ser well .. let's take the first sentence first .. 'you've worked in a variety of areas .. now, this is something you've put in your self assessment .. you feel -

See -yes -

Ser - you've worked -

See - in too many areas ... it's just .. as you get into the swing of one thing .. it changes .. then it takes a while to get going, you know

Ser Yeah - Yeah

See - then you're stopped again -

Ser Yeah ..

See .. Still .. it's a bit of interest .. sort of thing

Ser .. Yeah .. would you have preferred .. since you've obviously only been here four days a week because of G.R.I.C. .. would you have preferred then to have had a study topic .. throughout the year .. rather than chopping and changing ..

See a more steady topic

Ser Yes .. yes

See er .. I think I was .. just too much changing .. I don't know .. you can always go to the other extreme .. get cheesed off with too much of the same thing ..

Ser Yes .. it depends, really, on how this fits in with what you've done before.

S'er oh .. I see ..

S'ee So

S'er what other things would you like to have a go at which you haven't done - to date

S'ee Er I don't know of anything, really can't think of anything

S'er are we in the position then of saying it's a year of consolidation .. that, uhm .. you've got some basic knowledge of (chemistry),(techniques), (chemistry) - not done a lot in them - just dabbled - really .. but, at the same time, what you're going to be doing next year is probably going to be relevant.

See Yeah

S'er - to these areas .. therefore, now, you have accumulated the background knowledge you should be able to perform quite well ..

See Yes .. I hope .. to have a .. good year .. yeah.

S'er O.K. .. well .. apart from what we've said .. there's not much we can say about your performance - for the past year .. you know .. I think, probably, if you'd been here .. on a 5 day week .. without the problems of exams .. health .. and switching topics .. then .. from what (supervisor) has said, I assume that he would have given you a 'B' ..

See -uhm

S'er - because the pointers are all in your favour

S'ee Yeah .. yeah

S'er .. Now .. I'll put this down, obviously .. now .. the other questions which we ought to discuss are .. how you see your future - I know you haven't thought too much about this .. whether there's anything we can try to do during the next year to try and improve your performance ..

S'ee uhm

S'er do you have much practice in report writing .. that's one suggestion ..

S'ee ... No ... I haven't .. I have written some draft reports for (supervisor) .. he has been pretty keen on that

CASE STUDY TEN

The supervisor, in this case expressed satisfaction with the outcome of the assessment interview. The supervisee, however, continued an informal discussion with the researcher on the general topic of career development.

This assessment was by a Group Head of a Senior Research Scientist.

The initial level of supervisee self-exploration achieved in the pre assessment interview was high, it could be rated between level three to five. Exploration was greater in some areas than others. As regards the problem area of his career development, the individual is fully and actively focusing upon himself and his work, (see Case Ten (a)). However, with other problem areas, the exploration is not so great, e.g. "we have a hell of a lot of conflict .. too much, in fact".

As regards the initial conditions offered by the supervisor in the assessment interview, there is some minimal attempt at facilitation (e.g. Case Ten - (b)) - "you should feed back to me any information you think is relevant", but most of the emphasis is on more action oriented dimensions. Although the accuracy, or the relevance of the dimensions offered may not be relevant, and may be a response to the supervisee's attempt at confrontation "you're a bit like a panyer division".

Eventually, towards the conclusion of the assessment interview, the supervisee is exploring more effectively the area of career development, and the conditions of behaviour offered by the supervisor are much more facilitative, (Case Ten (c)) although the supervisor does not seem able to offer the conditions to help the individual with his concern about uncertainty, "the uncertainty is always there".

Case Ten (a)

- I What do you look for from assessment?
- S mmh! .. uhm I .. I've .. that's complex that!
- I hah!
- S I think that's the hardest thing of all .. I'm not really sure what I want out of my assessment!
- I hah!
- S - well - I'm not really sure that I want out of life .. uhm .. I used .. my ideas change every year .. uhm .. my life goals change every year .. uhm .. I thought I wanted er .. a top job .. I thought I wanted a lot of money .. and now .. I've got more money, I realise that money is not an objective at all..
- I uh-huh ..
- S The biggest objective with money in my life is my wife
- I Yeah
- S She provides all the stimulus for money .. I could manage perfectly on what I get now .. the only pressure comes from her .. you know, she wants the kids to go to private school .. she she wants more clothes .. she wants a bigger house .. she wants a bigger car for herself .. we have two cars - all the stimulus comes from her
- I well, what do you want?
- S -uhm .. I want a better job .. a bigger job .. at the moment - lets look at - say what it really is like doing - what I'm doing now .. it's the best job I've ever had ..
- I Yeah
- S .. I like coming in to work on monday morning ..
- I Can't be bad!
- S it's interesting .. each of my day I'm doing different things ..
- I Yes
- S I don't have any repetitive tasks at all ... the hardest bit - that I've got to drive myself to is writing .. bring together all the reports .. write them .. that's a good discipline for me .. in fact, I have to force myself to stop .. and clear my thoughts .. in order to write a good report .. now - even though it takes more time, I've been getting others to write all the reports, and I've done the editing - even though it

takes longer - I've enjoyed finding a new task for myself .. and I felt I'd achieved something with the people that I hadn't achieved before

I So that's how you're looking for a better job

S No .. well .. what .. the job I'm looking for at the moment is (supervisor's)

I heh!

S and I tell him this ..

I and what does he say!

S oh .. it varies .. sometimes he just sits there and says "You're not getting my bloody job" .. we have a reasonable working relationship .. which degenerates at times .. but it's a lot better than many .. we have a hell of a lot of conflict .. too much, in fact

I Anyway .. what are you looking for in your assessment this year ..

S oh .. well .. my problem is .. my big problem at the moment is what my next job is ..

I mm

S uhm .. three years ago I was due to go to Europe ... and then I got involved in this project .. and I've shown disillusioned about going to Europe .. and my family's grown older .. the cash offer they've made is abysmal .. my life style would change so much

Case Ten (b)

S'er .. uhm ... well .. I'll read your assessment out now, .. "outstanding work .. potential group manager .. give you highest mark possible" .. I'm going to recommend you be a made up to Haslam 15 .. Now let's .. the - uhm .. crunch of the matter .. you should feed back to me any information you think is relevant to this assessment.

S'ee .. Now, .. it's nice to have a nice assessment .. but .. when we've achieved as much as we have in one year, you're a bit like a panyer division, (name) and that leaves a fair bit of sweeping up to do .. Now I'd like to think I could improve my team motivation - get the most out of people ..

S'er .. How do you accomplish that? ..

S'ee - Not thousands of courses .. different jobs - work .. I'd like to help you with training the staff ..

S'er the most important thing is to show clearly what job is .. expected .. of them .. precise understanding of what is important .. what the order of importance is .. spell it out -

Case Ten (c)

S'ee we have .. a pretty continuous dialogue .. and .. and I certainly appreciate having a lot of help about - all the time - you know

S'er Yeah

S'ee being able to come in - an open door -

S'er - yes

S'ee but where I do need help - sort of .. and where I look for help in an assessment .. is .. how other people see the future .. you know, how my own views .. you know, the biggest concern in my mind over the future .. is .. you know with the developments that have gone on over the past few years .. I got to - sort of - I've .. I've developed into the sort of person who now needs .. I need more responsibility ..

S'er Yeah

S'ee and you wonder where you're going to see it next .. you see a lot of people at my level .. devoid .. of responsibility .. and the one thing about these last two years .. has been .. they've been exciting .. they've given me a lot of freedom .. they've given me a lot of pain, also .. and a lot of hard work .. but, on the other hand - it's been .. rewarding .. and so .. what comes after that ..

Ser .. well .. it's very difficult in ICI .. as you know ..
jobs are .. promotion is hard to come by .. and all we really
can do .. is create our own jobs .. we've got to get our
projects through .. we've got to make them go .. and then ..
it's up to people like me to insist that the people who made
it possible get the jobs that go with it .. Now .. one of the
disadvantages about working with (Division) is that they are
setting out to neutralise this .. uhm .. but in the end, I think
this will work out .. (colleague) got his job .. now .. if we
continue alright with (project) .. and (project) .. I think it
is almost certain if it goes well .. that you're going to get
a job .. I don't know where it's going to be .. it may be in
Australia .. but you're going to move .. you can't stay in
one locality .. you may have to go to Europe, in the end .. to
get the job you want .. you have to weigh up .. you know - what
you like doing .. what you obviously enjoy doing; and what you
do very well, indeed .. against .. the inconvenience involved ..
I mean .. I would much prefer to be doing this research in
(place) .. and not in this .. grotty northern .. what do you call
it .. bog, I think!!

See hah!

S'er - but there isn't ICI down in (place)

S'ee ... it's the uncertainty that's the main thing

S'er there has never been any certainty (name)

S'ee perhaps it will look better in November .. but .. it's
not being able to see past four months ..

S'er This is life, I'm afraid .. all you've really got is yourself
in the end .. your own abilities .. your own knowledge .. this
is why you've got to keep yourself .. well-balanced ..
professionally .. I'm telling people .. I'm insisting people
publish papers .. become known .. I mean .. who would have said
2 years ago .. that the profits of Shell would have halved ..
the uncertainty is always there ..

CASE STUDY ELEVEN

Both parties expressed satisfaction at the outcome of the interview, although the supervisor continued an informal dialogue with the researcher on career development.

This assessment was by a Senior Research Scientist of a Junior Research Scientist.

This initial level of exploration of the supervisee in this case could be rated at level four. The individual is quite actively engaged in inward probing of his experiences although this is not fully demonstrated as being in relation to personally relevant material. Personally relevant material is introduced more hesitantly and vaguely, in Case Eleven (a) "I think .. I'm not altogether too happy with that - because it has a .. sort of .. school exams .. feeling .. about it".

The conditions initially offered by the supervisor are high as the facilitative side - he discloses his concern about the effectiveness of the action oriented conditions he can offer - see Case Eleven (b). However, in effect, there is evidence of quite effective discussion of the situation, in action oriented terms, "so, get up towards Haslam 7-8 sort of work" and "yes .. yes .. that's O.K. by me". Various problems are discussed specifically and concretely, in such a manner, and the supervisee is keen to explore as much as possible - too much in some instances e.g. Case Eleven (c) "well .. don't take it .. too seriously." The generally high level of facilitative and action oriented conditions experienced by this supervisees generally, are then mentioned in Case Eleven (c).

Case Eleven (a)

I .. and what are you expecting this year?

S - you mean - am I expecting a good, bad or indifferent assessment?

I mm .. No ..

S or .. what am I expecting the assessment system to be this year ..

I No .. what would you expect to put into it .. and get out of it .. yourself ..

S well ... I don't really expect anything from it .. I don't think there's going to be much in the way of rise .. uhm .. I don't see that coming off this christmas .. I think that it just places on record that you've been as good as, worse than or better than your .. previous year's performance .. I suppose from that point of view alone .. it's useful .. I suppose it's also useful .. to the person .. who's been assessed .. in that you may suddenly discover that you didn't make such a mess of it, after all .. you know, you may think, yourself, what a bad job you've made of something .. and you've doggedly struggled on .. and other people think, well, that's not bad .. that's fair enough .. it's a bit .. like a pat on the back, you know

I yeah .. have you found it .. useful .. in past interviews that you've had ..

S well .. I mean .. when .. in other times .. you had no knowledge of when the interview was about to take place, you had no knowledge that your supervisor had actually written anything about you ..

I - Yeah -

S - and then you were shown this piece of paper for about 3 to 5 minutes and expected to make some sense of it .. to gain from it .. and to comment usefully on it as well .. you know, it was ridiculous ..

I .. Yeah ..

S it was just that bad, it wasn't thinkable .. so, anything really .. any development from that is a definite improvement ..

I Yeah-yeah!

S you know .. I think the participation part is quite useful, now .. and also, that it should be as impartial as possible, now that the grading system has been brought in .. and .. I think I'm not altogether too happy with that - because - it has a sort of - school exams feeling about it ..

I Yeah .. yeah ..

Case Eleven (b)

R Right .. off you go ..

Ser Oh God! .. o.k. .. where's your ..

See here ..

Ser .. Oh, yeah ... I warn you - I've had a look at this thing today - all this rubbish at the back, and quite honestly I don't know how to fill it in .. and - er - I was going to see (group head) about it today .. and then I realised it was this morning .. so I'll go and see him, and get some idea on how to fill it in and we'll have a go at it next week some time ..

See O.K.

Ser .. you see, I don't know what the hell this means, at all ..

See .. I don't know ...

Ser Anyway, we can discuss it .. and fit what we agree into there ..

See .. Yeah .. I think this is for .. uhm .. non .. non .. day release types .. you know

Ser ... yeah .. I think that goes on here .. you see, I don't know what next job means .. present position .. next job .. really .. bah! .. we'll put in prime minister!

See yeah!

Ser ... ah well ...

See I don't know .. career' pattern?

Ser bah! .. I want to get to Haslam 10 as quickly as possible!

See Bah!

Ser well, is there anything you want to raise .. talk about at all? .. so we don't forget it

See uhm .. there's only one thing that .. ought to be said .. I do appreciate that I ought .. to be doing .. More writing up .. and reports .. and library work etc. etc. .. but with our present money problems .. I think it's out of the question .. because there's really only me .. working at the bench .. you know, you're busy in the office .. and the library - sort of .. it would seem to be a bit wasteful of my effort if I was .. was to try and cover some of the area that you were covering at the same time .. you know ..

Ser ye-yeah .. uhm .. yeah, I know what you mean as far as library work is concerned .. I know what I've been trying to do - I don't know whether you think it's been worth it or not .. is to sort of, push all the literature your way .. so that you read it as I read it .. it's just that .. I don't know how comprehensive it is .. the stuff I give to you ..

See well, that's fair enough .. at least you pass me relevant stuff .. I honestly don't think I've got time at the moment to go down and find it for myself

Ser .. I quite agree with that, yes .. I wouldn't see you .. at this stage .. doing the literature work off your own bat .. I think that would be wasteful of effort .. what I'm more concerned with is .. well, with (name) lot they do all the report writing .. quarterly reports etc. .. they just write it, and (name) just edits it .. they extract all the results .. it's that sort of thing that I see you doing more and more of in the future .. you know, I'd be doing less and less editing .. and eventually, it would be your report

See O.K. yeah .. yeah .. right

Ser is that OK with you?

Ser yes yes

Ser well, that was a point I wanted to bring up, anyway .. to decide what we're going to do about it .. I don't think it's in any way holding you back, but .. well, (group head) has said he likes to see JRS's taking more responsibility in the writing

See uhm ..

Ser like (name) has been doing .. you know .. and so get up towards Haslam 7-8 sort of work .. O.K.?

See Yes - Yes .. that's OK by me ..

Ser .. well, let's have a quick whip through this then .. I honestly don't think there's very much to say because you score very highly all the way through ..

Case Eleven (c)

S'er .. have you .. have you got anything to say about .. the way we work together.. the way I treat you ..

S'ee - No .. No, not really .. uhm .. well .. I'm very happy to be working with you .. because you give me a lot more scope to develop than a lot of people .. I've not made a complete mess of what I've had to do ..

S'er As far as I'm concerned .. you haven't .. Yeah, I suppose I have given you a bit more latitude than .. most Hasler 6's have ..

S'ee uhm

S'er - but .. on the whole .. not all that much .. it's worried me more the other way .. you, obviously, should go and work on your own - because you're so capable of it .. I've .. been tending that way over the last year or so

S'ee uhm

S'er .. if there's any time you feel I'm not giving you enough information or direction .. then for goodness sake say so - .. you know what I mean

S'ee - Yeah .. yeah .. O.K.

S'er ... O.K. ..

S'er .. at the moment, it just seems to be a matter of where we jump in:

S'ee Yeah!

S'er .. we'll have to try and get you down to (division) to meet these fellows, some time ..

S'ee uhm .. Yeah ..

S'er .. if we could raise several people we could go down by car ..

S'ee yeah .. yeah ..

S'er .. oh well .. I don't think there's anything else to say .. really

S'ee .. any other .. er .. criticisms - well .. there's not much criticism, really .. you've just asked to do one or things I ought to do ..

S'er well .. don't take it .. too seriously .. I reckon it must .. be much easier to do a bad assessment than a good one .. I've got nothing to - really - want to say on particular points of improvement .. I had to think a long time before I could put than down ..

S'ee Yeah ..

SECONDARY OBJECTIVE : Other variables.

Again, it is not intended to present, here, detailed evidence concerning the development of the project's ability to manage other relevant variables, described by the Carkhuff model. However, some conclusions are summarised regarding some further significant aspects that arose during the achievement of the Primary Objective.

ENVIRONMENT : Part of the environment that was of special significance in this situation was the particular support given by ICI towards career development within the company. The company ran a list of internal vacancies which was circulated within the company, via the Personnel function. People, especially at the laboratory, were thus encouraged to keep an eye on the notice boards where vacancies were placed, as they occurred around the company, in various functions.

CONTEXT

As mentioned, above, the reputation, and previous experiences of assessment seemed to influence - negatively the process movement obtained during the assessment interviews. Supervisors, privately and informally generally gave the impression that they wished the supervisees would get around and do more - especially take the advantages for exploration given by working in a large company yet supervisees, privately and informally gave the impression that supervisors discouraged and even prevented people from getting a varied experience that would facilitate development.

The laboratory, generally, allocated a comparatively large budget for direct financial support for training and development e.g. courses. Also, the size of the company meant many developmental opportunities lay merely a few phone calls away e.g. talking over what some kinds of non research jobs were like, finding an internally-run company course etc.

It could also be seen, from these observations that the supervisor was an important part of the context, and environment of the individual supervisee who could, or could not help the individual in matching the development of an individual's work responsibilities with the development of his skills. It will be important in any future helping programme to take note of this variable if it occurred in a particular problem situation.

HELPEE

The evidence of these observations suggested that helpee motivation was often directly affected by past experience of assessments. Generally, higher levels of exploration were achieved by the researcher than the supervisors, and the range of problem expression especially might have been very different in the supervisees had they thought them relevant. Supervisors showed reluctance to enter into discussions of areas they might not be able to manage. Generally there was not a high level of concern for the specific feelings of individuals. As such, supervisees did not introduce them in this context of "the work comes first".

During these observations, the researcher began to be seen more and more as a possible internal agent who could offer some form of "psychological" if not practical expertise on career problems. The more practical help was expected to come from managers and supervisors 'greater' experience of the company, or from the personnel function.

It became clear, from these observations, that the group of helpees that could benefit most from assistance were those qualified staff, who, after some years at the laboratory were beginning to think of a move, but not necessarily with a successful research project as it was being put into operation, or to another research job in a division, but possibly into the other functions in the company.

Staff of lesser experience, or who were still accumulating qualifications usually had clearer career options open to them, i.e. progress through the stages of qualifications, or Haslam Grades; (the Haslam system of job evaluation graded the jobs done in the laboratory.

Generally, the high levels of the personal skills required by this form of assessment system (e.g. self-assessment) were beginning to develop in the supervisees. It was becoming part of the supervisee set that their performance was their own responsibility, similarly career development, but that they could look for and expect as much help and encouragement from the company as was reasonably possible.

For example, what had become a normal part of working life, meetings and discussions on primarily technical matters had encouraged a high level of immediacy in the assessment situation. Discussions was usually kept - even if in some instances ineffectively - to what was considered to be the point of the discussion.

CONCLUSIONS

An important aspect of the results of these observations were the assessment interviews that were not volunteered for observation. Informal evidence regarding the reasons behind the refusal to participate have suggested the anxieties that existed regarding obtaining a useful interaction. This suggests that a significant proportion of assessment relationships were in danger of deterioration, as the initial evidence in chapter 2 suggested

The observations that were conducted, at this stage of the project, provided a valuable opportunity for the examination and of the dimensions of supervisor behaviour relevant to the assessment situation in general, and the development of the various action oriented dimensions of behaviour relevant to the career development aspects of assessment in particular. Apart from information on the nature of career development problems, it was possible for the researcher to attempt behaviour relevant to particular problems that some supervisees brought to the attention of the researcher. Although this is not formally reported here, this enabled the development of specific plans for the eventual operation of a helping programme, (e.g. the use of a programme based on vocational guidance).

As regards the supervisor dimensions of behaviour that were observed, it was possible to draw various conclusions regarding the effectiveness or otherwise of their behaviour in relation to particular

supervisees. In terms of the Carkhuff model, it was possible to observe specific occasions where alternative behaviour might well have improved the development of helpee behaviour. For example, in some instances, supervisors moved to action oriented dimensions of behaviour without facilitating the development of adequate self understanding in the supervisee.

PART THREE - THE OPERATION OF A HELPING PROGRAMME

Chapter ten	10.1.	Purpose
	10.2.	Design
	10.3.	Results
	10.4.	Conclusions

10.1. Purpose

The purpose of this stage of the project may be described generally as the operation of a helping programme at the sponsoring organisation, the laboratory, in the context of the variables of helper, helpee, context and environment defined by the project in previous development work.

The helping programme, as defined earlier in ch. 7 was intended to offer improved conditions of interpersonal behaviour to a selection of laboratory staff, in the particular problem area of career development, and context of staff assessment at the laboratory.

Earlier observations, both informal and formally presented here, indicated that the cause of the dissatisfaction that had been presented to the project, as the problem for study, lay in inadequate Helpee self exploration. Furthermore, a prime means of developing this Helpee self exploration, of changing the effective behaviour, or performance of the staff lay in the use of effective interpersonal behaviour.

In terms of the Carkhuff model, the objectives of the work at this stage of the project may be defined as the operation of high levels of functioning of Helpee behaviour, in a particular problem and context, primarily to demonstrate the usefulness of the Carkhuff

model for its relevance to this problem situation, and secondarily to provide help to the members of staff concerned, with their particular problem.

10.2. Design Short-term treatment

As a result of conclusions achieved in ch. 9 the helpee group characteristics selected for the attempted operation of a helping programme concerned those with a career development problem - as highlighted by and in the staff assessment programme. This was chosen as a problem range due partially to the availability of suitable methods of treatment that could be used in this situation. Thus vocational guidance tests could be used as a simple basis for a helping programme that could be used and evaluated quickly and easily in this project situation. There had been evidence that the helpee population had a set which expected such help to be relevant to them, Also, such a helping programme could be implemented as a one off - short term helping programme suitable to the constraints on the project of not interrupting normal work at the laboratory. Carkhuff (1969) suggests a detailed outline of the phases of activities relevant to short term treatment (see Table 9)

Selection of Helpee group

A survey of the laboratory's indicated career development needs with the help of the industrial supervisor (from recent assessment data), suggested an opportunity for the implementation of such a form of helping programme. This concerned the group who had opted out of the work done in section ch.9. This group was intending to merge with another work group in the laboratory, (the group head was leaving

the laboratory) and the departing group head was intending to give his assessment interviews closer to the dissolution date, and with special effort towards career development as most individuals would have to commence new work. It was expected that some of the individuals concerned would use this opportunity for wider ^{ass}essments of their general career situation i.e. consider moving to alternative jobs within and even outside the company. The group head was approached with the proposal to involve the project in some way. This was accepted, and the plan outlined in Table 10 a was laid out.

FIGURE 1 (a)

Fig. 1 Helper and helpee activities in EXPLORATORY phase of helping

Long-term treatment (helpee development)	Helper	Helpee	Short-term treatment (Crisis resolution)	Helper	Helpee
	Level 2 of facilitative conditions in response to area 1.	Level 2 self-exploration in crisis area.	(1) Level 3 of facilitative conditions in response to crisis area. Introduction of treatment leading to crisis resolution.	Level 3 of facilitative conditions in response to area 1.	Level 2 self-exploration in crisis area
	Level 3 of facilitative conditions in response to area 2.	Level 3 and more exploration in crisis area.	Level 2 exploration in area 2.	Level 3 and more explorative conditions plus action-oriented dimensions	Level 3 and more exploration in area 2.
	Level 3 of facilitative conditions in response to area X.	Level 3 and more exploration in area X.	Level 2 exploration in area X.	Level 3 and above facilitative conditions plus action-oriented dimensions	Level 3 and more exploration in area X.

TRANSITIVE

PREPARATORY

Helper and helpee activities in self-understanding stage of helping

Long-term helping	Helper	Helpee	Dealing with short-term crisis	Helper	Helpee
Level 3 facilitative conditions	→	Level 3 self-exploration in all problem areas	Level 3 facilitative conditions	→	Level 3 self-exploration in crisis area
Level 3 facilitative conditions	↔	Level 3 self-understanding in first highest area below level 3 (area 1)	Level 3 and above facilitative conditions plus action-oriented dimensions	↔	Some degree of structural understanding in crisis area preparatory for action.
Level 4 and above facilitative conditions	↔	Level 3 or above self-understanding preparatory for action	Level 3 and above action-oriented dimensions	↔	Level 3 or above self-understanding preparatory for action.
Level 3 action-oriented dimensions	↔				

PHASE II

Action

Long-term treatment (helpee development)	Helper	Helpee	Short-term treatment (Crisis resolution)	Helper	Helpee
	Level 3 facilitative conditions	Area 1	Level 3 self-exploration in first highest area below level 3 (area 1)	Level 3 facilitative conditions	Crisis Area
	Level 3 and above facilitative conditions plus action-oriented dimensions	Level 3 and above self-understanding in area 1	Level 3 self-understanding in area 1	Level 3 and above facilitative conditions plus action-oriented dimensions	Level 3 self-exploration in crisis area
	Level 3 and above facilitative conditions plus action-oriented dimensions	Level 3 and above self-understanding	Level 3 and above self-understanding	Level 3 and above facilitative conditions plus action-oriented dimensions	Improved self-understanding
	Level 3 and above facilitative conditions plus action-oriented dimensions	Level 3 and above self-understanding	Level 3 and above self-understanding	Level 3 and above facilitative conditions plus action-oriented dimensions	Constructive action

Area X

Functioning at level 3 or above in all relevant areas

Termination

A SUMMARY OF THE BASIC CYCLE OF

TABLE 9 Helper and Helpee activities during long term and short term helping

In order to obtain a number of volunteers for the operation of this helping programme, a programme of Career Development Discussions was proposed to the group head, where the research student could lead or "chair" the discussion of present career development problems in small groups, (4 or 5 people per group) and offer the specialised service of vocational guidance to these group members who wanted to explore their career situation at greater length, and depth (see Table 10 (a); 10(b) and 10 (c)).

The Helping Programme. The helping programme was structured around the use of Kuder Aptitude tests as a basis for Vocational Guidance. The Kuder tests used were the Kuder Preference Records forms C (vocational) and AH (personal); (see Appendix 5). These tests were selected primarily due to the helpers previous experience in their use as opposed to other such tests e.g. Strong's Vocational Interest Inventory, (1943); and, also, such a detailed test as the Kuder forms was considered to be more appropriate due to the capacity of individuals at the laboratory to explore personal situations that had been experienced by the research student, and that some individuals had previously mentioned their experience of other, simpler interest inventories.

The Interviews

The pre interview, held with each individual, was intended to identify the individual's needs and reason for undertaking the vocational guidance programme. After some general familiarisation of the individual's work situation, the initial statement by the individual of his expectations gave some indication of the nature and extent of helpee self-exploration, enabling the helper to orient behaviour accordingly.

In the case of the Helping Interviews, the interaction was designed to follow as fully as possible the theoretical model defined by Carkhuff (1969) and summarised earlier (ch. 6). The sequence of the various interactions involved is summarised in Table 10c.

As far as possible, a gap of one week or more was allowed between each interview held between helper and individual helpee.

Table 10 (a)

A Career Development Programme (see Appendix 7)

1. Each member of the group (42 in all) would be invited to participate in a small group discussion (four or five) on the topic of career development, in order to collect ideas on how to solve the various problems brought up.
2. The Research student would "chair" the discussion.
3. Each of the groups would be composed of a cross section of levels of staff involved (e.g. 2 JRS, 1 SRS and 2 LA's).
4. A project leader and the research student would organise and liaise on the undertaking.
5. The research student would offer vocational guidance as part of the available help to follow up discussions.

Table 10 (b)

The Design of the Interview Proces used in the Operation
of a Helping Programme

- | | | |
|-------|------|--|
| S_1 | i) | Pre-interview with research student/helper |
| | ii) | Subject completes test in own time |
| | iii) | Interview 1 , exploration of results of Kuder ' Vocational ' test. |
| | iv) | Interview 2 exploration of results of Kuder 'Personal' test |
| S_2 | | etc. |
| S_N | | etc. |

Table 10 (c)

The Structure of the Interviews used in
the Operation of a Helping Programme

	<u>Sequence</u>	<u>Topic/Theme</u>	<u>Usual Question Form</u>
1. Pre Interview	1	Time	See Fig. 7 (b)
	2	Career History	"
	3	Enjoyment	See Fig. 8 (b)
	4	Expectations	("what would you like to get from the test?")
2. The Helping interviews	1	introductory comments	"how's life?"
	2	Test reaction to questionnaire or previous interview	"any difficulties in completing the questionnaire?"
	3	Test Expectations	(see above)
	4	Helpee rates himself	"how would you rate yourself?"
	5	Feedback test score	"here are the test scores"
	6	Test for helpee reactions	"any reactions?"
	7	Provide research feedback from classification of occupational interest profiles (see Appendix 5).	
	8	Provide helper feedback on practical interpretation of profile.	
	9	Relate data to present career problem.	

10.3. Results

The results of this set of interviews are analysed in relation to the description of the purpose in 10.1. The achievement of the purpose is assessed by relating the data to the Carkhuff model, i.e. by assessment of helpee process movement.

The interaction of the variables and their relation to Helpee process movement is demonstrated by selected samples of data demonstrating the functioning of the key variables, the Helper, the Helpee, and the helping process.

The analysis is presented by a case study of each Helpee subject:

A The analysis is presented of the total process and interview data involved (and another in appendix 6).

B With the other subjects, selected samples of key events are described.

Altogether 14 of the 40 groups members opted to take the aptitude testing and vocational guidance after the small group discussions.

Thirteen completed the planned interviews. One subject dropped out after the "vocational" test. The reason he gave was that "it was too deep".

A

One sample of the total helping programme offered to one subject is presented in this section. (Another sample is presented in Appendix 6). These interviews are analysed in Case Study 11.

Further, In Appendix 6 a line by line analysis of the total interview process is presented.

INTERVIEW ONE

my time in (Group) .. I joined in (date) .. I've done most of my work on (chemical) although when I started, I worked on (chemical) .. in er, tests .. and studying (property) phenomena in (product) .. and I've also done (tests) on (materials) .. that was until we got 2 girls, and they now do it full time .. and I went to work on the (machine) .. the laboratory scale (machine).

I - What about the 4 years before?

S - before that I was in (Group Head's) Group .. it was called (title) in those days .. I was doing much the same kind of work I was doing in (Group) .. I was doing a lot of evaluator work .. there used to be a Group called (title), and they used to submit a lot of (chemical) for evaluation .. I did various tests .. (type 1) .. (type 2) .. and (type 3) tests

I - What's (type 3)?

S - that's (analyse) (analyse) .. in order to find (information) about the (chemical) .. I couldn't operate the machine - one of the Lab Assistants did .. I had as many as four Lab Assistants at any one time .. in the days when there were Lab Assistants to spare than there are now .. you usually had one or two in those days - two or three even .. these days, you can't even get one .. dying breed ..

I - Yeah -

S - another thing I did was a lot of work on (testing) a (chemical) at different temperatures .. from () to () .. and measuring various (qualities) ..

I Good God!

S - it was rather a boring thing ..

I - but - it was something?

S Yes

I Fine

S Yes, I enjoyed it really.

I Could you draw a pen picture of your career before then?

S Yes, I'll have a go .. well, I graduated from (town) technical college in 195X .. and then I went through a rather difficult phase of looking for a job .. I couldn't decide what I was going to do .. so I more or less hung around at home - reading .. and travelling round the country as a sort of representative .. until I found a job .. somebody contacted me from the local school, and so I went to do teaching .. for 2 terms .. Spring and Summer term 195X .. it was a private school .. in (town) .. teaching maths and physics up to 'O' Level .. terribly bright - sort of - pupils, there, .. a lot of (foreign ones) - paying - fee paying school.

I - Yes -

S - and I didn't get exemption from National Service because it wasn't run by the Ministry of Education .. so my term of office wasn't renewed in the Autumn of 195X .. so another period of unemployment before I was called up on November 5th 195X ..

I Good God!

cont'd ...

I Right .. er .. well, how do you spend most of your time?

S My time at work?

I Yeah

S Well, my time at work .. I spend all my time on the (X) project .. spending a lot of time on testing .. recently I've been helping (Y) .. on a (machine) .. at the moment I'm working down in the basement on (C machine) .. which is a second generation machine .. the first (parts) have gone to (place), so they've got the (C machine) going now .. it's the same sort of product coming out of that ..

I I see .. what does that entail doing?

S Well .. we're trying to get the (material) to run through smoothly .. crinkle free .. that's more of an engineering problem .. (F) and (G) are trying to solve that at the moment .. all I'm doing is standing by watching what's going on .. taking readings of gauges .. note the conditions .. and helping clean the (C machine) when the (material) tears, and there's quite a punic to (mend the material) but .. there's not much to do once it's going smoothly.

I Yeah .. fine

S That's about all, I think ..

I Er .. what about the other .. the (project) and the testing?

S - testing .. well .. I've been at it for about 10 months .. and we've exhausted all we can do usually on that .. and, er .. while I'm not doing practical work, I'm writing up .. trying to organise the results of what I've been doing over the last 10 months .. trying to get order out of chaos .. it's still chaotic, really .. it's hard to tell anyone just what I've found out from it .. trying to organise it into some readable form really ..

I Huh!

S - And I don't expect I'll do much more with that .. the drawback with that has been that .. we can't use (material), and, of course, use of (material) is an essential part of the (project) .. not with the (tester machine) .. I'm just measuring the (property) of (material) on (material) .. I can't use to measure the effect of (material) on (another material) .. so that seems to be the stumbling block as far as that work is concerned ..

I I see .. how did you get into this?

S Well, about a year ago, I was stuck for a job really .. and what happened was that (F) was looking for an extra pair of hands, and .. he knew that I was looking for a job, and he just contacted me .. the project I was on was folding up -

I - which was?

S (project) .. (technique) on (chemicals) with other (chemical) and that had been going on for about 4 years and not showing any good results .. and so it was axed ..

I Yeah .. such is research .. what about before that? what projects? .. how long have you been in the Lab?

S Ah! I've been in the Lab nearly eight years .. on (date) .. I've spent most of

cont'd ...

S I was posted right to the other end of England, to (town) .. and did 12 weeks basic training in the - as they were then known (regiment) .. I survived that.

I Wah!

S - somehow - traumatic experience - but it was worth it, I think.

I Why? What was traumatic about it?

S Um .. well, I was with a very different type of person than I've been used to .. they were a fairly rough crowd - different accent - which I didn't understand -

I Wah!

S - there was an ex-jailbird there .. and there were redundant miners .. there were my teachers' mates got them, I don't think .. so they used to take the mickey out of me a bit for my funny accent.

I Wah!

S - I got through it .. they smartened me up from being a scruffy soldier in the first place .. I learned a bit of collective discipline, I suppose .. a good thing .. smartened me up .. I expressed a desire to go into the educational core .. I had fears I wouldn't get in .. I thought I would probably go to (oversas) like most of them .. but, a few lucky ones did join the educational core ..

S So, I then got posted to (town) .. and did an 8 weeks instruction course at the (X) school of education .. learnt various military subjects .. administration .. map reading .. teaching practice .. part of the course was to give lectures .. there was a period in the end for criticism .. we also did a certain amount of drill and Guard duties .. that wasn't very pleasant - all this training took place in winter!

I Wah! Yeah ..

S - and I packed out alright .. February 195X, and got a posting to (town) .. where I spent the rest of my approximately 18 months .. till I was demobbed in November 196X ..

I I was engaged there as an instructor in basic engineering science .. which is more or less the mechanical part of physics .. there were also other National Service instructors there, who gradually got demobbed, and so it meant taking on more and more work .. taking over other people's teaching periods so it was getting a bit hectic by the time I left .. it was quite easy-going to begin with - I remember I had the whole of Thursday free!

I I was promoted to Sergeant, and, as such enjoyed all the privileges of a Sergeant's Mess .. had a room to myself .. though nowadays in the educational core it's all officers .. as in the chaplains ..

I Good grief ..

S I did a few other duties .. Guard duty .. orderly duty .. once a week, was supervising the apprentices in the canteen .. and see that they kept order there .. um, we had Good holidays - a little bit shorter than normal school holidays, but ..

cont'd ..

I - what, about 8 weeks, were they?

S - I think it was about 8 weeks, yes .. six weeks ..

I Very nice ..

S .. in the summer of '6X, I met my wife-to-be .. on leave .. and that same holiday, I started applying for jobs - only two .. (O) and (P), only (P) were on holiday, and I never got a reply from them .. So, I went to (O) for an interview .. got accepted .. and, when I came out of the army in 196X, I went straight into (O) .. which is now a Division of (a firm) .. but it wasn't taken over in those days ..

I And I spent 15 months there till January 196X .. as a Junior Physicist on (product) development work .. I think one of my main projects was development of an (instrument) .. I did other miscellaneous work on (material); working (quality) in them .. and measurements with (instrument) .. the (quality) of various (materials) .. then I decided I had to leave there as my wife was expecting a baby, and there was no prospect of getting suitable accommodation in London, so, towards the end of 196X, I started looking round - unlike today, when it's very difficult to get an interview, I wrote off, and had interviews for most of them.

I I wanted to go into the scientific civil service .. I went before the Board, but wasn't accepted for some reason .. I don't know what .. I thought the interview went alright .. but .. I might have been applying for too high a post - I applied for Scientific Officer .. if I had applied for Experimental Officer Grade, I might have been more successful .. anyway ..

I I finally got a job offered to me at (firm) a Division of (firm) - near (town) - I got that job through the Ministry of Labour as it was known in those days - the Professional and Executive Register .. so my track North began .. I was at (firm) for 23 months .. after which I was getting rather fed-up with the job .. I wasn't getting any satisfaction - testing automobile horns - which nearly drove me mad .. I was outside the scientific environment .. I was the only scientist there, and felt a bit out of place .. so I started looking round again ..

I P & P Lab were recruiting Experimental Officers like mad - trying to build up .. I got an interview, and got accepted .. quite an easy interview .. So, I started here in 196X ..

I Were there any other places you were interested in?

S I did write off to some others .. I went to (X) for an interview - a very gruelling interview there - I wasn't accepted .. went to (Y) in (town) .. I didn't get through that interview .. those are the only two I can remember off-hand.

I Yeah .. fine .. what about the future, now, then?

S The future now is I'm awaiting the outcome of the interview I had last Friday at (location) ..

I When do you get that?

S I don't know when I get that .. I was told they had a few more people to interview .. I was hoping to hear by the end of this week .. if I get accepted, I shall certainly take it up .. if I'm not, I shan't be too disappointed .. it means a wrench, going to London, .. but, the other thing is I want, eventually, to get back to the South-East .. the longer I leave

cont'd ..

it, the harder it will be to get down there ..

I What -

S Once I get down there, it will be easier to move around.

I Yes ..

S Because most of the jobs I've been interested in have been in the South-East .. my wife wouldn't agree to coming North again.

I What sort of jobs have you been interested in?

S What - during my recent job hunting?

I Um

S - nothing very much .. I've written off to anything that would be remotely suitable .. one job that was rather interesting was at the (establishment) in (town) .. the description seemed to suit me very well .. a long description of the kind of work I've been doing, but I wasn't even invited to interview for that one .. I don't know what the pay would have been .. that was about the only thing I've been particularly interested in ..

I I've written off to 34 to date, so far ..

I Pss!

S I've been to 2 interviews so far .. one at (location) and another at (firm) ..

I 34! My God!

S Yes

I This is just recently?

S .. in 5 months

I In 5 months .. good grief!

S A lot of them weren't terribly suitable .. one job I wrote for at (firm), they wrote back and told me they had had 100 applicants.

I Wor!

S I'm not depressed about it, really .. I know what the position is .. and just keep looking .. it's alright while I've got a job here .. I can carry on looking as long as I like .. I don't look at the Sunday papers, and the Friday and Saturday Telegraph like I used to .. I do look at the bulletin board up in the V.G. office .. there's one that comes out every week, and I have a look through educational appointments, and R & D .. one job I wrote off for was an Inspector for (X) county council, with a salary of £3000 .. which is way beyond what I can expect to command at the moment .. anyway, I filled in an application form for that .. it was for an Inspector of Colleges of Further Education .. with advising on courses, and that sort of thing .. they would be better at advising me than I would be at advising them .. anyway, I sent off the form ..

I Good! Good! .. Jolly good!

S At the other end of the salary scale, I've written off to (a firm) in (town) with a salary starting at £1000 to £1500 which comes out to £150 below what

cont'd ..

I'm getting now, which is ridiculous .. but, the job did sound something that would suit me, so I wrote off ..

I Good!

S - they may decide to up the salary .. it's a good firm .. that's the reason I wrote to them really ..

I .. um

S .. I think you're as secure as anywhere in a firm like that .. the employees own the Company.

I Yeah .. well, well, well ..

S Another job I fancied was a Research Officer for (town) .. mainly because I fancied living in (town) .. because my parents live (heartily) .. I would rather get closer to where my folks live .. my wife's parents live in (town) and my folks live in (town) .. they've retired now and I don't imagine they've got many more years left - perhaps another ten years or so; and one only gets to see them twice a year, living here ..

I Yeah .. what sort of work are you interested in?

S What sort of work - well, the job I've applied for at (location) is as an Information Scientist .. which will be quite .. somewhat different from the work I have been doing for the last .. 5 years, I suppose .. I - fancy I could make a go of that ..

I Uh-huh .. what does it consist of doing?

S Well .. one of the jobs - a more routine job - consists of scanning career journals .. I think about 150 of them .. and keeping various people up-to-date with topics in their field .. it's called SBI - systemised dissemination of information ..

The other part of the service is ad hoc enquiries .. anybody, within the (firm) .. it would involve looking through the references to see whether there have been this type of enquiry before .. if not, it would then involve looking through the various journals .. doing a search, in fact, .. so, it would be a job that would give me a lot of experience .. I've been somewhat narrow up to now .. doing something like that you don't need to know anything in great detail, but you could get to know a little about a lot of things .. which, I think, is more helpful these days than knowing a lot about very little ..

I Hah!

S As a specialist, you're more vulnerable .. at least within ICI .. the person who seems to get on in ICI is the enthusiastic amateur .. who is not trained in any particular job - say personnel management, but he's got a scientific qualification and can get a job .. like someone did recently from here, who got a job in overseas pensions! - no formal qualification in accountancy .. merely some experience, and an interest in financial affairs .. this was sufficient to get him a job there .. ICI seems keen on employing - these types of people ..

For the moment, I'm doing evening classes 3 nights a week .. which isn't too hard going .. one is structure of accounts .. then the other night, I go to investment for beginners .. learn a bit about the Stock Exchange .. the various

cont'd ..

terms used in the financial papers ..

I Good'

S Bah! - it might be useful, I don't know .. (a V.G. counsellor) thought it might be a good idea to learn something about accountancy, so I took the hint from him .. the other thing I'm going is Russian, an 'O' level course.

I Russian?!

S - I've done this before; I'm only really going through what I know already .. I'm brushing up a bit on the oral Russian ..

I Yeah .. fine .. has anyone at the Lab been of any use - like (the V.G. counsellor)?

S Yes, he has been helpful .. He's been a sympathetic listener .. made the suggestion that I did accountancy .. during the summer, I was rather content doing my job .. I wasn't doing anything else .. and (the V.G. counsellor) said to me - "Perhaps you ought to be thinking of doing something else" .. and it occurred to me, he might be right .. the more skills you've got, the more likely you are to be of use .. and, I realise that I haven't really got any other skills .. I have got some skills, I think, with languages .. a bit of Russian - Italian - German - even Welsh! So I have some aptitude in languages - to fluent knowledge .. but I'd be enthusiastic to have a go at picking any language up - even Chinese ..

I How did you select this (location) job?

S (the V.G. counsellor) told me about the job .. he thought it might interest me .. he told (P) as well .. but he wasn't interested in it .. (Y) wrote me quite a glowing reference - which got me the interview, I think ..

I So you went down -

S Yes .. and had quite a searching interview ..

I Can you give me some idea of what sort of a searching interview it was?

S They wanted to know how I'd react in various situations .. and asked me - very - personal questions about myself .. they also asked me what I'd been doing here - and that didn't take very long .. one of the things I found difficult was to know whether to give the answer they wanted me to give .. the answer I thought they wanted me to give, or the answer I would honestly give ..

I Bah!

S - one of the questions he asked me was - "do you question what people tell you?" - referring to scientific facts .. and I said if I knew what the answer should be, then, yes, I do query it .. yet, quite honestly, I don't tend to .. I tend to accept what they say .. lots of questions like this .. "Are you a busy person?" ..

I Well, well, well .. and that went on for how long?

S Well, (X) who this was with, went on for - say - 2 to 3 hours .. the rest of the time was taken up by - lunch - say 1 hour .. his subordinate (Y) took me to lunch, and to his office and explained the job to me .. and the Staff Officer told me about how difficult it was getting accommodation in London - so I had 2 interviews with the Head .. one before lunch, and another, later in the afternoon .. when I returned in the afternoon, another chap was there wanting to see me .. this (X) was quite an interesting person .. mildly eccentric, I

cont'd ..

think!

I Bah! .. how do you organise your work? .. When you're setting about problems?

S Well, I'm working more or less under (Y)'s supervision .. he usually makes the suggestions .. I agree or disagree .. and he generally leaves me to it ..

I Yeah .. well, how do you go about it? .. in what form does the suggestion come to you?

S Well, he thinks about it before .. comes down to the Lab .. suggests trying these various things .. I'm usually a bit vague about .. I don't .. I can't initiate things, I need somebody to get me going on something .. suggest the ideas, and then I get on with them ..

I Yeah ..

S - so, I don't feel I'll go any further in research, because I don't seem to have this aptitude .. I'm not a prime mover .. I can only stay at the level I am .. I have reached the Haslam 10-11 barrier .. I think, perhaps, if I go into information work, perhaps I can go a bit higher ..

I Yeah .. well, how do you get on with it?

S Er, what, with the work?

I Yeah

S Well .. what do you mean?

I Well, how do you start - um - busying yourself ..

S Oh - well, having agreed what we're going to do, I simply get on and do it .. with the (machine), I devise the experiments .. work out the results .. and attempt to analyse them .. get them into some sort of order - the results I've got .. draw up graphs .. try to draw conclusions .. the usual - sort of - scientific method ..

I Is there any particular personal method that you've got for -

S - any personal method - No, I don't think so.

I Not that you've noticed?

S - I've got a lot of patience, I think .. a lot of other people have wondered how I've stuck it as long .. because, I suppose it is boring, really .. the same movements .. but, the results aren't boring, you never know what you are going to get .. so, I've had to develop little techniques for measuring things as we've gone along .. nothing's been laid down before .. and you - sort of - find them out as you've gone along ..

I Yeah .. yeah .. you mentioned a mass of data - how do you set about that?

S How do I organise it? - well, now I'm writing this report - and I got a bit of advice from Ian on this - summary - recommendations - description of apparatus - method of measurement .. the variables - there are about ten variables in this .. temperature; pressure; nature of the surfaces; speed of separation; index of (chemical); additives in (chemical); the surface treatment; the thickness; all these various factors .. now isolate all

cont'd ..

these factors, - you can study each one independently .. and then keeping everything constant except one thing, you then measure various factors - like the forces, the work required to separate the (material); the density of the (materials); and things like this .. so, there are about seven factors here, and about ten variables.

I What!

S - So it's quite a lot of work really! .. So, as I say, I shall isolate every variable, and say how each of these factors depends on this particular variable .. and .. I'm afraid - at the end - it won't mean a terrible lot, really .. Because, a lot of the information is too scanty, really .. to cover all the variables would take months more work .. and we're running down effort on the (project) .. I'm really going where I'm needed most at the moment, and this is really background studies - not producing the goods ..

I What do you do with a more intractable problem? Do you go away into a corner and quietly try and work it out? or -

S What - analysing all these results?

I Yeah

S Yes, well, I just wade through it, in the lab ..

I - What, sit down at a desk?

S Yes, sit down at a desk.

I Well, do you follow any guidelines?

S I don't really know of any guidelines, really .. whether there is a way of doing things that I don't know about .. (X) is just letting me carry on - he's got his own report to write on it .. if I need any help I'll see him .. but, I'm alright at the moment.

I Yeah, yeah .. fair enough.

C - What I'll do is get a load of facts together, and then he'll have a look at it - and perhaps decide to edit it .. anyway it'll be down in writing, and at the moment it isn't .. very little in writing .. the whole project is a bit vague .. it doesn't really fit any theory ..

I Yeah .. OK .. where do you do all your best thinking?

S Er ... I suppose .. I do it at work .. I don't do much outside .. I usually cut off thoughts of work when I get home ..

I Yeah .. a very good idea.

S Yeah - well - you know - I suppose if I was more interested then I would think about it much more of the time but .. I'm not perhaps that interested in it ..

I Yeah .. when you say the project doesn't fit any theory, how do you manage -

S - well, you can plot graphs - and if anything comes out to a straight line, well, that's great .. but, usually they don't ..

I Yeah .. fair enough .. have you any thoughts whatsoever on what you expect to get from one of these - psychological - instruments?

cont'd ..

S Well, what I'd like to find out is - exactly where my abilities lie .. I'm not - that certain - I mean .. I don't think I know myself, as well as I'd like .. one of the criticisms of me has been I've always underestimated my abilities .. more than one supervisor has said this about me .. I occasionally have a bit of an inferiority complex, and say maybe somebody else would be better at this than I would, and just .. I've got abilities and I tend to underestimate them probably .. modesty - can be a drawback .. especially when you go for interviews .. I would like to know where my abilities really lie .. (T) will say - design and execution of experiments .. analysis and presentation of results is my strong point .. I wouldn't have known this unless he's told me, because I didn't consider myself particularly good in this respect, but he - he thought I was good on this .. he thought my weak point was self-reliance .. that is something I don't know for you develop really .. I feel I - haven't got the courage of my convictions .. I can be easily swayed by somebody else .. I don't stick my neck out over anything .. I think I'm more likely to be persuaded by other people .. as I say, I've never really known where my abilities lie .. you know, at school, I feel I could have done equally well if I'd gone into arts .. I don't really consider myself a scientist - any more than an artist .. I did science because that was more - in vogue - at the time .. my best subjects at school were something like art, woodwork, biology and geography .. and the subject I did work at, at GCSE, was physics .. and then I did that for my degree .. it seems crazy .. well, I was quite good at maths .. I was a - sort of - late developer .. I suddenly got the hang of maths in the last year .. but, they thought I wasn't academically inclined at school, and advised me not to stay on at the sixth form ..

I - well, you don't seem to have done too badly.

S No, well, my parents are fairly liberal minded people - my mother's a Quaker - and my father doesn't practice any religion .. myself, I'm an agnostic .. I have Christian sympathies, but I'm not sold on the idea ..

I - Christian way of life, rather than Christian -

S - I admire the Christian way of life, but I can't honestly call myself a Christian .. you know, I would like to be, but I'm not convinced .. I would like to follow some religion .. to give me an aim in life .. I don't seem to have much aim ..

I You don't have any aim?

S Well .. I suppose I'm searching after clues, you know, and religion gives you a definite .. I suppose we all want to be happy, basically, really ..

I .. Well, that sounds very human! ..

S Yes, I suppose it is really ..

I ..OK .. well, you've given me some superb information -

S Yeah - well, I've told you quite a lot about myself .. I don't know whether I've missed anything out ..

I No, no, that's ideal .. thanks very much.

S I had a chat with (T) .. I don't know whether you know.

I Oh! (T)?

S Yeah .. I told him quite a lot about myself ..

cont'd ...

I .. Yeah .. and that -er ..

S - and he noticed .. that I'd been 5 years at Boarding School and 2 years in the Army .. and he - sort of - told me something I didn't really know about myself .. that I'd been rather conditioned - in the environment .. and nobody ever told me this .. it never occurred to me .. I'm somewhat used to being told what to do ..

I Yeah, yeah ...

S - and this might be significant ..

I Yeah and - then - did you go away and do something about it?

S Er .. not actually, no .. because I don't know what I can do about it, really .. I think the fact that I'm thinking a lot more seriously about what I'm doing .. I am trying to be flexible - taking up different subjects this term .. I'm not actually - being told to do it .. I thought it up myself ..

I Yeah!

S - Perhaps I have over-reacted .. but this came out of my assessment interview in August with (S).

I Great! .. great!

S - that I ought to be doing something.

I - not standing still?

S - that's right, yes .. I had rather forgotten about job searching .. I was rather content with what I was doing .. I was then stirred into action again .. thinking maybe things aren't that secure here .. you can't stay here forever .. I'll have to be looking around soon .. because of the policy here .. I have not thought about it too much .. I have rather left it to other people - say (Group Head) when he was here .. said that if anything suitable came along, he would let me know .. I haven't been doing much for myself .. but, since the assessment, I have been actively doing .. I have realised that, in the past, nobody has been doing anything for me, really .. letting me stagnate, in fact, .. it struck me .. I ought to do something about it .. I'm the only person that can help me .. nobody else can help me .. - but, I am not as worried as I used to be .. I'm doing all I can, now, so .. I realise my career hasn't been really very varied up to now .. if you have varied experience, it helps ..

I - and you're going the right way about it, now - into a varied experience .. as you were saying, this (location) ..

S - it is more different, yes .. a bit of a change, yes.

I Let me show you what I was thinking might be of interest there are 2 different profiles here, which - it's a questionnaire - where you put down answers to questions rather like these .. just a simple choice between alternatives.

S - Oh yes

I - OK .. those are the tests .. and the results come out in this form - where you rate yourself .. where .. according to your answers, you come out with a figure that puts you as a percentage - in comparison with the rest of the

cont'd ..

population.

S Ah! yes ..

I OK?

S Yes

I And, the dimensions are - on this one .. these 5 .. and on that one .. 10 ..

S - Well, would you like me to have a look at this now ?

I Well, I was just checking out whether this was the sort of thing you were thinking of ..

S I had no idea of .. yes, this seems quite reasonable .. perhaps the result will come out that I'm doing the sort of job I am cut out for - you know, I'm not expecting anything entirely novel to come out of this - that I'm entirely in the wrong field .. but, I'd like to get confirmation that I'm on the right lines ..

I Well, we should be able to say something about just where your abilities lie .. in some detail ..

S Yes .. so, this test .. does it tell you where you fit on here?

I Yes, that's right .. well, I've booked a room for 17th, so you can have a look at the test then, if that's OK - then come back and we'll have another chat.

S Yes .. are there many questions?

I Yes, there are, actually.

S I see .. there's only one page, but there are stacks of them ..

I OK .. so, I'll see you on the 17th?

S Yes

INTERVIEW TWO

I. well ... a reasonable amount I suppose ... they said something about having to work under pressure ... well I've never really had to work under pressure before ...

I. never worked under pressure!

S. - well ... Maybe I have done ... but not that I've been aware of ... You know, I've never had to work to a deadline - put it that way

I. Oh! I see - that sort of pressure ... because anyone working at Corporate Laboratory at the moment is under pressure

S. ... Yes, I would say so ... Yes ... but I think most of the time I've been in Corporate Laboratory I haven't been under pressure ... there hasn't really been a time limit for jobs ... I think they were a little bit doubtful on this point. But I don't see why I shouldn't be able to cope with that.

I. Ah! that's what I like to hear! ... well, that's really fantastic ... have you accepted yet

S. Oh yes, I've accepted

I. - and are you going to commute every 2 months?

S. Commute at weekends and stay there in a hotel

I. commute at weekends - that will make a change for you anyway.

S. I think it will be, yes

I. ... Great! ... OK, well let's ... blimey, Well ... what was your reaction to the questions in the ...

S. - well I'd seen the sort of questions before, and the sort of test ... and I just decided to start and go ahead

I. Yes ... did you have any difficulties, at all?

S. Oh yes, there were some awkward ones ... when there is three - and you like doing all of them, it's very difficult to say which you prefer ... and, again, you might get 3 where you don't like doing any of them ... and you take rather a long time thinking up answers ... I did - er - prick every question

I. - you did!

S. Yes

I. well ... thanks ... OK ...

I. - who have you been hearing this from

S. Oh a chap called (X) ... he said: "have you seen (1)" and I said "oh, yes; that reminds me!"

I. Wah! have you heard from anybody else

S. No, I just happened to see him ... about

I. I see ... what about jobs

S. Oh yes ... I've got onto the job at (location) ... at least secondment for 2 months anyway

I. - To see how you -

S. - Yes ... I think the chances are that I'll stay there

I. - that's really great! ... that's fantastic

S. ... do you think so?

I. Yeah!

S. I suppose it is fantastic being picked for it anyway ... considering I didn't know anything about (subject) at the time ... in the meantime I can read up about it ... it's only a glorified (technician's) job as I see it anyway.

I. um!

S. - well, there's probably more to it than that

I. hah! ... You're at it again aren't you - underating your abilities

S. ... well the more I read about it the more it seems to make sense.

I. ... from what I know about it it's a very responsible job - with people relying on you a good deal.

S. oh yeah

I. and there's a hell of a lot of work to do ... it's not the sort of work that can be done by anybody either. It's got to be done by somebody with a particular -

S. - Yes, they were quite concerned about this ... they don't seem to be able to find the right person for the job ... they've been looking for 3 or 4 months

I. that's right ... what was it you were saying about yourself - you seem to have a Great Deal of patience - much more than others ...

S. - also - I looked at the back of the sheet where the circles are joined by lines and saw where there was three dots in one circle - which is fairly negative information, I suppose you discount it don't you.

I. Yes

S. because, before, I had an awful feeling I was contradicting myself

I. Well, we check for contradictions ... and lies etc ... there are all sort of many ways we can check! ... that's fine ... did you react in a positive way to any of the questions?

I. ... like - that's something I haven't thought of ... or ... would like to do ...

S. oh No ... not really

I. ... Fine ... right ... let's go straight into the results then

S. if I did the test again, of course, I might come up in different places ... I don't think it would be very different but ...

I. Hah!

S. - I just don't know.

I. would you like to try an experiment and do another

S. I don't think it would be very different in my case

I. Well ... this is the scoresheet ... Now, what I'd like is for you to rate yourself along each of these - dimensions - that they put the score along ... OK ...

S. Yeah ... OK

I. how I would like you to do that is ... there are four quartiles marked out here . OK?

S. Yeah

I. these are the percentage scores ... and what the test means is that if there are 100 people standing outside in the corridor ... where would you go and rate yourself ... where would you go and place yourself in the queue in terms of your liking for doing this sort of activity ...

S. ... Yes ... in one of these quartiles?

I. Yes, you see these lines going across here, what I'd like you to do is mark yourself say - with a cross - whether you think you are in the top 25 per cent of interest ... or whether you are in - it really turns you off ... or whether it gives you considerable satisfaction ... or whether you can take it or leave it - which is in the middle quartiles, here.

S. Yes, ... in just one of these columns?

I. Yes - that's outdoor that one down here ... Eventually the test scores will come into this as numbers which you put down in the column ... which tells you what your standing is in each of these activities

S. Yes ... Right ... Well, obviously I must start with scientific ... I think

I. well, take them one by one - start with outdoor

S. outdoor?

I. um

S. ... I think probably in this quartile

I. - Right! OK

S. I don't know where - shall I just -

I. - mark it in the middle

S. - just here ... yes, OK ... Mechanical, here ... Computational ... Scientific persuasive ... um! I think I'll put myself down here on that one!

I. hah!

S. - artistic, well, I'm not bothered ... literary, there ... musical ... I think here ... Social service ... here ... clerical ... about there ... OK

I. OK, would you ... just go through and check them through

S. well, quickly thinking about them, I think that's about what I'd put

I. OK ... good ... so that's just above 50 for outdoor, mechanical computational and scientific ... just below 50 for artistic musical, social service and clerical, and below 25 for persuasive and literary ... OK let's see.

S. - persuasive, I imagine, would include things like selling, and I put myself well down on that

I. why?

S. ... well ... it's just my image of myself ... I mean

I. - selling what sort of things? - going up to them and trying to persuade them - er - that they ought to do this, that their best interests are in doing this - you don't like talking in this way to people?

S. ... Oh, I enjoy talking to people ... I don't know that I would try and sell anything to them ... I have always tended to be middle of the road, you see ... I don't tend to have extremes of views ... if I did then I expect I would try and persuade people

- I. Fair enough ... in other words, you don't try and dominate their point of view
- S. No, I listen to what they have got to say ... I don't really try and convert people to ... my way of thinking ... as I say, my way of thinking isn't extreme, so ...
- I. OK! Fine! Well, what you're saying to me is that you don't like persuading people unless you think you've got a good justification for your point of view
- S. There are very few things that I get worked up about. I think that if I got worked up about it, then, I would
- I. Yeah ... Yeah
- S. I don't really get worked up about things ... I don't know why ...
- I. heh!
- S. but, I don't, so
- I. OK ... well, now take a biro and mark in the scores as I call them out ... The first one was 63 ... OK
- S. Yes
- I. the 2nd was 32 ... let's have a light on ... OK ...
- S. Yes
- I. the third one was 44 ... the 4th was 12 ... the 5th was 26 the 6th was 17 - that's literary ... the 7th was 14 ... number 8 was 41 ... and clerical was 53 ... OK ... now what reaction to that?
- S. ... uhM ... well, I've under-rated myself on 3 of these
- I. - which are -
- S. outdoor, computational and scientific
- I. Yes
- S. - and I've over-rated myself on mechanical ... under-rated on artistic, literary, and musical ability; I'm all right on social services ... and under-rated on clerical ...
- I. that's right ... You've under-rated yourself on eight and over-rated yourself on 2!
- S. heh!
- I. heh indeed
- S. - which proves - as I was saying before! ... but there's more to it than that, though, isn't there?
- I. what it says now is that you get your greatest satisfaction from going things in this area here ... OK ... and you're not at all too happy about these things. Like ... you're not too happy if asked to play with a piece of machinery ... you like working very much with your head - as in the computational and scientific ...

- S. that outdoor, then is an odd one, is it?
- I. Well, it means that you like to get around and you don't like writing in an office all the time ... You like to be able to escape and get into various parts of the world about you - which I suppose is part of the job - you may have to get out and find things out.
- S. - Yes that's as I imagine it ... I may be wrong, but
- I. - You're probably very wrong! - you'll probably find yourself rushing around trying to find people! ... and, yes, with this down here, we've just been saying something about persuasive!
- S. - You couldn't - honestly - come to any conclusions, could you
- I. Yes!
- S. You could
- I. Well, what they provide with the test is an attempt to classify occupations according to interest patterns ... like ... let's take 044 - outdoor mechanical and persuasive, then you're probably OK for a professional engineer ... similarly, are 5 and 7 ... OK ...
- S. Yes
- I. Unfortunately, it doesn't say anything specific about an information scientist ... but if I was going to put in here what I think an information scientist ought to have, it would be zero, 2 and 3.
- S. ... Yeah ... jolly good ...
- I. ... can you see why?
- S. ... well, computational, and scientific, well you've got to have a logical and methodical way of thinking ... outdoor - I wouldn't have thought that would have counted ... but, as you say, it may be going to places, to searching for information ... Yeah, it might well ... It certainly would be better if it was that ... because one thing that did put me off was the thought of being sat at a desk all day long ... I would have to get up and walk about a bit but, you wouldn't be doing any work, then!
- I. You would have to make an excuse that you were doing some important thinking!
- S. ... my ideal job is one where you are sitting down half the time, and walking about half the time, really
- I. Great! do you have an ideal job like that?
- S. well, the ideal job would be a job that would involve both scientific and a certain amount of field work as well as office work ... you go out and observe ... facts in the field ... and ... write a report ... an account of what you've done ... something like that

I. Recently?
 S. well, I think the last year or two
 I. - with having to think about -
 S. well, as I told you, with having talks with (the personnel officer)
 I. Yeah
 S. He really probed into me, and got me thinking about myself!
 I. Good! Good ... in what ways.
 S. well ... I wanted to know ... I went into it for vocational guidance ... that was as a counsellor ... He thought I might make a probation officer, but I thought, really, I'm not cut out for it ... that was the kind of conclusion he came to ...
 I. Yeah
 S. I also went to the DEP and their vocational guidance expert ... and he suggested factory inspectorate ... as an out and about job ...
 I. Yeah ... Yeah ... but that's still missing out some things like your scientific and computational talents
 S. well, I don't know, maybe that was included as well ... I suppose it was to a certain extent ... ah - mechanical comes into it as well
 I. what, the H.M. factory inspectorate?
 S. uhm
 I. but you don't think you'd like that so much.
 S. uhm ... I'm surprised it's come out like that ... I didn't think I'd ... answered questions so as to make me come lower - it wasn't my least -
 I. You weren't aware of it being least
 S. definitely not, No ... a lot of instances there were ... would you like to repair toys ... and this is a sort of thing I often do! - having to repair things at home
 I. uh huh
 S. - I definitely wasn't against doing these things ... they were things that I would like doing less than that
 I. ... You think that's a mechanical type job?
 S. ... Yes, I think so ... I mean, I mess about with the car and do my own service, and so I thought I have reasonable mechanical ability.

I. what sort of field are you thinking of? - You're not thinking of a laboratory, are you?
 S. oh well, the world is a laboratory itself ... if you treat the universe as your laboratory
 I. Right!
 S. I know I've probably got the wrong sort of training ... if I had my time again I'd probably do a different sort of training - not (subject) ... perhaps
 I. ... Yeah ... you've really got a very wide interest, then?
 S. Yeah, I suppose I have, yes...
 I. Yes
 S. I went to that lecture on (subject) ... that's the sort of thing I would like to find out about ...
 I. Yeah
 S. - go up to the pennines, do some observations, come back to the lab, try and correlate results ... would also be ideal
 I. Great! ... Great! ... well! ... You'll certainly have in this job an opportunity for a wide view
 S. Yeah! ... I think this is possibly where I'll be quite cut out for it.
 I. Yeah
 S. - You need to have a wide view of things ... this is just the opposite of being a specialist.
 I. that's right ... Yes... it sounds as though in this job you have a chance to be both
 S. ... I could be a specialist ... it wouldn't bother me to have to pay a great deal of attention to something ... I think I'd have the staying power
 I. Yeah ... back to your patience ...
 S. Yeah!
 I. well well well ... I'm really tickled pink by the thought of you getting that job, because I really do believe that it's ideal
 S. Yeah, - you say ... you would be able to say that you couldn't see me doing a job like that ... you know me sufficiently well to be able to say - that I would be able to make a go of it.
 I. Yeah ... when you say that you don't know yourself very well ... compared to how some people - know themselves - ... I think you do know yourself very well.
 S. ... I think I've got to know myself abit better recently

I ... Perhaps you've been lucky ... or - rather - perhaps you've been unlucky in not realising how turned off you would have been in other sorts of jobs ... like ... you know you wouldn't like to ... work on a lathe ... you know you wouldn't like to ... bash other people with your own opinion.

S. Yeah
 I. ... and you also rated yourself fairly well here
 S. - not too much disagreement
 I. No ... in this case - take it or leave it ... a bit higher on musical - artistic ... these two are to do with expressing your opinion ... and persuasive is 'needing' to get over your opinion whereas these two are having an opinion to express ...
 S. - ah! yes
 I. So do you do have more of an opinion
 S. - that's, er -
 I. - in literary and artistic
 S. - that - correlates somewhat
 I. - as you thought you did
 S. Er - Yes
 I. You do have opinions!
 S. ... Yes ...
 I. - which it says here ... but, rightly so, you can keep your opinions to yourself ...
 S. Yes

I. ... whereas some people must ... have a job where their opinion counts ... and the opinions you're interested in are the scientific and computational ones ... would you like me to tell you some bad things!
 S. ... Some bad things ... yes - sure ...
 I. hah! ... really - er -
 S. - what are bad things?
 I. .. It would be bad if you were going to a job which - um - well, these sorts of things - your interests - and personality - clashed with what the job was going to be like
 S. - Yeah

I. Yes ... let's put it like this then ... if you are given a choice between doing work with your head, and work with only using your hands, then you prefer to use your head
 S. - probably, yes ...
 I. Like, even when you are working with toys, or working with the car, you have got to be thinking all the time
 S. Yes
 I. - it's not a matter of -- having a job on a production line where the task is very routine ... You are solving problems with the car -
 S. - Oh, I see, yes ...

I. OK there is a sort of difference ... the 'mechanical' here refers to doing things with your hands which are well defined ... just like using your hands ... a lot of the jobs in the laboratory are like that - using your hands to do well defined and laid down procedures ... bringing things together and building it up in front of you ... people get a lot of satisfaction from that.
 S. Yeah ... there are things I would prefer rather than - say - grinding something on a lathe
 I. Yeah, the mechanical here is like that.
 S. Oh, yeah, ... working something out does appeal to me more ... or I hope this was the case ... if this wasn't the case I would be in the wrong place ... I mean ... if I was rated highly on this sort of thing, I would be out of place here - I should be an apprentice or something like that
 I. - In the lab? or as a craftsman?
 S. Yes

I. this goes back to people always telling you that you had greater potential than you actually believed in yourself ... I mean - look at these two, you're in the 90's - in the top 10 per cent of people who like using their heads in making calculations and in understanding and looking at scientific things ... that's fairly significant and important! ... because 90% of the rest - out there like this sort of thing less than you do.
 S. Yeah!
 I. Do you get the message!
 S. Yeah ... I'm just amazed, really ...
 I. You'd better believe it!
 S. I find it a bit hard to accept ... because I'm not turned on to that extent I wouldn't have thought ...

I. - if you were going into a job as an apprentice or - well, let's take the probation officer or the factory inspectorate jobs ... it will depend somewhat, on what ideas we have on what those sorts of jobs are about ... but I would have said these jobs might ignore the scientific part ... factory inspectorate may include some of it ... but, it wouldn't have had a very broad scope of science

S. - mechanical, I would have thought.

I. Yes ... Yes ... but I don't know whether that would have met this high interest here for using your head ...

S. Say ... as if you were working in a car factory-on a production line

I. on a production line, Yes ... I would also think that your interest would be in a more - roaming - brief

S. an outdoor, you take for roaming? - not necessarily in the field, but -

I. - well, not tied down to one spot - as on a production line

S. Yeah, that's true, Yeah

I. You like a bit of variety

S. - Yeah

I. and similarly in the factory inspectorate, you might be tied down to a set of rules and procedures which wouldn't give you as much scope as you would like ... in the scientific and computational fields

S. and probation officer?

I. probation ... well, social service isn't something which turns you on very much

S. - not too much, No ... and that's primarily what it would be

I. Even thought it would give you the outdoor

S. Yes ...

I. ... OK ... what reaction?

S. ... Well, fine! ... got nothing to worry about!

I. hah!

S. I'm doing the right thing then

I. Yup!

S. I shouldn't be a square peg in a round hole, then

I. No ... well, it's dangerous for me to tell you that ... do you feel a bit better about it yourself?

S. - Yes., I think so ... I think it improves my self confidence, if I know that

I. - You do?

S. Yes

I. Good

S. well, it's going into something pretty new, really, where I haven't got much experience ...

I. Yes, Yes

S. ... As I say, I shall try to prepare myself by doing a bit of reading ...

I. Very Wise!

S. - it's a bit difficult, to start with, but it get's easier ... a bit awe-inspiring though!

I. Yes

I. what else are you doing to prepare yourself?

S. well, I'm seeing (X) and (Y) in the information section, and the library ...

I. Yeah

S. - find out a bit from them ... that's about all, I think ... read a couple of books ... and try and fit in what else I can ... As I told you, I'm going to evening classes 3 nights a week ...

I. that's right!

S. - to broaden my knowledge a bit -

I. (a foreign language) as well!

S. - and accountancy ... just to broaden out a bit

I. Yeah! ... are you going to carry these on? ... when are you going to start?

S. No, I'm going to pack these up fairly soon

I. Fair enough

S. The problem's resolved itself, now that I've got the job

I. Yeah

S. I'm not too worried about going to night school, now

I. Decisions being taken left right and centre! bang - bang - bang - how's about that for decision making ability!

S. hah!

I. when are you going to start

S. 2nd (month) ... next Tuesday

I. Tuesday! You really do have it well mapped out!

S. well, the 1st is going to be a holiday for everyone, now, isn't it?

I. Yes ... well... I mean ... should I add a cautionary note about ... it is still only temporary, so keep your antennae open, or do you feel ...

S. oh yes ... it will be alot for me to catch onto in the two months

I. it will

S. Yes ...

I. ... and you can come back and start again if it doesn't

S. - oh, Yes ... I'm not losing anything ... I hope it doesn't come to this ... I ... I shall think I've failed if I do come back here, but I hope that won't happen

I. Well, that's a good enough attitude to go away with feeling you want to make a good thing of it

S. Yeah

I. OK ... what - er -

S. it's rather like going in to an exam, if you know your stuff well enough beforehand, you can accept it but ... with this, I knew nothing about it ... apart from what I found out during the interview, and from (X) beforehand ... because I didn't prepare myself at all for this interview ... I didn't read up anything in the library ... perhaps I should have done ... I might have made a better impact!

I. hah! you couldn't have made a better impact!

S. well ... No, as it happens ...

I. Out of all the people that they saw ... and they grilled you for 6 hours was it?

S. I was there for 6 hours, yes

I. My God! what was your boss's reaction

S. who (Z)? ... I don't know what he thought, really. He was pleased from my point of view, obviously, but I don't think he wanted to lose anybody ... I don't know what people think, really ...

I. ... Have you told anybody else?

S. oh yes, I've told most people ... You don't really know what they think about it ... Some of them are a bit jealous, I suppose, ... just as I might feel ... if somebody managed to get a job outside here

I. well, you've put in a lot of effort

S. well ... I don't know really ... I've done something about it, yes ... I was very, very complacent about a year and a half ago ... then I started questioning things a bit ... then I was complacent for a year ... until my assessment interview when I started really getting down to things ... I wrote off to 26 jobs ... - some people have written off to 80, I think

I. who?

S. (B)

I. good God!

what about the family

S. oh, they will welcome a move down South.

I. Great

S. ... Yes ... well I hope the advantages will outweigh the disadvantages ... I sometimes feel like getting into the country - away from it all - like the highlands of Scotland ...

I. well, you'll have outlets into Norfolk - where some others of your family are?

S. Yes ... it'll be quite useful ...

I. great! ... I envy you! because I have quite a lot of my family down South ...

S. aah well, I've been away 10 years altogether, so it's about time ...

I. Yeah! ... OK ... well ... what a success story! ... what do I say, now? ...

S. - congratulate me!

I. Yeah! ... goodness gracious! ... do you want to do any of the other things I've got around, or ...

S. .. I don't know ... there's another form isn't there

I. Yeah

S. well, what form does it take? - what is it about

I. well ... Let ... shall ... I'll go up and get it, shall I?

S. Yeah, OK, I'll hang on ...

I. I'll just nip up and get it ...

S. what would you say from this - something I would be suitable for ... the other extreme ... trying to sell something -

- I. - in the social service field! ... at the moment. You only feel confident when you are dealing with people in this area - with this information ... I reckon in a year or two's time, this score would move higher ... When you get a bit more experience, because, here, you don't get the experience ... You like making surveys and writing reports ... but you haven't had the chance to test out many ways of setting things over to people ... too well
- S. Yes
- I. So, if you had to get things over to people based on ... more vague information, or social service - or clerical - or mechanical problems ... it would go against the grain of your scientific or computational interests, and you would probably have a clash ... OK?
- S. sure ... can I keep that?
- I. Yes - by all means ... Here's the other one - it brings things out on ... 5 ... different ...
- S. ... Yes, I think I'll have a go at that
- I. - You're going to have a go -
- S. - Yes -
- I. OK if I give it to you -
- S. I don't know whether there's much time left, I'm going off on holiday soon - whether I could do it before then
- I. Yes - I'll make a note ... what I'll do ... we'll go upstairs - nov - I'll give you a copy - and an envelope ... and you can do it in your own time
- S. oh well, that's OK
- I. - and you can bring it back, and we'll have another chat about it
- S. Yeah, OK ... fine ...
- I. Right.

INTERVIEW THREE

S Could you explain to me, first of all why .. the reason for playing the tape recorder prior to the tests .. I don't see .. where ..

I where that comes in?

S - No -

I because .. when .. you know when I went through this profile sheet -

S - Yes -

I - with all of these dimensions -

S - Yes -

I - in order to make sure that you are getting the right interpretation - can you remember, I asked you questions like, "can you think of an example" .. "in your actual work" -

S - um -

I - I wanted to make sure that the result that you got here related as closely as possible to your work ..

S - Yes -

I when I first see anybody in the lab, I haven't got much of a clue what they actually do .. even though you're very familiar with your work .. I just like a chance .. to .. find out what the person does .. in order to help interpret the results .. and also, to ensure that the test is relevant

S Er, yes, one thing that you didn't tell me was about the scores .. this, here ..

I the 'V' score

S Yes, what is that ..

I this score, here, where it says that it must lay between 37 and 45

S Yes ..

I what was your actual score, there .. I can probably find out what it was .. about 38 or 39 .. only that .. some of the questions are the same - only thinly disguised ..

S um

I and they are intended to find out whether the person is behaving consistently - or thinking consistently ..

S Yes -

I or .. if it goes through the other end, it's because the person is taking .. illogical steps .. like .. they actually think that going to a hanging is a good thing .. whereas 99% of people will say that a hanging .. going to watch a hanging is their least preferred activity -

S Yes -

I - if it's their most preferred activity, then the test rings a little bell and says .. there might be something a little funny here! it's not very usual

S aah!

I O.K?

S Yes .. actually, a lot of the questions on this test appeared to be the same as on the other

I Oh!

S - You don't actually look at all my answers, do you

I - No

S - it would be too time consuming, wouldn't it, to .. er ..

I Yes .. all I do is to count up .. and do a little calculation and then apply them ..

S Yeah ..

I O.K.

S Yeah ..

I Did you have any thoughts - from that last one .. any reaction - from .. last time ..

S Yeah .. well .. you know .. I've thought about it, and .. I'm a bit disturbed that I'm a bit low on the 'persuasive' I'd like to improve that .. but maybe that'll come on the next job ..

I Great!

S - because I think that's vital really .. that you're reasonably persuasive .. I think this is probably the thing that's holding me back .. if I improve on that, I might get .. promotion and all that ..

I Great!

S actually .. it surprises me .. this is what you need in an interview above all .. if you're not very hot on other things, if you can sell yourself in an interview then ..

I well -

S - only it amazes me that .. I got through that interview .. when I'm so low on this ..

I hah!

S - this is enough to say you'll never get through any interview ..

I No .. wait a minute .. that doesn't necessarily say that you are bad at it .. just that you don't particularly like it

S aah .. yes .. there's a difference isn't there

I You - people can often do things quite well, but they get no satisfaction out of it .. or they get no enjoyment out of doing it - and they'll do it as least as possible .. now if you got through that interview you must have been bloody good at it .. I mean .. being grilled for six hours .. to have merely stayed the course is quite an achievement ..

S Yes ..

I - and you obviously got yourself across or you wouldn't have been selected for the job -

S - um -

I but .. yes .. it's something that you don't actually relish the idea of .. having to go and .. persuade somebody to .. do something ..

S - Yeah -

I - either for you or for them -

S - Yeah - but, as I say, I haven't really had much opportunities - so far in my career ..

I - Yeah -

S I mean .. this probably explains why I didn't carry on teaching .. you'd think .. if I was low on this .. the chances of succeeding as a teacher wouldn't be too good .. yes ..

I .. Yes .. you have to be bloody tolerant to put up with .. some teaching situations ..

S .. Yes .. well .. I did for nearly 2 years, and I didn't really enjoy it ..

I well, there you are ..

S Yes

I Besides, you've got a lot more talent, here .. and a lot more liking .. for jobs here .. these are the preferred activities - rather than the persuasive bit ..

S I've done the right thing anyway ..

I well, that happens to everybody, in their careers .. It doesn't start off in the right niche .. it starts off going all over the place .. speaking for myself, I started off as an economist, and I've .. learnt .. eccarries isn't my strength .. you know, I don't really like that .. but I can find something which is much more to my liking .. by trying .. and you learn by experience .. by making mistakes .. and this happens to everybody .. and it also happens to everybody right up to and through their 30's .. which a lot of people at the lab seem to be a bit afraid of .. I think you also feel that it all ought to have been decided .. if you haven't got a career -

S - I wish I'd had one of these tests - you know - fifteen years ago .. twenty years ago, in fact.

I - You think that it would have made a good deal of difference

S ... I don't know .. Perhaps 15 years ago .. but not to wait until my thirties until I do one of these sort of tests .. I think everyone should do one of these sort of tests .. very early on in life .. you know, know things that they are not cut out for .. like this teaching .. teaching wasn't my cup of tea .. mind you, then I wouldn't have had the experience

I .. well, you could have tried out - you wouldn't have committed yourself so completely .. you could have experimented with teaching .. and found out that you weren't very happy with doing that .. without .. taking it up for 2 years .. 2 years is a bit of a drastic experience .. which can put you off quite a lot I can imagine ..

S Yeah ...

I So you would recommend it for anybody else in the lab as well would you!

S Yes, definitely ..

I good!

S .. as I say .. I've been trying to think of situations where I've been in this position .. now, I did a job in the holidays, once when I was about 22 .. just after I'd taken my degree .. I was a barman .. and I was in that kind of position then

I Yeah

S I didn't enjoy what I was doing then, really ..

I Oh!

S that might account - .. it just occurred to me .. I'm trying to think of other positions where .. I've been in a persuasive .. position .. I can only think of being a teacher and .. being a barman .. but ..

I - nothing in the job at the moment

S Er .. not really ... well, of course, you get this position in group meetings, for instance, when you have to .. sort of .. defend yourself .. and .. I do tend to be - er - uncomfortable in this position ..

I well, there you are .. yes .. have you any idea what it is that's making you feel uncomfortable?

S ... I don't know really ... er ... I'd like to overcome this, though ..

I Yeah .. Yeah ... well, what would it be .. that you are being asked to do something that you are not quite sure you'll be able to do

S Yes .. it's .. this has come out of my assessment .. I was marked .. You know we have this - uhm - various points system .. and I didn't come out very high on self reliance .. in fact, that was probably my weakest point ..

I eah!

S .. I was marked about average .. I wasn't low or anything .. but it was my weakest point .. I talked to (supervisor) about it, .. he said he would mark me a little bit low on that one ..

I is that the same thing as being .. er .. persuasive

S I think so .. to be persuasive, you've got to be absolutely sure of yourself .. and .. er .. if you lack self reliance, you can't really be persuasive ...

I .. I would have said you are fairly sure of yourself

S - uhm -

I .. but you're not sure of your right to impose that on others ..

S .. No, I wouldn't say that .. sometimes I'm not sure of the facts

I - not sure of the facts -

S uhm ..

I eah

S its very difficult for me at times to hold the facts in my mind .. I have to refer to my notes .. I have them down there somewhere .. I just haven't got them in my mind at the moment .. I'm not going to stick my neck out because I don't know ..

I Yes .. Yes .. Right .. well there you have it .. that sounds to be a good understanding of what worries you in group meetings

S - Yeah ..

I you're not going to stick your neck out, because you haven't done - you don't feel you've done .. all your homework

S Yes .. that's about it .. Yes .. you know, I can be caught unawares .. it's alright if I'm prepared .. sometimes you're not .. sometimes you're asked to justify what you've said ..

I - Yeah .. well is there anything you can do about that?

S ... well ... I suppose it's a matter of commitment to the project really .. I haven't been that interested in what I've been doing really .. I suppose this is it .. you know, I've been working with (supervisor) and I've been doing what he suggested .. and I haven't really worked things out entirely for myself .. if (supervisor) has been missing I've been in this uncomfortable position, really .. you know .. it's a bit hard for me to defend something where it's been something that (supervisor) has thought out, you see ..

I I see ..

S that's what I think anyway

I you haven't had all the facts?

S I've been .. assisting .. in a lot of experiments .. and I perhaps haven't seen the overall picture like he has .. he can justify the results and I can .. only see part of it ..

I - Yeah - that sounds like it ..

S Yeah

I -- so what you do about it is to make sure you see .. the planned .. the overall picture of what's going on

S Yes

I and you'll be able to do .. what you haven't been doing too well up to now ..

S .. I think so .. I think I'll be in a better position ... It should be good practice -

I - absolutely -

S Yeah .. even if it doesn't work out, it won't be a wasted exercise .. I shall have learned something ..

I Yeah .. Great ..

S ... I hope to get it does work out .. I've no particular wish to come back here .. I don't know where I'm going to fit in if I do ..

I - Yeah -

S nominally, the job will be kept open for me .. but I don't know what I'd do .. I'm not sorry to leave what I'm doing here ..

I .. Great .. Great ..

S I'm just a pair of hands at the moment .. you know .. helping out on this machine in the basement ..

I - which is a bit frustrating ..

S - this is not up my street, really, .. I don't mind doing it for a limited time

I Yeah .. O.K. .. well, shall we get on with the - er -

S - Sure -

I .. well, the same thing would apply .. would you like to briefly write what you think, yourself would be .. if we divide it up into 4 quarters ..

S .. Yes

I have you got a pen

S ... Yes ... preference for being active in groups ... ooh, somewhere down about there I should think ..

I - what are you thinking of? .. when you say that

S well .. not being on my own ... working with a group .. I suppose

I - sort of (name) group?

S - Yes .. rather than being left to do things on my own .. I reasonably like working with other people .. although .. as I say .. what I'm doing at the moment, I'm not too keen on .. maybe, this is it, I don't like working as a member of a group of three on a project .. perhaps ..

I Yeah .. Yeah .. Right ..

S that's a bit vague .. I'm not too sure about these preference for familiar and stable situations .. I suppose I'd put myself about here ..

I Can you think of anything in the work which would be about that?

S well, knowing things are not going to change very much .. you know where you stand .. you niche ..

I You know what project you're going to be on .. for the next .. period

S Yes .. I think this way I think ..

I - and your role in it is fairly clear

S Yeah .. although, I say, there are opposing forces on the other side that disagrees with that!

I O.K.: - hah!

S I'm a bit of a split personality!

I .. preference for working with ideas .. that's a bit vague

I well .. what do you think that might mean .. in the job

S .. trying out new ideas .. rather than routine, I suppose ..

I .. trying out 'new' ideas ... er ... You mean, if (your supervisor) said this, you'd be saying "what would it mean" .. "how would it apply" uhm ... I think -

S (reading) "high interest in this means you like working with ideas rather than things" .. that goes back to my interest in computational scientific rather than mechanical .. I suppose ..

I Yes .. like, you're working on a machine, at the moment, but

S - No, I find working on machines a bit soul destroying .. I don't know what it is about it .. but .. I can't explain why it is I don't like it, really ..

I - because you're good at working with ideas?

S maybe

I - you enjoy it more -

S Yeah

I does that make it more understandable ... if you think ..

S - I've never considered myself that good at working with ideas .. I know that I don't like working with machines, particularly

I - Yeah -

S - I find it terribly soul destroying .. I get that feeling of claustrophobia ...

I let's say it's working indirectly .. rather directly

S Yes

I - You know - you can work with figures, which represent some part of the world .. or with an equation .. which represents some scientific phenomenon .. rather than, for example, a salesman .. who wants to see more - physically - what it is he's selling .. and he wants to be able to look at it .. to see it .. whereas you can use ideas .. to represent the work about you .. and what's going on -

S - Yeah -

I it doesn't necessarily mean - only - trying to fit some creative new ideas into some place in the world .. it goes beyond that .. although that can come into it.

S Yes .. I admit I wasn't thinking along those lines ..

I .. will you leave the rating the same?

S No .. I'll probably put it higher, now ..

I O.K. ... D ...

S "preference for avoiding conflict" .. oh, I tend to prefer to avoid conflict .. so, I'll ... where do I put myself on this ... I'm comparing myself with other people, aren't I

I - Yeah -

S - well, a lot of people wouldn't want to avoid conflict .. I think they'd like to face it .. I think I'm a bit lower down ..

I .. Yeah .. do you have any conflict on the job at the moment?

S .. Yes, I do at the moment .. as I say, there are 3 or 4 working on the job at the moment .. some have been doing it for a year, and I've only just started it .. and I've got to stand back and let them do it, and I don't like this, really -

I hah!

S I don't particularly like the way they do things!

I Right! ... beautiful! .. O.K. .. so you quite like conflict

S I don't revel in it, No ..

I but .. you can face situations .. some people would be avoiding it all at all costs ..

S oh .. I didn't .. No, I wasn't thinking of it, that way ... I was thinking of people up here who seem to like conflict .. whereas I tend to avoid it

I You do think you like to tend to avoid it? .. O.K. ... is this something fundamental to a job, or is it something you'll put up with?

S oh .. something I'll put up, yes .. so somewhere in this middle bit, here ..

I O.K. .. yes .. so .. but it's more avoid

S Yes .. I should say so ... Preference for directing others .. well .. that ties up with the persuasive situation .. so, I'll probably mark myself low .. down here ..

I O.K. you don't do any directing .. in any way

S I do very little .. I did have some lab assistants at one time .. but I haven't had any assistants now for some years .. so ..

I Yeah .. fair enough .. what about this next job?

S I don't know, I'll probably be .. I shan't have anybody under me. I wouldn't think .. I'll have somebody over me .. the only people "under" me will be clerical people I suppose .. I'll be in much the same sort of position that I am now .. in the hierarchy ..

I Right ..

S - still on the same grade .. but I shall have a supervisor .. presumably .. I may be less supervised than I am now. I should think .. more autonomous

I Right .. yes .. sounds ideal .. O.K. ..

S so .. if you'll call out the percentages

I could you call out where you've rated yourself, and I'll -

S - Yes - 'A' .. I put myself at 35 .. not particularly liking ..

I Your 'y' score came out at 47

S oh .. I'm alright on that, then

" Yeah .. well you got 6 on 'A'

S well! .. well, well!

I hah! you are a bit of an autonomous type, aren't you!

S must be!

I you like working on your own .. like organising the job according to your own ideas ..

S .. Yeah .. well, well!

I .. just give him the materials, and he'll go away and do the job

S .. Yeah ..

I are you supervised?

S .. I am rather .. yes ..

I .. in what way?

S ... ve, well, it suggests that I'm very much of a loner

I - No .. I think here we've got to look at the interpretation ..

S Yes .. Yes .. maybe I ..

I Preference for being active in groups means that you want to meet people .. Meet new people all the time ..

S oh, yes

I - a tremendous appetite for meeting new people - saying hello, and goodbye ..

S Yes

I - whereas, I should think you prefer to meet new ideas .. and deal with the same people .. and know where you are with the people ..

S Yes ..

I - it doesn't mean to say that you don't like people

S No .. I see what you mean, now ..

I it also means that you must be the centre of attention

S .. Yes .. well that certainly doesn't apply in my case ..

I Yeah .. O.K.

S Yes

I so it's not dismissing your ability to get on with people

S not - sort of - anti-social

I No .. in fact, you're extremely social - in a small circle ..

S Yeah

I but .. compared to how a lot of people .. and you must also remember this is an American test, and you know how much more - um - "groupy" they are in America

S aah .. Yes ..

I O.K. .. so, have we -

S - Yes .. in fact, a lot of people in this country would tend to be a bit low on their score

I - Yes ... O.K. ... I don't want to shatter your confidence!

S hah! .. Yes

I O.K. ... next one .. where did you put yourself

S ... fairly high up .. about 54

I Oh .. well, you got 53 ..

S oh ..

I spot on ext

S .. quite highly .. 46

I 47

S oh! .. quite good

I next

S I put myself at 42

I - 40

S oh, I wasn't directing others, I put myself fairly low - 23

I uh-huh, 31 ..

S 31 .. oh .. do these numbers mean anything?

I No, not really, the meaning comes in the percentile .. when you carry them across ..

S Yes .. so .. could you explain again .. if I'm in this bottom 25 .. what this exactly means .. out of a group of 100 people .. er ..

S I was close on these three .. not far out on that one .. and way out on that one

I well .. as well as to rate how well you know yourself it's also supposed to help to indicate the sort of jobs you should get involved in ..

S .. yes .. so, um .. familiar and stable situations .. working in a large company .. you know, a cog in a large company, you're reasonably stable - in fact, the civil service .. which was what I tried to get into originally ..

I well, there you are .. great

S well, I missed the boat .. but .. ICI's the next best thing

I Yeah ..

S not that stable, these days .. but it's as stable as any firm could be .. its not likely to go crash is it

I well, I hope not ..

S well, others will go crash before ICI

I Yes ..

S So .. obviously .. I wouldn't like to be in a high risk situation such as a small shopkeeper .. this would be absolutely out as far as I'm concerned

I Yes

S .. I don't know whether I'd also have to be high here, dealing with people ..

I I should imagine so, yes ..

S this wouldn't have to apply .. stable situation ..

I .. No .. I would say shopkeeper was absolutely out ..

S Yes .. well .. I'd have known that anyway!

I hah! Yes! .. well .. can we evaluate this next job

S - in terms of this .. yes ..

I You see .. its very ironic, because .. if - er - you hadn't got into this next job, we'd now be turning to constructing the sort of job that would be best for you .. and I'd be saying things like - information scientist - would be ideal for you .. and you'd be saying things like .. um .. do you think so! let's give it a try ..

I well .. what its meaning is .. if you think of the people who do jobs .. naturally .. outside .. of those 100 people

S - a random selection of people

I - Yes, a typical 100 people, or a thousand or ten thousand .. it's supposed to represent everybody .. the people in the top quarter, above this line .. well, they'll be far happier doing work .. and far more effective doing work in these areas .. because everybody else doesn't like doing that sort of work ..

S Yes

I - so they are highly competitive in doing that sort of work .. O.K.?

S Yes

I whereas, down here, they are not going to be very satisfied on the job .. they are not going to be very keen to do work in these areas -

S - aah, yes

I O.K.?

S Yes

I and don't forget its the work as defined by these test dimensions here .. O.K. .. which is a peculiar interpretation .. the test has its own definitions .. which is not to say that you'll turn off at working in a group .. because that this test is saying is .. your need to meet new people constantly is very low ..

S - Yes -

I Its rather ignoring the typical situations at the lab ..

S so I'm not cut out to be an insurance salesman, or ..

I that's right, where you're going directly from person to person to person ..

S O.K. .. yes .. so it .. doesn't really prove anything

I it doesn't prove anything?

S well .. um .. it shows what you think .. if you didn't know already .. and obviously I wasn't too sure on some of these things ..

I well, you knew yourself fairly well ..

I well - it's difficult, because what - how I do it .. with job titles .. er .. in broad terms .. like - analytical chemistry .. er .. then I'd have to translate it into ICI terms .. like what are the paths out of this laboratory into those sort of jobs .. they might be into some sort of technical work .. outside .. where you're working on the analysis of technical results .. which is very similar to what you have been doing ..

S - Yes -

I - and what jobs - in things like technical service - would actually have these sort of components ..

S - Yes -

I does that give you some sort of idea of what it's like .. what I'm thinking if ..

S Yes .. this would be of great interest to (group head) if he know people's scores, and what they are suited for .. this is going to help him, isn't it ..

I well, if you'd like to tell him that, I'd be very grateful!

S well .. yes .. I shall go and see him before I do down there ..

I .. O.K. ..

S he's a bit elusive .. I shall certainly mention the results of these tests .. I'm going into the right sort of thing .. in my own mind ..

I O.K. .. well, let me know how you got on ..

S Yes .. certainly ..

S oh!

I - but you've rather -

S - jumped the gun

I Yes .. thank you! - just the expression I was looking for and - bang - your in .. and I should think that'll go just right for you .. it ties in so well .. you've got autonomy, you've got working with ideas .. it ties in well with computational and scientific .. and also, you'll be sort of expressing your own interpretation - fairly well

S Yes .. in fact, I could do with taking these scores along and showing them, and saying - look, I'm just the chap you're looking for -

I - You've done that already .. because, I mean, you must have been fairly persuasive in some way ..

S - Yeah -

I - because you've certainly given them the right impression

S Yes .. because the guy who was doing the interview, knows a lot about people .. and they don't always, lets face it ..

I Yeah .. Yeah

S You've obviously learned a fair amount about people from doing this .. people in higher up positions probably don't know nearly as much as you do!

I - I like to think that!

S hah!

I O.K. .. so .. what I suggest is .. go full of re-assurance that you can make a real good job of this next thing

S .. Yeah .. I could do that .. Yes .. in the initial stages, yeah

I I wouldn't spend too much time thinking about what other sorts of jobs it would indicate .. that's something we could do .. but I'd spend time at the moment thinking out this one, because it's got all the components of the sort of job you really want

S Yes .. it's one of several, I can see that .. I should be interested to know at some time what the others are .. but I'll leave that to some other time .. you mean you can, from this, quite simply tell me what other ..

B

Selected samples of key events in each helping programme are presented in this section in the form of a case study for each subject (in alphabetical order) demonstrating the development of Helpee Self-exploration.

The extracts, or samples, of interviews data are, in each case, usually taken from:

- SLA - the pre assessment interview; expectation of guidance
- SLB - the results of the aptitude test/s (self ratings in 1st column; test rating in 2nd column.)
- SLC - the reactions of the individual to the test results as they compare with his self-ratings, on the 1st test.
- SLD - the outcome of the helping process towards the end of the discussion of the 1st test.
- SLF - the reactions of the individual to the test results as they compare with his self-ratings on the second test.
- SLF - the outcome of the helping process towards the end of the discussion of the second test.

(N.B. Some of the individuals only completed one of the tests).

Sl

The initial level of helpee self exploration in this case - from the extract (SlA) presented - was rated around level '3' (alternating from two to three). Information is volunteered with little obvious emotional quality, although the subject would probably become more involved in self exploration if he could begin to reach a more effective level of self-understanding.

However, both the intention and some facility to use the test towards exploring his own self understanding was demonstrated (see extract SlA). In fact, because self understanding was alleged to exist already in certain areas, the 'vocational' test was omitted, and the subject took the 'personal' test, (see Slb).

The development in helpee self exploration achieved by the presentation of the test results is demonstrated in extract Slb. Despite initial concern to avoid exploring discrepancies between his self evaluation (i.e. self understanding) and the test evaluation, the subject does move eventually to an area of understanding, a problem area that particularly interests him.

Eventually in the interview, see extract SlD, after fully exploring the discrepancies, the subject moves on his own towards exploration of the implications for his present situation (emerging directionality). His problem is now presented in a

more defined manner, and he achieves greater ability to explore himself, his self understanding, in a manner significantly different from some of his earlier expression. Eventually, in extract SlE, the session is brought to a conclusion, with the subject deciding on further action. By now, the subject declares more certainty and feeling in his expression, e.g. "I feel I can". In fact, several further talks were requested by the subject - formally and informally as he began to integrate the experience of exploration during this session with his present concerns.

Exploration during this later stage can be rated at level 5 (e.g. SlE).

S

- Yeah! that's .. I think that's maybe it .. But, I don't .. I don't like to leave someone in the situation where what I'm saying might be misconstrued
 Anyway, to set back, I'm fairly sure the vocational one will come out strongly in favour of mechanical, computational, and scientific .. This is what my interests and background, are, you see .. whilst I didn't make a conscious effort to decide to go to university .. after leaving school .. I did make a conscious effort as to which area I was going into - mechanical engineering .. It could have been any other engineering .. I'm fairly fairly sure that was the right decision .. But, what I want to know .. what I'm looking for .. is the .. sort of .. second level activities .. For example, since I've applied for this post in Personnel .. I think I might have something that .. I've got an interest in people .. and I might have a sort of hidden talent .. which, at the moment .. is slightly submerged by the mechanical side of my knowledge .. and aptitude .. that sort of thing .. I'm not particularly looking for the latent composer, or anything like that .. because I don't think you'll find it ..
 But, I think you might find something on the social .. the social service side ..

SIA

I What were you expecting to get from the test? .. or, didn't you have any expectations!

S Oh .. I've no real expectations .. I can tell you what I'm looking for .. uhm .. I have, what you might call .. one or two preconceived ideas .. of what would come out of this .. I shall be very surprised if I don't get a high rating in vocational terms .. a high rating on mechanical .. computational .. scientific .. and .. I'd be very surprised if that didn't come about. But I think I would like to try and get out of it - er - which is not on the list ...
 And, having .. decided ... I'm .. I'm not quite sure what I want to say ... I don't want ... I want to think carefully what to say .. When you replay this, you'll find that on a number of occasions I've stopped and gone back again .. on what I've said ..

I - well, that's fairly human!

S Well, I think I do it more often than a lot of people ..
 uhm ..

I .. Do you think out loud? ... in other words, you have one attempt at thinking, and you'll .. just .. sort of .. say it .. and then, - I'd rather sum it all up now by summarising it all like this? ..

PERSONAL		VOCATIONAL	
PERSONAL	PERSONAL	VOCATIONAL	VOCATIONAL
0 OUTDOOR	0	1 MECHANICAL	0
1	1	2 COMPUTATIONAL	1
2	2	3 SCIENTIFIC	2
3	3	4 PERSUASIVE	3
4	4	5 ARTISTIC	4
5 LITERARY	5	6	5
6 MUSICAL	6	7	6
7 SOCIAL SERVICE	7	8	7
8 CLERICAL	8	9	8
9 GROUP ACTIVITY	9	10	9
10 STABLE SITUATIONS	10	11	10
11 DEALING WITH IDEAS	11	12	11
12 AVOIDING CONFLICT	12	13	12
13 DIRECTING OTHERS	13	14	13

SIC

I Reactions!

S .. well .. you can't get closer than that!

I - hah! -

S - if I .. if I had done that as a physical experiment, and I'd got those answers .. if I'd predicted ..

I - Yeah -

S - that those answers were going to come out .. and they hand come out .. I'd have thought - Christ - you've proved your theory, man!

I hah!

S - well .. honestly .. if results in physical experiments came out as close to that .. to predictions .. there would be no need to do experiments .. because .. if your theory predicted things that closely .. you would have been pretty - the only mistake is this one ..

I - so what you're saying is -

I .. S .. it's saying here .. to exaggerate again that half the population would like to go over Niagara Falls!

S hah! - yes ..

I So .. it's saying that you'd like to go a bit more towards coming to terms with new situation ..

S .. Yeah .. mm .. that's pretty good .. you know, I'm interested by that actually .. if one out of five is .. only one is significantly different from what I think .. than I think that is pretty good .. I think the test is quite valid ..

S - familiar and stable situations .. so they .. I'm saying - I think I'm .. sorry .. I'm saying that .. as a result of that test .. I'm saying that I prefer stable situations more than I thought I did ..

I - at the time of taking the test .. Yes ..

S .. Yeah ..

I - more than most people .. the test says .. that in comparison with the rest of the population -

S - I was about equal .. about half way up the scale .. talking to you, just now, I thought I was thrusting - looking for new ideas -

I - not only that you thought you were - but that you would like to feel .. a bit more at home .. than you actually are .. what it's saying to me is that you've been having a bit of bad experience and therefore I tend to avoid it .. therefore - when you're answering the questionnaire .. and you're faced with an .. exaggerated question .. like .. would you like to .. jump over Niagara Falls in a bath tub .. you tend to avoid that .. because you're well aware of reality

S .. mm, yes ..

SID

S You see - um .. at the present time .. I ought to be looking .. for a job where I've got bags of opportunity to exercise 'E' .. this is the directing of others .. I think .. I'm itching to get more responsibility than I have at the moment .. I mean .. a section leader .. a section leader in the present area that I'm in would suit me fine .. um .. with the proviso that I've got to make the decision whether the area I'm in at the moment is right or wrong ..

I - Yeah -

S - I'm fairly sure that it's wrong, actually ..

I - Yuh -

S but ..

I why do you say that it's wrong ..

SLE

I O.K. .. well .. shall we leave it ..

S - mm - yeah -

I - open ..

S - Yeah .. I'm going to have to .. think .. as to how I'm going to .. pursue that one .. or even .. but, that .. that's the main one .. that's come out of it .. I'm going to think very hard how I'm going to pursue it .. I feel I can ..

I .. Yeah ..

S by - A - simply ringing this bloke up and saying .. look, I'm interested in your advert .. I know you can't give me a job .. but, for Christ's sake, tell me what you do ..

I Right! .. Right .. you've stirred a chord .. you can tell me more

S .. and .. maybe .. maybe I'll come up with something .. um .. within I.C.I. .. I don't know .. as I say, I've also got this friend in (company) .. have a chat with him and find out what he does ..

I Yeah ..

1
2
3
1

The initial level of helpee self exploration in this case - from extract S2A was rated as around level 3 (alternating between three and four). Information, of a personal nature is volunteered immediately but with little demonstration of feeling in the problem area as initially defined - "I should try to get some qualifications - sort of thing". However, the subject does demonstrate some emotional proximity in a related problem area - "I've already done one at (university) and made a mess at that".

Although the subject demonstrated little idea as to how the test might help, his attempts to explore were sufficiently advanced for him to take both the vocational and personal tests, (see S2B).

Whereas some subjects (e.g. S1) demonstrated some self understanding fairly immediately with respect to the Kuder dimensions, S2 was not confident about this approach to self understanding. Although self ratings (S2B) were as effective as many subjects, there was a reluctance to risk too many judgements about himself (see S2C). His immediate reaction after the feedback of results was to attempt to obtain the helper's judgement. However, with encouragement he did begin to explore the areas of greatest concern; and, eventually (S2D) he developed more and more ability and confidence in the attempt to develop self understanding and see it relate to emerging directionality and action, e.g. "Yes .. well .. obviously .. you

know - particularly as I'm thinking about going back to do this course .. I mean .. if this had come out with mechanical at about 12 or something .. I'd have thought - something is wrong here! .. you know ..

The personal test and concepts of self understanding tended to be a little too much for the subject to explore with ease - although, it was by no means rejected (S2E). The conclusions of the session (S2F) thus reflected the differing attitude to the two tests; however the subject continued to explore his difficulties in relation to the concepts of self understanding and his immediate concerns to arrive at a decision about his future career.

Helpee self exploration at the conclusion of the sessions can be rated at level 5 (S2F).

S2A

S ... the thing is - er ... I'm an engineering L.A. - sort of thing .. I was on a sandwich course .. I was at the university - taking my honours degree

I - Yeah -

S ... and I failed my first year -

I Right -

S - so I came back here as a lab assistant.

I - Right -

S .. Now .. people here want me to go back and do a degree again .. and I'm not really certain ..

I - Right -

S - whether it's the best thing to do or not ..

I - uh - huh -

S .. er .. I seek to get this feeling, that - er - I should try to some qualifications - sort of thing ..

I - Yeah -

S - actual degree course .. now, I'm not really certain whether it's the right way to go .. or even the right subject ..

I .. ah - hah - well!

S hah! .. I've already done one at (university) and made a mess at that ..

I - Yeah

S - through various reasons -

I - Yeah

S - uhm .. I was ill at that time .. through nerves - sort of thing ... and I don't want to fail again

--

I What would you like me to do?

S uhm ..

I .. are you clear on that?

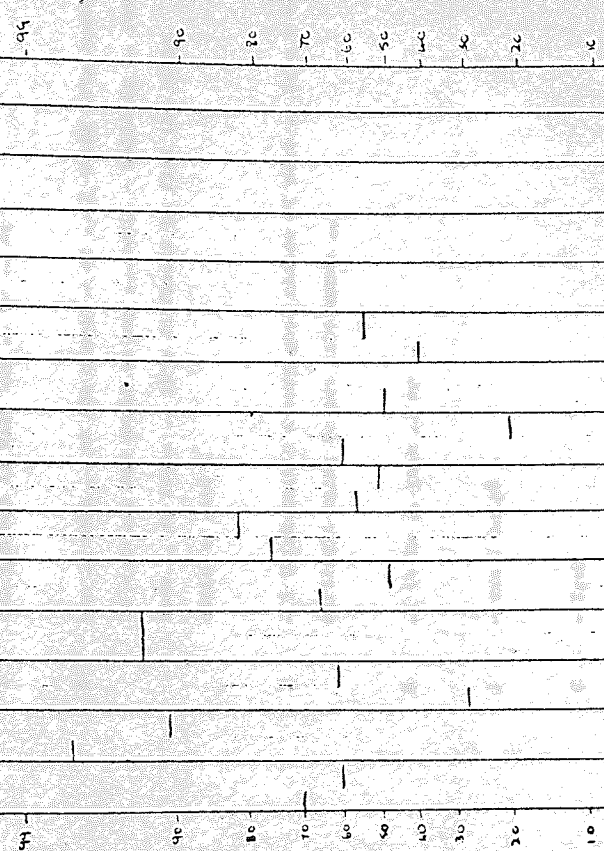
PERSONAL		VOCATIONAL	
Category	Sub-category	Category	Sub-category
Directing Others	D3	Outdoor	0
Avoiding Conflict	0	Mechanical	1
Dealing with Ideas	2	Computational	2
Stable Situations	3	Scientific	3
Group Activity	A4	Persuasive	4
		Artistic	5
		Literary	6
		Musical	7
		Social Service	8
		Clerical	9

S .. not really .. because (supervisor) said you had some sort of analysis - or something ..

I - Yes -

S - You know .. which could show me my right - vocation - sort of thing .. uhm .. could we do something on those lines? .. or just give me a few ideas - or something?

I - Yes .. sure .. Right ...



I How have we gone with this .. can you give me some idea .. any idea .. hasit been worthwhile

S - oh yes .. definitely ..

I - Yes, definitely -

S - Yes ..

I Can you say in what way .. or .. or

S uhm .. well .. at the moment - er .. I think it's tended to - er ... how shall we say ... well - solidify .. you know .. my ideas .. it's difficult to find the right choice of word -

I - I think that's a very good choice of word .. it's a very difficult thing to put into words ..

S .. it is .. yeah .. er ..

I - can I help? -

S - Yeah

I - let me offer a suggestion .. what I hoped you'd do, is - er - when you went out of the room .. you'd have a little more .. er, confidence .. about - saying .. this is me

S So .. what do you make of that?

I hah! .. what do you make of that! ..

S .. well .. the biggest difference is this one isn't it .. the - er - social services one .. followed by music ..

I - Er .. Yeah .. well, it depends how you look at it .. the biggest percentage difference was the social service one .. where there was something like - forty per cent difference .. whereas, if I'd asked you a bit more about that one .. it might have -

S - dropped -

I - dropped - yes ..

S .. it might have been .. you know .. that it went so high .. because - you know - you didn't want to appear a right - bastard -

S - Yes - well .. obviously .. you know - particularly
as I'm thinking about going back to do this course ..
I mean .. if this had come out with mechanical at
about 12 or something - I'd have thought - something
is wrong here! .. you know ..

I Right!

S - And .. you know .. it's been quite reassuring that
those things have come out there ..

S - mm ..

I - and you might actually suggest to someone - I like being
creative .. whereas I don't actually think you do that,
at the moment

S - No -

I You're a bit reticent about - being self confident .. about
actually saying - I can do this better than anyone else ..
I'm good at this .. when you say - solidify some ideas ..
it's solidified some ideas you've had at the back of your
mind - about this artistic - for example -

S - mm

I - You know - am I really - or - is it wishful thinking

S - Yeah - Yeah .. definitely ..

I - so it's making out that it's really, not just wishful
thinking

S - Yes .. it's really .. well, you know - laying it down
on a piece of paper .. what - you are - sort of thing.

I which will - presumably be some help in -

S2E

S .. uh - hugh .. what are your comments then!

I half .. well .. I take your reaction to be a little unsure .. and, a little surprised -

S - Yes -

I and a little at a loss to understand

S Yes ..

I Fair enough .. but, don't worry .. I've often found people with less job experience than - say - someone in their 30's - go a bit askew ..

S oh ..

I - your current life situation - I suppose - could also be .. described as a little .. unformed .. so, if we take .. 'E', first .. er .. you would 'like' to be in a position of authority much more than .. you dare admit .. and dare answer the questionnaire as -

S - Yes - .. Yes

I - sort of a bit of a lack of confidence ..

S Yeah .. that's quite reasonable

The initial level of helpee self exploration in this case was relatively low - see extract S3A - being rated at '2' (alternating between one and three). There is little expressed dissatisfaction with the subject's present life - career - situation, and a tendency to talk in the abstract rather than personally, e.g. "a person who believes he is right will 'expect' .. someone who is less self-confident about being right will 'hope' rather than 'expect' .."

This subject opted to omit the 'vocational' test and take the 'personal' one. Although the results 'surprised' the subject and created some reaction, the self exploration that was achieved was not very effective. Some defensiveness was aroused (e.g. S3C 'So I don't like meeting people as I said - eh ..') which the helper was unable to overcome totally. Eventually, (see S3D) the subject reacted favourably ('it's certainly an acceptable sort of result, I think ..') but still inadequately in terms of process movement. In S3D, the subject is still unable to volunteer any concept of himself except in the abstract sense of the impersonal terms of "the jobs I've been making enquiries about".

At the conclusion of the session (S3E) the helper is still unable to effect any significant process movement to where the subject demonstrates any personal involvement -

I O.K. .. well .. what implications .. what conclusions ..

S .. uhm ..

I what are you going to do .. as a result of these

S Well .. that is pretty clear - the vocational one ..

I - Yes

S - but I'm still not certain about this personal one ..

SZA

I What would you expect, then, from this -- short - test.

S You're talking about the aptitude test .. oh boy! .. what would I expect from it ... I don't know ... I don't think I really expect anything, you know .. there's no point, it seems to me, in expecting it to do something ...

I - Fair enough ...

S - one hopes that .. it will confirm one's own self analysis .. er .. reasonably well, otherwise, the self analysis is way off beam, you know, .. it might turn out to be a surprise ...

I uh huh -

S - but as for expecting it to do something .. again, it's a personality thing isn't it .. a person who believes that he's right will 'expect' .. someone who is less self confident about being right will 'hope' rather than 'expect' ..

I I quite agree .. yes ... so that says what you would like to get from it, does it?

or awareness of particular work activity that achieves feelings of satisfaction. The subject would probably remain unaffected by the limited self exploration achieved during the session -

Helpee self exploration at the conclusion of the discussion (S3E) can be rated at level 3.

PERSONAL		VOCATIONAL	
11	DIRECTING OTHERS	0	OUTDOOR
10	AVOIDING CONFLICT	1	MECHANICAL
9	DEALING WITH IDEAS	2	COMPUTATIONAL
8	STABLE SITUATIONS	3	SCIENTIFIC
7	GROUP ACTIVITY	4	PERSUASIVE
6		5	ARTISTIC
5		6	LITERARY
4		7	MUSICAL
3		8	SOCIAL SERVICE
2		9	CLERICAL
1		10	

S .. well .. perhaps it might help .. to point the way a little .. help in thinking out what to do next ... I've done a number of tests, and some of them point one way, and some another. I also believe someone told me that there's more than one way of interpreting the answers, which was an interesting point!

I hah! .. when you say 'point the way a little' could you expand a bit on that

S well, yes .. I just don't have any idea what might come out of this test .. It might give me more idea of what I do have an aptitude for .. or what I don't have an aptitude for, and that's got to be taken into account ..

I Yeah

S - as long as I choose to believe the results, of course!

I hah!

S - but I don't think I'm the type to completely discount what comes up ..

SFC

S uhm, that's interesting isn't it .. they're not very accurate ..

I eh?

S my shots don't look very accurate.

I They don't?

S Well ..

I which ones are you thinking of?

S it depends how accurate is accurate in this sort of activity, really, you know. I'm obviously not miles out, but I don't know what you would regard as a normal degree of accuracy .. this is the worst one, the last one ..

I Yeah ..

S that's the one that seems to be giving me a lot of trouble!

I hani yes .. what, in understanding?

S uhm .. so, your score comes out a bit lower on working with people - meeting with people - centre of attention .. a bit lower on familiar and stable situations .. so I don't like meeting people as much as I said - eh ..

I - well, that isn't really significant - a quick rule of thumb is a difference between your score and mine in different quartiles, those two are only a few apart ..

S I see .. so the ones we should be looking at perhaps are 'C' and this one, 'E' ..

I Yes .. in terms of the job you like.

I Can I make a suggestion

S - uhm -

I I haven't heard any - er -

S - well, there might be something I've left out ..
I don't know ..

I well, there's one obvious gap .. like I.C.I. ..

S oh!

I what kinds of jobs are there in I.C.I. .. what I
was going to suggest was -

S - Personnel, I'd forgotten that .. I mean I have
tried applying for that ..

I - put down .. go away and do a bit of thinking along
these lines you suggested, and we'll take it up
another time ..

S .. Do a bit of thinking about what, though?

S it's certainly an acceptable sort of result - I
think .. I read somewhere, recently .. er.. an
article on this kind of testing .. I don't know,
a colour supplement or something ..

I - Yeah -

S - which said, that .. er .. the usual result was
that people got fairly close to the answer ..
because they tended to know themselves best in any
case ..

I - Yes - Yeah .. well .. as I was saying, the object
of the exercise was to do some thinking .. about ..
jobs .. your ideal job .. and then, how it might
apply ..

S .. Yes ..

I presumably .. you would be able to have a better idea,
now, of your ideal job - after thinking about it ..
along these lines .. than before

S .. Yes .. Well .. it might be interesting to compare
it with the sorts of jobs I've been making enquiries
about ..

I .. O.K. .. Yeah .. Yeah .. which ..

S4

I well .. take down the various career paths .. like technical service .. marketing .. personnel .. distribution .. finance .. and then rate them - across here - on the 5 columns .. O.K?

S - uhm -

I - on the various definitions .. like you've done that one

S - uhm -

I - and see what you come out with ..

S Yes .. that might be an interesting thing to try ..

The initial level of helpee self exploration in this case was rated generally at 4 (alternating between three and five). From the very commencement of the interview, the individual concerned expresses his concerns with considerable emotional proximity, although not necessarily achieving very effective exploration of his concerns. The ideas that pour out are often abstract and only vaguely related to the predominant career problem concerning the individual (S4A).

Similarly, initial levels of exploration in relation to the method of treatment were not very high (S4B). This subject, too, opted to omit the 'vocational' test and take the 'personal' questionnaire (S4C).

Self exploration after the feedback of test results (S4D) was still comparatively hesitant, but, with some strong helper direction, the eventual levels achieved were much higher (S4E). In this case, compared with S3, the subject demonstrated far greater ability to develop a sophisticated concept and understanding of his own aptitudes and how they related to the various components of work situations. In this case, action was erratic rather than hesitant.

Helpee self exploration at the conclusion of the sessions (S4E) be rated at level 5.

SIA

before .. I'd been told I hadn't been doing enough for the group - and all this .. so .. this time .. I didn't exactly walk out .. but rather than sit around reading papers all day .. I went and got a job on the plant ..

I .. How do you spend your time - at the moment?

S umm .. very poorly ..

--

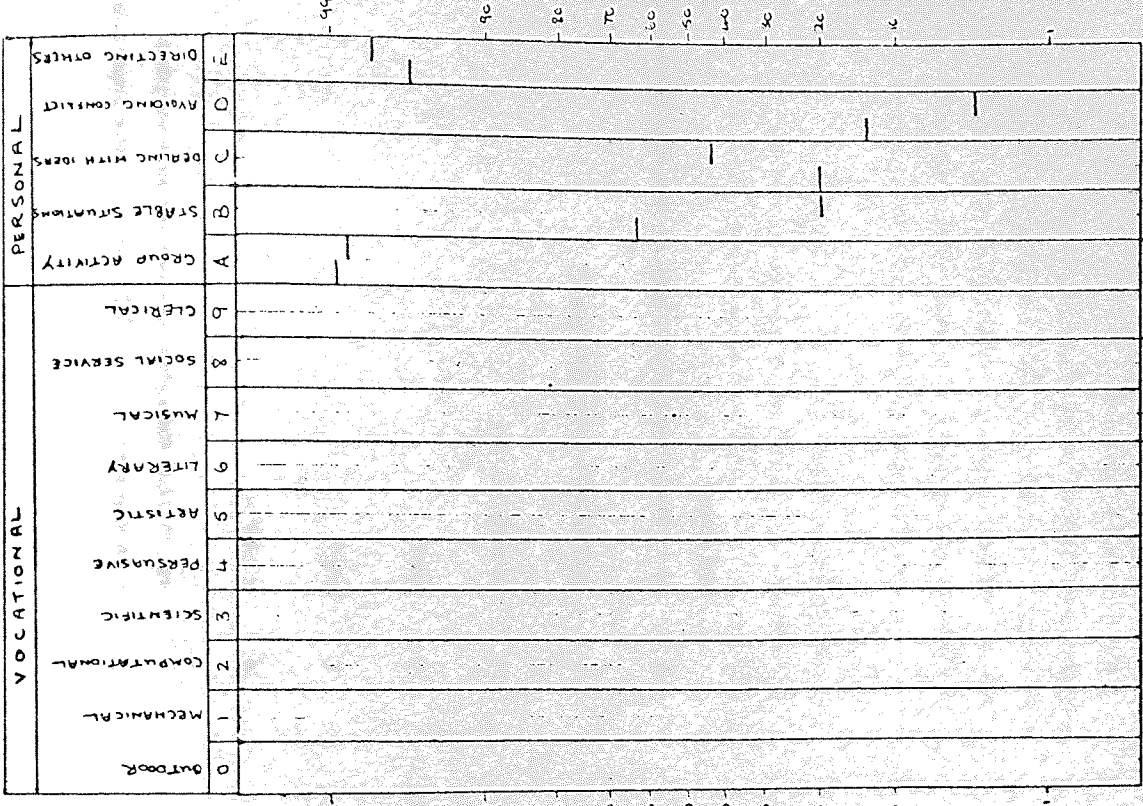
S - I think I tend to have a lot of drive .. and because .. at the moment .. the work is so up-hill and down-dale .. and I'm also dissatisfied with the career prospects .. and things .. I'm transferring a lot of my drive to keeping fit ..

--

S - I went to see (group head) at Christmas .. he wondered why - and I told him I'd come about my assessment .. I know .. I .. I expected to get a reasonable rise at Christmas .. when I found out - (group head) had given me a 'D' .. now, I'd expected at least a 'C' .. so .. I went bloody mad .. well .. he gave me a chronic rise .. and we had another argument .. so I got all the assessment out .. my supervisor gave me a good assessment .. he said - oh, I don't believe that .. so, I thought, right - I'm off ... I had another assessment .. there was an enormous row .. about things ... and I got hammered again.. I got hammered this time for being too diverse ..

S4B

I well .. what would you like to get from the test?
 S well .. I'm really in the position where I want to explore every avenue .. check out whether I'm on the right track .. how do I get into a job where some sort of progress is possible ..



4

I Any reactions?

S Yeah!.. they are rather close together ..

I - what A and E? - are close together ..

S well .. there's a lot .. 'A' and 'E' are close together ..
umh .. No .. sorry .. the scores you gave me .. it's
close together for 'A' .. it's close together for 'E' ..
and, for this this one ..

I - 'D' -

S Yeah .. 'D' .. reasonably close .. now, I don't know
about these two .. 'B' and 'C' .. it suggests to me
that I'm a bit mixed up!

I hah!

S either, that .. or the test is no good!

I hah! aah!..

S No .. Not really ..

I well .. what is it that's mixed up .. umh .. let's look
at 'C' first .. 'C' .. preference for working with ideas ..
the test says that you're a little higher than you rated
yourself ..

S - Yeah -

I - in other words, it's not something that turns you
off .. it's something that you can take or leave

S - Yeah -

I O.k.

S Yeah

I So that's right

S That seems reasonable, yes ..

I so .. you're much better able to cope with ideas than
you think.

The initial level of helpee self exploration in this case was rated generally at '3' (alternating between 2 and 4). The subject's expression of his situation was a struggle. But it was a struggle that he was determined to undertake (S5A).

This subject opted to take both the 'vocational' and the 'personal' questionnaires, (S5B).

Eventually (S5C), the subject began to explore himself more effectively. A particular concern had been a fear of what he might find out about himself. Similarly, (S5D) after more detailed discussion of the test results, towards the conclusion of the first session, the subject declares his particular concern much more effectively, ('uhm .. I'd already decided that .. it was a question of what, really ...) Also, the subject demonstrates some effectiveness in turning this self understanding towards the problem of action (S5E).

During the second session, the subject has difficulty in exploring understanding as effectively with the 'personal' test as with the vocational - (S5F - "I'll take it back with me and look at it again"). But, despite the difficulty the subject continues as far as he can to explore (- S5G) the 'vague feelings' he has.

Helpee self-exploration at the conclusion of the sessions (S5G) can be rated at level 4.

S4E

S Well .. at least .. it seems that I'm on the right track .. you know .. I mean .. I've decided what I want to be - or do, anyway.

I What

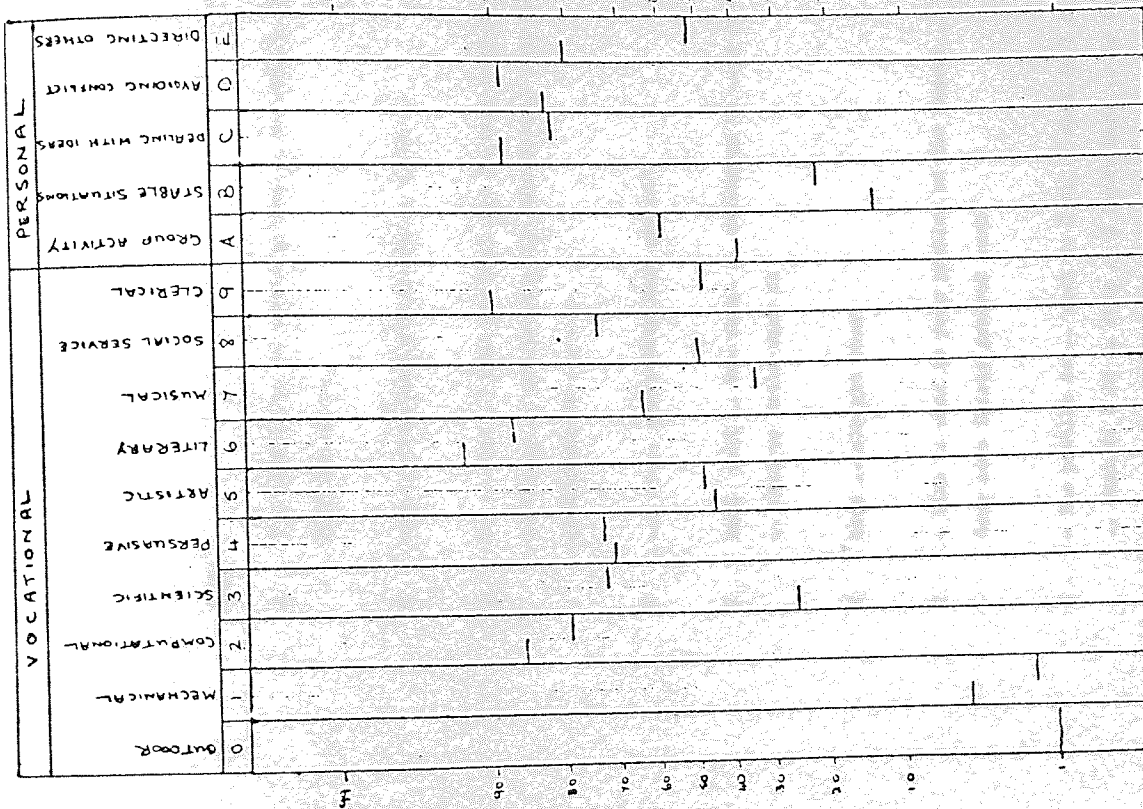
S become a sales rep. or a sales manager .. or .. something in production .. production manager .. you know - plants - and this kind of thing

I Yeah - Yeah .. what would you have said this implied about the job you're going to be interviewed about tomorrow?

S I would have said that it's spot on ..

I Yeah ..

S - its a lot of responsibility .. it'll be challenging .. the situation will be fairly stable .. er .. job wise .. but not stable, ideas-wise, because of the trouble-shooting .. er .. sounds like I'll meet a lot of people .. have to advise people .. on setting up plant and making sure the thing runs properly .. so .. it should be quite good, actually ..



55A

I What do you expect to get from the test?

S er .. confused results ..

I confused results?

S - possibly

I confused in that the test doesn't understand .. isn't really a representation of you?

S No .. No .. just - the impression - that if I am of a confused state of mind about what I really want to do -

I - Yes -

S - then, presumably, the test would reflect that.

I Right .. Yeah ..

S .. of course, if the test .. - I shall be interested to see if, what the test result is .. whether it confirms my own feeling, or what ..

I Yeah .. Yeah right

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S5D

I You like to be on secure ground .. before you put your oar in ..

S and .. directing others was .. quite ..

I So .. that .. when you feel you do have a good grasp of things .. you can usually communicate what that good grasp is

S ... so .. where does that get us?

I hmf! well .. how about .. owning up to .. a problem .. that we could work at

S Yeah .. alright then

I - like .. what is your problem at the moment .. we've done some fairly general work

S - The problem is .. what do I do .. what do I do - How .. what do I do .. when .. I leave here .. is that - stated - clearly enough, .. or does it want .. some more ..

S5C

S .. well .. there .. those .. that - that .. you know, I'm satisfied with that .. I'm satisfied with .. that .. I suppose I am satisfied with .. Yeah .. literary .. that's right .. uhm .. that persuasive worries me .. er, that .. not too worried about that - scientific .. I rated that high because I was in this particular situation -

I - Yeah - Yeah

S .. computational .. that doesn't bother me, as well .. uhm .. mechanical .. uhm .. that worries me .. uhm .. outdoor .. I don't know .. I don't think there's much to be feared there .. but those two .. particularly that one ..

I - Yeah -

S - as regards occupation -

I Yeah - Yeah

S looks a bit frightening ..

I well .. I imagine it would benefit from as much as you could give it

S Right .. so we do .. what do we do if we stop being a physicist.

I - Right .. yes .. is there anything here which helps you answer that .. can you see the sort of profile of activities that you like doing .. that you are especially suited to doing ..

S .. Yeah .. mm .. I suppose so ..

I Well, what's your reaction to that lot?

S .. oh .. I'll take it back with me and look at it again .. it's not surprising, really the first one, group activity, that's a bit low, what does that mean?

I - that you can take or leave, working in groups .. it doesn't particularly bother you ..

S uhm .. I quite like meeting people

I oh, yes, it doesn't say that you don't like meeting people, but rather, for example, whether you like to have decisions taken jointly ..

S Yes .. I suppose you're right ..

SEE

- I So we've helped in the decision about .. is it on to look outside pure physics ..
- S umh .. I'd already decided that .. it was a question of what - really ..
- I - it was a question of what?
- S - not so much where .. or when .. as what, to do .. rather .. It was .. you know .. It wasn't a question of .. shall we look outside physics .. or shall we stay inside physics .. it was a question of what to do outside physics, really .. that's it ..
- I - Yeah - .. does this help you decide what to do outside physics?
- S .. Yeah, I think so .. really .. I .. I was thinking to get on .. one of those .. sort of .. er .. what do they call them ... er .. management mathematics - type of course .. or something
- I - very good!
- S - but it might be better not to ..
- I Why not?
- S - it might be very difficult to get on one, anyway .. another is that .. from this .. it might be better to straight to an accounting .. type .. of thing ..

S6

The initial level of helpee self exploration in this case was rated generally at '2' (alternating between one and three). During the initial interview, the subject discussed himself, volunteering personal information but in a predominantly mechanical manner. Statements of his situation were made in terms of solutions that already existed. He was unsure about what he could achieve from the session - and more generally what it was he wanted in terms of assistance (see S5A). However, it was possible to get some general declaration of a problem - a dissatisfaction - at the level of confusion.

There was an element of defensiveness regarding the results of the test - fear of possible results tended to overcome any interest in exploring discrepancies between his present self understanding and directionality. After the test (S6C), more exploration was achieved, new concerns emerged, (lack of confidence) but the discussion never achieved any really effective exploration of the concerns, which were quickly hidden again.

Although this subject took the first test, with the intention of taking the personal one as well, he changed his mind after the vocational test (see S6D).

Helpee self exploration at the conclusion of the session can be rated at level 4 (S6C).

S5G

- I Have you found that this has helped in any way?
- S Yes .. it has ... it has - sort of - confirmed - vague feelings, if you like
- I Yes
- S I feel more confident about .. certain vague feelings ..
- I Right ..

SSC

I What did you want to get out of .. what did you get out of .. this?

S Er .. a bit more confidence, I suppose .. I mean, that's not bad is it ha! .. that - one per cent out - well, less than one per cent, really ..

I Yeah .. it comes out that you do know yourself quite well .. in the important areas.. because, you've had quite a struggle .. to work against .. the career you first started in

S - Yeah - Yeah .. like, well .. it's more engrossing - sorting out people in London.

S This is the reason why I asked to take the test, really .. either to give me a bit of confidence .. or .. if I do fairly well, it will give me the confidence .. if I don't .. do well .. then I'll .. have to pull my socks up ..

Have decided am sufficiently satisfied, and too much self analysis may be harmful!!!

S6D

exploring his situation. Eventually, a conclusion was reached which demonstrated how the subject was concerned to examine his problem principally in terms of the mechanical concepts of 'research or production' rather than as personal activity which gave him greater or lesser satisfaction.

Helpee self-exploration at the conclusion of the session (S7E) can be rated at level 4.

S7

The initial level of helpee self exploration in this case was rated generally at level '3' (alternating between two and three). There was some initial reluctance to volunteer personally relevant information (see S7A). When pressed, however, the subject did begin to state a situation that he was concerned to see changed, a question he was trying to answer about himself (e.g. S7A "What could I do").

In common with some other subjects, this subject opted to take the 'personal' questionnaire. The 'vocational' test was not considered as likely to increase his understanding in relation to his concern (S7B).

Immediately after the presentation of the test results (S7C) exploration was still hesitant. There was an awareness that a discrepancy was highlighted, but a reluctance to explore the implications for fear of the consequences, and because of the inability to really explore his self understanding in relation to the test areas.

Later on in the session, exploration began to improve (S7D), the problem or concern being better expressed in terms of self understanding (e.g. 'I have this problem'). However, the session was not able to lead the subject beyond the abstract generalisations (S7E) with which the subject was

S7A

Q pure or applied?

A Er, well .. I don't .. I think .. I'm not sure whether I'm a pure scientist or an applied one, because I call myself a theoretical engineer! because .. hah! because I prefer the theoretical side which is not what applied science is about .. But the theoretical side of applied science, if you like!

(Laughter)

Q Well, well, well!

A But, No, I mean .. it might point to other things, like management. I mean, you mentioned management before - and - er - one or two people have said that I should end up in management, not science at all - not that I'm not a scientist, but that I'd be a damn good manager, And, er .. you know, but some things - I've not had any experience of that, obviously, but I was you know - I hope that - something like that might - might come out, might tell me something about that .. At the moment, I just see a mass of .. I just think that I could do.. I see this massive area - science - and I think I could probably do anything within that area, but what could I do? - hah - that's my problem, you know.

Q What - er - would you like to get from this test?

A ... Er, well, I've had some of these before actually, when I went through the university careers appointments boards procedures, I had one of those.

Q Do you remember what it was?

A Yeah, it was one of these things where it said ... you know, it had about 40 questions or .. they were all would you rather be this or this, and then someone came up with some Graph which said your scientific ability is off the chart and we can't - its too high - we can't put it on the chart; and, you know, it was all joining points up and down. I think it was fairly accurate - fairly-predicted fairly accurately, but, you know, it wasn't specific, I mean, it just said, you are obviously good at science, and that's it. You know, I would hope that it might sort of point some areas .. in which I should look - well, it happens that I've looked at some of them already, but perhaps tell me some areas in which I should be looking at, and some areas which I might be good at - within - within science.

Q - such as - what are you thinking of?

A Well - I don't know really ..

S7C

I O.K., so what's your reaction to that?

S .. well .. it doesn't have to be too far out to pass, does it?!

I hah!

S .. what was 'B' .. preference for familiar and stable situations .. yes ...

I .. that's the one that you're most wrong on ..

S .. it seems so ... uhm ... well, perhaps it's right! ..

I ... what do you think it means .. what do you think it's trying to say?

S ... these two seem to be consistent

I which ..

S .. preference for directing others .. and for dealing with ideas ..

I Yeah ...

S Yeah .. well, I suppose that figures alright ..

PERSONAL		VOCATIONAL										
		O	M	N	S	F	A	L	S	C	S	
		OUTDOOR	MECHANICAL	COMPUTATIONAL	SCIENTIFIC	PERSUASIVE	ARTISTIC	LITERARY	MUSICAL	SOCIAL SERVICE	CLERICAL	
DEALING WITH IDEAS	0											
STABLE SITUATIONS	0											
GROUP ACTIVITY	0											
AVOIDING CONFLICT	0											
DIRECTING OTHERS	0											

44
90
80
70
60
50
40
30
20
10

I ... Yes ... the low scores are also important ... this suggests that you like challenging and new situations ... you like conflict ..

S Yeah .. I'm not worried about that one .. it doesn't tell me anything new! ... but I didn't think it was that bad! ...

S .. I quite like research, but .. I have this problem, that .. after relatively short periods of time .. I become .. a little .. I want a new situation .. which is perhaps completely opposite to what I said earlier about wanting a stable situation ..

I hah!

S I want something new .. I feel that I know the area .. and I know the work .. and there isn't anything particularly new to learn .. and then I become disinterested .. I mean, I think this rapidly happens to me even in completely new research .. I mean, I'm not at that stage yet .. I feel, now, that there's not a lot more for me to learn without .. considerable .. more effort .. over a long period of time .. I mean - then - I would be interested .. but .. coming to the last of my Ph.D course .. and presenting my thesis .. there's not a lot more for me to learn from this three years ..

S7E

I Well any more reactions, now? .. like what does it all mean!

S .. well, in I.C.I., its simply a matter of research or production isn't it .. I mean, you either go into a production job or stay in the research area ..

S Yeah .. well, I was going to say .. it still seems pretty general

I uh huh ..

S Yeah .. it seems to assume .. er .. No - perhaps it doesn't .. perhaps it just comes out that I should be a manager and not a scientist ..

I - it appears? -

S - well - it - you know .. from .. what .. it says .. it appears that I should .. be in a management position .. you know, dealing with people .. and directing activities .. rather than .. being .. uhm .. going completely the other way .. I mean, there's two directions you can go in I.C.I. .. You can stick completely to the research side .. and go on that way, to try and get up to senior research associate .. and whatever .. and that doesn't seem to come out, at all, does it ..

I .. No .. that's very true .. here .. I'd say be careful about how you think jobs are - what they consist of ..

S8

Helpree self exploration at the conclusion of the sessions (S8F) can be rated at level 5.

The initial level of helpee self-exploration in this case was rated generally at level 3 (alternating between levels 2 and 4). The subject was initially a little reluctant to volunteer information regarding any personal dissatisfaction with his career situation. This expression did improve (S8A) when the helper requested. But, still, it was not expressed with much evidence of emotional proximity; although satisfaction was introduced by the subject as being important "I've enjoyed what I've done".

The subject opted to complete both the 'vocational' and 'personal' questionnaires.

Development in helpee exploration was slow but steady throughout the two sessions that followed. In S8C attention is turned towards the discrepancies, but without much affective exploration of them. By the end of the first session with the 'vocational' results the subject was (S8D) able to explore the discrepancies, and relate them to his own understanding and needs - e.g. "I think it's a fair .. comparison .. I think you've hit the nail on the head".

Eventually, with the results of the 'personal' questionnaire (e.g. S8E) the subject begins to explore his needs at newer levels of description - "with experience and years, you carry on working up" (S8F) as he realises a need for some pattern or plan in relation to career.

I What would you like to get from - this:

S .. well .. I .. I've no ideas of what I'd like to do - and be .. I just wondered what - er - a sociologist's viewpoint of what .. what I ought to be doing ..

I Right! .. O.K. ..

S .. what I shall do if you come out with something different that I should be .. a cowboy, or a chef or something .. I don't know quite .. what I'll do

I hah! .. right .. that's alright - except that you haven't told me what you think you ought to do - or be .. but, that's O.K. - you've told me something of it - in simple terms ..

S .. well, it's just to work, basically .. in engineering ..

I it is

S : Yeah .. I don't think I'm fitted to do .. It's difficult to know really isn't it? .. I'd like to travel, but er, .. with the job type of thing ..

I Yeah .. O.K. ..

S .. I don't think you can define what you are going to do .. what you'd like to do .. because you don't know whether you'd like it, anyhow ..

I - until you've tried it

S Yeah .. I can say .. with fair conviction .. I've enjoyed what I've done .. whether its been fibres, or its been membranes .. after a while, you get used to it .. when you get into it, you commit yourself to it ..

I .. Right .. Right .. fair enough ..

S My viewpoint is - as long as it is serving a purpose ..

I uh huh ..

S -I'll do it ..

I uh huh ..

S - when it stops being .. when I'm doing work to just fill in time - that's no good ..

PERSONAL		VOCATIONAL														
		OUTDOOR	MECHANICAL	COMPUTATIONAL	SCIENTIFIC	PERSUASIVE	ARTISTIC	LITERARY	MUSICAL	SOCIAL SERVICE	CLERICAL	GROUP ACTIVITY	STABLE SITUATIONS	DEALING WITH IDEAS	AVOIDING CONFLICT	DIRECTING OTHERS
S	.. 39 ...															
I	27 ...															
S	um .. I think that literary one, there - .. I said I wanted to be, didn't I? ..															
I	That's right, yes.															
S	Yes, that's what you wanted to know .. 90 per cent of me wanted to be better at it than I was															
I	uh hhm ..															
S	.. well, what do you conclude from that?															
I	oh! .. what do you mean! - what do you conclude from that? .. there were lots of Grunts and Groans as those scores were coming out .. what were the Grunts and Groans for?															
S	well .. perhaps I'm over rating myself ..															
I	- over rating your ability .. Your interests															
S	it looks like it .. or my interest in it ..															

I .. uhm .. well let me say .. No .. I don't think you are .. its more to make you think about it .. it's more important to concentrate on the fact that you come above the line in 8 .. 5 .. and 1 .. O.K. .. and with 0 .. 3 .. and 6 you rated yourself .. over rated yourself

S - the interest is not there perhaps .. - I would regard that .. outdoor scientific and literary would be my less important .. interests ..

I Yes .. Yes

S as they are .. and I would regard mechanical, artistic and .. social service .. are my interests, I suppose

I that's right .. Yes

S also computational .. yes, well .. oh .. and persuasive .. now that's right down, isn't it ..

I - it doesn't mean to say you're bad at it - it means that .. probably you've got other things to do

S Yes .. that's right .. I .. yes .. I think it all comes out .. it's funny really .. I didn't really expect it!

I hah!

S well .. are you supposed to say what I should be doing then

I hah! .. which is what you really want to get out of it!

S what I wanted .. what I wanted to get out of it was .. I know what I want to do .. I wanted to find out what you want .. what you thought I should be doing ..

I well!

S8D

I Well, how do you feel about the result?

S .. I think its a fair .. comparison .. I think you've hit the nail on the head

I encouraged?

S Quite pleased, yes ..

I .. Do you want to do the other one?

S Which one's that?

S8E

I Now .. any reactions

S - preference for being active in groups .. are you saying I don't prefer to be in groups?

I er .. well you're not below the 25% cut off.

S No .. I'm in it ..

I You're in the middle .. sort of .. can take it or leave it.

S Yes ..

I My interpretation of that is .. do you remember the first test .. the artistic thing came out on .. a high score .. which to me refers to someone who likes to get on with their own .. thing ..

S Yeah .. oh, I see ..

SBF

S uhm .. jolly good .. uhm .. it plans out, doesn't it ..

I it plans out? .. what, the pattern?

S Yes .. you can see the pattern ..

I Can you see a pattern that you can put into words ..

S well .. just that .. you come in as a junior .. and, with - generally - experience and years, you carry on working .. working up .. without actually going for promotion and this sort of thing .. you tend to .. I suppose .. with more experience and more knowledge, sort of thing, you gain more respect in the group you're working with ..

I - uh - huh -

S whereas .. when you're just new they don't take any notice of you, at all ..

I Yes .. Yeah

S - especially if you come with no experience and - feel for how they are working ..

I and .. also .. you gain more confidence for doing things on your own in your own way ..

S Yeah .. Yeah ..

The initial level of helpee self exploration in this case was rated generally at level 3 (alternating between levels 3 and 4). Although a great deal of material is volunteered about a dissatisfactory personal situation, the manner of the expression is disjointed, and ranges - mechanically - over various areas without attempting specific exploration to any great extent. There is evidence of some emotional proximity - SGA 'I have been somewhat fed up'.

This subject opted to complete both the 'vocational' and 'personal' questionnaires. However after the discussion of the 'vocational' results, events moved in a way such that the subject considered that the reason for taking vocational guidance no longer existed (she was offered and she accepted a new job).

The immediate reaction to the conclusions and discrepancies highlighted by the 'vocational' results was notably one of feeling. In this case, self understanding needed confirmation rather than alteration (S9C). As the session continued, exploration of the subject's concern became more effective (J9D) and eventually this understanding was applied to the situation in terms of action to change the dissatisfactory work situation (S9E).

Helpee self-exploration at the conclusion of the session (S9E) can be rated at level 5.

I Why are you taking the test?

S .. well .. for a while, I have been somewhat fed up .. with the job .. and position .. uhm .. for many reasons .. there's not much scope for a person of my level ... and ... a lot of it - particularly the job I'm doing at the moment - is very routine .. you're carrying out part of a job, and then somebody else completes it ... uhm ... and also the type of work that you're doing means that it doesn't really fill your day as you would like it .. to be filled .. uhm .. you've probably got time on your hands, and really there is nothing to fill the time with ... you could probably rush through a lot more than you do .. I could fit more in, but it would be a waste of my time, anyway ... the particular group I'm in isn't particularly good to be in, for prospects .. or even an interesting job ... I'm sure I could get more out of the job - even more out of a job in chemistry - being placed somewhere else, perhaps .. you know .. which I think .. because I'm so fed up with the particular job I'm in, it tends to put me off chemistry altogether ...

S9C

PERSONAL		VOCATIONAL									
		O	I	A	S	F	A	S	N	C	S
		OUTDOOR	MECHANICAL	COMPUTATIONAL	SCIENTIFIC	PERSUASIVE	ARTISTIC	LITERARY	MUSICAL	SOCIAL SERVICE	CLEERICAL
DEALING WITH IDEAS	U										
STABLE SITUATIONS	D										
GROUP ACTIVITY	V										
AVOIDING CONFLICT	D										
DIRECTING OTHERS	M										

I Any reactions?

S hah! .. I find it amusing to come as high .. as that

I - amusing? .. like you weren't expecting it?

S - er -

I - or it's a funny combination

S - No .. No .. it's funny because .. uhm .. I think of me .. uhm .. I'd enjoy working with people .. and using that side .. but .. there's .. always a bit of ..

I - hesitancy

S - Yes, hesitancy .. and confidence .. and it's come out like that .. I find it amusing ..

I hah! well .. in fact .. it's saying that you're in the top 5% of the most .. uhm .. of people who like dealing with people .. of the most persuasive and the most social ..

S - uhm -

I socially concerned .. sensitive ..

S uhm .. yeah .. I wipe the floor with some people - sometimes ..

I hah! yes .. I can imagine ..

SDD

I What impact .. do you think the test has had? Has it helped in any way?

S I think it's helped to confirm my own thoughts .. because .. once .. I thought I knew my own mind .. and I'm the type of person .. who does tend to underestimate .. and .. I think: - you know - now, I'm sure I know my own mind .. is it just because .. you know, because I'm fed up, or is it .. you know, well, that is more of a true picture ..

I Yeah .. Yeah .. and it helps you convince yourself that .. you're not just .. trying to swim against the tide .. that is the real 'me'.

S - Yeah .. Yeah ..

I and .. do you feel more assured .. that ..

S - I'm not being fed up with certain things for .. the sake of it, really .. you tend to think .. am I just making it appear .. am I must being stupid.

I You now .. know more certainly what's upsetting ..

S Yes

I and you can a lot clearer .. what to do in order to change the situation

S - Yes .. Yes ..

S Well .. there is a vacancy in a (group) .. This would .. include a job of one's own .. and it would include administration as well .. because everyone would be taking their fair share ..

I Right

S and I've been asked to think about it .. there was nothing definite .. just to keep it in mind .. and have a chat again about it and .. from what I could see .. I would certainly be better off doing something like that ...

I

... why?

S ... it was connected to a field I was interested in ... there would be more involvement - because of the way the group is run ... and there would probably be more outside contact, as well ... short of leaving I.C.I. ... and doing something entirely different .. that seemed to me .. one of the best solutions ... you know - I thought - well, I could do a good job .. my days weren't going to lumbered in doing chemistry as such .. I obviously needed something more in a job .. which as I'm doing, now could be seen as boring .. anyway ..

I

Yes ..

SIOC

The initial level of helpee self exploration in this case was rated, generally, at level 4. During the initial interview, the subject disclosed considerable concern about "the job I would most enjoy doing" (SIOA) and also demonstrated the depth of his own personal probing towards understanding "an infinite combination of circumstances (SIOA). However, despite some confusion, his formulation of the problem provided a good basis for this particular helping programme, with its emphasis on the distinction between the person and the environment at work (SIOA).

The subject's reaction, in fact, to the method of treatment was too positive, the emotional proximity of his response tended to prevent as effective a thoughtful exploration as was probably possible. In fact, this is evidenced in the excerpt SIOD, where the subject explains how the experience of the first interview was still producing new insights. However, the exploration, evidenced in SIOC, during the first interview was at a high level. The development of self understanding was clearly well received, although the subject at this stage felt uneasy at his ability to act on this - "I see things a little more clearly.. I'm not sure how to use it.." (SIOC).

This high level of exploration continued during the second interview (SIOE), and eventually, (SIOF) the subject began to develop spontaneously some emergent directionality concerning the self understanding that had resulted - "the simplification is ME .. and it does help in knowing .. helping you to know what situations you would like to be in".

The subject's difficulty in applying his self understanding to his particular circumstances is further evidenced in S10G, the voice quality of his exploration is less enthusiastic, and his ideas are less spontaneous or probing - e.g. "No .. I don't think so .. it doesn't really have .. you know .. this ideas, thing." (S10G). However, there is enough evidence of the subject's willingness to explore to suggest that his achievement of more effective behaviour will develop, given time for the subject to fully probe his emerging ideas about himself and his world, e.g. "O.k. .. its got the stability .. which is quite something .. its got this .. conflict bit .. its got this directing others bit .. but it hasn't got this ideas bit .." (S10G).

Helped self exploration at the conclusion of the sessions can be rated at level 5.

S10A

I What would you like to get from .. the .. aptitude inventory?

S .. Er .. well .. I don't really know much about it .. I don't know what .. I don't know what the object is .. I suppose the object of it is .. that .. let me tell you first, I suppose that's what you want me to do .. umm .. the object of it is to tell me where my specific strengths and weaknesses are .. er .. I think that's really .. that's what I expect out of it .. I would like to get .. I would like it to be .. I would like the impossible .. I would like it to tell me what job I would most enjoy doing ..

I .. what job I would most enjoy doing?

S Yeah!

I Why? - is that impossible.

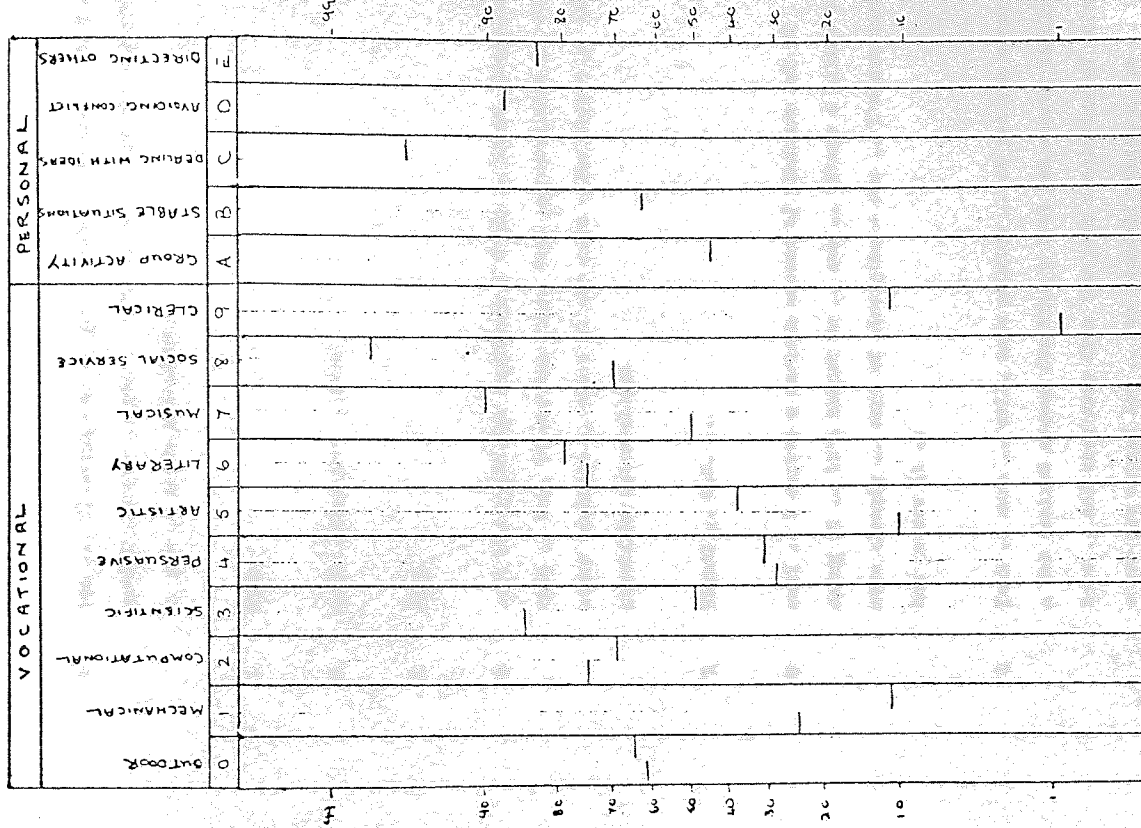
S .. Because I don't think you know .. you know .. enough about the job .. to make that possible .. to know about all the jobs in all the different circumstances .. I think .. is an infinite problem .. an infinite combination of circumstances .. it's not just the job, it's .. it's the environment you're in .. the way you live ..

I un-huh!

S well... I would think that was impossible!

I O.K.!

S .. You might .. I mean .. you might be able to take in isolation - say - a job somewhere .. a "job spec." is an attempt to make a fit .. But, that's not going to tell you whether you're going to be happy in your job ..



SLOC

S Yes ... literary was .. quite good .. musical .. yes .. social service .. yes .. I think we solved these problems .. yes .. quite acceptable ..

I Yeah.

S quite surprised ... yes!

I hah!

S .. I was a bit too confident I think .. about predicting them .. Now, it was the other test you mentioned .. the other headings .. where it was more - feelings - .. that should be interesting!

I Right! .. O.k. ..

S well .. I derive a certain amount of pleasure out of doing it .. It's helped me .. see .. things a little bit more clearly .. sort of strengths - etc .. I'm not sure how to use it ..

I Yeah .. sure .. well, as a proviso .. if you can construct a job centred around the things that you scored highly on here .. and keep away from the jobs consisting of things where you scored low .. you yourself wanted a job .. in scientific .. and literary .. whereas the actual score suggested 6 .. 7 .. and 8 ..

I O.K. ... any reactions?

S er ... I think the musical one's a very good one ..

I uh-huh ..

S I can see that ... and .. it's not really a surprise at the others .. musical is fairly high .. mechanical is fairly low .. computational - fairly high - but not dominant .. scientific .. I'm not particularly surprised. I had trouble with the interpretation, here .. because I wanted to interpret it in a very specific rather than General way

I - problems .. rather than - 'physics' ..

S Yeah .. It's a very good picture, yes .. very good .. fantastic, yes .. artistic .. discrepancy, there .. I put myself low, because of the interpretation...

I - messing around with hands -

S Yes - but in fact it came out a little higher because I saw things as more .. creative.

I - expressive -

S109

I Have you had any thoughts on the previous one?

S Er - I have, but .. I .. well, not so much on the previous one, but .. what .. there were things that .. after I last spoke to you .. which I thought was a .. yeah, in these sessions .. we talk entirely about me .. that's great, you know .. well, I turn round and say what are your expectations, and what do you want, and .. it's a little unfair in a sense .. its all centred .. the discussion is centred around myself .. and that's partly it .. I enjoyed the last session, because I thought I .. I recognised .. things .. about myself, which I'd .. only .. thought about or only suspected .. only thought about in a hazy way ..

I - Good!

S - it, sort of, crystallised one or two things out ..

I - Great! ... you can't remember what they were? - it doesn't matter if you can't.

S - I can't - but at the same time, I went away, and a day or two after it, I thought .. well .. not so much about .. well, I should have told you, that fact about me, or another, because without that, you wouldn't understand - I can't for the life of me think what they were, but they were - sort of general facts - that could have added more to the conversation -

I - that makes up the picture of you -

S Yeah - Yeah

SLOE

anything - recognising - and not doing anything about it .. uhm .. although .. I'd like to do something about it ...

I uh-huh ..

S .. so .. so I would agree with the .. analysis .. in that case ... yes, preference for avoiding conflict situations is higher .. than I said it was .. The other thing that's higher is .. preference for directing others! .. uh huh! .. that's very good that

I - compared with .. the average

S well .. I'm not sure whether it's very good .. in fact .. I have wondered whether .. it's something I do enjoy it .. or it .. it's something I'd like to do - and I'll do it well .. uhm

I - may I suggest?

S - uh-huh -

I - that it's .. you enjoy putting in the thinking .. behind .. presenting .. a problem to someone .. in a way .. which .. they will then feel .. they can .. proceed with

I .. Any reactions?

S .. let's see .. oh .. preference for working with idios is very high .. well - obviously - I would expect that - yeah .. and 'D' preference for avoiding conflict .. aah, yes .. yes, that's good .. yes .. I would .. I think .. I probably underestimated it, actually.

I - Yeah?

S Yes .. I think I did.

I - especially .. and this is the most important one .. the conflict between .. what you are doing .. and what other people expect of you ..

S - yeah -

I - these are the conflicts you don't like ..

S - Yes .. Yes ..

I - and we discussed that, also, under familiar and stable situations ..

S .. Yes .. we did .. that's true .. yes, that's very true .. yes .. that is a conflict, I .. well, when you say its avoidance, or .. yes .. yes I do see it .. because I suppose I am avoiding it .. in a sense, by not doing

SLOF

S uhm .. yeah .. yeah

I - it's very much .. behind the scenes .. working

S Yeah .. that .. that work behind the scenes bit .. I .. feel a lot more for that, than in just directing

I uhm

S Yeah!

I Well .. how are you going to apply this .. to I.C.I ..

S .. hmmm

I - that's what you thought I was going to tell you!

S hah! .. yes .. well, I did ask you that question a few minutes ago .. in a sense ..

I well .. would you like me to .. er ..

S .. it's very difficult isn't it .. to apply anything like this to I.C.I. ..

I .. Unless, you're trained!

S .. well .. unless .. people are totally aware of this sort of thing .. you know, people will accept this .. in the sense that .. the job situation is not very good at the moment .. one can only really hope to move from one job to a .. slightly better job in this respect ..

I uh-huh

S - one wouldn't make giant strides .. I don't think .. but unless people .. well - say - who are selecting people .. want .. want to use this as a method ..

I Yeah .. Yeah ..

S You know .. in a way .. I think people always try to do this .. er, semi consciously -

I - without really knowing why ..

S but - that .. that's the difference between me .. going through this procedure .. and me NOT going through this procedure .. and recognising .. that .. it .. it is possible to .. simplify .. ME .. in some respects .. the simplification is me .. and it does help in knowing .. helping you to know what situations you would like to be in

I uh huh

S .. for finding out about people .. about people's suitability for the jobs ..

I uh-huh

S - if they did that - that would change .. the situation

I - er ..

S You know .. if I was going for a job in I.C.I. .. and .. most of the things that we've done here .. I tend to agree with ..

I uh-huh

S You know, I can see why I've scored high in some places and low in others .. Now, if I was going for a job .. in I.C.I. .. and the people who were going to employ me could recognise all of this .. and relate all of my .. strengths and weaknesses .. to the job .. then that would be very good.

I Yuh! .. You don't think they do?

S Well .. my impression is they don't .. they don't think very deeply about these .. sort of .. aptitudes .. when they're thinking about putting a person into a job

SLOC

S No .. I don't think so .. it doesn't really have .. you know .. this ideas, thing

I Yes .. Yes ..

S .. O.K. .. it's got the stability .. which is quite something .. it's got this .. conflict bit .. it's got this directing others bit .. but it hasn't got this ideas bit ..

I .. Yeah ..

I - Also in Teaching, there's D plus .. E plus .. C plus D plus ..

S E minus is there?

I Yeah

S Where .. what's E plus .. is it in the upper percentile?

I Yeah ..

S .. Yes .. well .. I knew this thing about teaching .. anyway .. um .. that .. that teaching wouldn't be .. unacceptable .. as a profession

I uh-huh .. and .. that's a good way of putting it .. that teaching wouldn't be un-acceptable .. in other words, it would be a 'take it or leave it' .. wouldn't be too enthusiastic, or too unenthusiastic about it .. one way or the other ..

S Yeah!

I it's not the sort of thing that you're really looking for .. for stimulus, though

S11A

I O.K., well, you've given me some superb information.

S Yeah, well.. I've told you quite a lot about myself .. I don't know whether I've missed anything out ..

I No .. No .. that's ideal .. thanks very much ..

S I had a chat with (personnel officer) .. I don't know whether you know ..

I oh! (personnel officer)

S Yeah .. I told him quite a lot about myself

I .. Yeah, and what - er ..

S and he noticed that I'd been five years at boarding school and two years in the army .. and he - sort of - told me something I didn't really know about myself .. that I'd been rather conditioned - in the environment .. and nobody ever told me this .. it never occurred to me .. I'm somewhat used to being told what to do ..

I .. Yeah .. Yeah ..

S - and this might be significant ..

S11

The initial level of helpee self-exploration in this case was rated, generally, at level 4. A great deal of personally relevant material is volunteered, but without much tendency towards inward probing towards new attitudes that could alter an unsatisfactory state of the subject's career (S11A).

This subject chose to complete both the 'vocational' and 'personal' questionnaires.

The development of the subject's capacity to use his exploration for developing effective courses of action depended primarily on the helper offering conditions relevant to confirming much of the helpee's self understanding (S11C). The subject became ready to evaluate courses of action spontaneously (S11D) - "so I'm not cut out to be an insurance salesman". However, the principal concern of this subject was to evaluate the appropriateness a course of action he was presently undertaking (he had applied for a new job, not in research).

During the second results session, this concern became the primary focus of attention (S11E) and, eventually, the subject begins to apply the new capacity for self understanding towards other relevant concerns (S11F).

The level of helpee self exploration at the conclusion of the sessions can be rated at level 5.

I .. Yeah ... and - then - did you go away and do something about it?

S .. Er .. not actually, No .. because I don't know actually what I can do about it, really .. I think the fact that I'm thinking a lot more seriously about what I'm doing .. I am trying to be flexible - taking up different subjects this term .. I'm not actually being told to do it .. I thought it up myself ..

I Yeah!

S - Perhaps I have over reacted .. but this came out of my assessment interview in August with (group-head).

I Great! .. Great!

S - that I ought to be doing something ..

I - not standing still -

S - that's right, yes .. I had rather forgotten about job searching .. I was rather content with what I was doing .. I was then stirred into action, again .. thinking maybe things aren't that secure here .. you can't stay here forever .. I'll have to be looking around, soon .. because of the policy here .. I have not thought about it too much .. I have rather left it to other people - say (Group

head), when he was here .. he said that if anything suitable came along, he would let me know .. I haven't been doing much for myself .. but, since the assessment, I have been actively doing .. I have realised that, in the past, nobody has been doing anything for me, really .. Letting me stagnate, in fact .. it struck me I ought to do something about it .. I'm the only person that can help me .. nobody else can help me .. - but, I am not as worried as I used to be .. I'm doing all I can, now, so .. I realise my career hasn't really been very varied up to now .. if you have varied experience, it helps ..

I - and you're going the right way about it, now .. into a varied experience .. as you were saying, this (job application).

S - it is more different, yes .. a bit of a change, yes ..

I .. let me show you what I was thinking might be of interest ..

SLIC

I ... Now, what reaction to that

S ... um .. well, I've under rated myself on three of these

I - which are -

S - outdoor, computational, and scientific

I Yes

S .. and I've over rated myself on mechanical .. and under rated on artistic, literary and musical ability ... I'm alright on social services ... and under rated on clerical ..

I ... that's right ... you've under rated on six and over rated yourself on two

S - hah! -

I hah! indeed! ...

S ... which proves - as I was saying before ... but, there's more to it than that, though .. isn't there

PERSONAL		VOCATIONAL												
TR	DI	CO	SC	ME	LI	AR	MU	SO	CL	GR	ST	BE	AV	DI
Directing Others	Initiative	Computational	Mechanical	Literary	Artistic	Musical	Social Service	Clerical	Group Activity	Stable Situations	Dealing with Ideas	Avoiding Conflict	Directing Others	

94
95
96
97
98
99
100
101
102
103
104
105

SLID

S .. so I'm not cut out to be an insurance salesman,
or ..

I that's right, where you're going directly from person
to person to person ..

S O.K. .. Yes .. so it .. doesn't really prove anything

I - it doesn't prove anything?

S well .. um .. it shows what you think .. if you didn't
know already .. and obviously I wasn't too sure on
some of these things ..

I well, you know yourself fairly well

S I was close on these three .. not far out on that one
.. and way out on that one ..

SLIE

I O.K. ... what reaction?

S ... well, fine! ... got nothing to worry about!

I han!

S I'm doing the right thing, then ..

I Yup

S I shouldn't be a square peg in a round hole, then ..

I No ... well .. it's a bit dangerous for me to tell you
that .. do you feel a bit better about it yourself?

S - Yes, I think so ... I think it improves my self
confidence .. if I know that ..

The initial level of helpee self exploration in this case was rated, generally, at level 4. Personally relevant information is introduced spontaneously and with considerable emotional proximity but with little achievement of any probing to discover new or alternative courses of action relevant to career concerns (S12A).

This subject opted to complete both the 'vocational' and 'personal' questionnaires.

The development of exploration in the case of this subject depended - again - on confirmation of such present self understanding. The subject only began to relate understanding to directionality and action in the later session with the 'personal' results. Reaction to the 'vocational' results was still exploration at a fairly high level (S12C). However, there was a tendency to avoid any direct expression of concern at this stage.

By the beginning of the second session (S12D) the subject had developed fairly effective self understanding in these areas and had related them to personal concerns. The results of the 'personal' questionnaire were now approached with greater confidence, and exploration now achieved higher and more effective levels (S12E).

The level of helpee self-exploration at the conclusion of the sessions can be rated at level 5 (S12F).

S12F

S .. this would be of great interest to (group head) .. if he knew people's scores .. and what they are suited for .. this is going to help him, isn't it ..

I well, if you'd like to tell him that, I'd be very grateful!

S well .. yes .. I shall go and see him before I do down there ..

I .. O.K. ..

S he's a bit elusive .. I shall certainly mention the results of these tests .. I'm going into the right sort of thing .. in my own mind ..

S12D

I Before we get stuck in, how .. have your thoughts progressed any further from last time? .. what sort of impression have you got of last time? .. anything stick in your mind?

S .. uhm .. last time, really .. sort of .. proved, to a certain extent, what I was .. perhaps .. thought vaguely about, you know .. I was .. sort of .. pleased that it was .. uhm .. we got something .. down on paper - rather than in the air .. you know ..

I - Yeah .. and what were the things?

S well .. you know .. it's very nice to know that you've .. got .. this .. ability .. you can enjoy .. in another field .. a different thing altogether .. but it's difficult to drop everything immediately and .. go to that job .. and it's also very difficult to plan to get there in steps .. you know .. because one's towards a peak in one profession - a scientific one - it's very difficult to drop everything - start from right down .. and climb back up in another one ..

I Yeah .. Yeah

S the other possibility .. I suppose .. is to go sideways .. and slightly down .. in I.C.I. ... and change the - sort of - thinking

S12C

I O.k. .. well .. what's your reaction ..

S well .. other than this one .. which was a slight surprise .. I mean, I can understand this one .. it's pretty obvious .. I could .. you know .. I think .. I think that's probably .. the .. you know .. surprise .. I'm slightly surprised that that one is - at least - not near the boundary ..

I uh huh ..

S and - er - this one I think: .. you know, I accept those two, really .. I mean .. I've had to round here - do you know that there are some people here who haven't been to a cinema for over two years!

I Really!

SL2E

I what - the emphasis on the job that you're doing?

S Yes - from this emphasis on long term research to .. more involvement with .. you know - things like writing .. and ..

I - using your ability to express yourself.

S .. I'm nothing ..

I - what do you mean, you're nothing!

S .. well, I'm right in the middle .. I don't know what I'm doing!

I hah!

S well .. this one's slightly up - B - does that mean I've low interest then?

I it means that you like things to be happening all the time .. you don't to have the same situation

S .. I suppose that's true .. yes .. like being on staff committee .. Yeah.

SI2

The initial level of helpee self-exploration in this case was rated, generally, at level 2. This subject did not volunteer personal information very easily, and seemed detached from any personal involvement in the process going on. Initial exploration (SI2A) bordered on evasiveness ("Should I go on the hole") and even further into the session any personal information was presented reluctantly and ambiguously ("No ambitions ... just that - er - I obviously want more responsibility - eventually").

This subject opted initially to complete both the 'vocational' and 'personal' questionnaires. However, after completing the session on 'vocational' results, and taking away the 'personal' questionnaire, the 'personal' questionnaire was not returned to the researcher. The subject, informally, mentioned on various occasions that he was still "getting round to finishing it".

The reactions to the results of the vocational test show hesitant attempts to relate the results to his own self-understanding (SI2C). The subject, at this stage, has not directly expressed any concern about his career situation and thus is not sure why he is interested in the test results.

Towards the conclusion of the session, however, (SI2D) one concern does emerge more clearly - "Yeah ... pass

exams and that "which is not explored at any depth".

The level of helpee self exploration at the conclusion of the session can be rated (SI2D) at level 2.

S12A

I ... have you thought how you might get it?

S ... well, the only way to get it is to get more paper qualifications; there's no point in - er - it's just working - working hard .. it's the paper qualifications that count .. as far as I.C.I.'s concerned, anyway ...

I What would you like to get from the - er - aptitude test?

S .. uhm .. to see if I'm suited to the job, perhaps .. to see if I'm suited to any other job ... whether I should go on the dole ... that's about it -

I - what?

S - I think that's about it

I hah! would you fancy going on the dole?

S I don't know, I've never tried it ..

I It's got some good parts about it.

S Yeah ...

I Fair enough ...

S ... not so bad to get paid for doing nothing.

I Yeah! ... do you have anything of a career plan?

S ... No ambitions .. just that - er - I obviously want more responsibility - eventually ...

SLXC

I Any reaction?

S .. this is supposed to be a comparison of what I .. think of .. in general .. in comparison to what I score of in actual - in those areas ..

I well .. it's saying that you have a preference for this activity compared with the rest of the population .. in general .. at this level

S - Yeah .. that's what the crosses are supposed to mean .. that's my - er -

I .. that's where you put yourself .. so on these scores you were fairly accurate .. but .. like .. what do you like about music?

S well .. you know .. it's fairly creative .. uhm .. that's why I chose that ..

I creative .. in what way?

S well .. you can play .. pleasing tunes .. you can create things .. out of an instrument ..

PERSONAL		VOCATIONAL	
TH	DIRECTING OTHERS		
D	AVOIDING CONFLICT		
P	DEALING WITH IDEAS		
B	STABLE SITUATIONS		
V	GROUP ACTIVITY		
D	CERICAL		
S	SOCIAL SERVICE		
M	MUSICAL		
L	LITERARY		
A	ARTISTIC		
P	PERSUASIVE		
S	SCIENTIFIC		
C	COMPUTATIONAL		
M	MECHANICAL		
O	OUTDOOR		



I Yeah .. Yeah .. any other reactions?

S Well .. computational .. that's a bit .. strange ..

I well .. what do you like about .. computational ..
sort of activity ..

S Yeah .. well .. when I finish doing something like
that .. there's a sense of satisfaction .. it is ..
exactly correct and pleasing to look at when it's
finished ..

I Right .. Yeah ..

S But the actual starting to do it is much less fun ..

I Yeah ... Yeah ...

S so, what's your view?

I my view .. well, I was still asking you yours ..
let's go through them then, one by one ..

SL3D

I it's not for me to analyse .. it's not for me to come
out with a - you ought to be this .. O.k. ..

S Yeah

I it's for you to look at it and say - well, I know
myself pretty well, already ..

S and this is to help me make sure that I do

I Yeah .. and .. if you like .. what it would be for,
then .. is to say .. well, O.k., in 5 years' time what
are you going to be doing .. what would you like to be
doing

S mm .. yeah .. that's what I was thinking, you know ..
.. there's no .. there's not .. there's no
advancement, I don't think ..

I what? in I.C.I.?

S - not in the job I'm in .. there are people doing the
same job as I'm doing, at a higher level .. and earning
a lot more money ..

I Yeah .. Yeah .. but you've got to get a lot of basic
background, haven't you ..

S14

S Yeah .. pass exams and that ...

I ... and how is that getting on?

S .. oh .. I treat it as a challenge.. you know .. rather than as for their usefulness ..

I treat it as a challenge?

S well .. you know .. a challenge to the system .. I'll pass those bloody exams .. you know .. whatever use they are or not ..

I do you find the knowledge of any use to the job?

S None whatsoever.

I Do you think it might be of some use, eventually?

S Only passing the exam .. I suppose it is a bit .. only I think most people forget.

The initial level of helper self exploration in this case was rated generally at level 3. Personally relevant material was introduced quite freely, but without much demonstration of emotional proximity or inward probing. In fact, the subject suggests that he merely requires confirmation of present constructs, although there is also some evidence here that the voice quality is less confident than the expression - e.g. S14A - "but .. really .. I suppose I wanted you to wave a magic wand and tell me I'm ideal for it".

Although the first interview facilitated some degree of exploration in the subject, the subject only achieved some inward probing of his constructs slowly and hesitantly, and with some considerable direction by the helper. However, at the conclusion of this first interview the subject responded - for the first time with some evidence of emotional proximity, e.g. S14C "Yeah.. I quite like the idea of science and social service".

The subject's difficulty in overt expression of new insights continues during the second interview. However, high levels of empathy help to develop the subject's self understanding, e.g. S14D and S14 E. Eventually (S14F), the subject responds enthusiastically towards a specific action suggested by the helper that is seen and experienced

S14A

I What would you like to get from the aptitude test?

S um .. well, the .. the biggest disadvantage with my experience at the moment is that it's very limited .. I've got no experience at all outside of life in the university and life in - Runcorn -- and all of that has been scientific ... um .. basic to work ... I suppose I've had very limited experience of - administration - just a few odd things tossed your way ... so, the biggest uncertainty is I'm not .. I can't be sure of how I'd fit in with the whole wide range of opportunities that are available ..

I Good ... yeah ...

S now, if .. it occurred to me that .. the emphasis seems to be towards progression into management .. in the laboratory, or it certainly was .. and I didn't see .. that I wouldn't fit in with this .. general progression .. because I didn't mind the administrative side ..

I .. Yeah ..

S but .. really .. I suppose I wanted you to wave a magic wand and tell me I'm ideal for it.

by the helpee as most usefully related to his, present circumstances "Yup .. Yup - that would be very good .. quite useful .. so I'll get a list of past vacancies .." (S14F).

Helpee self exploration at the conclusion of the sessions can be rated at between level 3 and 4.

SL/C

I Well .. how you go from here into take the ones from here .. which is mechanical .. scientific .. and social service .. O.K., that's 1, 3 and 2 ... with a proviso on one, actually, because you said, as an activity you like it .. but - er - in a job, you're not necessarily very keen on it -

S - Yeah -

I - because you do a lot of it at home, O.K. ...

S - Yeah -

I - You take a look at these ratings here .. 5, 6 and 7 .. that's a bit suspicious, as well .. because from what you've said earlier .. you've got a greater desire to be expressive in your job than you've actually come out at .. therefore one wouldn't go too much by these results .. well .. with other people, one would say .. well, let's say with clerical .. one would say, don't go for a job which is predominantly clerical .. when you are thinking of a job - think in terms of activities that it requires me to do' .. like .. personnel work .. a lot of it can be clerical .. so, you say to yourself .. I like a lot about personnel work - I like the social service bit .. but unfortunately it's got clerical .. let's take a closer look .. what are its good points .. what are its bad points ...

I .. well, any reaction?

S .. um .. chemical .. computational .. scientific .. well .. persuasive still comes down doesn't it ..

I don't forget the test is not absolute .. but I would interpret this discrepancy as probably meaning that you are not very confident .. if you rate yourself higher than you score .. like, you are probably interested in these activities .. but you didn't have the confidence to choose them in the test.

S - Yeah

I ... there's an interesting bit of development going on there ..

S Yeah

I ... O.K. .. it's not absolute - saying for all time .. At the moment when you took the test, you might have just had a bad experience trying to persuade somebody, and you've gone right off persuasive ..

S .. Yeah .. oh, that's quite interesting What do we get out of that, then ...

SL4D

S .. Yeah ..

I What does a personnel officer do ... most of his day he may spend being persuasive -- persuading people .. and you can actually then rate a job in terms of .. well, its got a lot of bad things about it .. or one or two good things .. whereas this other job has four or five things that I really care for -

S - Yeah .. Yeah

I .. How do you feel about the .. results so far?

S Yeah .. I quite like the idea of science and social service ..

I .. Fine .. O.K. .. we'll see what we can do for you next time.

I .. any reactions?

S .. the biggest one was 'E', my preference for stable situations .. so that I have a very high preference .. compared to other people .. that means .. Yeah ..

I ... what does that mean .. that you probably like a particular type of work compared to other people .. people who don't like to be tied down to a particular line .. or job .. they are much more changeable .. they like .. being .. Given opportunity to chop and change .. according to their whim and fancy ..

S .. uh-huh ..

I .. whereas you're liable to say .. well, I can do what's to be done .. and I don't mind committing myself - getting stuck in to actually doing it.

S - Yeah -

I .. does that make sense?

S .. Yeah .. I think so, Yeah ..

SL4E

I ... because - er ... it means that you like in a job that you can take a fairly deep view .. and know that all the work you are doing is relevant to one main aim, or objective .. yes? ..

S - Yes ...

I What about any other reactions.

S Well .. I'm high on this one, of course ..

I Yeah .. and as you said, you haven't really had much experience.

I .. well, do you think that ties in with the other one in any way?

S ... I don't .. know ..

I ... O.K. ... well, any surprises?

S ... uhm ...

I .. or does it confirm?

S - No ..not a lot really .. I think that's - er - .. that would .. I would be reasonably happy with that - er - picture .. as a picture of .. my .. self.

- I Have you been putting any ideas to a career plan of any sort?
- S - Er ... not a lot, No ... I'd decided that I would - this year - take much more of an interest in the vacancies ... to see what would come along ...
-
- I Would you like to have a job at actually putting the picture we've got so far ... together, and seeing how they go with some of the jobs on the notice board ... and seeing how they ... might ... fit in?
- S - Yes ... Yes, that seems fair ... Yes ...
-
- I Well, a practical idea might be to go along to (the personnel officer) and ask for a list of the past - uhm - jobs that have come up - sift through them and get a wider view of what comes up
- S - Yes - Yes ...
- I - if you wanted to discuss - and perhaps apply these ... you would have a better idea in future when something does come up ... You'll be able to have something to latch on to.
- S - Yup ... Yup - that would be very good ... quite useful ... so I'll get a list of past vacancies...

CONCLUSIONS

In general, the helping programme was operated successfully, the success can be measured from various points of view. The individuals who took part generally undertook to complete the programme (The tests) and were personally well satisfied with it, and some continued to seek help beyond this (e.g. Case Study 4). Subsequent to this helping programme and the results observed by the organisation, the organisation suggested to other individuals that they might benefit from undertaking the helping programme that had been constructed - when their particular problem situation suited this. These results are not formally recorded here. Furthermore, the helping programme was a success in terms of usefulness for demonstrating the operation of the principles and model of therapeutic psychology, and the helping programme was a success in terms of these principles, i.e. the interpersonal behaviour built up in the researcher during the initial stages of the project, which lead to effective changes in helpee behaviour as a result of the operation of the helping programme.

The particular aspect of helper behaviour that had been most needed during the helping programme was specificity - especially in relation to the development of self understanding. Although individuals' self ratings on the aptitude test dimensions were generally quite accurate, apart from one or two gross blind spots, this self-rating was usually "initiative", and the individual had not formed a clear understanding of his preferred activities in order to construct effective

actions towards undertaking them.

The aptitude tests, (Kuder) also proved to be an appropriate instrument for the development of a method of treatment for the particular helpee population that had been selected. The tests were sufficiently complex to supplement other vocational guidance based on simpler test instruments that were usually used by other, external agencies. For example, the 'vocational test' used ten dimensions, which are also well defined. Furthermore, the 'Personal' test enabled a deeper investigation of the helpee's personality as and when possible - something that an instrument which is overtly a personality test might not have enabled, due to some fear of self analysis in many of the subjects.

The Carkhuff model of effective interpersonal relations proved to be very useful and appropriate to this problem situation. This eclectic model included elements that would have hindered any helping programme that omitted them. Focusing on the client, via responding initially to his level of self-exploration proved an effective means of developing the effectiveness of the relationship. However, the Carkhuff model does not emphasise enough the variance in client self exploration that may occur from one instant to the next (e.g. Figure 9). For example, the rating scales suggest that a level of behaviour is a stable phenomenon. It was found that the stability of this behaviour - self exploration - depended considerably on the

facilitative behaviour offered by the helper, which built up a level of trust. This is particularly demonstrated in Case Study S12 by the difference in the stability of response from the one interview to the next.

Similarly, the action oriented dimensions were well suited to the particular environment in which helping took place. A crucial factor in behaviour change is the feedback that change is necessary. In an industrial environment, where the consequences of ineffective actions are usually quickly brought to the attention of those responsible, this provides an environment of considerable attention to and information about alternative courses of action. In the case, however, of this helpee population, it was suspected that this feedback had been avoided for some period of time, ie that supervisors had avoided giving information regarding the ineffectiveness of some behaviour, especially perhaps, because of the lack of human relations skills in being able to feed back such information in a constructive rather than deteriorative manner.

Also, the industrial environment, in this case, a large and well organised company, provided a plentiful, and well supported range of actions that were not necessarily as demanding as applying formally for a new job in order to maintain career development. Many of the actions that resulted from the helping programme were, apart from stimulating continued thought on the particular problem by the individual, to continue to seek to discuss the problem with others in the organisation.

For example, for many of the graduate staff at the organisation, there was considerable ignorance regarding the work environment, and thus suitability for career development, of functions other than research. There was considerable opportunity, in this environment, for a helpee to initiate contact with a job holder in another function in order to gain some insight into opportunities and suitability for his particular talents.

Finally, the Carkhuff model, is especially valuable in providing a means of allocating priorities among helpee populations. The concept of self exploration, and the respective levels of exploration was useful, in indicating those individuals who benefited most from helping. The higher the level of self exploration, the greater the effective development of the individual.

PART FOUR

CONCLUSIONS

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thirteen	Conclusions Presented to the Sponsoring Organisation	

Chapter Eleven

Conclusions Regarding the Research Undertaken by the Project

"The helper .. (in effective human relations) .. does not know that he has been a helper until he has made inquiries into the helping process" (Carkhuff 1969). When the inquiries ignore human experiences they can lead away from effective functioning - the pragmatic criteria by which formulations must be measured, are tangible human benefits. The helpee will not maintain his voluntary involvement at a cost of time, energy and money, in the helping relationship unless he feels he is benefitting in some way. However, the measurement of the effects of helping has often been too subtle for available research methods to identify satisfactorily.

The work presented here has been an attempt to implement a particular theoretical model of helping, in a particular organisational situation. Although various criteria were adopted and used at various stages of the project, the research presented here consists primarily of the development and use of a rating scale (Helpee Self-exploration) as defined by Carkhuff (1969).

Other approaches to the objective measurement of helpee change were considered and in some instances used - informally (i.e. no systematic record was maintained for the purpose of later reporting). However, the circumstances of the project suggested that a criterion related as far as possible to tangible helpee (subject) benefit would be necessary. The techniques of measurement that were considered during the project may be summarised as follows:-

Second Person Self-reports: It proved difficult in the laboratory to persuade staff to undertake to complete detailed satisfaction inventories or other objective (projective) tests. However, as often as possible, the research student requested a verbal indication of helpee personal satisfaction. This is shown in some of the case study excerpts (e.g. Case Study 14).

First Person Reports of Second Person Functioning: (These indices would include both gross and systematic assessments of process and outcome by the helpers within and without the process e.g. the immediate supervisor of the helpee). Again, such reports were sought, informally, in various cases, but, this was not undertaken comprehensively as the judgements or helper level of functioning of some supervisors was limited.

Objective Assessments of Second Person Functioning: (Such indices as discharge or promotion rates, measures of creativity and productivity). Again, scattered, informal evidence was gathered on various of these indices. However, the need to focus on the interpersonal index as the primary objective for the project, and the danger of disturbance to the normal working and tolerance of the organisation prevented more extensive use of such measures.

Third Person Reports of Second Person Functioning: (Opinions of 'significant' others in the helpee's life e.g. spouse, friend, colleague). Use of these measures was not practicable in the situation.

In order to develop the use of the Carkhuff rating scales by the research student, the project was designed so to systematically develop the operationalisation of the constructs; i.e. to enable the research student to discriminate and communicate the appropriate behavioural cues relative to the particular graduate scientist population at this research laboratory, in the particular context of career development relative to their staff assessment environment.

Traditional research design currently employed in research into helping can be summarised as in Table 11. The design used in this project was adopted primarily in order to enable the development of helper behaviour by the research student, and to examine this development and its effects on selected samples of the laboratory staff.

The procedures recommended by Carkhuff concerning the operation of the helping model, and the rating scales are summarised in Table 12 and 13. These procedures have proved to be both relevant and helpful to the problem situation encountered by this project. Thus:-

The excerpting undertaken for the presentation of these results, and the testing of this model of effective interpersonal processes has been carried out largely in accordance with these rules:-

- 1 (a) As mentioned previously, the recording medium was a SONY TC800 Tape recorder. The scale employed in the determination of helper behaviour was the index of helpee self-exploration, which also served as the principle index of helpee change during the interaction with the helper/research student.

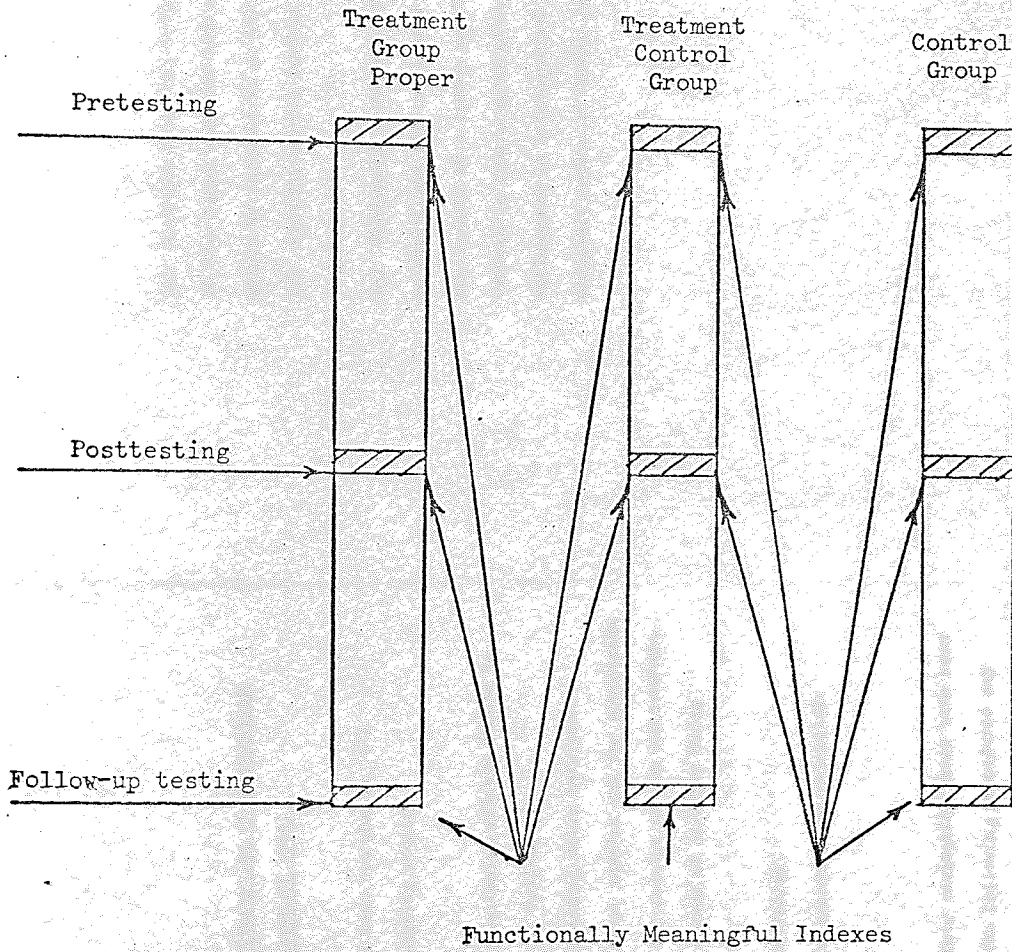


Table 11. Schematic Representation of Research in the Helping Process.

Table 12

A Summary of Recommendation Concerning the Excerpting of Counseling

Excerpts for Rating Purposes. (Carkhuff 1969)

The excerpting process may be divided into two phases, (1) the preparatory stage and (2) the excerpting proper.

(1) In the preparatory stages of excerpting extensive efforts should be made to assess the relationship of the following:-

- (a) the scale employed and the recording media involved.
- (b) the population of relevant variables samples and the population to which it is wished to generalise the results of the assessments.
- (c) The construct involved and the source of excerpts being studied.
- (d) the independent and dependent variables.
- (e) the content and intensity of the excerpts and counselor and counsellee styles of functioning.

(2) Once the relationships of the preparatory excerpting phase have been ascertained, in excerpting proper, the following procedures may be followed.

- (a) It is usually most efficient to employ samples of the briefest duration (approximately 2 minutes).
- (b) Random and, or predesignated means of sampling, (for example, random selections within designated periods) will increase the probability of securing representative excerpts.

(c) Excerpts from late within the individual session as well as from later sessions within the total counselling program should be included if at all possible.

(d) Excerpts should include at a minimum a helpee-helper-helpee interaction.

(e) Divergence between content and intensity of different helpers or style, was not considered to be significant. Emphasis on the control of a common problem, and a common environment and context in this problem situation helped to emphasise that any differences in interpersonal processes was probably due to different levels of helper functioning.

Table 13

Summary of Recommendations Concerning the Rating Process Employed in Counselling, (Carkhuiff 1969).

1. The rating scales employed are largely a function of the stage of exploration of the dimensions involved.

(a) Usually during the early phases of investigation, the constructs created and developed by the clinician researcher are clinically meaningful but often able to make only very gross discriminations.

(b) Having achieved some degree of predictive validity, it is imperative that the procedures of rigorous research be employed in an attempt to further refine and make operational these constructs in order to generate more accurate discriminations and predictions.

2. The rating process followed will be largely a function of the development of the dimensions involved.

(a) If the concern of the study is to develop new, clinically meaningful learnings simultaneous ratings on multiple scales by multiple persons may be warranted.

(b) If the principal concern of the study is replication of earlier findings, rigorous methods of coding and rating in isolation are essential.

(c) Due to the inadequacies of the present scales in assessing all aspects of helper helpee interactions, the model means of assessing both individual ratings and summarising ratings appears most appropriate.

- (b) The population relevant to the study was previously defined as 'graduate scientists', specifically the technical staff of graduate status at the sponsoring organisation. Different samples of this population were drawn at different stages of the project, in order to provide suitable experience for generalisation. Thus, in ch.8 the sample was drawn to represent the (3) principle levels of experience of the technical staff. In ch.9 the sample was drawn to represent the nature of the assessment relationships at the laboratory, again, at various levels. In ch.10, the sample was drawn to represent the extent of potential career development and vocational guidance needs in a typical work group.
- (c) The construct involved at each stage was helper behaviour although the source of excerpts relevant to the construct varied between research student/helper, supervisor/helper and the helpees, or subjects themselves.
- (d) At each stage of the project, the dependent variable has been the subject being interviewed, observed, or helped. Supervisor, helper, research student variable has been viewed as independent.
- 2 (a) Samples presented here, although usually brief, have been selected according to the structure of the interaction rather than a simple time criterion. The ability of this population to think constructively usually meant that a point, once brought up, was dealt with to the greatest possible extent, and then left for another point. It was possible to return to the point later in the interview.

The use of this structuring is demonstrated in ch.8. In later interviews, the subjects maintained a high degree of this ability to structure exploration. This had aided the selection of excerpts.

- (b) As with (a), it was possible to predesignate the majority of excerpting according to the structured nature of the interaction. Although some excerpts of helpee self-exploration that occurred at odd occasions, but which are relevant to the demonstration of the effect of the interaction, are also included.
- (c) Part of the structure of the research has been to highlight the excerpts from the developed relationship between helper/ research student and helpee, (e.g.in ch 10) As regards excerpting of supervisors, the commencement of the assessment interview may be viewed, in fact, as an excerpt from well within the established relationship between supervisor and supervisee which has developed in the time before the assessment occasion.
- (d) In all cases, the sequence of helpee-helper-helpee interaction is presented, in order to demonstrate the pattern of interaction as an operationalisation of the Carkhuff model.

Similarly, the procedures recommended concerning the rating process, shown in Table 13, proved a useful indication of how to approach the problem of operationalising the Carkhuff model.

Thus:-

- 1 (a) Ratings in section ch10 are made on very general evidence, not necessarily related to specific problems relevant to each individual. Comparisons between subjects are thus possible on the basis of their ability to explore and articulate their understanding of themselves in work contexts.

In Chapter 9, ratings of supervisee self-exploration are still gross, in that the interaction still is not necessary in the context of helping. Ratings are thus in relation to the supervisee's apparent disposition for self exploration in his assessment context.

In Chapter 10 ratings are based on much finer discriminations of helpee behaviour enabled by the focus of interaction bearing wholly on the world and problem situation of the helpee.

Initial levels of exploration are deliberately treated with appropriate helper facilitative and action oriented behaviour during the helping programme, and the individual is able to put his maximum attention into exploration. Ratings may thus be made by the research student based on finer details of spontaneity and expression.

(b) The plan of research is deliberately intended to obtain more and more accurate discriminations of helpee characteristics in this staff population. Early interactions sought primarily to understand, obtain information the working environment. Chapter 9 obtained information primarily about the interpersonal and personal environments and in Chapter 10 the research was intended to provide opportunities to communicate all the relevant information to subjects (e.g. concerning self-understanding).

2 (a) The earlier stages of the study (e.g. ch 9) were indeed primarily concerned with the development of clinical learnings for the research student - helper. In order to provide confirmatory

data on early research student ratings, the data presented in ch 9 was informally discussed with the management group at the laboratory. Although comments and discussion at this occasion was not articulate (in terms of their ratings or scales employed), enough agreement was found between research student and management ratings to encourage the further development of the project work in stage ch. 10.

(b) An important aspect of the Carkhuff (1969) model concerns the attempt of the model to identify the "core conditions of effective interpersonal behaviour". As the problem situation was defined in terms of inadequate conditions of 'interpersonal behaviour', a primary aim of the project has been to demonstrate how the operation of these core conditions may be achieved. Thus a lengthy and rigorous system of coding and rating in relation to the critical variables of helper, helpee, and the helping process has been undertaken in order to demonstrate the interaction of these core conditions in this problem situation.

(c) Due to the relatively short duration of the helping programme operated by the project it has been possible to achieve ratings based on a pre and post testing basis - particular sections of the total interview process before and after high levels of functioning of the helper dimensions of behaviour.

A SUMMARY OF THE CONCLUSIONS REGARDING THE RESEARCH
CARRIED OUT BY THE PROJECT

1. The Carkhuff model is a suitable 'general' model of counselling effectiveness.

Apart from the practical constraints and objectives of the Project, the environment, context, and helpee were also different from these variables in the majority of previous research into counselling effectiveness, (see Chapter 4). For example, the helpee population were not "distressed" or otherwise ineffective in their behaviour to a point where they would consider seeking help from a clinic, or other helping institution. Similarly, the environment, and context of this helping situation required understanding of the particular situation, an industrial organisation, before help would be effective. Other models of counselling effectiveness make little, if any, effort to isolate and manage these factors (e.g. trait and factor approach).

2. The Carkhuff model provides an effective means of measuring help.

Research into the helping process has been difficult due to the problem of understanding systematic enquiry. Whereas favourable helpee conclusions as regards the effectiveness of the helping programme may be sufficient for the organisation, systematic research must demonstrate the objective use of functionally meaningful indices, pre and post testing on these indices, and the use of controls. The detailed process of excerpting and rating tape recordings, (outlined in Tables 12 and 13) ensures systematic analysis of data, and that the subjective evaluation of the helpees, and organisation are corroborated by 'objective' measures, (see Results Table 'A').

3. The Carkhuff model provides an effective means of undertaking Research into effective helping.

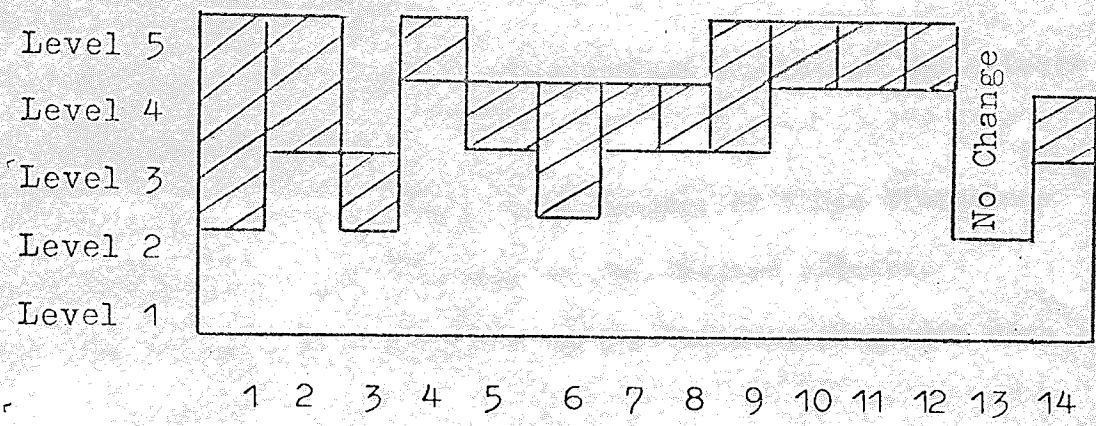
The use of the Carkhuff approach enabled various constraints on project work to be overcome. It provided a research design that provided practical and meaningful help to the organisation, and individual members of staff, by enabling such factors as the helpee population's sensitivity to 'social science' and 'psychological techniques' to be overcome; further, highly confidential and sensitive research situation concerning the content of the data. As a large part of the interviews are included in the body of the thesis, further rechecking or analysis of the conclusions can be made on the basis of this data. Similarly, the lack of project resources, such as trained raters, was overcome by adopting the Carkhuff model for the purpose of developing helping and rating skills in the Research student.

RESULTS TABLE A

A Summary of the Results Achieved by the Operation of the Helping Programme

A demonstration of the development in Second Person self-exploration achieved by the operation of the Helping Programme

D
N
R
A
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O
N



SUBJECT

Second person self exploration at start of helping programme
 Second person self exploration at finish of helping programme

CHAPTER TWELVE

Conclusions Regarding the Problem Investigated by the Project

Carkhuff (1969) describes the purpose of research in human relations as "to shed light on the ingredients of effective processes in the following:-

- (a) Analysis of the effects of what is going on in a given area of practice.
- (b) Discernment of those dimensions that are most closely related to desired effects.
- (c) The conducting of pilot, experimental studies of the effects of these dimensions.
- (d) The application in training programmes of those dimensions that demonstrate their relevance to the desired effects.
- (e) The analysis of the effects of the training programme upon the trainee/s."

The work presented here is analysed according to these headings in order to develop conclusions regarding the work in relation to the problem being investigated.

- (a) Analysis of the Effects of What is Going on in a Given Area of Practice.

During the initial stage of the project, evidence was collected from various sources in order to identify the particular effects of what was going on in practice, that would constitute the area for project work.

Initially, analyses highlighted "the relevance of higher education to (chemical) industry". This suggested that the training received by graduates in higher education was in some ways unsuitable for the performance of graduate staff in (chemical) industry. When the sponsoring organisation became the P and P Laboratory, the analysis of the particular effects that were the problem were defined in forms suggesting inadequacies in the organisation of the Laboratory - especially concerning methods of selecting and appraising 'creative potential'.

An initial survey of the problems of organisation in the selection and appraisal (assessment) of creativity emphasised further the inadequacies of areas of the present organisation. In particular, this sample of staff responsible for the problem situation mentioned conflict between work functions, inadequate staff assessment practices, and anxieties concerning careers.

A survey of available research literature provided an analysis of these effects of current practice in terms of an inadequate interpersonal environment for the supervisees - staff in the organisation. Later project work confirmed this analysis of the interpersonal origins of those behaviour problems.

- (b) Discernment of Those Dimensions that are Most Closely Related to Desired Effects.

The 'desired effects' in the situation, the 'creative' changes in behaviour, and in particular improved cooperation between work functions, improved staff assessment practices, and improved career

situations were interpreted initially as dependent on the improved conditions of interpersonal behaviour as outlined in a theoretical model by Carkhuff (1969). In particular, 'helper' conditions, i.e. improvements in the 'helper' dimensions of interpersonal behaviour were considered to be the most important dimensions for obtaining the desired effects.

Project work was consequently organised in order to examine the effects of helper (supervisor) levels of functioning on respective helpee (supervisee) self exploration. This examination was limited to the problem of career development of staff in the staff assessment context.

The analysis of the effects of various helper conditions on particular levels of helpee self exploration was undertaken by the use of rating scales that are outlined in the theoretical model by Carkhuff (1969). The use of the rating scales enabled the development and operation of a helping programme where the project (research student) was able to offer improved conditions of interpersonal behaviour and evaluate the consequences of these conditions on helpee self-exploration.

(c) The Conducting of Pilot, Experimental Studies of the Effects of These Dimensions.

The study of the effects of helper dimensions of behaviour on helper self exploration was organised into two parts, one, the development of the levels of functioning of helper dimensions of behaviour by the research student, and, two, the operation of a helping programme by

the research student.

In the first part of the study, a representative sample of staff at the laboratory were interviewed for basic information (e.g. to enable minimum levels of empathy) and to examine the effects of other variables in the potential helping situation. In order to complete the first part of this study, a further representative sample of staff assessment interviews were observed to provide basic information on the nature of action oriented dimensions of behaviour. It was also possible to test the effects of higher levels of helper facilitative dimensions of behaviour with the subjects in this second sample.

In the second part of the study, a helping (vocational Guidance) programme was offered by the research student as part of a career development programme in one of the work groups. The effects of helper (research student) facilitative and action oriented dimensions of behaviour offered to the sample of staff, who asked for help, were examined in relation to the model outlined by Carkhuff (1969). The predictions of this model, that helpee level of functioning, helper level of functioning and the nature of helping process are critical to developments in helpee self exploration, e.g. changes in helpee behaviour, were generally confirmed.

- (d) The Application in Training Programmes of those dimensions demonstrate their relevance to the desired effects.

The training of helper (research student) levels of functioning in the dimensions of helper behaviour was undertaken by a series of

interviews with selected samples of staff.

Interviews with the first sample (ch8) were designed to examine the effects of minimum levels of the facilitative dimensions of helper behaviour, and the relevance of other variables of helpee, context and environment, on levels of subject (helpee) self exploration. The interviews were designed to avoid the voluntary introduction of personally relevant material by the subject, except insofar as this was relevant to the series of questions put to him by the helper. Developments in helper behaviour were thus made according to the developments in subject self exploration in these limited areas.

Interviews with the second sample (in particular the pre-assessment interviews (in ch9) were designed ^{to} examine the effects of the operation of higher levels of facilitative dimensions of helper (research student) behaviour, of the action oriented dimensions of behaviour offered by supervisors in the career development area of staff assessment, and of other relevant variables of helpee, context and environment. The interviews with this sample, by the research student, were designed to obtain the voluntary introduction of personally relevant material by subjects. Developments in helpee self exploration in relation to the dimensions of behaviour offered by the research student were assessed on helpee expression concerning the intended staff assessment interview.

Finally, the operation of a helping programme offered the opportunity for the development of high levels of functioning of helper dimensions

of behaviour relevant to the problems of a sample of staff with career development.

(e) Analysis of the Effects of the Training Programme upon the Trainee.

The progress of the study is reported here to demonstrate the development and operation of high levels of functioning in helper (research student) dimensions of behaviour in relation to career development problems in a staff assessment system.

Developments in helper behaviour are recorded for the particular stages of the study. Samples of interactions between helper (research student) and subjects are presented for each stage, and analysed according to the guidelines of a theoretical model outlined by Carkhuff (1969). Although the primary purpose of the study was defined as to offer improved conditions of interpersonal behaviour, the analysis presented here has focused on the particular conditions relevant to each subject and context, as the interaction developed.

The effects of the stages of development and operation of helper behaviour have been analysed according to a rating scale of helpee self exploration. Subject self exploration, and thus the necessary helper dimensions of behaviour required to help, was developed from one stage of the project to the next. Thus, the first stage (ch. 8) demonstrates helper (trainee) behaviour related to a limited self exploration (particular helper questions). The second stage (ch. 9) demonstrates helper (trainee) behaviour related to subject self exploration in relation to the staff assessment exercise. And

finally, in chapter 10, the operation of a helping programme demonstrates the levels of functioning achieved by the helper (trainee) in relation to career development problems of staff in the staff assessment context.

The final conclusion to the project work consisted of a decision by the personnel group to suggest that various supervisees from other work groups contact the research student for vocational guidance related to their career development situation. A further fifteen people were helped by the project, in the remaining months of its duration.

CHAPTER THIRTEEN

CONCLUSIONS presented to the Sponsor

Results, conclusions and recommendations were presented to the sponsoring organisation - either industrial supervisor, the personnel staff, laboratory management, or laboratory staff at various occasions throughout the project, both formally and informally.

The participation of the industrial supervisor (Personnel Officer) in the supervision of the project, and the day to day, week by week, discussions that were thus possible (e.g. on research student visits to the laboratory) provided an especially valuable means of testing the results, conclusions and recommendations relevant to the sponsoring organisation, at every stage of project work.

At the conclusion of the first stage of project work (development of helper facilitative dimensions of behaviour) a presentation of results and conclusions was made to laboratory management. The purpose of the presentation was both publicity (to provide information about the project in order to facilitate further opportunities for developing the work) and evaluation.

The results presented in chapter 8 were presented to the group of laboratory senior management for the purposes of obtaining their subjective reaction and opinions as to the potential value of the results. A discussion with the group, the industrial supervisor and the research student, took place where the management were able to ask questions about the project, these early results, and what further work was intended. As far as conclusions and recommendations

were concerned, at this early stage, the project was only able to report on the development of a potentially successful research strategy. Indeed, the results of the interviews at this stage lead to similarly encouraging reactions and comments by the management. For example, 'getting people to relax and talk about themselves freely', and 'making sure that you (the supervisor in the assessment situation) don't rush people into things without any real commitment' were the typical observations of the management, during this discussion, on the quality of the interview samples presented. The other frequent comment by management on the results of this stage was 'it's all very well getting people relaxed and chatty, but what do you do with them then'.

During the second stage of project work, (development of helper action oriented dimensions of behaviour), the results, conclusions and recommendations arising from the project work took place informally with the individual supervisors, supervisees or other interested parties in the laboratory, (e.g. a supervisor who had heard about the work but who was not in the sample who were tape recorded).

During the observation of the process of assessment, either party would often ask the research^{STUDENT} for an opinion or some help. The specific comments made by the research^{STUDENT} were often made informally and thus no collective, or formal recording was feasible. However, the overall conclusion that the helper (research student) was able to effectively help in certain assessment situations lead directly

to the opportunity for undertaking the third and final stage of project work, a group's particular need for a helping programme was suggested as the right opportunity for the operation and evaluation (formally) of a helping programme.

The results, conclusions and recommendations arising from the third stage of project work (the operation of a helping programme) were written and presented formally to the industrial supervisor in the form of a short report (see appendix 8).

Although this completed the original purpose of the project, (stated in chapter seven) during the several months remaining (and during subsequent employment of the research by the sponsoring organisation), the helping programme designed and operated for the group in the third stage of the project was offered to other individuals across the laboratory (fifteen during the next three months), at the recommendations of the personnel group and industrial supervisor.

APPENDIX 1

- (a) ICI Statement of Minimum Practice
concerning Performance Appraisal

- (b) The Organisation of the Staff Assessment
System at Corporate Laboratory

APPENDIX 1 (a)

STATEMENT OF MINIMUM PRACTICE - PERFORMANCE APPRAISAL

1. Everyone is entitled to a discussion at least once a year with his Manager about his performance. The discussion should recognise the areas in which the individual's performance is good and enable the individual to agree with his Manager the action needed to make it better.
2. The Line Manager is responsible for seeing that this is done.
3. Practice may vary from Division to Division but the following minimum standard will be met:-
 - i) The discussion will be between the individual and his Manager and will take place annually.
 - ii) In preparation for the interview the individual and/or his manager (with another Assessor if at all possible) shall write out their comments and these will be available to both parties.
 - iii) The conclusions of the Manager after the interview shall be written on the form and the individual shall have the opportunity to add his written comments if he wishes.

iv) Either then or soon after they shall agree a limited number of important targets or areas of work on which both parties wish to see progress during the coming year. This agreement should include a time table and an indication of the progress that should be made. This will form a basis for part of the next year's appraisal.

ICI CORPORATE LABORATORY - RUMCORY

STAFF ASSESSMENT 1972

Note for all Members of Staff

Objectives of the staff assessment scheme are:-

- 1) To provide staff with a means of reviewing their own performance and of discussing this with their immediate supervisor and/or Group Head. (The interview with the Group Head is optional on the part of staff. However, every individual may have an assessment interview with his Group Head if he wishes.) Discussions should cover performance during the past year, individuals' own needs for development and training, together with work planned for the coming year.

- 2) A report of the discussions will provide data for Group Heads when making decisions or recommendations concerning training or rewards.

- 3) To help provide a method for monitoring the effectiveness of personnel policy, including selection, training and rewards.

For your part in the annual appraisal we would, as usual like you to prepare a written self-appraisal on the attached sheet, Section 1. Guidelines are given, but you may find it helpful to complete this section in the form of 2 columns, headed 'Helps' and 'Hindrances'.

This section will eventually form part of an Assessment 1972 'package' together with a Supervisor's Assessment (where relevant) and Group Head's assessment.

Also attached is a form (Form 1) whose completion is entirely optional but which may be useful in helping to structure ideas. You may wish to complete it jointly with your supervisor or independently; the important point to remember is that it is intended to provide a basis for discussion only, and will be returned to you.

Supervisor's Assessments

If you are involved in writing a supervisor's assessment (Section 2, which will be given to you by your Group Head) please make sure the completed form is discussed with the individual before his assessment interview with the Group Head. This also applies where the optional large Form 1 is completed.

This year supervisors are asked to indicate a performance rating for each person which will serve as a guide for Group Heads. However, the ultimate responsibility for an overall performance rating belongs to the Group Head.

- 2 Self-appraisals and supervisors' assessments (where appropriate) should be prepared in time for the assessment interview.

S. C. Carson

SELF ASSESSMENT 1972

NAME:

GROUP:

This self assessment should describe (1) the progress of your work in the last twelve months (or since you joined the Laboratory if within the past twelve months), (2) any environmental factors which have helped or hindered your work and (3) any personal factors in the same way; remember that this will help in the planning of your career development.

Please try to keep your comments within the space available below and overleaf. If this is not possible add further sheets as necessary.

SUPERVISOR'S COMMENTS

NAME: _____

Please review the performance of your subordinate during the past year, paying particular attention to any factors which were discussed during assessment last year. Remember that the most important single function of assessment is as a help in personal development: your information provides a most important guide as to his or her strengths and weaknesses. You should consider, for example, his knowledge of the job, his practical ability, and ability to produce new ideas, ability to express himself verbally and in writing, ability to plan and organize his work, ability to work independently and with others, ability to gain maximum performance from his subordinates.

PERFORMANCE IN PRESENT JOB:

NAME: _____

GROUP: _____

AGE: _____

YEARS OF EXPERIENCE: 11.12*

ICI SERVICE: _____

1. Overall Appraisal

Rating appropriate performance:

- A Standard greatly exceeded D Below standard
- B Standard exceeded E Very much below standard
- C Standard met Unproved

2. Career Development: Summary of Actions

- 3. Considerations for Salary Revision
(Company Agreement, Continued Good Service Bonus, change in grade)

RATING SUGGESTED BY SUPERVISOR:

- A Standard greatly exceeded
- B Standard exceeded
- C Standard met
- D Below standard
- E Very much below standard
- Unproved

Signature : _____ Date: _____

Signature of Group Head: _____ Date: _____

*As per ICI Corporate Lab. (Nucorn) definition.

NAME:

The interview is normally carried out by the Group Head. Any member of staff has, however, the right to ask for further discussion at a higher level.

Career Development

The likely career pattern and prospects should be discussed with the individual during the interview or subsequently with the Group Head and a member of Personnel Department and summarised below:

Present Position	Specify	Action	
		Date	By whom
Next Job			

Training Needs

The following have been identified (and agreed with the individual and the Personnel Department) as a result of discussion and consideration of career development needs.

Course Date Completed

1. Induction
2. Technical
3. Management/Developmental
4. Others

1. Comments by individual having read the assessment and above comments:

Signed: _____ Date: _____

Name: _____ Group: _____

(This Section to be returned to Personnel Group)

FORM 1 - ASSESSMENT OF PAST YEAR'S PERFORMANCE

(to be completed by first Assessor and individual to be assessed). Please tick appropriate box.

Name of Person Assessed _____

NOTE - These factors should be assessed against standards required in existing JOBS and GRADE. There may be some factors not appropriate to the present job - please insert N/A against these. Insert in blanks available any others you consider relevant.

Date _____

Please feel free to qualify ANY of these gradings by suitable footnotes.

A

Has displayed exceptionally wide, thorough and up-to-date knowledge of his job.

Has been exceptionally good at experimental/practical application.

Has produced new and good ideas.

Excellent at analysis of technical problems eg always selects best method of approach.

Oral - clear and concise.

Written - clear and concise.

Open and flexible in putting over his' views.

Has shown excellent judgement and foresight.

Has shown outstanding planning and organising ability.

Has obtained maximum performance from his subordinates/colleagues.

Listens to suggestions and helps with presenting them as well as possible.

Has established excellent working relations with others.

Has been keen, energetic and thorough.

Acts Independently when required.

A Applies	8	7	6	5	4	3	2	1	B Applies
1 PROFESSIONAL ABILITY ie IN JOB TRADE OR PROFESSION									
a) General Professional Knowledge									
b) Experimental/Practical Ability									
c) Originality									
d) Technical Judgement									
e) Powers of Expression									
f) Powers of Persuasion									
2 ADMINISTRATIVE/MANAGERIAL ABILITY									
a) Judgement									
b) Planning and Organising Ability									
c) Man Management/Supervision									
d) Acceptance of Others' Ideas/Views									
3 PERSONAL QUALITIES									
a) Ability to work with others when he is in frequent contact									
b) As above, but when the contacts are less frequent eg in other departments or with outsiders									
c) Enthusiasm									
d) Self Reliance									

B

Has shown restricted or superficial knowledge.

Has been poor at experimental/practical application.

Has produced no original ideas.

Poor at analysis of technical problems eg fails to distinguish what is important and what is not.

Incoherent.

Incoherent.

Irritable when opposed.

Judgement has not been reliable.

Has been a poor organiser.

Has shown no ability to lead.

Dismisses others' ideas (especially subordinates') or fails to follow them up

Has proved difficult to work with.

Has been apathetic, slipshod and lazy.

Never trusts his own judgement.

Signature _____

Appendix 2.

SCALES FOR ASSESSMENT OF INTERPERSONAL FUNCTIONING.

LEVELS OF EMPATHIC UNDERSTANDING IN INTERPERSONAL PROCESSESLevel 1

The verbal and behavioural expressions of the first person either do not attend to or detract significantly from the verbal and behavioural expressions of the second person(s) in that they communicate significantly less of the second person's feelings than the second person has communicated himself.

Examples: The first person communicates no awareness of even the most obvious, expressed or surface feelings of the second person. The first person may be bored or uninterested or simply operating from a preconceived frame of reference which totally excludes that of the other person(s).

In summary, the first person does everything but express that he is listening, understanding, or being sensitive to even the feelings of the other person in such a way as to detract significantly from the communications of the second person.

Level 2

While the first person responds to the expressed feeling of the second person(s) he does so in such a way that he subtracts noticeable affect from the communications of the second person.

Examples: The first person may communicate some awareness of obvious surface feelings of the second person, but his communications drain off a level of the affect and distort the level of meaning. The first person may communicate his own ideas of what may be going on, but these are not congruent with the expressions of the second person.

In summary, the first person tends to respond to other than what the second person is expressing or indicating.

Level 3

The expressions of the first person in response to the expressed feelings of the second person(s) are essentially interchangeable with those of the second person in that they express essentially the same affect and meaning.

Example: The first person responds with accurate understanding of the surface feelings of the second person but may not respond to or may misinterpret the deeper feelings.

In summary, the first person is responding so as to neither subtract from nor add to the expressions of the second person; but he does not respond accurately to how that person really feels beneath the surface feelings. Level 3 constitutes the minimal level of facilitative interpersonal functioning.

Level 4

The responses of the first person add noticeably to the expressions of the second person(s) in such a way as to express feelings a level deeper than the second person was able to express himself.

Example: The facilitator communicates his understanding of the expressions of the second person at a level deeper than they were expressed, and thus enables the second person to experience and/or express feelings he was unable to express previously.

In summary, the facilitator's responses add deeper feeling and meaning to the expressions of the second person.

Level 5

The first person's responses add significantly to the feeling and meaning of the expressions of the second person(s) in such a way as to (1) accurately express feelings levels below what the person himself was able to express or (2) in the event of on going deep self-exploration on the second person's part, to be fully with him in his deepest moments.

Examples: The facilitator responds with accuracy to all of the person's deeper as well as surface feelings. He is "together" with the second person or "tuned in" on his wave length. The facilitator and the other person might proceed together to explore previously unexplored areas of human existence.

In summary, the facilitator is responding with a full awareness of who the other person is and a comprehensive and accurate empathic understanding of his deepest feelings.

SCALE 2

LEVELS OF COMMUNICATION OF RESPECT IN INTERPERSONAL PROCESSESLevel 1

The verbal and behavioural expressions of the first person communicate a clear lack of respect (or negative regard) for the second person(s).

Example: The first person communicates to the second person that the second person's feelings and experiences are not worthy of consideration or that the second person is not capable of acting constructively. The first person may become the sole focus of evaluation.

In summary, in many ways the first person communicates a total lack of respect for the feelings, experiences, and potentials of the second person.

Level 2

The first person responds to the second person in such a way as to communicate little respect for the feelings, experiences, and potentials of the second person.

Example: The first person may respond mechanically or passively or ignore many of the feelings of the second person.

In summary, in many ways the first person displays a lack of respect or concern for the second person's feelings, experiences, and potentials.

Level 3

The first person communicates a positive respect and concern for the second person's feelings, experiences, and potentials.

Example: The first person communicates respect and concern for the second person's ability to express himself and to deal constructively with his life situation.

In summary, in many ways the first person communicates that who the second person is and what he does matter to the first person. Level 3 constitutes the minimal level of facilitative interpersonal functioning.

Level 4

The facilitator clearly communicates a very deep respect and concern for the first person.

Example: The facilitator's responses enables the second person to feel free to be himself and to experience being valued as an individual.

In summary, the facilitator communicates a very deep caring for the feelings, experiences and potentials of the second person.

Level 5

The facilitator communicates the very deepest respect for the second person's worth as a person and his potentials as a free individual.

Example: The facilitator cares very deeply for the human potentials of the second person.

In summary, the facilitator is committed to the value of the other person as a human being.

LEVELS OF FACILITATIVE GENUINENESS IN INTERPERSONAL PROCESSES

Level 1

The first person's verbalizations are clearly unrelated to what he is feeling at the moment, or his only genuine responses are negative in regard to the second person(s) and appear to have a totally destructive effect upon the second person.

Example: The first person may be defensive in his interaction with the second person(s) and this defensiveness may be demonstrated in the content of his words or his voice quality. Where he is defensive he does not employ his reaction as a basis for potentially valuable inquiry into the relationship.

In summary, there is evidence of a considerable discrepancy between the inner experiencing of the first person(s) and his current verbalizations. Where there is no discrepancy, the first person's reactions are employed solely in a destructive fashion.

Level 2

The first person's verbalizations are slightly unrelated to what he is feeling at the moment, or when his responses are genuine they are negative in regard to the second person; the first person does not appear to endeavor to employ his negative reactions constructively as a basis for inquiry into the relationship.

Example: The first person may respond to the second person(s) in a "professional" manner that has a rehearsed quality or a quality concerning the way a helper "should" respond in that situation.

In summary, the first person is usually responding according to his prescribed role rather than expressing what he personally feels or means. When he is genuine his responses are negative and he is unable to employ them as a basis for further inquiry.

Level 3

The first person provides no "negative" cues between what he says and what he feels, but he provides no positive cues to indicate a really genuine response to the second person(s).

Example: The first person may listen and follow the second person(s) but commits nothing more of himself.

In summary, the first person appears to make appropriate responses that do not seem insincere but that do not reflect any real involvement either. Level 3 constitutes the minimal level of facilitative interpersonal functioning.

Level 4

The facilitator presents some positive cues indicating a genuine response (whether positive or negative) in a nondestructive manner to the second person(s).

Example: The facilitator's expressions are congruent with his feelings, although he may be somewhat hesitant about expressing them fully.

In summary, the facilitator responds with many of his own feelings, and there is no doubt as to whether he really means what he says. He is able to employ his responses, whatever their emotional content, as a basis for further inquiry into the relationship.

Level 5

The facilitator is freely and deeply himself in a nonexploitative relationship with the second person(s).

Example: The facilitator is completely spontaneous in his interaction and open to experiences of all types, both pleasant and hurtful. In the event of hurtful responses the facilitator's comments are employed constructively to open a further area of inquiry for both the facilitator and the second person.

In summary, the facilitator is clearly being himself and yet employing his own genuine responses constructively.

LEVELS OF FACILITATIVE SELF-DISCLOSURE IN INTERPERSONAL PROCESSES

Level 1

The first person actively attempts to remain detached from the second person(s) and discloses nothing about his own feelings or personality to the second person(s), or if he does disclose himself, he does so in a way that is not tuned to the second person's general progress.

Example: The first person may attempt, whether awkwardly or skillfully, to divert the second person's attention from focusing upon personal questions concerning the first person, or his self-disclosures may be ego shattering for the second person(s) and may ultimately cause him to lose faith in the first person.

In summary, the first person actively attempts to remain ambiguous and an unknown quantity to the second person(s), or if he is self-disclosing, he does so solely out of his own needs and is oblivious to the needs of the second person(s).

Level 2

The first person, while not always appearing actively to avoid self-disclosures, never volunteers personal information about himself.

Example: The first person may respond briefly to direct questions from the client about himself; however, he does so hesitantly and never provides more information about himself than the second person(s) specifically requests.

In summary, the second person(s) either does not ask about the personality of the first person, or, if he does, the barest minimum of brief, vague, and superficial responses are offered by the first person.

Level 3

The first person volunteers personal information about himself which may be in keeping with the second person's interest, but this information is often vague and indicates little about the unique character of the first person.

Example: While the first person volunteers personal information and never gives the impression that he does not wish to disclose more about himself, nevertheless, the content of his verbalizations is generally centered upon his reactions to the second person(s) and his ideas concerning their interaction.

In summary, the first person may introduce more abstract, personal ideas in accord with the second person's interests, but these ideas do not stamp him as a unique person. Level 3 constitutes the minimum level of facilitative interpersonal functioning.

Level 4

The facilitator freely volunteers information about his personal ideas, attitudes and experiences in accord with the second person's interests and concerns.

Example: The facilitator may discuss personal ideas in both depth and detail, and his expressions reveal him to be a unique individual.

In summary, the facilitator is free and spontaneous in volunteering personal information about himself, and in so doing may reveal in a constructive fashion quite intimate material about his own feelings, and beliefs.

Level 5

The facilitator volunteers very intimate and often detailed material about his own personality, and in keeping with the second person's needs may express information that might be extremely embarrassing under different circumstances or if revealed by the second person to an outsider.

Example: The facilitator gives the impression of holding nothing back and of disclosing his feelings and ideas fully and completely to the second person(s). If some of his feelings are negative concerning the second person(s), the facilitator employs them constructively as a basis for an open-ended inquiry.

In summary, the facilitator is operating in a constructive fashion at the most intimate levels of self-disclosure.

SCALE 5

LEVELS OF PERSONALLY RELEVANT SPECIFICITY IN INTERPERSONAL PROCESSES

Level 1

The first person leads or allows all discussion with the second person(s) to deal only with vague and anonymous generalities.

Example: The first person and the second person discuss everything on strictly an abstract and highly intellectual level.

In summary, the first person makes no attempt to lead the discussion into the realm of personally relevant specific situations and feelings.

Level 2

The first person frequently leads or allows even discussions of material personally relevant to the second person(s) to be dealt with on a vague and abstract level.

Example: The first person and the second person may discuss the "real" feelings but they do so at an abstract, intellectualized level.

In summary, the first person does not elicit discussion of most personally relevant feelings and experiences in specific and concrete terms.

Level 3

The first person at times enables the second person(s) to discuss personally relevant material in specific and concrete terminology.

Example: The first person will make it possible for the discussion with the second person(s) to centre directly around most things that are personally important to the second person(s) and areas in which the second person does not deal with concretely and areas in which the first person sometimes guides the discussions into consideration of personally relevant specific and concrete instances, but these are not always fully developed. Level 3 constitutes the minimal level of facilitative functioning.

Level 4

The facilitator is frequently helpful in enabling the second person(s) to fully develop in concrete and specific terms almost all instances of concern.

Example: The facilitator is able on many occasions to guide the discussion to specific feelings and experiences of personally meaningful material.

In summary, the facilitator is very helpful in enabling the discussion to centre around specific and concrete instances of most important and personally relevant feelings and experiences.

Level 5

The facilitator is always helpful in guiding the discussion, so that the second person(s) may discuss fluently, directly and completely specific feelings and experiences.

Example: The first person involves the second person in discussion of specific feelings, situations, and events, regardless of their emotional content.

In summary, the facilitator facilitates a direct expression of all personally relevant feelings and experiences in concrete and specific terms.

SCALE 6

LEVELS OF CONFRONTATION IN INTERPERSONAL PROCESSES

Level 1

The verbal and behavioural expressions of the helper disregard the discrepancies in the helpee's behaviour (ideal versus real self, insight versus action, helper versus helpee's experiences).

Example: The helper may simply ignore all helpee discrepancies by passively accepting them. In summary, the helper simply disregards all of those discrepancies in the helpee's behaviour that might be fruitful areas for consideration.

Level 2

The verbal and behavioural expressions of the helper disregard the discrepancies in the helpee's behaviour.

Example: The helper, although not explicitly accepting these discrepancies, may simply remain silent concerning most of them.

In summary, the helper disregards the discrepancies in the helpee's behaviour, and, thus, potentially important areas of inquiry.

Level 3

The verbal and behavioural expressions of the helper, while open to discrepancies in the helpee's behaviour, do not relate directly and specifically to these discrepancies.

Example: The helper may simply raise questions without pointing up the diverging directions of the possible answers.

In summary, while the helper does not disregard discrepancies in the helpee's behaviour, he does not point up the directions of these discrepancies. Level 3 constitutes the minimal level of facilitative interpersonal functioning.

Level 4

The verbal and behavioural expressions of the helper attend directly and specifically to the discrepancies in the helpee's behaviour.

Example: The helper confronts the helpee directly and explicitly with discrepancies in the helpee's behaviour.

In summary, the helper specifically addresses himself to discrepancies in the helpee's behaviour.

Level 5

The verbal and behavioural expressions of the helper are keenly and continually attuned to the discrepancies in the helpee's behaviour.

Example: The helper confronts the helpee with helpee discrepancies in a sensitive and perceptive manner whenever they appear.

In summary, the helper does not neglect any potentially fruitful inquiry into the discrepancies in the helpee's behaviour.

SCALE 7

LEVELS OF IMMEDIACY IN INTERPERSONAL PROCESSES

Level 1

The verbal and behavioural expressions of the helper disregard the content and affect of the helpee's expressions that have the potential for relating to the helper.

Example: The helper may simply ignore all helpee communications, whether direct or indirect, that deal with the helper-helpee relationship.

In summary, the helper simply disregards all of these helpee messages that are related to the helper.

Level 2

The verbal and behavioural expressions of the helper disregard most of the helpee expressions that have the potential for relating to the helper.

Example: Even if the helpee is talking about helping personnel in general, the helper may, in general, remain silent or just not relate the content to himself.

In summary, the helper appears to choose to disregard most of those helpee messages that are related to the helper.

Level 3

The verbal and behavioural expressions of the helper, while open to interpretations of immediacy, do not relate what the helpee is saying to what is going on between the helper and the helpee in the immediate moment.

Example: The helper may make literal responses to or reflections on the helpee's expressions or otherwise open-minded responses that refer to no one specifically but that might refer to the helper.

In summary, while the helper does not extend the helpee's expressions to immediacy, he is not closed to such interpretations. Level 3 constitutes the minimum level of facilitative interpersonal functioning.

Level 4

The verbal and behavioural expressions of the helper appear cautiously to relate the helpee's expressions directly to the helper-helpee relationship.

Example: The helper attempts to relate the helpee's responses to himself, but he does so in a tentative manner.

In summary, the helper relates the helpee's responses to himself in an open cautious manner.

Level 5

The verbal and behavioural expressions of the helper relate the helpee's expressions directly to the helper-helpee relationship.

Example: The helper in a direct and explicit manner relates the helper's expressions to himself.

In summary, the helper is not hesitant in making explicit interpretations of the helper-helpee relationship.

SCALE 8

LEVELS OF HELPEE SELF-EXPLORATION IN INTERPERSONAL PROCESSES

Level 1

The second person does not discuss personally relevant material, either because he has had no opportunity to do such or because he is actively evading the discussion even when it is introduced by the first person.

Example: The second person avoids any self-descriptions or self-exploration or direct expressions of feelings that would lead him to reveal himself to the first person.

In summary, for a variety of possible reasons the second person does not give any evidence of self-exploration.

Level 2

The second person responds with discussion to the introduction of personally relevant material by the first person but does so in a mechanical manner and without the demonstration of emotional feelings.

Example: The second person simply discusses the material without exploring the significance or the meaning of the material or attempting further exploration of that feeling in an effort to uncover related feelings or material.

In summary, the second person responds mechanically and remotely to the introduction of personally relevant material by the first person.

Level 3

The second person voluntarily introduces discussions of personally relevant material but does so in a mechanical manner and without the demonstration of emotional feeling.

Example: The emotional remoteness and mechanical manner of the discussion give the discussion a quality of being rehearsed.

In summary, the second person introduces personally relevant material but does so without spontaneity or emotional proximity and without an inward probing to discover new feelings and experiences.

Level 4

The second person voluntarily introduces discussions of personally relevant material with both spontaneity and emotional proximity.

Example: The voice quality and other characteristics of the second person are very much "with" the feelings and other personal materials that are being verbalized.

In summary, the second person introduces personally relevant discussions with spontaneity and emotional proximity but without a distinct tendency toward inward probing to discover new feelings and experiences.

Level 5

The second person actively and spontaneously engages in an inward probing to discover new feelings and experiences about himself and his world.

Example: The second person is searching to discover new feelings concerning himself and his world even though at the moment he may perhaps be doing so fearfully and tentatively.

In summary, the second person is fully and actively focusing upon himself and exploring himself and his world.

APPENDIX 3

An additional transcript of an interview used in facilitative dimensions of establishing necessary levels of HELPER behaviour.

A Transcript of the Total Interview of Subject 8

With this subject, the interviewer has to provide considerable facilitation in order to help the subject articulate a response to the question topics. Thus, after the initial questions on 'Time', (page 1), and career history, (page 2), the interviewer helps the subject to talk about the various aspects of his working environment. Eventually, (page 7) this leads to the disclosure of some dissatisfaction with it, and the intention to leave. Despite these feelings, the subject is eventually re-directed (page 7) to the topics of the first interview, notably 'output', and significant individuals in his working environment (supervisor).

In the second interview, similarly held approximately one week later, after initial empathy, the interviewer commences with a question of 'magic wand', in order to build the subject's expression first in an area where he is most likely to be able to articulate a response. In this case, some feeling of dissatisfaction with his situation has been suggested, and this had been suggested again at the start of this second interview. However, the interviewer quickly reverted to the other topics (most valued experience) as the individual did not seem to want to express much in relation to the wand question. By page 3, the

question of 'method' is introduced. By page 5, the question of 'future' is introduced. Eventually, (page 6) the interviewer returns to probe more specific information regarding the response to the 'wand' question. By page 7, the topic of 'criticism' is introduced, and 'hobbies' by page 8. Finally, the subject is given a chance to ask any questions of the interviewer.

INTERVIEW ONE

- I Aah, right what I want to ask about is ... the sort of situation you are faced with ... at the Laboratory - normal work .. routine ... OK?
- S uh huh
- I So .. how do you spend your time? ... can you divide it up into a segmentation of any sort?
- S I'm not sure that I can ...
- I Take a typical day for example ... a typical week, or a typical month.
- S what sort of categories of division do you want?
- I ... Can I say .. that which occurs to you easiest.
- S ... Well .. I presume .. I'm not going to be able to say 10% this - 100% that .. but .. basically, the particular project which I'm on is one that relies very heavily .. on one particular piece of equipment .. and .. I spend quite a bit of time .. just from day to day .. um with that .. trying to sort .. sort out problems which occur on it .. with the guy that runs it .. um .. and .. having .. actually produced something on it .. which way .. it very rarely anyway, goes to plan .. er .. I'll then .. the next person along the line .. to do the next process in the .. gradation of we've produced .. This will be another process in the .. gradation of properties we have. And then having gone through the next process, will test them, and I'll organise someone on the - testing procedure. And then all the results basically come back to me, .. and I'll try to interpret them .. as best I can. And - you know - I'll try and decide .. in consultation with the other chap on the project .. what we do next. Um .. But the project - running as it is .. not very well .. you know - our planning, although we try planning long term, our planning is really day to day planning ..
- I ... Yeah .. have - .. how long have you been on this project?
- S All the time
- I 2 years?
- S Yeah
- I Is this with 'X' Group?
- S 'O, its with 'Y' Group.
- I I see .. What was the nature of your specialisation before you came to the Laboratory?
- S Well, I was a physicist .. the .. in solid state physics
- I uh huh
- S aah - a bit electronic - although not really electronics - electrical properties of solids .. um .. using a 'X' technique to investigate this .. Nothing to do with what I'm doing now, at all!
- I Ha! So .. how .. why do you find yourself here?
- S Um .. well, I see myself as a physicist, using a general physicists training .. more concerned with physical processes than chemical processes ..
- I .. Can I ask - you came here straight from a PhD?
- S 'Mm
- I How did you choose P & P?
- S At the time I was looking round for jobs, I applied to quite a few places .. and .. you know, out of the interviews, this was the one that seemed probably the best .. er .. from a day's visit, this was the one that would suit me .. There was a certain amount of lab work .. there was a certain amount of .. sitting in your office .. contact with quite a few people, especially Divisions .. and generally .. it seemed somewhat more varied than some of the other places that I saw. Many of the others were somewhat more routine.
- I Oh! ... It's not routine here?
- S Well, in this particular project, it has turned out to be ..
- I Could you go into the nature of this routine? .. and how the project became routine?
- S Well, yeah, from what I described initially .. the routine nature of the thing is that we are trying to solve day to day problems all the time - .. mainly engineering type problems. Um .. we .. we haven't really been able to plan .. and really get to grips with the problem in hand ..
- I Do you know why this is .. is it the nature of the problem or ..
- S the nature of the equipment, I think
- I the nature of the equipment, oh Can I ask why .. why you're a physicist?
- S .. Um .. well it presumably stems back from school, when I was good at - well, reasonable, at physics .. er .. and not so good at maths .. I found physics easier .. so I preferred physics .. I found it easier than chemistry - less memory work involved .. things were much more obvious than they were in chemistry .. there didn't seem to be any .. er .. logic or any thread. I'm sure there was. In aspects of it there wasn't, it just seemed to be purely memory, whereas in Physics it was very much more logical .. well, to me anyway.
- I Yeah .. Yeah .. OK .. um .. So, you're sitting in your office .. can you divide how much time you spend between lab and office?
- S .. 50% of the time, plus or minus 10% .. I suppose.
- I The rest of the time is in the Lab?
- S Yeah
- I What about the Library and things like that?
- S Well, I include the Library as being in the office.
- I Yeah, fine .. what about getting out?
- S Going to Divisions, I suppose we have a trip .. I suppose it averages out about once a month.

cont'd ...

cont'd ...

I Divisions - particularly with the equipment problems.

I Fine ... How much reading do you do? .. In terms of current journals, for example?

S Well, a lot of current journals come round - on circulation. Um, probably too many, which means that - you tend to skip through them and you don't really read them. You just read titles and not much more .. unless something really takes your interest. There are lots of things which are not really that interesting or pertinent to what you're doing at the time. Yeah, there are quite a few of the things that come round which are completely irrelevant, and you have to sort through them.

I Yeah, can I ask what of things these are? - journals which aren't - er -

S I'm talking specifically now - I think - now of various abstracted systems .. which are .. put out by textile institute - Plastics Division puts them out, Fibres Division puts them out.

I They are Company reports.

S Yeah .. and there are the patent surveys which are put out by the Lab .. I suppose - really - to get the information you want you've got to look at all of these, and it just takes a lot of time .. and there probably isn't any other way of sorting it other than sorting it yourself.

I What sort of things are you looking for?

S .. Er .. I'm particularly looking for things relating to the project I'm on i.e. patents relating to the work .. that we're doing, and fibre and polymer science in general .. Basically the project that we're on is a technological project .. um .. so we could get by on reading just technological articles .. but, its more reading for general interest, and scientific articles as well.

I Yeah .. fine .. how far do you keep up with your old academic background?

S Well, up until this time last year, very much, because I was still writing up my thesis .. um .. since then, I haven't looked very much at the journals .. you know, I've seen one or two articles, but .. I try to keep .. in touch with physics in general.

I Yeah .. how much have you had to learn .. new information, new knowledge since you've been here?

S a lot - a lot -

I Can you - sort of - specify a few of the things?

S .. Well, first of all, the basis of most of the work is polymers of some sort .. before I came here, I didn't even know what a polymer was, let alone a property and its characteristics .. there's this sort of thing there's various methods of characterising .. and then there's the added technology of production of fibres, fibre properties etc ... you know, the whole thing was something new .. something I knew nothing about ..

I Uh-huh .. how easy was it to find out about these sorts of things?

cont'd ...

I That's for the day.

S Yeah, for the day .. It may require staying overnight.

I What sort of meetings do you have at Divisions?

S These range from formal - what we call - Liaison meetings with top management - 'X' research department at 'X' down to informal meetings with people at the same level as myself, about .. more specific aspects of our work.

I .. uh huh .. how long does such a meeting last?

S .. an hour, I suppose, but then there are various other things to see to, perhaps pieces of equipment .. ancillary to the main ..

I What about conferences and things like that?

S I haven't been to many conferences .. I've been to about a couple in my first year, but I haven't been to any since then .. you know, basically, one person in a group will go to a conference and see if there's anything relevant ..

I OK, what about meeting people - in the Lab? .. Do you go to other meetings? Are there group meetings? Or is it merely informal?

S .. There are formal group meetings - nominally, once a month, but they are less frequent than that .. it's probably 2 months since we've had one now .. but, our particular group is fairly small .. everyone can keep in touch with what everyone else is doing fairly easily .. er .. as far as the other groups are concerned .. we have contact with .. er .. a few odd people .. and then we can keep in contact with what they are doing .. you know, this is very important .. there are no formal meetings with other groups - unless it really is pertinent, in which case we would probably be invited along .. but this .. this rarely happens at all.

I .. What about informal meetings with people? Things like the grapevine? .. Do you have odd discussions about things?

S Yeah .. over lunch, or .. you happen to meet someone in the corridor ..

I - uh huh -

S Or, you drop into someone's office and talk .. sometimes you talk about something specific, sometimes not ..

I How far will you .. go for advice yourself?

S How far - what?

I Would you go to the research specialists about anything or are you fairly self-operating?

S .. Well, I think, probably the sphere of influence is mainly the rest of the group, and the group head ..

I The rest of the group

S In 'X' group - the people at my level .. Occasionally there may be specific problem cross up, and if I think somebody else might help, then I'll go to them .. or go to Divisions for help. In many respects, we have had to go to

contd ...

S Well .. its fairly straight forwards .. there are lots of books, review articles on these things .. It's just a matter of trying to sift out the relevant information - as quickly as you can - and this is the problem. There's a lot of information, and a lot of it isn't necessary.

I How .. do you .. is any of the sifting done for you, or are you just left to go into it from cold?

S Well, I found I was faced with .. nothing .. just the Library! Just the shelves .. before I arrived, I had asked if there were any books or review articles I could usefully read, and I was told not to bother.

I Not to bother to read anything?

S Uh huh

I And do you find it is necessary?

S Yeah!

I .. Why is that? .. Can you say why?

S Um .. well, I knew absolutely nothing about the topic and .. er .. I found it difficult to converse with people .. um .. on the topic .. without reading something. It's a completely new - science - to me.

I Do they know anything about physics?

S .. um .. well, some of them do .. well, presumably everybody here has done physics - at school - at least. Most of them will have done Physics at University, and .. so they will have some knowledge of the fundamentals.

I Yeah .. what sort of things do you have to talk about? .. with chemists, for example .. what sort of things would you need to have knowledge about?

S .. um .. well polymers .. and their general physical and chemical characteristics.

I For whatever specific job?

S Yeah

I At whatever .. work generally?

S Yeah

I Just find something to do?

S Yeah

I How did you take to this .. how easy was it?

cont'd...

S Um .. well, I was put on to this particular project .. um, well, a fairly open-ended project .. um no particular goals, except .. well, we want to improve nylon fibres and terylene fibres .. um .. and .. this was probably one of the difficulties .. there were, in fact, no goals, and so we had to look for our own goals, and um .. then try and solve them ..

I .. was this just you personally?

S No, there was myself, and another guy at my level - initially. He left, and then somebody else came; so there were two of us basically, all the time.

I How did you go about this? .. How did you initially do about this with the other guy? .. or did it just happen?

S Well, initially, the other guy was more concerned with - "let's try mixing A with B .. try all the A's and all the B's and see what happens" .. And, um, you know, OK, we can do that - fairly quickly .. but, you know, if you don't know what you're for, you're not going to see it .. um .. and .. you know, even if you did know what you're looking for, the chances of finding it first time, are probably fairly slight .. because there are lots of conditions you can vary .. to produce these fibres .. and, um, the others are .. you wouldn't get this right first time .. and .. um .. I think the Group Head had been - he thought this approach was a good idea .. we thought - well - some of the things that he found looked quite promising - before we chased them up further .. but .. you know .. we eventually came round to the conclusion that we needed goals, and then when we got goals, we could think of ways of solving it, and then we could really try to tackle these particular systems that we wanted to look at .. and very things systematically and try to understand what was going on .. and try to improve .. the .. properties.

I - so, did you actually set about setting the goals with this first bloke, or did he disappear before ..

S - he disappeared .. first .. you know, the problem wasn't really too bad at first .. because .. he was really looking at everything .. and I just picked out one or two systems to look at .. in a bit more detail .. with no objectives .. but just to look at .. but this is where we found the equipment problems .. um .. you know, we couldn't get consistent results, because of the equipment .. we couldn't really characterise what we were producing, because of this .. um .. and then .. the project had been going on for quite a bit - even before I arrived - and it just wasn't settling anywhere because of these problems .. it was then that we really started to set some goals and find out where we were going rather than just looking .. and hoping .. but, you know, the equipment was still not working so the project is .. dying.

I Yeah .. How would you set the goals? How did you go about this?

S Well, we tried to decide what was lacking .. what the defects of nylon and terylene were ..

I This was restating the problem - sort of thing?

S Yeah .. And then we took one specific problem, and tried to see if we could solve this using our techniques. And when we thought we could, we talked to the Group Head about it, and he said OK .. so, you know, for the past year we've - perhaps a bit less than that - we have been looking at one specific problem which after a few months and one of the formal liaison meetings where we had a very lukewarm reception, some shelved it for a bit,

cont'd...

until the last liaison meeting we got a very warm reception for it - you know the sun was shining -

I - ha! -

S - things change for no apparent reason in the space of three months, and we effectively got going again on the problem.

I Yeah ... What about the future? .. You know, you said this project's dying, have you looked to the next project?

S Uhm .. I'm leaving

I You're leaving! .. I see! Where are you going?

S 'X' Polytechnic

I 'X' Polytechnic?

S Uhm

I So you are going back into academic?

S Yeah

I Do you find that industry doesn't attract you very much?

S Well ... from my experiences in here, I haven't been particularly happy .. uhm .. had I been on .. a project which had .. moved .. and got somewhere, then I probably would have stayed .. longer, anyway .. I think I would have gone back into a lecturing capacity at sometime .. uhm, it's just the time factor which has probably changed .. You know, I've felt that .. with this particular project .. you know, its .. its never really been important .. you know, we are all cogs in a great big wheel, and this particular cog was never one of the more important ones .. er .. nobody would have missed it - sort of thing .. uhm, you know, I think it's a fairly difficult area to find new work in .. I think the Group's finding that now. There are a couple of projects that are on the rocks. There are quite a few people who are a bit dispirited at the moment .. uhm .. there's not really much else to do in this area .. at least we can't think of anything .. uhm ..

I Fine .. what would you say was your output over your period here?

I ... not very much, I would think.

I What would you say it was?

S In what sort of terms?

I Well .. apart from the evaluation of it, what did it actually consist of - in terms of written words .. you have talked to people .. and written reports ..

S Well, one of the techniques that we developed has been extensively used by 'X' Division over at 'Y', who have sent some stuff over to us on a couple of occasions .. to evaluate .. patent work, because they had said something about their system and .. the opposite was true .. as we were able to show and similarly 'Y' have done the same. As far as anything really coming out of the project as such, I think very little has come out of the project itself.

cont'd ...

- You know - whether that's our fault, the equipment's fault, or the topic itself, I'm not sure .. 'M' Division have been working on this as well, and they are scrapping it as well, because they haven't got anything out of it .. You know, I think it was one of these bad-eggs. A few years ago there seemed to be a lot of patents appearing about mixing polymer 'A' with polymer 'B' and we were probably a little bit behind .. and haven't been able to produce anything .. neither have 'M' Division .. So .. where the trouble really lies, I find it difficult to assess .. uhm .. report wise .. Oh, I've written one report, and I've a few more to write .. but .. just how valuable they are I don't know .. probably not. One of them may be of use .. it's a bit more scientific than producing a commercial product at the end of it.

I Is there any - sort of - regular - administrative report writing that you have to do?

S Well, we have to write .. a resume of the quarter's work, every quarter, just to say what we're up to.

I Uh huh .. and, er .. are you conscious of the standard of work that you have to do in a quarter?

S Uhm .. fairly conscious, yeah .. when the quarter comes round, we always feel - the other chap and myself - that we haven't really done anything worth - really worthwhile.

I .. So what do you try and put down? .. what, er, impression do you try and convey .. what amount of work do you say that you have done?

S .. well, on quite a few occasions, we have been honest and said - 'I've achieved nothing in this quarter - due to various problems' .. You know, occasionally - well, usually, we have done something albeit negative - negative results. I don't think we try and give an impression of bubbling over with tremendous output of .. work .. because we're not.

I OK .. fine ... Do you have any people working for you?

S Yeah

I Can you say who they are?

S Uhm .. well, there's a Junior Research Scientist who does small scale evaluation of systems we want to look at .. uhm .. these just give an indication of whether we're likely to get anything if we scale it up or not. They are not tremendously reliable results, but if they are good then we would produce something better on our bigger machine .. then there are two Lab Assistants who do testing and .. specimen preparation if we want to prepare any specimens for X Ray or electric microscope, .. anything like that ..

I Fine .. is there anybody else working for the other bloke?

S Uhm .. he's got .. one Junior Research Scientist working for him specifically .. Uhm .. In fact, we're one big happy team .. but .. I'm .. more concerned with the testing end of it than he is .. for instance, he's a chemist .. uhm .. those two Lab Assistants of mine are his as well. They generally do the testing .. for .. the physical techniques .. which I tend to look after. And there's also the guy who operates the 'X' machine, who - technically - doesn't work for either of us, but we tell him what to do.

cont'd ...

I OK .. um .. a typical problem with the machine that you've had .. can you say a bit more about that?

S Well, basically what we're trying to do is - feed polymers - down a 'B' - at exactly the number of revs - and mix two polymer streams together. Well, basically the problems come right at the beginning because we can't feed them properly. This is all .. largely screw design .. which we've never overcome. The screws were copied from a machine at 'X' .. and, er .. the guy that designed it knew that 'B' feeding systems were a bit dubious as to the way that they worked, so he copied this exactly from X .. but .. And, as .. a matter of fiddling round with 'Y' some modifications were made .. but there seems to be some factor which we haven't hit on yet. We get to the stage where 'we've solved it' and it's feeding perfectly, and then one week later, we'll get going, with it all exactly the same, and it won't work .. it gets rather frustrating.

I And there's nowhere you can go to try and solve this?

S .. the .. as I say, they've got a machine similar to this at 'X'; we've had a few of their couple come over here - a couple of times for days .. and, er .. when he comes over, as you may guess, it works .. and er ..

I .. that's life, unfortunately ..

S Um

I Oh dear ..

S It gets a bit frustrating!

I Yeah .. How do you get on with the Group head .. who is presumably your immediate superior?

S Yeah .. He's a nice guy .. a nice friendly guy .. um .. socially - anyway .. Work-wise - he doesn't apply a great deal of pressure .. he leaves you very much to yourself .. and .. um .. you know, he gives the impression of not being particularly interested - a lot of the time .. um .. and .. you know, I think there's some - you know, with other projects I think he does show a bit more interest - with projects that seem to be going. Possibly because this has never really got going he's never really shown the interest.

I Have .. How much do you - How much feedback do you get? .. You were just saying that you got very little.

S - from him?

I - from him as regards your own performance.

S very little

I very little - do you think this helps?

S .. I'm sure it doesn't help.

I It doesn't?

S No .. uh .. I think, had he said this project's not getting anywhere .. and why not .. let's give ourselves a few months more, and really try and sort it out .. but if it doesn't get anywhere we'll scrap it .. We get the impression - whether it's an accurate impression or not we don't know - but that if any decisions are made, we put the words into his mouth and then he feeds them

cont'd ...

back to us.

I hum!

S Um .. and .. Well, I feel that he's a bit unhappy about the project, but he doesn't really come out with it at all ..

I What about your own individual performance - your own personal performance as opposed to project performance?

S .. Um .. well, the only feedback we've had in this respect is assessment time - once a year ..

I Uh huh

S And, er .. this wasn't .. particularly good.

I - In what way?

S Well, you know, as an individual, I've produced very little goods .. just why .. I'm not sure .. I have my individual .. I think I've lacked the incentive .. I've never - um - really .. got enthusiastic about the job. I feel that I've got very little job satisfaction .. you know, I feel that these are all intrinsic factors ..

I Would you know what you would like? .. in order to generate some enthusiasm? .. what have you got enthusiastic over in the past?

S Um .. well .. when .. I was at university at the end of my years there, I had an assistant lectureship, and - um - I got pretty enthusiastic there about .. helping people .. and talking to people .. well, just lecturing .. and that is really why I've gone back .. this was something that I'd really enjoyed .. I think I enjoyed that more than the research I was doing at the time .. even though I was only doing this for a short period of time .. and .. er .. actually passing information on to people .. gave me a kick, anyway ..

I Yeah

S It made me feel as though I was doing something - worthwhile.

I Yeah, yeah .. Do you think you might come back to industry, or are you well and truly put off?

S ... I don't know .. um .. when I first came here, my ideas were .. that I didn't want to stay in research - for ever, anyway. Because, research is a bit too far away from reality - um .. I thought I wanted to go into production - more into the production side of .. industry .. um, but having been in industry .. I've never actually been in contact with the production side, but just looking at some of the problems that .. they have .. they seem very trivial problems. As far as reality is concerned, they don't appear to me to be any closer to reality than research .. and .. they haven't got the interest content that research has got .. so .. um .. I think I'm put off industry.

I lol!

S You know, and I think I see people as being the ultimate in reality.

I Yeah .. like it! .. definitely .. Yeah .. is there anything you think I missed regarding the work .. that you are faced with?

cont'd ...

- S ... probably .. but I can't think of anything.
- I OK .. if I can leave it there .. and take it up next time - another time .. and grab you - for another interview. As I said, I'll say more about what it's all about - behind it - later - if you're interested. But, I don't want to influence your answers too much. It may seem all a bit funny but I assure you it's all relevant - to me .. Is there anything that I might be able to answer now?
- S .. umm .. probably not .. but .. I'm just interested in what you're doing, but you'll probably tell me that .. after.
- I Er - yeah!
- S .. when do you want to see me next time?
- I .. where's your diary - I suppose we could fix a date - next week?
- S Yeah
- I Friday afternoon?
- S Er .. yeah .. I'll let you know if I have anything on.
- I OK - we'll assume 2 o'clock.
- S OK
- I Would you like to just come along; I'll hang on here - OK?
- S Yeah, OK
- I Fine .. see you .. next Friday.

I Hello ... How are you doing at the Lab .. still ticking over?

S - writing reports -

I - before you disappear?

S Hopefully, yeah

I Hah! .. You're still disappearing .. off into the - eastern sky?

S Yeah

I Good .. right .. well, this time I want to range a little wider ..
As a matter of fact, it might appear to be so wide as to be disappearing
off the edge of the earth.

S Hah!

I - um .. Yeah, OK .. What would you do if you were given a magic wand?

S ... that's a good question! ..

I It's a nice - Glossily wrapped magic wand, all ready for use.

S I can do anything with it at all?

I Yes - yes

S Um .. I would do something about the world population problem.

I Uh hah ... What about personally?

S Uh .. I don't think I would do anything with it personally ..

I .. Would you do anything with it at the Lab?

S .. I would get the piece of equipment going that I'm working on.

I Hah! .. Yeah .. very well .. OK .. what do you think, in your experience
to date, has been of most value to you .. especially with regard to the
work you're doing?

S - the work I'm doing at the moment?

I Yeah

S Um .. probably my PhD .. not in the actual subject matter, but in that I
had difficulties - and frustrations there .. which eventually turned out OK
and .. it's probably only that which has kept me going for so long .. these
were nothing to do with science at all .. there were just general frustrations
that ..

I - working something out?

S - Yeah - worked out in the end.

I - this was a particular problem of work?

S Yeah

I And it was a matter of working out the way to do it?

cont'd ...

S Yeah

I ... what about exams?

S .. Um .. You're thinking more of subject matter of the course, now.

I Um - yes

S Well, I don't think any particular subject matter .. has been .. too much
use. But I'm sure that the general principle, as a whole .. have obviously
been of use .. it's difficult to pin down - 'that part of the course has
been valuable' - 'that part of the course hasn't' .. I think it's something
of use .. as a whole ..

I What about the other things - apart from actual subject matter?

S .. Er .. for working in an environment like this - the actual laboratory work -
that you do - is very useful. Probably - more useful than the actual subject
matter itself - you know, using your hands, getting familiar with the apparatus
and doing something useful with it .. this does, in fact, only take up a small
part of .. er .. courses.

I Yeah .. this laboratory work was part of your work at University?

S Yeah

I Was there any particular sort of way which you had to pass exams? ... any -
sort of - particular strategy you had to work out? ... I'm thinking - like -
some people have different examination techniques .. some people go away on
holiday for the week before!

S .. My exam technique .. was to read .. and digest all my notes .. just once -
slowly - before the exam .. Er .. I suppose, in the last week, just read
quickly through everything .. you know.

I You've got a good memory, then?

S I don't think I have .. um .. I have to work things out - slowly .. and
fairly logically .. um .. I think if .. in an exam question, I have to go
to first principles and then logically work through it .. OK, I was able to
do this, but if someone asked me - point blank - what is the answer to this,
I couldn't do it, even if I had actually read it .. You know, my memory was
trying to sift out the relevant pieces .. and then hopefully I would add them
together later.

I Yeah .. yeah

S But .. occasionally I got to the stage of - I ought to be able to answer that
question - but I had no idea what I was going to write - I would slowly work
through it.

I Yeah .. with the PhD, was this a matter of taking the responsibility to do the
work yourself?

S Yeah .. well, initially the PhD work was a formal course - an MSc course, which
was .. a first degree and after that, it was a matter of taking responsibility
for it yourself .. I was given a problem .. a very specific problem, and, you
know .. try and solve it as best as you can ..

I I know the feeling!

cont'd ...

S Huh!

I I know the frustration too .. if you had to do it again would you do it the same way?

S .. If I had to do the PhD again?

I Yeah

S .. I would probably be able to do what I did in a month of two! .. having once tackled the problem, and knowing where to go .. you know, the actual .. useful .. content of the work I was doing was done in a very short space of time - once I had got sorted out .. it was mostly a sorting out procedure.

I - of - what - various ways to various products?

S .. of experimental techniques .. sort of .. the initial part, anyway, was just trying to learn a bit about the problem. It was a topic completely new to me .. it was a topic completely new to my supervisor, so we were both in the dark .. it was a matter of finding out something about it first of all .. And, without being able to talk to anyone at all - with any expertise ..

I And how easy was this? .. in comparison with the situation you find at P & P?

S .. I wouldn't say it was easy, but it was a challenge.

I Would you say that the work you're doing at P & P is similar to what you were doing then?

S In many respects, it's similar, yes .. the problem at the end is somewhat more open-ended. I don't think it's clear what the problem is .. Although there's a general problem .. you know .. within a certain context, we can invent our own problem .. but .. we haven't been able to get into the position of getting everything to work and get to the real problem at hand .. this is probably the main difference.

I .. Are you given a much more intractable situation in P & P?

S I don't think it's intractable .. I think the difference is .. umm .. basically, you must do something that is useful for the Company in the end .. Er .. a PhD is no use to anybody, really -

I Huh!

S It certainly wouldn't have made any money for anybody - which appears to be the all important factor here .. whatever you do must be worth - so many pounds in the market place ..

I Fine .. would you say you had any particular style of working - any routine of working - now?

S .. I think I try to work very slowly, and methodically .. slowly; hopefully - it's methodically!

I Can you put some words as to what the method is?

S Er .. I'm trying to get it fairly clear in my mind what it is I'm trying to do .. and then .. trying to do .. experiments .. which will .. give me as much information as possible about the system .. and hopefully being able to tie all this together, and .. come down to a final answer at the end .. hopefully.

cont'd ...

I Where does this approach - come from? - you know, it's grown up in your own mind presumably .. can you say where it originated?

S Not really ... it's probably just basic - sort of - education .. doing physics, which is a fairly logical .. you know, one thing follows on logically from the other .. it's basically an understanding subject .. umm .. This is probably an aspect of the general .. education .. not of anything specific .. this is part of the whole ..

I - Er .. you also mentioned that you do it very slowly. Is this - at your own pace?

S Yeah

I - and you think it's at a pace that is slower than ... average .. or normal?

S Probably, yeah .. I think I need to follow each step, and get it clearly in my mind. Whereas if I go any faster, I just tend to get - lost!

I OK! .. when you say - 'get it clearly in your mind', are you referring to some sort of picture, or some sort of pattern .. the system?

S Not necessarily pattern - just trying to work out at each stage what each bit of work is .. and, possibly try and put it in the context of everything else, but, I try to understand that particular bit.

I Uh-huh, Uh-huh ... and, er, what sort of ... well, presumably, you have to put into this, the chemical formulae?

S Yes .. well, I'm not a chemist .. but .. chemical formulae do mean something to me, I suppose, yeah.

I What else would you include?

S Physical properties ..

I Like - what - hard .. or soft?

S Yes, hard, soft .. this sort of thing ..

I Do you have a sort of repertoire of physical properties that you have at the back of your mind?

S Well .. there are certain physical properties that we look at .. And .. er .. you know .. one has done something to the system .. one has changed the properties .. and we can try and understand why this change has produced that change.

I How do you quantify the changes in properties? .. it's a bit of a technical point I suppose? How do you ..

S Well .. in the manner of - has this material got high or low hardness?

I It's just as simple as that?

S Yeah

I Do you just bash it on the table and see whether it breaks?

S Well, it's not hardness in that respect. We're looking at the forces

cont'd ...

I necessary to stretch it, and break it. And how much goes back when you let it go. You can measure these .. on the machine.

I OK ... what about your days at school - before University - did you get anything useful from that, do you think, apart from just a generally useful background?

S Uhm .. with school, generally, I was interested in science - more than any of the other subjects - I suppose all subjects to some extent were forced down your throat .. and, uhm, it happened that the more scientifically based courses appealed to me .. to the detriment of many of the others .. uhm .. but .. I think, now, I am more interested now in other aspects .. history - literature - than I was then. So they were really not something I cared for .. at that particular time.

I Yeah .. Yeah .. What about your future career? Is it nice and carefully planned out?

S Hah!

I You have got one move now?

S Yeah .. what comes after that I don't know .. at this point in time, I'd like to stay in .. well, physics education - or science education .. rather than being a professional research worker .. or - going out into some other field .. You know, I feel at the moment that I'd like to stay in education in some form or other.

I Where does this - er - come from? Any idea?

S .. Uhm .. I think it probably all stems from the assistant lectureship that I had .. in University .. which I thoroughly enjoyed .. and, er .. I think that's probably the main criteria in deciding ..

I Fine .. are there any - sort of - bits of training that you would - ideally like?

S - that I think I need? - or - that I've had which have been useful?

I The last one - that has been useful ... this is presumably at P & P.

S .. Well, I've been on a public speaking course, at the beginning of this year, which I found extremely useful .. it was only a very short course - 3 days. I benefited a tremendous amount from that - particularly when considering the amount of time we spent on it .. uhm .. I've been on a spinning and weaving course - how to produce fibres - the raw materials and the whole process .. which was quite useful .. it was interesting. Similarly, I've been on a weaving and knitting course which has been useful - as well as interesting .. but, again, possibly not useful in the job context but as a general - education .. which was very interesting .. all about trousers and how they're made up.

I Yeah .. Yeah .. that's something I know absolutely nothing about ...

S Well, the more you know, the more you realise you don't know.

I Ha! .. Yeah .. OK, so, would you like more of these sort of things?

S .. Uhm .. Yeah .. I think the public speaking course .. was extremely useful both from the personal point of view and the Company point of view .. probably ..

cont'd...

Uhm .. the other courses .. were .. useful .. from a personal point of view .. but, certainly working in the Lab, not .. useful for the Company .. although, they may have been had I carried on in the fibre business .. uhm .. like going on to producing something more on the commercial side -

I Yeah .. what about the GDP programme that's been instituted?

S Er .. I'm not really sure what .. useful effect it has had in the .. Lab .. this may well have been - at all .. it will have made people more aware of some of the problems but I don't know .. whether it has helped anyone get any closer .. to solving them .. uhm .. this .. I know course is one .. that's impossible to quantify at all, but .. it had a shattering effect at the time, and shortly afterwards .. uhm ..

I - was this exhaustion? .. exhaustion rather than -

S - Er, yeah .. certainly on the last day, I was completely exhausted, you know, I didn't want any more.

I - Yeah -

S - and all of the next week ..

I Yeah!

S - just for that time, that was it .. I just didn't want to know any more .. I was completely exhausted.

I Did you come to any conclusions about that .. er .. course .. I mean in the same way as the public speaking one that it was of use to you personally?

S Uhm .. actually .. seeing .. in a fairly concentrated form - personal interaction - er - is something .. You're there all the time, but you cannot see it - you're not forced to see it .. this sort of course helps you to see how personal interactions occur, and what .. You can do to change them in some way .. uhm ..

I Yeah .. is this .. what did you get from the public speaking?

S The main thing I got from the public speaking is more confidence to stand up in front of a group of people and talk to them about something.

I Fine .. yeah

S - which can also be quite a shattering experience.

I Ha! .. yes .. why over-population?

S Uhm .. well, I feel at the moment, I feel the world is .. slowly destroying itself .. uhm .. and .. you know, I see in - 100 years perhaps, there will be little of the thing left.

I Uh-huh

S Perhaps that's a bit of an alarmist point of view .. but - er - I would say it's going that way fairly rapidly. There would obviously be some

cont'd ...

- I survivors .. but the whole of present culture and technology .. would be lost, if it carried on .. the way it's going at the moment .. I feel this is the over-riding problem of the world at the moment ...
- I What sort of effects does it have .. on the culture and technology?
- S Well, at the moment, I'm not sure .. that it's having any .. if the world were destroyed by this process, then all the cultures would be lost .. because most of it - I think - would be destroyed in the latter stages, and, there wouldn't be much evidence left for anyone .. that's the way it seems to be going at the moment.
- I Yeah .. what do you think are the signs? .. You know, can you .. I can agree with you, to a large extent.
- S Uhm .. well, I think .. perhaps I'm the cause of the whole problem!
- I Ha!
- S Uhm .. I'm sure there are some signs which are useful in that they produce a better living .. but also there are some with the adverse effect .. you know, some problems do tend to get overemphasised .. like the pollution problem, because it's the population problem basically.
- I Yeah .. Have you thought a lot about the population aspect? .. it seems to sum up a lot of problems to you.
- S Yeah .. uhm .. I see this as the over-riding .. rather than fresh air, or an Ice Age in the next years or not producing quite as much smoke from this chimney.
- I An Ice Age in 10 years time! WOW!
(laughter)
- I I was just getting worried! ...
- S No .. No ..
- I OK .. what about Northern Ireland?
- S .. It's a problem .. but .. I'm not sure what the solution is to that one, er - there's a basic conflict there - but it's between a minority of people .. it just gets blown up .. uhm .. but, you know, I haven't a clue what anyone can do about it .. I'm sure that force .. isn't having the desired effect .. I think the situation would probably be easier if they moved out .. but .. you know .. it's certainly an unstable situation .. and .. so it remains .. the Protestants could be moved out .. but that isn't really a solution ..
- I What about a magic wand? .. would that ..
- S .. Yes, you could wield a magic wand, and say all these people will live happily together .. uhm .. if you could do that .. OK .. but ..
- I Fine .. what's your reaction to criticism?
- S - Criticism to me?
- I Yeah
- S Uhm .. I think it depends on how it's done .. I think if it's .. completely .. knocking criticism .. with no .. other effort then to just knock you down .. then, you know, it's a bit hard to take, but probably still valuable .. uhm .. but, if it is constructive in any way then it's easy to take - or easier .. and, er .. of more value.
- I Fine .. Can I ask a bit about how you spend your spare time .. what sort of hobbies and interests?
- S .. Well .. at the moment I've got two kids!
- I Ha!
- S One is two years old, and the other a few months .. so .. you know .. it's a bad time, recently .. you know, I spend most of the evening trying to decide what happened to it.
- I Ha!
- S Since .. since I got a house .. and a garden, I've developed an interest in .. gardening .. to a certain extent .. to the extent that I would like a larger garden - for growing flowers and the like .. and I suppose, do-it-yourself .. mainly for the good of the house .. er .. I like reading .. although I don't seem to find time to do any of those things .. uhm .. I'm interested in lots of sports .. not many of which I actively participate in .. I play tennis, and squash .. and, if I had the time, I would still like to play football - which I used to play.
- I Yeah - what about the ones of your youth? .. have a lot of them died away, .. because you don't have any spare time?
- S Well, I used to do a lot of athletics - which - I would like to do now - to a certain extent .. certainly as a means of keeping fit .. I've been promising myself for the past year that I would start running in the streets - just to keep fit .. but .. uhm .. you know, that's something you can do fairly easily, because you can do it on your own, with football, you need to get the rest of your team round you .. Yip .. it won't fit easily into tight schedules .. similarly basketball.
- I What about reading?
- S Uhm .. you know, I don't get as much time for reading as I would like to .. When I read, it's mainly fiction .. or, I suppose, social type novels - as a broad classification ..
- I Uh-huh
- S - uhm .. Steinbeck is probably my most read author .. uhm .. I suppose - science fiction - to some extent ..
- I Uhm .. what do you like in them?
- S uhm .. well, people - and their reactions to situations .. I suppose.
- I Uh-huh .. Do you find that .. You can translate the insights into real life situation here?
- S .. uhm .. occasionally .. not always .. I think it depends - sometimes -

cont'd ...

how you are reading the book .. which sometimes may be for more serious reasons, where you .. than some .. where you read as a light relaxation ..

I Yeah, Yeah, Fine .. OK, I've had my go at you, are there any questions you would like to ask me?

Appendix 4.

The interviews presented here are
chosen as representative of the typical interview.

- 4 (a) A pre-assessment interview with a supervisor
(relevant to Case Study 9, in chapter 9).

After a concise description of the way time is spent, the interview moves on to career history, (page 1), enjoyment (page 3), and magic wand (page 5). Although assessment intentions is introduced on page 8, much of the rest of the interview seeks to elaborate on earlier answers to the questions about enjoyment (e.g. page 6) and magic wand (e.g. page 12).

The supervisor's description of his intentions in the assessment interview (e.g. page 11) demonstrates the sort of problems that require his attention, e.g. performance appraisal, career development, and a decision on a merit award.

- I You mentioned you've finished - what sort of thing are you going to do now.
- S I've had an offer from (Z) university .. in chemistry.
- I well, well, well! how did you pull that one off?
- S I .. I've had a training in (chemistry) - I'm quite old - I was 28 when I came .. so I did two separate post docs after doing my Ph.D. .. and I did both my post-docs in (chemistry) .. and a lot of the research I've done here, has been based on that training .. At (Z) they are setting up a combined honours degree in chemistry and (chemistry), and, the job entails - initially - preparing lectures and practical classes, for the students who want to take this option. This means teaching (chemistry) to 1st, 2nd and 3rd year undergraduates .. This is a subject that has been very much neglected - at undergraduate level .. by universities and not all universities have research schools.
- I (Z) has research interests
- S Well, they've already got one member of staff who is interested in (chemistry). But, primarily they want someone to teach at undergraduate level.
- I Fine!
- S - as well as that, I'll do research in my spare time.
- I Yeah .. are you severing all contacts with industry?
- S Well, initially .. you never know how it may develop .. but certainly initially, it involves setting up a new course, a new degree - really. I have to devote all my efforts to this initially, but, as things settle down, I shall be more able to use what contacts I have.
- I Yeah .. why are you a chemist? - or a (X) sorry?
- S Well, I'm a (X) by training. I did an undergraduate degree in chemistry .. uhm .. it's a difficult question, why I chose chemistry .. I wasn't one of those people who picked up a test tube at the age of 11 and decided this is for me -
- I - You weren't?
- S No .. I think, really, it was my chemistry master at school .. I think .. being not practically minded, I was fairly good at maths - I'm sure that was my best subject.
- I Not being practically minded?

- I Right, how do you spend your time?
- S - how - weekly -- monthly ...?
- I Aah .. a selection .. Yearly
- S Yearly! .. uhm .. I would say about 50% of the time doing odd jobs for the group head .. well, 50% not 50% .. 50% running the (X) project, and, er .. 20% doing my own research within that project ..
- I How does that differ - say - day by day, and week by week?
- S .. Uhm .. the 20% probably goes by the board some weeks ..
- I .. Yes, I imagine so .. yet, at other times, it might take up most of a week -
- S - Yes -
- I How long have you been working like this? - how has it developed?
- S Well, the history is you've probably heard of the group trainee scheme?
- I - Yes
- S - Well, I was one of the group trainees .. uhm .. and that occupied, I should think, 20% of one's time .. In actual fact in group head's) group, which is one of the largest in the laboratory, one gets more of the trivia or odd jobs. He does delegate a lot more than other group heads. He's a scientific group head rather than a managerial group head. He's interested in what people are doing scientifically; in that way rather than being the perfect manager.
- I Oh, huh
- S - he's interested in what's going on.
- I I see - How long have you been at the Lab?
- S Almost 5 years
- I What were you doing when you first came
- S Well, it was entirely research when I first came .. And I had a couple of assistants to look after, and this .. er .. 3 years I was just doing research .. my only goal, if you like .. My fourth year, I was doing research for 60% of the time; 20% of the time I was doing odd jobs for the group .. Just before I finished, I assumed control of the (x) team .. which is 3 Ph.D.s.. and their junior staff.
- I What are you going to do now?
- S I am supposed to have $\frac{1}{3}$ of the time off - between January and March I think I was only in the lab about 3 days a week while working on this committee.. which is why the administration has increased.

S I didn't really approach mathematics in the way most people, or the school, did. Most people treat mathematics as a subject in its own right; well, I treat it as the language of science. So, I could only see myself if I did mathematics as a subservient member of the scientific community. And really to do some forms of chemistry and physics properly, you've got to know a lot of mathematics. I wanted to do something more practical, where you could see the fruits of your labours. I've never been biologically, or medically oriented. So that was why chemistry. And having chosen chemistry, my reason for choosing (X) was. Well, at that stage, knowing I was going to go into industry, (X) at that stage was a growth area, and so I chose that.

I This was what you did your post doc work in

S both Ph.D. and post-doc. Then I came here, P & P Laboratory.

I - 'Corporate' Laboratory?

S Oh no, not really.

I Why not?

S Well, I prefer to be a scientist!

I I see! .. well, have you enjoyed your stay here?

S Oh, yes, very much, yes.

I Tell me, what do you enjoy most about your work?

S Well, I.. I'm curious. I like to be creative. I like to understand what's happening - Behaviour - not making things, if you understand the difference.

I Yes

S - I've managed to make a bit of money for the Company. I've had a very enjoyable 5 years here. I've just published 1 or 2 papers in the external literature.

I Ah! and now he's buzzing off to lecture!... Is there any particular method you adopt when you tackling a problem?

S Er.. Yes.. that's a nasty question that isn't it.

I Is it?

S Yes, well, ICI sends you away on courses on that you see.

I Oh, I see

S You get all this - knowledge - pushed down your throat about this way, that way, and the other way.

which way do - which course

S The problem solving course at (D) where you critically examine this and network that, and etc etc. and even so, I still tend to disregard all this information and go at the problem in the way I always go at it.

which is -

S - Trial and error, I suppose, as much as anything. Using. Using. Using. Well, using some thought as well, obviously. I think. Research is bound to be probing into the unknown to some extent, and you've got to play hunches. And the final hunch is on - er - experience and. How things have happened in the past. So you work on previous experience. And, er, you learn from the people you work with. And the people you work for. And how they approach different things.

I have worked for 3 different professors and these worked in 3 different ways.

I - What was the difference

S - Well, the 1st one was very conservative, and obviously in industry you don't have that choice. You have to work on what's going. He was - 1st of all - very practically minded.

My second professor was. Both theoretical and experimental. He approached things from a theoretical. Working out various theories, and then trying to confirm them from experiments.

I How did the experimental one differ from the more practical.

S Well, the 1st one would go through results and say: "this looks interesting; that looks interesting." - OK? and then say "do this experiment, which will tell us this" - alright? .. and the other one worked it all out in his head, or on paper, and "we will get this result" and if we got that result, it was quite an interesting experiment. The 3rd one - very enthusiastic - always full of bright ideas - always came in and expected - not necessarily a theoretical approach - just hunches and say "this looks interesting let's try and do this. It may or not work."

I don't know whether these represent anything like a broad spectrum of approaches, at all. I think the majority fit into these categories, although there are probably other categories as well.

I there are other categories as well?

S there probably are - yes.

I what - er - are you thinking of?

S Well, I can't think of one on the spur of the moment.

I Can you think of any other people. Who differ in approach?

- S .. Yes, I suppose the other difference is that these people were all very knowledgeable in their subject .. the other approach is that some people can move very quickly with a small amount of knowledge - in the subject - and other people seem to take much longer .. to figure out .. what the important experiment would be
- I Yeah .. Yeah .. what did you learn from these approaches?
- S Well, in any particular problem, one might be able to use any one of these rules, depending on what the problem is
- I So you're fairly eclectic
- S huh?
- I - eclectic
- S eclectic? .. I'm afraid I'm just a narrow minded scientist!
- I You can use various approaches, and ways of tackling a problem
- S I would hope so .. I think this is also a point about these problem solving courses . You go away and hear about .. what I suppose is just common sense .. but .. you never apply these things in a conscious way
- I No
- S Now, maybe because of the environment you live in, you don't have time to apply them .. the pressure is so great that you can't - say - choose from various approaches - I'll try number 18, now.
- I Yeah - Do you take any of your work home?
- S Yes
- I In what way?
- S Well .. a lot of the papers I've written for publication have all been written at home.
- I Why's this?
- S Uhm .. well, 2 main reasons .. I find it impossible to write things properly here .. because of the office arrangement .. it's too noisy .. all you do is talk all day .. that's one reason .. I suppose, in the case of publications for the outside world, it's not the main objective of one's being here anyway .. the main objective is to do research relevant to the company, and that's not necessarily compatible.
- I - No - indeed .. I know .. what would you do with a magic wand?
- S In this place?
- I Well - No .. I was thinking more widely .. perhaps you would like to use it on this place!
- S You mean myself - 1st of all?
- I - Yes -
- S I think - er - if I'm honest with myself - that the job I'm going on to .. is nearer to the job I want, than doing research in industry ..
- I Why would you say that? .. You've done fairly well.
- S Yes, I've done fairly well. but, I think, at heart, I'm more of a self-employed man - that has come down generations in our particular family .. more a self-employed man than a man who likes to work for a company ..
- I What demands are made on you that you either can't do , or don't like?
- S Well, I think what I do is more important to me than the rewards I get ..
- I Yes .. Yes
- S - in other words job satisfaction is more important to me than reward .. a scientist, in any environment, providing he's a reasonable scientist, can obtain a satisfactory standard of living .. luxuries aren't that important once you've got a car and a house ..
- I Yes .. Yes .. have you got any conception of what it is you want to do? What gives you the satisfaction?
- S Well .. er .. setting out on a problem, and actually achieving something .. and if one can choose the problem one is to work on, so much the better ..
- I .. what sort of problems do you like choosing?
- S - difficult ones ..
- I difficult ones! ... what problems do you enjoy most?
- S Well .. Just to keep to ones while I've been here .. there was a particular technique we developed, called (x), when I came here, it had just come out, and there were no more than 3 or 4 instruments probably in the company .. A lot of people in the company thought it wasn't a very good technique - too expensive - .. We were the 2nd Division to get it .. the 1st weren't doing very much with it .. and I was given the job of trying to do something with the technique, here .. this then misfired, to building a second - improved instrument .. and I also convinced the people who thought it was worthless to buy the technique .. now, I regard this, as moving into an area that was still - dodgy, and proving that - er - this particular technique was viable.
- I How many problems are there around that you wouldn't like to work on?
- S here?
- I Yes, here

S I don't know about the problems, but I think the method of approaching them is - er - rather - non-scientific..

I hah! do go on! - he said - knowingly!

S Well, obviously, there's great panic, or a great rush to demonstrate whether a particular product - or process - is going to satisfy the business people - right?

I Yeah

S Now, it's quite easy to set up a grid saying we do several experiments, varying several different parameters, now, if you go away and do this, and do your 65 experiments .. but on the other hand, if you haven't done things from the start, and you haven't monitored things as you go along .. you haven't learnt anything, and .. at the end of the day if everything's failed, you haven't learnt anything to form a new series of experiments..

I .. and you think that some people tend to take the experiments for granted? .. is that it? .. saying there's no need to go through that long list ..

S Oh yes .. there's always the person who believes he knows the truth - or she?!

S or she! Yes ..

I - I imagine you wouldn't subscribe to the method used by (Y) for example

S - No, I wouldn't subscribe to her method .. I would hope you could combine her method with a more academic method .. which learns at every step .. but I think in industry, you've got to do a bit of both, because with just academic methods, you'll never get there quickly enough .. this is where the "hunch" approach, obviously, is helpful ..

I How do you get your hunches

S Well, I find that I get mine away from work believe it or not ..

I Hah! tut-tut! .. what in the bath?!

S - in the bath - or mowing the lawn, or out on the cricket field .. strange, yes - or where I'm doing something else where I probably don't have to concentrate very hard .. you sort of - tick over, and, bobs-your-uncle, you've got a hunch that something might work..

I Do you ever say at work, 'I want a hunch, right now?'

S No. No ..

I You normally find they come when you leave the treadmill? .. You can't sort of machinate one

S Well, I think I go through the mechanics of doing certain things, in work time, between say 8.30 and 5.00 o'clock if you like .. there are certain things you have to do, right .. I don't think the atmosphere is very conducive to hunches, unless you can .. Well, 2 things are necessary for hunches .. either you are on your own, or alternately talking to people .. and I prefer the solitary - monastic - approach, rather than talking to people in the laboratory..

I Fine .. the monastic approach being doing something in order to relax?

S Yes ..

I some hobby or ..

S Yes, Yes .. where the concentration is minimal .. this is where the new ideas come from, on the other hand, new approaches to the problem in hand usually come from talking to other people in the laboratory - or in the same office

I But the new problems, often come from the mind wandering - at rest -

S - or reading in the literature .. which I never find sufficient time for ..

I Yes .. Yes .. OK, what about assessment .. You've had some experience in staff assessment already?

S I've sat on both sides of the fence, if you like!

I hah! .. do you have any particular approach to assessment? .. when you're doing it rather than being it ..

S Well - uhm - I hope I try and be systematic about it .. er .. do you mind if I?

I No fine.

S Yes, I explain to the man what it's all about .. interviewing him on his own performance .. what his strengths and weaknesses are - so that - if there are any courses he can follow in the coming year .. what his rise should be .. what his grade should be - if he's at the top of his maxima .. that's what is involved .. and I fill in the details as appropriate .. you'll never find 2 cases exactly alike.

I Heaven forbid! .. what do you mean exactly - you're surprised at the twists and turns that can happen

S Well.. I won't say twists and turns .. I think it's my philosophy that no 2 human beings are identical ..

I Yeah! what do you think that's important, as far as people are concerned .. when it comes to assessment

S - You mean - assessment in the job here?

I Yes - Yes

V

- S It varies, depending on what level you're talking to .. Below five, then I regard the most important factor as passing examinations .. um .. I emphasize to the laboratory assistants, that this should be their prime target .. and providing they do a reasonable job, here, and don't fall down on the job, then fine .. You don't expect miracles, but if they can pass examinations, O.K. um .. above five, I think, if they still want to go on taking examinations, fine; .. it's always said you can progress to the main board .. without further qualifications, providing you've got something like 100 .. 50, the more important requirement is that they should do a job that they enjoy - do a job which they are good at .. think about what the future holds for them .. do they aspire to a permanent career in a laboratory such as this, or to something closer to making money .. if it's closer to making money, then maybe they should think about whether they are getting the right sort of experience in the branch that they are in .. what it is worth while to get experience in a different part of the laboratory .. which might ease the transition from laboratory to somewhere ..
- I I think the important thing is to stress that, although one can't plan your career exactly, one can get some idea what's going on, and maybe, offer some advice on what they should do ..
- I Yeah .. what are the typical strengths and weaknesses? - how do you find them out?
- S well .. perhaps the 1st person I deal with has got lots of drive - is enthusiastic - he gets on with his fellows .. or he may be a bit of a loner .. um .. whether he can talk ad-infinitum about his work - or what job he's doing .. whether he can write reports quickly or whether he has trouble writing reports .. whether he should stay in chemistry or perhaps branch into something like medical science..
- I - Would you consider it part of your job to help them come to some decision as to what they are suited for.
- S You mean that they came to a decision during the actual assessment interview?
- I -uh- -
- S I would probably give advice from my own personal experience, and my own knowledge of the company .. my own knowledge of the laboratory .. having given this advice .. I think the final decision must be their own decision .. because they know what they want out of life .. I don't...
- I Yes .. Yes .. Do you find they need sort of encouraging to look into this .. area ..
- S Yes .. I think it's so easy to drift .. at certain stages in life, it's very easy to drift .. starting a family can easily see 5 years pass by ..
- I So, what would you do to ..
- S - Well, I suppose I try and ask pertinent questions .. Like, if he was 25, what will he be doing when he's 30 .. if I get a blank expression, then .. I'll go into the problem .. very often, you do get a blank expression ..
- I hab! .. Yes .. what do you do then?
- S Well, I suppose .. if the system was correct, you would have some sort of mechanism where you would talk to these people more than once a year .. not necessarily assessment interviews .. I don't know whether this is possible .. but, it seems to me, that if the man comes round a second year with the same blank expression on his face - then either he's got no drive, and is not interested in what he's doing to do during the next 40 years .. or, alternatively, he's been knocking on the door of the system, but the system hasn't responded ..
- I what do you do then? can you think of an example
- S Yes .. some - production - type jobs were circulated a couple of years ago; and various people around Baslam 10 showed interest .. but .. nothing ever happened as far as people in the lab were concerned .. certainly no-one in our group moved as a result of this, despite their interest ..
- I How do you recognise someone who has been knocking on the door, but the system hasn't responded.
- S - in my own immediate research area, by talking to them .. Now, I'm probably going to assess people who aren't in my immediate research area, .. if this sort of conversation cropped up during the course of the interview, I would make it my business to check out - say - once a month, for a few months to see if anything is happening. If not, then I might knock on (the personnel officer's) door .. the chap may be aspiring too high .. which is always possible of course .. or .. he may be qualified, but there are not the jobs available .. I think you have to recognise .. one always fears blocking up the problem out of all proportion - this happened in the past to some extent .. people think that - er - there's a place waiting all the time for them, and it may be difficult to bring them back to earth ..
- I How .. what do you actually look for in such a case?
- S well - I don't look for anything .. I don't look to see whether he's got his hair parted on the right hand side - or -
- I - well, he must show it somehow
- S - well, I think this is very dangerous .. because one is always very good at picking characteristics in a chap which you have .. saying .. bringing someone down on some characteristic, which you are probably not too high on yourself
- I Yeah .. Yeah .. How would you bring someone down?

S How would I bring someone down .. well, if I wanted to do it, I would probably confront him with a problem, which I know from previous experience, that he probably couldn't solve ..

I Have you actually done this?

S - I don't think I've consciously done it ..

I uh huh! .. hah! ...

S ... it depends - what do you want to bring his down for? can I ask you that question?

I Er .. what do you want to bring him down for ..

S - if he's got a good characteristic then there's no point in bringing him down .. if he talks a lot, he may be just communicating a great deal, then that's fine.. but if he talks incessantly .. I think you should point out to him, but way bring him down?

I Yes .. I suppose .. what one really wants to do is to check out how high he is capable of flying.

S ... Yes, I suppose if you've got to put him in some sort of job, you would ask him " what would you do in these circumstances .."

I Yes, Yes, .. Can you think of any example where you might have done this

S Well ... that's going back a bit in history ... well ... yeah it depends on the person, with some people you can really be blunt with .. if you like, they are thick skinned, and you know that no harm will come from saying what you mean .. umm .. other people, if they are a bit more sensitive, then, obviously you have to be a bit more careful how you say what you want to put to them .. Now, the point is that I'll be assessing some people that I don't know at all well, and which approach do you use?

I Yuh! Do you have an idea where you want to get to in the assessment interview?

S I think I want to do three things . The first is to find out how the chap has performed during the year .. and 1st of all find out whether the supervisor's view bears any resemblance to that of the assessee himself - so first of all one tries to obtain a realistic view as to his performance .. having satisfied oneself on that - and it may take quite a bit of probing actually to find out what the real situation is .. umm .. of course, taking in all this drive; enthusiasm; will he work with people, or does he need propping up ..

I Any others?

S - technically - is he competent technically, does he work too slowly; does he work too fast .. umm .. all these - sorts of - characteristics .. is he capable of moving on to a job that will stretch him even further.

I - this is the 2nd thing?

S Well, this will be the result of .. you'll be having this ticking over in your mind, while going through the rest .. and having gone through all this, you determine where the weaknesses and strengths are, OK.

I Yeah

S - Hopefully, you can point these out at the time. Whether this leaves any impact, or not, I'm not sure.. It probably doesn't... the chap is probably concerned with how he's performed.. and whether he gets through in one piece .. and then, the final thing is, of course does he deserve £10, £15, £100, £200 over the year .. In other words what reward does he merit for that particular year ...

I .. Yeah ..

S .. In this situation, people are especially concerned with education, and qualifications .. a person may come along and say: "I just got my BSc, and I can go on now and get GRIC, and then I could go to university, and get a Ph.D." and you've got to guide them and say whether you think it's a good thing for them to do a Ph.D. or not .. bearing in mind, for example, the opportunities for Ph.D.'s in chemistry, four or five years in the future.

I Yeah .. to what extent do you think about it beforehand? .. what may happen

S - that depends .. (A) has worked with me, and I already know him quite well..

I What about (B); what are you expecting with (B)

S Well .. I think .. he's got his GRIC last year .. he's been married probably a year - or two years - now .. he's bought a house .. he'll be quite happy to go along for a year or two and see how things go .. He may ask for a different type of technical job .. I think he now sees himself as trying to do a job in laboratory, and see how things go from there .. that's my prediction ..

I OK .. let's go back to that magic wand, that you didn't really answer:

S what .. for me ? .. or the lab.

I the lab

S well I think the lab is going through a transition period ..

I what sort of transition period

S well, until this amalgamation has taken place, with everyone being on the same site, it's not clear what's happening .. what sort of balance will result .. if disciplines ..

- 4(b) a pre assessment interview with a supervisee
(relevant to Case Study Three, in chapter 9).

After a brief description of the way he spends his time (page 1) the subject moves towards a description of his career history (page 1) which discloses significant personal information - "I've had a few setbacks" (page 2). Assessment intentions are introduced in page 3, (in order to discover if the assessment system are viewed as possibly helping this unsatisfactory career situation).

Enjoyment is introduced on page 4, after the subject mentions his interest, (i.e. high level of exploration,) in research. Further discussion on assessment expectations (pages 4,5 and 6) leads to further development of the subject's self exploration of enjoyment (page 7). Method of working is introduced on page 7, and magic wand on page 9. These questions lead to further expression by subject of high levels of self exploration concerning his career situation (page 10). Although the interviewer offers action oriented conditions in relation to the subject's developing self-understanding, (page 10) no attempt, in this interview, is made to offer more comprehensive helping conditions.

I Right .. how do you spend your time?
S Er - mainly practical work.
I Uh-hih .. can you go into a bit more detail?
S well, at the moment I'm running the batch reactor pot .. which polymers ethylene .. using organometallic type catalysts .. and, at the moment, it's repetitive .. but .. you're just carrying catalysts all the time with the same piece of equipment .. there's quite a degree of flexibility in it because .. each catalyst is different, and, er .. sometimes you get nothing, and, er, sometimes you get a good product .. each time you have to screen each catalyst .. testing the polymer ..

I - You do the testing afterwards?
S Yes, we do simple testing on it ..
I - You make it, then pass it on to someone else?
S No, I do some of it .. there are a lot of tests which are carried out by (X) and people.
I I see .. how long have you been doing this?
S Well, actually, I've only been on this particular job a couple of months ..
I What about beforehand?
S Before that .. I was up in (a laboratory) .. setting catalysts up and testing them .. and, er, I've been up in the lab - maybe 12 months .. before that, I was over at (location) for a couple of months.
I And before that?
S Before that, I was back in (the same laboratory) preparing catalysts .. it's basically the same overall project.
I How long have you been at P & P?
S (month) 1968 ...
I My God! and (the laboratory)
S - basically (the laboratory), and (group head's) group
I So you've been here (X) years?
S Yeah
I And on the same project?
S The same project, yeah
I So, it's going well?

S Yeah .. well there's still a lot to be done.
I I see .. what about yourself? - could you give us a picture of your career to date?
S Uhm .. well, I've had a few setbacks .. academically .. uhm .. I actually went to (Y) University before I came here .. I left school in (year) with 3 'A' Levels .. I went to (Y) University but I didn't have much success there so I had to leave.
I What, this was the 1st year exams, was it?
S Yeah .. 1st year exams ..
I In what?
S In Chemistry
I Yeah
S So I came here, and started an EMC course at (D) College, and .. for 3 years on the trot I didn't have much success with that .. last year was the final year of the course ..
I So this year, you ..
S - this year I'm not doing anything .. just treading water ..
I .. what does treading water consist of doing?
S Er .. Well, I'm not quite sure .. whether I want to carry on in chemistry - in which case I would have to do something like Open University .. another course .. uhm
I - Yeah .. OK
S Yeah, well .. I'm a bit lost - so to speak .. a bit frustrated .. not getting anywhere .. and, er .. without EMC, I'm not making any progress ..
I why chemistry?
S why did I start chemistry? - that's interesting! .. Er, it's a thing that you do at school.
I why not anything else - like physics?
S Well, I was interested in physics and chemistry.
I Physics and chemistry?
S Lots of other subjects as well.
I This is 'A' Level?
S Yeah
I What - physics, maths and chemistry?

cont'd ...

cont'd ...

S Yeah .. typical sort of thing you do at school .. it was either that or arts .. there was no such thing as doing an art and .. basically just fitting into the timetable ..

I Why science .. rather than arts?

S Uhm .. it's a good question .. uhm, well, there didn't seem much career prospects in art at the time.

I Can you think back to the actual sort of things you thought of? - actual drawing - art - or ..

S Yes .. uhm .. commercial art .. again you have to be very good to ..

I That's true!

S Yes

I So, it was more of a going for something that didn't seem bad rather than did seem good?

S Oh, I liked chemistry, yes, I found it an interesting subject.

I What? .. speaking as a non-chemist, I'd be fascinated to know what ..

S Well .. the chemical .. er .. transformations, and the chemical state of the world was really quite interesting .. how substances differ from others ..

I Uhm .. I see .. what are you expecting from assessment?

S Uhm .. well, I don't think it applies so much to Lab Assistants as Research Scientists .. it applies more to people who used to be called T.O.'s .. people leading research groups ..

I - Get most from it?

S Get more from it than Lab Assistants and Junior Research Scientists .. I think everybody gets something from it .. but people leading a research group tend to have the ideas and be responsible for the work ..

I .. and what do they get from it?

S Well, a catalyst that works ..

I - not from the project, the assessment, --sorry

S Oh .. well .. for example, there's a chap in Mond who's responsible for (a product), which is really going to be a money spinner for ICI .. he'll get a good assessment for that ..

I Hah!

S - that's an exaggeration -

I Yeah, yeah .. but it makes the point.

S I think research is a difficult thing, really .. because there's a certain element of luck in it, as well as planning.

cont'd ...

I Uhm huh

S - of actual work .. I mean, you can work for years on something and never get anywhere .. and somebody can come along, have a stroke of luck, and out of the blue, suddenly find something .. It's not all luck .. there's an element of planning ..

I Uhm huh .. do you like research?

S Yes .. there's always some interest in it ..

I My God! - you actually like it?

S Yes - it's - er ..

I - What is it you enjoy about it?

S Uhm .. well, you could say you're on the frontier of science, I suppose .. something like that .. uhm .. it's just the investigation .. I think .. you'll know nothing about something, and then .. after an investigation you begin to get an idea how these particular systems work ..

I .. and that's the interest?

S And also the development of a catalyst system .. and developing it .. developing it into a commercially viable entity .. I think this is essentially - .. development of a new process.

I Do you actually see anything of the project?

S Yes .. quite a bit .. uhm ..

I How do you get this information? - meetings?

S Yes, we have meetings .. on Monday mornings.

I Are you allowed to ask questions?

S Well, I provide most of the data, actually!

I I see! .. What's happened in past assessments .. that you've suffered - or had in the past?

S Well, basically .. it's just a précis of your past year's performance .. I think this is basically what it is for Lab Assistants ..

I .. Yeah .. Yeah .. what form does the précis take?

S Well, you just say what you've been doing for the last 12 months.

I - then what happens? What does he say to you?

S Hah! I'll have to remember, now! .. Well, the assessor asks you if you're happy in the job you're in or if you're fed up and want another job .. usually in the same group .. uhm .. because the usual procedure is to swap people around .. for example, (B) is now doing my job, and, I'm doing his .. every so often, 6 months or 12 months, we swap round .. and this gives everyone a fuller understanding of the project, as well as - er - a new insight ..

cont'd ...

I So it's a bit more than just a change?

S Yes, I do think people can get bored, just doing the same job ..

I Yes! .. do you say anything else, do you ask him anything else?

S Uhm .. uhm .. a lot of people usually ask about salary grades ..

I Do you?

S Well, I can't really do anything about that .. I think for Lab Assistants, it's usually settled by age .. I think it would have more relevance for Research Scientists and higher grades.

I Ok .. Yeah .. do you bring anything else up?

S .. career development

I - Yes

S - especially in my esse .. and with other Lab Assistants .. examinations .. or .. I think I'm on grade (X) .. but I can't make any progress to grade (X + 1) until I get HMC ..

I or equivalent?

S uh huh, or equivalent ..

I Well .. how have you brought up career development: the past?

S Well, the natural progression of the Lab Assistant is to pass HMC - or HHD - become a Research Scientist.

I Well, presumably - when you have difficulty in passing HMC - was this brought up in the assessment in anyway?

S Uhm .. this year, it's become important to me, because I'm no longer at College .. last year, it was just a case of carrying on .. with HMC.

I You didn't discuss the actual exam, or what you were doing or how you were doing it .. or ..

S Uhm .. No, we didn't actually .. it's just .. it was mentioned, he would like me to pass it.

I Who did you see?

S Last time, I saw (X) I think.

I This time?

S It could be (P) or (u).

I How do you get on with them?

S Quite well

I Quite well?

cont'd ...

S Yeah .. I've never had an assessment with (the group head).

I Would you like to?

S I don't know, really, because (the group head) doesn't know many people in the group very well .. he knows some of the senior TAO's .. but we don't have much contact with him .. he seems quite busy .. mainly with people outside ICI - working our project outside.

I Yeah .. yeah

S I think it's useful to have an assessment because you then understand exactly what's going on.

I With someone you work with?

S Well, the Research Scientist .. I've had an assessment by (R) .. and he's given me quite a good one.

I This year?

S Yeah .. I think an interesting thing is that a lot of group heads do assess everyone in their group .. I think (his) is the only exception .. he doesn't consider it essential.

I Is there anything you'd like to say to him?

S I don't really know him .. he did come up to me one day and said .. "Oh, yes, you're (somebody else) aren't you?"

I Hah!

S Er - (S) worked for him for 5 years before he found out who he was ..

I Hah! .. can you bring him into the assessment?

S Well .. I've been treading water .. so I'm not really sure .. I've come to the stage now where I've got to make a decision, I think ..

I Have you had any ideas?

S There's two alternatives, I think .. either have another attack at some other academic qualification in chemistry - perhaps the Open University - or .. slide into some other profession .. there is another, a third alternative, which is just carry on here ..

I Yeah .. yeah .. have you had any idea about what other thing you might slide into?

S Well, there are so many things aren't there?

I Are there? Usually people complain of there being so few!

S I'll probably stay where I am.

I You have thought that you could enjoy working at something else?

cont'd ...

- I think anyone shouldn't spend their whole life time doing on particular thing ..
- Yeah, yeah .. fine .. what do you enjoy most about your work?
- Er .. er .. that's a good question, that .. it's .. I'm trying to pin it down .. versatility, I think, is the - one of the main points .. and, er .. the scope is ..
- uh huh -
- it's .. it appears to be the same job from day to day but I think there's a great deal of change in it .. especially as the project develops ..
- Uh huh
- I think .. it's the fact that one is doing different things .. from week to week, and month to month .. learning new skills .. and gaining more insight into the project ..
- What about dislikes?
- dislikes - uh .. there's a few I think .. uh .. I can't pin it down!
- Can you think of any examples?
- Sometimes you get fed up .. you like to do something else ..
- It can't be that easy going, surely!
- Very minor things, really .. I suppose everybody dislikes coming to work, that's one thing -
- what, getting up in the morning?
- Yes, well, that's one thing.
- Yeah, yeah .. do you try and organise your work in any way?
- Yes - er - it's mainly organised for me, at the moment .. I think that's general for all Lab Assistants .. I'm given a catalyst to test, and I test it .. (W) and (V) are actually responsible for the planning of the project .. but, the actual practical part, I organise myself ..
- Is there any particular pattern - or way you go about it?
- Yes .. there's .. the actual practical side to it, there's a way of doing things which is quite important, really.
- Can you say a bit more?
- handling of catalysts
- What, you do it one way rather than another?
- Well, it's just sensitive usually .. well, at one possible moment .. you have to organise things to happen at the right time of the day -

cont'd ...

- er - putting things on at a certain time .. getting things ready .. preparing - hypo .. syringes etc and other small items, so these are ready at the right time ..
- So, it's a sort of planning exercise?
- Yes, yes .. for example, when the (reaction) is at a stage where it can be left, you usually pop off and do something else.
- Uh huh .. how far ahead can you plan?
- Um .. usually, you can plan first thing in the morning - what's going to happen during the day .. sometimes various things do happen .. you might run out of hypo, or solvent or something .. the whole set-up is disrupted then.
- What, when you come in in the morning, you sit at your desk and -sort or work out your day, or what?
- No, I usually know the day before .. I get the (reaction) ready .. (P) usually makes the catalyst .. I'm getting the (apparatus) ready.
- Yeah .. can we turn to your exams .. is there any particular way you go about that?
- Um .. yeah, I think .. probably the major upset was doing the thing part-time .. especially with a full-time job, finding time to do it is difficult .. somehow, I was never very good at exams, I don't know why ..
- Why do you say that?
- I could never swot .. I tried, but remembering was .. I could remember chunks of it .. but when it came to the exam, the various questions, I must have made blunders in the .. groups or something ..
- Have you tried to work out what it was you were doing wrong?
- .. Possibly, I didn't know what really was needed in the exams .. I think there really is a great deal of determination needed for - chemistry exams .. because the subject is quite large .. I think for HNC possibly 2-3 or 4 hours a day.
- Did you ever get down to doing that?
- Um .. yes, yes, I think it wasn't sufficient .. I think one of the main factors was that I'd done 'A' Levels which were theoretical, with very little practical background ... this was a mistake to do on to HNC .. because HNC follows naturally from O'NC, and, er .. it was like jumping from a bicycle to a motor bicycle .. it was incompatible.
- In what way? It was too practical?
- No, I think it was more modern, really ..
- More modern?
- Yes .. I don't think the 'A' Levels we did were up to the standard.

cont'd ...

- I I might have been better to do OMC before HMC.
- I What .. how did you get on with the 'A' Levels, then?
- S Fairly well .. I got three; one C and 2 D's I think .. not brilliant, but ..
- I What happened at Liverpool?
- S Uhm .. I probably wasn't mature enough for the course at the time .. it was a big jump from school .. I didn't know what I was in for ..
- I What were you in for?
- S - a lot of work! .. University maths - I was lost - it was new maths .. we were doing ancient history maths at school .. I was lost there .. physics wasn't too bad .. I found the lectures fairly useless, really .. I'm one of these people who doesn't really learn from lectures.
- I What do you learn from?
- S - mainly books .. and just working on my own, really but some lectures were just like a sermon.
- I Yeah .. when you say books, and your own way, can you give me an example?
- S Well, just a set piece - probably like the Open University projects.
- I So you are quite attracted by that idea?
- S Well, I'd like to find out more about it .. I know a chap who's doing one ..
- I I see .. how do you spend your ..
- S Nowadays .. well, I've started to take up ballroom dancing actually ..
- I Great!
- S Yeah .. I was getting to the stage of getting a bit of a belly on .. I was getting out of shape, and I had to do something.
- I Great! .. do you do any reading?
- S Not a great deal.
- I OK .. what would you do if you had a magic wand?
- S What would I do if .. Oh! I don't know .. I'd - er - probably .. produce a million pounds and, er ..
- I Yeah! and would that be the end of it, or then what would you do?
- S - transport myself to the Bahamas, or .. I don't think there's any chance of getting a magic wand.
- I Well .. what would you do when there - just sit around and while away your days?
- I cont'd ...
- S Oh no .. I'd probably end up doing something .. I don't know, I'd have to think about that ..
- I What would you like to end up doing?
- S .. I just don't know .. I'm sure something would crop up ..
- I Yeah .. what was it about commercial art that attracted you?
- S Er .. I just have this feeling for design ..
- I What? - for good design?
- S - and art itself .. well, it's something that you can't really describe .. art .. it's something that you like .. like 'managers' - you can't really explain why ..
- I Yeah .. when you're looking through a book, or posters in the street do you say - I like that one?
- S Oh, yes .. I'm always looking at things, and, always analysing .. quite often sub-consciously.
- I Yeah, yeah
- S I've just bought some posters.
- I That you like?
- S Yeah-yeah; it's a (name)
- I What?
- S - a reproduction poster of 1908, one of these ..
- I Do you know what it is you like about it?
- S Oh well .. it's just typical of the sort of style that was .. used at the time ..
- I Do you do any reading about this? .. do you follow it up in any way?
- S Uhm .. I've done a bit of reading about art .. from time to time .. I read about anything, really, any subject is interesting, if you understand it.
- I Yeah, yeah .. when you say 'design', what are you thinking of? Can you say what ..
- S - Er .. well, anything's got a certain appeal about it - even ugly things .. it's just that certain elements in it produce a certain aesthetic effect ..
- I Yeah, sure .. Can you see this apply to work in any way?
- S Well, chemistry itself contains many of these ideas - structures of molecules, for example .. structure of metal ..
- I Have you seen it in any of the jobs that other people do around the place?
- I cont'd ...

- I I suppose if one looked for it, one could find it .. there's a certain amount of design in people's jobs.
- I I was thinking more of some form of chemistry or chemists
- S Oh - yes - um .. fibres - clothes and things ..
- I Um .. what about non-research jobs? like technical service?
- S Yes, I think this applies more .. especially in fibres and prints .. especially in sales and marketing .. I don't think there's much aesthetic in a lump of polythene.
- I Um .. are there any people that you admire?
- S Ada ..?
- I Yeah ..
- S Oh yes, quite a few people.
- I Could you say who they are?
- S Um .. let me see now .. well, in our group, there's (C), he's a great planner .. he's one of these chaps who likes to plan everything instead of rushing in .. there's (D) ..
- I What do you admire him for?
- S He's a fantastic for getting everything exactly right - leaves no stone unturned .. which is very important in research .. I think .. um ..
- I What about in the world at large?
- S It's difficult to say -
- I Or history at large ..
- S Um - there's so many people, it's hard to say .. each .. has different .. particular features ..
- I Yeah, yeah .. what about Picasso?
- S Picasso, yes, now Picasso has this brilliant ability to illustrate form with just a few lines .. with just a few squiggles, he can convey a complete concept .. oh yes, I admire the Beatles and people like that .. 'cos their music is very .. I'm not a musician.
- I You admire their music because of what?
- S Um
- I - You like it!
- S Yes, I like it, yes .. very very talented ..

cont'd ...

- I It's better than other people's.
- S Not necessarily, a lot of other people have written very good music .. I think in the present day they've been responsible for the complete change in music .. along with many other people ..
- I Yeah, yeah .. what - er - coming back to the assessment interview, is there anything you are going to ask to get sorted out?
- S Well, I just write a précis .. meet 3 main headings .. work during the past 12 months .. the second section is environment 1 factors .. and third is personal factors .. so, in the first I'll just say what I've done .. the second, I won't say a great deal .. and the last section, I didn't say very much, except that I was a bit frustrated with the career development side .. I think that's my biggest problem - not having HMC.
- I You think that would solve the career problems - having HMC?
- S Well, it would be very useful.
- I Yeah, yeah, what do you think is going to happen?
- S I don't know really .. I don't know what they are going to do .. I think there must be a shovel waiting for me down at Castner's!
- I Hah! Not a broom - a shovel?
- S - something like that .. I think one approach is for people to do some sort of plant work.

- 4 (c) An Assessment interview between a group head and a Senior Research Scientist.

For Analysis, see Case Study 5, in chapter 9).

S'er So .. these are supervisors comments on your performance .. creative chemist able to work in a variety of fields .. including (chemistry) .. I agree with your self assessment .. you have achieved a considerable amount in the previous year .. and have natural ability as a research worker .. enthusiastic .. always after something different .. I'll give you an 'A' rating .. what you'll have to do now .. is to go through some of these things .. because in your self assessment .. you've taken the opportunity to say .. many more things than your colleagues have .. uhm .. uhm .. we're very pleased with some of the nice things you've said .. but let's not spend too much time on that ..

S'ee - that's important

S'er - Yes .. but .. you want me to do something about these .. other things .. don't you

S'ee Yes.

S'er .. You would like to go to more conferences .. I think that's something we can arrange .. I'm a bit surprised that I've stopped you going to a conference

S'ee - You did once -

S'er When was this?

S'ee When we were busy recently ..

S'er Ah, yes .. well, you should have come back to me .. There are some I want to discourage but I don't think I want to discourage you - right -

S'ee Yes ..

S'er "I'm not satisfied with the training" .. "I could do with some development of extra skills" well we can deal with that .. I'll deal with that in a moment .. "I find myself becoming more sceptical about the abilities of mid-management in the research departments throughout ICI" .. Ghew .. sympathy - you know .. come cry on my shoulder .. but .. what are we going to do about it.

S'ee Yes - Yes ..

S'er I mean this is a statement ..

S'ee I find it certainly affects the way I have to try and put things over -

S'er - Where is this .. can you give me some examples?

S'ee .. This has happened a few times .. in (divisions) regarding fluorine chemistry .. and - er - to be quite honest .. these people didn't know what they were talking about.

S'er Yeah - Yeah ..

S'ee It's very difficult to put over your ideas .. when you're automatically questioning their validity to receive the ideas.

S'er Yes .. Yes .. well, uhm ... this is a serious problem but we can't say .. this is stupid, and go away and leave it at it .. One of the things .. that scientists - in the future .. all scientists, have got to do .. is learn how to talk to people who know less about what they are doing than they do themselves .. scientists are on top .. rather than on top is because of this ..

S'ee - uhm -

S'er - people in laboratories doing something .. perhaps quite spectacular .. but nobody knows about it -- there's nothing you can do about it..

S'ee - Yeah -

S'er We really have to learn .. how to sell ourselves .. people complain about me .. in this .. as well .. you see, people in commercial department .. glogs 100,000 tons of sodium carbonate .. and makes twopence .. he beats the drum .. everyone is on Maslem sixteen .. but scientists .. you know .. it's just pure projection .. you've really got to learn to talk to these middle managers .. in such a way that you get your point over ..

S'ee uhm .. now, the trouble is -

S'er - there's a mechanism for doing this .. what you should have done .. with this character in (division) is .. when you weren't getting through .. is to come and see someone like me and ask .. how do I have to put it .. you know, and really concentrate .. on the .. communication aspect ...

S'ee Yes ... it's probably .. a lot of the problem on my part .. in getting through to these sort of people .. my basic problem is that I sometimes .. have no time for them ..

S'er Sure .. you can take that view .. if it happens to be the chairman of Mond Division you're in dire trouble, mate.

S'ee Hah! .. Yes ...

S'er ... How do you deal with the (Director) for example?

S'ee Well .. I have terrible trouble with him .. yes ..

S'er Yes .. well, we all did at some time .. you have to find the things that you can say .. and there are certain things that you just don't bother to deal with him about ..

S'ee uhm ..

S'er You know .. he's not right up to the coalface .. he knows we want a new (chemical) .. but it's no use saying to him you've just found a new tickle three complex .. he won't know what you're on about.

S'ee um .. yes ..

S'er .. What I suggest you do, (name) is to look at this communication exercise as you would an experiment in the laboratory .. um .. you get information .. if it's unsuccessful, you redesign the experiment in the hope that you'll get it successful .. the next time .. and if you fail again .. as one usually does .. you go on again .. until you've found .. a method .. whereby you could achieve your experimental objective .. with people .. you want to .. set .. the discussion out .. the main points of the discussion usually rather .. the main .. concepts .. then put yourself in a no-knowledge, situation.

S'ee - Yes -

S'er You see, we sometimes forget to give people the context .. rather than get irate .. try and analyse why it went wrong .. it sounds a strange thing to do .. but unless us scientists learn to do it .. we're going to get pushed off .. pushed out ..

S'ee .. Yes, this is a new experiment for me.

S'er And its vital.

S'ee Oh, I know its vital.

S'er Its so vital, we ought to have special courses on it at universities.

S'ee um .. I know .. but at times you get so frustrated .. perhaps I'm over emphasising the problem .. but, the problem's there .. and I don't think it's just a problem I have .. I think it's a universal problem ...

S'er hrm .. let's take something else .. I think we've dealt with it as much as we can .. um .. I think it is genuinely true .. that there is less opportunity in ICI, now .. the chemical industry is in a protected state .. and I would think for the average person, a career .. wholly within the company .. is something he shouldn't bank on ..

S'ee - um -

S'er - But in your case (name) its slightly different .. my view about research laboratories is that .. the only way we're going to succeed in the future is by having people .. who genuinely have a talent for it .. who not only have the scientific .. and educational background .. but a rapport .. with exploratory research .. these are very few in number .. But .. if you equip your group with a number of these .. you can have quite a small group .. and be extremely effective..

S'ee - um -

S'er Now .. it is still probably a little early to say .. but .. you're one of the few people in my group .. with the signs of this natural ability ..

S'ee - um -

S'er Mainly because you have .. a talent for chemistry .. and it doesn't really matter, the kind .. what form the chemistry comes at you .. now .. its got to be married to a few other things .. but I think you are one of the better qualified people to stay in the research environment .. with the majority of the people in this group, I would not suggest that they stayed in a research environment .. even, here among the group heads, we haven't got - in my opinion - very many .. and it's the only way these laboratories are going to survive .. if it can identify these people.. and keep.. some of them .. not all of them ... you see, a lot of people can do a good team job .. or a good development job .. or an extrapolation job .. very few people .. can get up to this trick of doing something really original .. and .. I think you show signs of it .. I don't think I've given you enough scope, yet, and that's what I'm hoping to do .. if we can get us out of one or two of the messes we've got ourselves in -

S'ee - I think that's what's important (name) - scope -

S'er Yes .. I think that's having a damping effect on me, too .. and I would be the last to suggest that you look for your career - wholly in ICI .. our people seem to get university posts quite easily, for example, (name) and I strongly suggest .. In fact, I'll beat the bloody day lights out of you if you don't do it .. you have to write .. papers ..

S'ee um

S'er Publish papers .. so that when the time comes .. to examine your career .. you'll have the opportunity to .. choose.

S'ee ummm

S'er .. and that's what you must preserve to yourself .. we have no trade union .. all we have .. is our natural ability .. and we have to record it .. and the only way we have to record it is .. by .. what we do within the company.. and what we publish .. in journals outside .. So.. I insist .. that everyone in this group .. should publish .. at least one paper a year .. so that after five years, he will have something like ten papers .. to his credit .. some on his own .. some in collaboration .. this is an insurance policy..

S'ee um .. You must think you have a pretty depressing outlook

S'er No, I do not have a depressing outlook.. because I don't think .. that you know what you want to do .. in five years time .. Right?

S'ee .. Yes ..

- S'er .. and I do not know that people change their mind about what they do .. and you will then have the option of staying within the company, or going outside of it .. also .. I think we have to do this .. I'm keen to get recognition of the bloody good chemistry we've got going on here.. I'm keen to get recognition for the laboratory .. I'm keen to show people, outside that basic research, in industry, can be exciting .. can be meaningful .. can be profitable .. because, unless somebody does it .. it's going to disappear completely ... we're having to re-pioneer basic research in industry, these days, it's a fact .. this is the last laboratory of its kind .. to be working .. and if we can make it work, then perhaps people will go back and take another look at the idea..
- S'ee So.. from what you say .. it's sound common sense
- S'er Several people have done it .. the company's not .. unhappy that people spend .. five .. eight years in it and then go off .. to university .. maybe, they might come back again .. let's see if we .. can deal with this one .. let me just - er let's take a look at .. this business of your future .. we'll try and structure this, in a minute -
- S'ee - uhm -
- S'er uhm .. oh! - "I've been involved in several jobs in the laboratory - safety committee .. lab steward liaison committee etc.. and I feel that the use of these is not considered .. uhm .. oh, I see, .. what form do you think this consideration should take ..
- S'ee er .. well .. I think that during your stay in the laboratory, more training should be given than just .. training for the job you're doing -
- S'er - uhm -
- S'ee .. Sitting in on these sorts of committees I've found has been exceptionally helpful..
- S'er uhm ..
- S'ee uhm .. I think sometimes .. e.g. with safety committee, it can take up a lot of time -
- S'er - and I said why don't you make it your job!
- S'ee Yes
- S'er Hah!
- S'ee As if you were saying - don't you think you could spend your time better in the laboratory .. but I was getting something out of that
- S'er - I think .. we have to make a choice .. here .. how we divide our time up .. between the many different things we would like to do .. and
- the many things we have to do .. uhm .. I usually .. do these things once .. just to get to know what they're about .. for example .. I was chairman of (committee) .. I did this for eighteen months .. to begin with it was rather a nuisance .. but I wanted to change the work, there .. in fact I've probably, now, eliminated the (committee) .. but, running this group is .. it's a question of priorities .. I think you should do these things to find out the structure .. of a job .. but .. because I'm relying on you for other things .. I can't replace you .. very easily .. for certain things .. e.g. (chemistry) .. so .. I'm jealous .. of that .. so .. when you list your priorities, I would consider that your prime work .. it's a question of balancing things out .. you'll have to make up your own mind, yourself, in the end, how you're going to distribute these priorities .. uhm ..
- S'ee Yes
- S'er .. If you feel genuinely attracted -
- S'ee - oh no -
- S'er - to this kind .. of laboratory administration, rather than laboratory research .. uhm .. you know .. maybe we ought to do something about it .. you know .. many people can do the administration.
- S'ee Well .. I found those committees very useful .. I've sat in on very few .. and a group of people trying to produce a report .. that experience I found very useful -
- S'er Yeah .. Yeah
- S'ee It was just a fact of getting a group of people to work together - organise a committee .. this sort of thing I've never had to do .. I've done it in small numbers .. when we've all been talking science .. but, not with other things.
- S'er - Yeah -
- S'ee I thought it very useful ..
- S'er Well .. what I suggest you do, then, is keep one of these things going .. and then change every year, or so .. Right.
- S'ee - I notice the difference, now, when I go to meetings .. I'm sure I can put forward my ideas a lot better.
- S'er Yeah .. Yeah
- S'ee without having always to be asked ..
- S'er So .. which
- S'ee the safety angle .. I'm very interested in

- S'er well .. carry on with that, then ..
- S'ee um ..
- S'er ... "The higher management of the Corporate Laboratory is so project oriented .. that research - speculative work is very difficult to do .. unless it is within the remit of the project" .. well, this is really unanswerable, you know .. we have a research R.E.N., now .. we're in a central position here, and now in danger of getting clogged up with our projects ..
- S'ee Yeah ...
- S'er but, we cannot walk away from (project) .. (project) is settled. um .. the projects that .. we're working on .. are in a crunch position ..
- S'ee Yeah
- S'er we really have to determine .. between now and Christmas how good these (chemicals) are .. if we can solve this (project) then it will get better .. what we are trying to do .. is to really solve how much control we can have .. over what these (chemicals) do .. when we've done that .. I'm determined to go back and look at things in a very fundamental way .. e.g. these equilibrium constants we want to measure -
- S'ee - Yes -
- S'er - or the relationship - we were talking about of the structure of the surface .. we want to look at soluble equivalence ..
- S'ee Yes
- S'er and I want to go back .. and take a year .. to put what we've been doing over the past 18 months .. back into a scientific jacket .. I think everyone agrees that this is what we want to do
- S'ee Yes .. that's important ..
- S'er but, at the moment .. if we attempted to do it .. and the (project) collapses .. and (project) collapses .. we would be exposed .. if they go through .. then we can spend money to do these basic studies .. so .. the criticism is in many ways justified .. but .. because of the way I run this Group .. which is different from everybody else .. um .. I will turn the criticism back to you, and say, .. if I can get these projects going, then I can do what I like on the research side .. I will have .. earned my keep ..
- S'ee Yes .. Yes
- S'er what I've been trying to do over the past four years, is to create this base .. on which the research will stand .. and it's been harder than I thought .. I mean, in (group) they've got virtually no projects going .. and they're still doing - just fundamental research ..
- S'ee Yes .. it gets very frustrating -
- S'er - there's method in the approach .. you need it for security you see .. when (colleague) goes along to a resource allocation meeting .. they tend to think, well, you're not getting anywhere, and you get .. a bit .. exposed ..
- S'ee ... Yeah ...
- S'er ... well, is there anything else (name) you want to bring up?
- S'ee .. well .. I'm rather concerned about my position in the group .. there are so many .. rumours .. that I'm no longer going to be concerned .. in certain bits of work .. it really makes me wonder what I'm going to be doing.
- S'er ... oh ... what are these rumours, then!
- S'ee well .. I know you want to take (chemical) work away ..
- S'er - I don't want to take it away .. No ..
- S'ee - er -
- S'er No .. quite wrong .. I would like to get it set up .. and administered as a .. kind of service .. within the group .. um .. it is true that you've broken the ground .. I'd like it to be something we can do a lot more of .. therefore .. I'm inclined to have someone like (colleague) who's a physical chemist -
- S'ee - um -
- S'er and can only do physical chemistry .. and he'll be quite happy .. and we can use him, you see .. to do what we want to do .. But for you to be always worrying about how (operation) .. I don't think this is right and proper
- S'ee um .. No .. its just that I -
- S'er - But -
- S'ee - it's just that I'm the sort of person (name) who likes .. to have .. ideas in the future ..
- S'er .. Yeah ..
- S'ee .. Now, I've always got lots of work I like to do ..
- S'er .. Yeah ..
- S'ee my horizons coming in ..
- S'er .. I see ..

- S'ee ... its ... I can see it, now .. and that's bad .. you know, the (chemical) work is disappearing .. things are contracting around me .. so what I mean?
- S'er .. Yes .. well, what .. they're not really .. you're a bit like a squirrel with nuts, you see .. having produced this, you want to hang on to it!
- S'ee - Hah! .. Yeah .. it's not quite that bad, actually ..
- S'er well .. with that work .. its only a part hold .. in the wall .. sort of thing.
- S'ee oh, it's been very hard work ..
- S'er it's obviously very valuable, you know, .. its obviously going to be terribly important to us .. and, instead of having .. you .. part-time with (colleagues) as an assistant .. I want to up .. improve the status of that kind of work .. now, you're essentially an initiator .. you're very good at starting things off .. the fact that (colleague) is going to take over .. and you're not going to be all that involved in it .. means that you're just going to allow (colleague) to turn the handle .. churn out the results .. you will want the information from this
- S'ee oh yes .. its valuable information ...
- S'er - You see, (name) I think what I really have in mind for you .. part of your horizon's contracting .. I have really made up my mind that the job I want you to tackle is the (chemistry) ..
- S'ee um
- S'er now .. we have a commitment to do something here .. now, this is a real number one job, in my opinion .. because it would break ground in (chemical) in a way .. phew .. Now, this is a job and a half .. now .. if you want a target .. that would excite .. now, this is something that is out of all proportion to .. anything .. that we're going at the moment .. now .. a lot of people think .. oh, it's just being high-falooting again .. trying to confuse us .. getting us worried! Hah!
- S'ee hah!
- S'er - and they are probably right! .. now, it may still be an unsound area .. now, you're an (area) chemist .. you know about (chemistry), you know about (chemical technique) .. you've worked in this area .. you're probably all set to do this .. and that's what I really have in mind for you ..
- S'ee ... it sounds very .. exciting ...
- S'er I've got £20,000 to spend on that .. and I really want you to make a start .. in the autumn...
- S'ee ... Now I see my horizons expanding again ...
- S'er well, you see .. you don't .. you don't come and ask me, you see .. you sit and sulk.
- S'ee mmh .. I know .. it's a good way of getting ideas out of me, you see!
- S'er hah! .. but, um you're about the only one I know who could tackle this .. and if you make any headway, at all it would be terrific .. it's as big as (chemistry) - it's that same kind of principle, operating .. So, that's really what your kind of jobs going to be in autumn ...
- S'ee ... um ...
- S'er .. and (Division) isn't going to put me off, either!
- S'ee hah!
- S'er .. so .. it really is fun .. if we could do that, you know
- S'ee um ..
- S'er (Chemistry) is the horizon I've got for you.
- S'ee .. You see .. I don't want to go too far towards the (branch) chemistry .. and lose (chemistry) altogether
- S'er No .. No .. what we're really after doing .. is building this .. control ..
- S'ee um
- S'er .. in that way we could .. dominate .. the whole (chemical) side of ICI ..
- S'ee .. we certainly have the basis for doing this
- S'er we have the building blocks .. can we put them together .. to meet targets set in the company .. but .. (colleague) would take over the (chemical) work .. he would build it up .. and it would be a service for the rest of the work .. to supply us with the basic information to build the (chemical) .. that's what we want to do .. So .. er .. um .. well .. we've been talking for .. nearly an hour .. let's just see whether I can finish off this .. interview description, here .. um .. um .. here's what I've said .. "problems with communication to middle managers .. will attempt to study the problem of conveying scientific ideas, to outsiders" .. right?
- S'ee um

S'er [name] will publish his research, where possible, and try and keep his options open for future employment .. considered, however, talented enough to stay in ICI .. and CI-R .. known to a wide range of people outside the group .. as regards future plans .. will work on (chemistry) .. much happier .. to continue work on safety committee .. "would you .. would you make any .. any comments about that?"

S'ee - No .. No .. it's .. fair enough

S'er ... You're 29 now aren't you .. let's just see if we can do this then .. research scientist .. you've been in the lab - what 2. years ..

S'ee - three years this April ..

S'er Right .. lets say you'll be here another four .. another four years .. so .. it's now - um - until about 1976 .. I think Training .. Right, let's get this training settled .. what is it that you want to do here, (name)?

S'ee Er .. I want to go on .. I want to go on a course to do with the organisation and storage of data .. I don't know how or what form this would take ..

S'er Do you know of such a course anywhere?

S'ee No .. I've talked to people .. but .. I'm sure this must be a common problem ..

S'er it might be something, then, we do within the lab .. like at Bozdown ..

S'ee Yeah .. information retrieval is one of my big problems

S'er .. why don't you try and organise something then, with the Bozdown people .. Give lectures or something .. they must know something about this .. do you know anyone at Bozdown?

S'ee I don't, actually, No ..

S'er why don't you get in touch with .. um .. (name)

S'ee (name)

S'er he's one of the group managers, there .. I know he's sympathetic to us .. and he'll be able to put you in touch with someone who knows about this .. but if you think .. I know .. that there's no way of doing this .. go and talk to (colleague) ..

S'ee Yes .. I've already had an interesting talk with (colleague) .. I'm all in favour of some of (colleague's) ideas actually ..

S'er why dont we -

S'ee - storing information and getting hold of it -

S'er - why dont we -

S'ee - I find it's a terrible problem ..

S'er well, why don't we try and work in out .. he's put all the (chemical) information on .. and now he can put (chemical) on, too .. actually, I think there isn't a course for this .. this is something we have to do ourselves, actually ..

S'ee um

S'er .. what else is there ..

S'ee well .. I put something down about two years ago, that I've never been to .. I'd like to go on a rapid reading course .. which is simple, and there is one that's important .. and useful ... I've read a book about this ...

S'er ... The papers are very full of it aren't they -

S'ee - Yes - it's very useful -

S'er - the date is the tenth of August ..

S'ee - especially for scanning abstracts .. and the scientific literature ..

S'er .. well .. you'd have to see (personnel officer) about it .. do you know where there's one on

S'ee well, there's one run in Mond Division .. they run one twice a year .. two days ..

S'er well .. christ .. we can do that .. that would be easy .. um .. rapid reading course .. (Mond) .. right

S'ee um

S'er (personnel) to arrange ... anything else, at all ...

S'ee No ..

S'er [name] will publish his research, where possible, and try and keep his options open for future employment .. considered, however, talented enough to stay in ICI .. and CI-R .. known to a wide range of people outside the group .. as regards future plans .. will work on (chemistry) .. much happier .. to continue work on safety committee .. "would you .. would you make any .. any comments about that?"

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S'er why dont we -

S'ee - storing information and getting hold of it -

- 4 (d) An assessment interview between a senior research scientist and a junior research scientist.

For analysis, see Case Study 7, in chapter 9.

S'er - Assessment ... I've been through ... what you've written ... I'm quite pleased with what you've written actually! ... it was quite good ... it started getting a bit heavy, towards the end ... this bit, here ... where -

S'ee - I devoured it, a bit

S'er devoured! .. Yes!

S'ee well .. I thought .. while I've got the paper .. I might as well write .. throw it all in ..

S'er Yeah .. well, let's review last year .. since you joined .. the reason we got you in was that you were good with semi-tech work .. you know .. previous experience .. and, you know, I've always thought of you as a good, and careful, analytical worker .. You've had a good year .. and .. you've done everything you've been asked to do .. and, you've made progress .. so .. in terms of reviewing your performance .. we should review in terms of .. past achievements .. and where we go from here .. Past achievements .. you've acquired new skills - without any problems .. the one .. and you've been reasonably responsive .. you've put yourself out - and you've got L.S.D. for it ... well .. let's go through (supervisor's) comments .. um .. he's of the same opinion I am .. the work's been of a hard and sustained nature ... Performance away has been good .. from your last assessment, I can't understand why it was so bad in certain areas .. (your group head) gave you a bad rating .. I don't know who wrote it ..

S'ee I think it was (previous supervisor)

S'er oh .. well .. I think you're the opposite of what he says .. I think you're reasonably tidy .. compared with the lads ..

S'ee -well, it depends on your definition of tidiness

S'er Yes .. Yes .. well, there was obviously a bit of conflict there .. um .. you can't rationalise it .. equate things when people are in conflict there's not much more to say about the historical side .. you know .. You've had a good year .. In terms of classification .. of your performance .. I would say that it's .. class B .. which is - standard exceeded ..

S'ee Yeah

S'er .. um .. Now let's talk about it in terms of where it needs improvement .. remember, we're talking about performance, now .. the other aspect well have to cover is career ..

S'ee um

S'er Career .. career development .. if there is such a word these days .. um .. I think the weak .. yeah Let's go through what (immediate supervisor) has put down here, first .. he says .. you've not yet acquired .. a comprehensive knowledge of polyolefine technology ..

S'ee Yeah .. I think I've put that down myself

S'ee Yeah .. I think I've put that down myself

S'er Yes .. You've put that down yourself .. how do you feel

S'ee Well .. You know .. obviously, with the work pressure, I just pick it up as I go along ..

S'er - uh-uh- ..

S'ee .. You know .. unlike (supervisor) who's been at it 3 or 4 years .. but the actual .. polymer technology ..

S'er - what points don't you understand, then?

S'ee - it's not that I don't understand .. it's all the .. er .. catalyst support work and .. er .. you see, that's new to me

S'er is it

S'ee and - er - these are things I just have to .. er ..

S'er - well, how do you feel we can help you?

S'ee well, it just depends on whether I need to know the knowledge quick or not .. to me .. with the work I'm doing .. it only limits me in the - er - suggestion area .. a little there, like

S'er how do you mean?

S'ee well .. like with .. molecular weight distribution .. what do you think causes this .. we, if you don't know much about the theory .. the polymer technology .. then you're a little bit lost for really good suggestions, you know ..

S'er um .. do you .. do you feel curiosity motivates you at all?

S'ee well .. when I started on this rig it was quite new to me .. the work of using a - pot - was quite new to me ..

S'er - Yeah - Yeah

S'ee You know - I'd never even worked in there before .. and within two days I was running a batch - you know - and I thought - well it's a start, anyway ..

S'er Yeah ..

S'ee um ..

S'er .. Curiosity is .. well, what I'm getting at is .. you make a polymer .. and you make different polymers .. and you find the parameters vary .. at this end .. do you find you're curious about why they differ .. and why we're doing it? and what happens to them

S'ee Oh, I think I understand a bit about .. varying temperatures and all that .. I think I understand that - kinetic side .. it's this - er - the basic .. theory .. behind it - like ... You know, to take this molecular weight distribution side .. I would'nt really know, straight away, what field to look in

S'er well .. how do you think we can improve it? .. can we get (colleague) to -er- give a few talks .. you know - effectively - do some schooling on it ..

S'ee Yeah .. Yeah -

S'er - would that help?

S'ee - I could do it quicker that way .. you know, I pick it up .. as a meeting goes along -

S'er - Yeah - Yeah -

S'ee and we say - let's look at this .. and I see the logic behind that ..

S'er - but I wonder if .. well, let's say two things, here are .. should we do it by taking time off from work - taking you off the reactor .. or, should we - stop reacting for a while .. should we take off one day a week ..

S'ee well, we already have monday and tuesday free really .. as far as the reactor not going ..

S'er Yeah .. so how do you think people would take it if I said .. from 2 to 6.30 on a monday afternoon .. for a few mondays ..

S'er oh .. well this is individual, isn't it ..

S'er how will you feel about it

S'ee well .. I accept that .. as a personal opinion although I don't think, as a whole -

S'er -every monday afternoon .. if we had a teaching seminar to teach you the aspects of the polymer side of it

S'ee - uh huh ... I think it's important if you expect a contribution from me towards solving problems ..

S'er um .. yes .. I think there is a need, here .. although every time I've tried approaching the other lads .. you know .. pressure of work .. there's been little interest anyway ..

S'ee well .. people say quite often it's a job thats that ..

S'er .. well .. that's that aspect .. let's move onto another I'll go through them as I see them, and you let me know anything you'd like to bring up ... Haslam eight at the moment -

S'ee Haslam eight .. Yes ..

S'er .. No problem with development to Haslam nine .. but then you've got to think about moving

S'ee Yeah ..

S'er .. we've got to build a structure for that .. we've got to build two things .. one .. something that will fit in with the pattern of employment .. and secondly, what you want ..

S'ee Yeah

S'er those two things have to be bought together

S'ee Yeah

S'er So, I'll put it in terms of what the job looks like in the lab .. for you .. if this project goes ahead .. um you'll be working at Warrington .. and that could then go on for about 5 to 7 years

S'ee that long?

S'er Yes .. and then there will be commissioning and main plants .. as well as pilot plants .. in terms of the structure for the pilot plant, the trial will take .. fourteen months .. Yours will be one of them .. we haven't decided on others yet .. in terms of running the system .. we should use the same system .. in terms of .. you know - job enlargement .. job enrichment .. more interest - more stimulation .. if .. if there was no progress made .. in terms of understanding what the whole project's about .. and improving your own facilities for .. reporting .. then the job's not going to have much future after the first year -

S'ee - um -

S'er in terms of .. interest .. unless we can develop a commitment .. so you can get involved in the whole .. the whole production .. I hear you might find yourself coming back here .. and you'll be back making simple bloody measurements on a small scale again - you know .. you've got to get involved on the whole

S'ee oh - yeah -

S'er So .. it'll be a large learning programme .. in the next few months we've got to use it as a learning time .. so .. we can help here .. but .. in terms of your personal position on this .. I am prepared to have you on the project .. as the team leader I'm quite happy about

S'ee that .. if this is what you want .. as you are at the moment ..
 you've probably got to rises left on Haslam eight

S'ee I've got one left ..

S'er You've got one, have you .. have you got the figures?

S'ee Yes .. 2223 .. is the present

S'er Yes

S'ee 2385 .. is the max .. now I don't know what you consider .. a general
 rise .. it would depend on the general rise whether I got two out of
 that or not - wouldn't it

S'er Yeah .. it would depend how large the rises are .. the messages coming
 through are .. that could well be two rises .. or 1 1/2 rises

S'ee Yeah .. I wouldn't see it as a total - one - at the moment, I don't
 think ..

S'er but the main concern is that you're going to be on your max next year
 .. a better way to look at it is that .. Haslam nine is two rises ..

S'ee Yeah ..

S'er to get to your Haslam 9 max, you've probably got four rises .. right?

S'ee - what's a Haslam grade? - 200

S'er ch no .. over 300 add .. and in terms of about - rises - of 110 a year
 that would be about 4 .. we're thinking in terms of planning, here ..
 we've said we've got to look for a job for you .. you know, a
 development job for you .. and we've 4 years to do the developing in

S'ee uh - huh

S'er .. that would .. you know .. substantially, you would have had experience
 on plants .. running pilot plants .. and then semi-tech units ..

S'ee - Yeah -

S'er so the time scale is not wrong .. only with some people it is .. uhm ..
 the time scale isn't wrong ... so that's the position in terms of work
 .. we see it coming like that .. now .. that's 4 years .. this job
 might be what you want .. there's one alternative .. let's structure
 to it if you like .. in terms of .. one .. what the ambition is ..
 difficult one .. that .. I always find ..

S'ee Yeah .. well, I've gone a little bit off .. bench work .. and the
 .. analytical side .. which I've always been doing a lot of .. I like semi
 tech work ..

S'er uh-huh ..

S'ee um

S'er - longer term .. think longer term .. you know, what do you want -

S'ee - well .. in the longer term, you know ..

S'er - can you see yourself in this kind of business for the rest of your
 life?

S'ee - plant size, I wouldn't mind

S'er - you wouldn't mind

S'ee No, I wouldn't mind plant size .. er .. having been on plants .. up
 North .. up at Wilton .. and, you know, it was 12 hours .. but I
 preferred doing 8 hours here ..

S'er You saw (colleague's) job?

S'ee mm

S'er Now, how do you see yourself doing that ... you know, Haslam
 eleven .. you know, I'm trying to set the -

S'ee - Yeah .. I like the job .. yeah

S'er You wouldn't have minded that job .. it's a good target .. isn't it

S'ee - No, I wouldn't have minded .. No .. I wouldn't mind a job on a main
 plant, like that ..

S'er You were also on a main plant at (plant) .. what kinds of jobs could
 you see yourself doing there .. if given time suppose you were
 .. supposing we transferred you either next year .. or in five year's
 time ..

S'ee - Yeah -

S'er and, now, supposing we transferred you next year what kind of job would
 you see yourself doing?

S'ee Er ... I'd like to be .. at least a shift team leader .. on a main plant

S'er - shift manager -

S'ee - shift manager, yes .. I'd be pushing for one of those jobs .. I'd
 probably have to start on shift basis, and then get onto a day basis ..

S'er The level is right ..

S'ee Yeah

S'er .. You know, shift manager, by the time you're Haslam 9 ..

S'ee Yeah ..

S'er .. do you see much difference between working on a small plant and working on a large plant?

S'ee ... oh yeah .. I think there's far more in a job that on a main plant .. even on a small plant .. its often a case of a maintenance job .. the plant runs itself really .. you just have a control panel .. and all you really need is -

S'er well, would you see different problems in management - you know -

S'ee um .. I think there's far easier looking after the main plant than the pilot plant ..

S'er Yes

S'ee everything is so automated

S'er do you think (colleague) relied on his subordinates more than the guy's on the main plant did?

S'ee .. Yes .. he relied on their technical skills more than they would on the main plant, yes ..

S'er He's got to assume that they've got a certain degree of competence

S'ee - He's got to assume, yes .. they've got to know the job well .. all they've got to know in these modern plants is when light 'A' comes on you press button 'B'

S'er - Yeah - yeah -

S'ee whereas .. you know .. they get something going on down at the pilot plant .. and then you've got to say .. quick, lets get down there -

S'er - You've got to know what to do

S'ee You've got to know what to do .. yeah ..

S'er .. I should think (colleague's) job is an interesting job ..

S'ee oh .. yeah .. I'd prefer a job a little bit like (colleague's) where you've got to be on your toes, a little bit .. know the job inside out .. rather than -

S'er - pressing buttons -

S'ee Yeah

S'er .. well, that's reasonable, yeah .. so .. let's generalise a bit .. I mean, in terms of life .. what do you do outside of work .. what do you want of life, you know ..

S'ee - outside of work

S'er um ..

S'ee ... well .. I want a good standard of living .. I've got quite a fairly good standard, now ..

S'er - Yeah -

S'ee I like to - you know - I'd like to have a bit more time in the future .. I don't mind working now, because I'm working to set myself up you know ..

S'er - yeah -

S'ee .. once I've set myself up over the next two or three years -

S'er - you'll ease back -

S'ee I'll ease back, yeah

S'er Yeah

S'ee I think everyone's got to go fairly steadily - I mean, if they want anything, they've got to go for it ..

S'er - Yeah ..

S'ee .. that's fair enough with me ... I think another three or four years should bring .. ease back a bit .. and getting a family

S'er yeah .. family life's the - sort of - goal ..

S'ee um ..

S'er have you any interests that you've got, but that you haven't developed, yet?

S'ee Not really .. er .. I used to be very sporty .. I like to play a bit of golf .. which I manage to do three or four times a week ..

S'er - You'd like to do a bit more of that?

S'ee - I'd like to play a lot more .. yeah ...

S'er .. Yeah .. well .. what I'm trying to get is a picture of what you want .. to make sure that the picture I've got of what you want .. you've got to have some idea of what somebody wants when your planning ..

S'ee - Yeah

S'er .. well .. I've got a reasonable idea ..

S'ee I think it would be difficult to get out of P & F at the moment ..

S'er at the moment .. it will be

S'ee but .. at the moment, the job I'm in is going my way .. sort of thing..

S'er Yeah .. you're not under pressure .. I mean .. there's no chance of you being made redundant for instance .. in the present company environment .. you know .. if they start chopping, I wouldn't see you as being .. one of the first .. sc .. I could perhaps see you as being one of the last .. you're in that position .. but things change .. your price is too high at the moment

S'ee Yeah

S'er .. so .. we see no conflict, at the moment .. I'm just trying to think of what to put down on the bloody form .. we seem to have completed some idea of that you want

S'ee well .. the way ahead .. seems quite satisfactory .. as far as I'm concerned .. as it stands ..

S'er let's just tie it up with the way we see the training needs in the future .. because .. with this - sort of - quiet period coming up in September and October -

S'ee - Yeah -

S'er - I'm hoping to get a fair number of training courses in ..

S'ee Yeah .. well, of course -

S'er - One -

S'ee - writing up ..

S'er well .. this is mainly, of course, to be able to express yourself ..

S'ee Yeah

S'er .. it's not just english .. I don't think your english is that bad ..

S'ee Yes

S'er but .. to learn how to organise your thoughts, first ..

S'ee Yes .. well, I come unstuck because .. I can't actually say I've never read a book in my life ..

S'er do you find difficulty in reading books?

S'ee Yeah .. this is why I had difficulty with account .. wherever he talked through anything, I never understood it like that ..

S'er - Yeah -

S'ee .. and when it comes to sitting down and reading

S'er - there's a barrier ..

S'ee Yeah .. there's a barrier

S'er You'd rather be taught

S'ee Yeah .. if someone gives me a book and says - read it - there's not much chance of it being done in a short time ..

S'er .. Yeah .. the .. well .. the two years where I think its important .. of where you're going to come into more and more contact .. is one .. how to handle men on plants ..

S'ee - Yeah -

S'er .. there's the procedure .. that's learning the rules ..

S'ee Yeah

S'er and the example of that was that thing at Wilton .. that was all that was about .. and the second thing is - your organisation and expression ..

S'ee uhm

S'er - in other words .. how you gather things together .. how you analyse a problem .. and how you communicate

S'ee - yup -

S'er and I think - you know - there's (name), (name) and (name) that I think we want to try .. and get .. on this ..

S'ee Yeah

S'er .. well .. let's try and summarise what we've got on this .. I don't intend to write this down now .. I'll write it out this afternoon ..

S'ee Yeah .. fair enough

S'er - I'll write the description of the interview ... now, this section number three says .. career development .. I'll fill this in .. then I'll come back .. and see if you've got any comments .. Right

- 11 -

Shee Yeah

Shee O.K., then ..

APPENDIX 5The Kuder 'Aptitude' Tests

The function of the Kuder Records in the Project was to serve as a basis for the operation of a helping programme in Part 3 of the Project. After the initial interview between research student and subject, establishing the subject's need for vocational guidance as an aid to his career development, either one or both Kuder preference records were provided to the subject to be completed in his own time and convenience, (i.e. not supervised). The test results were interpreted in relation to the subject's own, present self understanding for his preferences for a particular dimension of activity, (i.e. a self-rating), in subsequent interviews. The profile that emerged was then used as a basis for choosing relevant actions for the purposes of the subject's career development, (e.g. look for a job in functions other than research).

Purpose of Tests: (reference Science Research Associates Ltd.) for career guidance, selection, placement, development and counselling.

Author: G. Frederick Kuder, presently editor of Educational and Psychological Measurement. Formerly Professor of Duke University.

Description:

1) Kuder Vocational Preference Record : Form C/E:

This edition (U.K. revision 1972) was prepared by the independent Assessment and Research Centre to serve the same purpose in the U.K. as Forms C and E in the U.S.A.

Widespread use of the U.S. editions of the records have enabled revisions to be kept as near as possible to the original.

The Test assesses interest in activities associated with ten broad occupational areas : outdoor, mechanical, computational, scientific, persuasive, artistic, literary, social service, and clerical. The grouping of the items, requiring the examinee to choose most-and-least preferred activities encourages honest responses, although a verification scale is included in the test.

Age Range : the full range of secondary students and adults.

Test Time : No limit. Usually takes 30 - 40 minutes.

Format : Questionnaire, answer sheet, blackboards and punch pins. Two profiles are provided (for either over 18 years or under 18 years) for males and for females. An introduction and instructions for completing the test are also provided.

2. Kuder Personal Survey : Form A:

The test measures preferences for the following types of social relationships that might influence choice of vocation : participation in group activities; familiar and stable situations; working with ideas; avoiding conflict and directing and influencing others:

Age Range : 13 to 17 years and adult

Test Time : 30 to 40 minutes

Format : Questionnaire, answer sheet, blackboards and punch pins. Two profiles are provided (for either over 18 years or under 18 years) for males and females. An introduction and instructions for completing the test are also provided.

A copy of the test instruction page and profile leaflet is included here.



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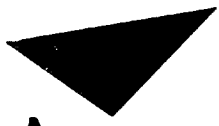
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Appendix 6.

An additional transcript of interviews used in the operation of the Helping Programme; (for analysis see Case Study 14, in chapter 10.)

INTERVIEW ONE

I Right; How do you spend your time.

S A: the moment? At work?

I Yeah

S I've just come back into the lab; and I'm starting a new project - so - new to me. So, up to the present time most of the time has been spent reading - background information to the project ... and deciding the 1st stages of my study ... Some of the time has been spent - in - getting familiar with the sort of experimental techniques that will be used ... that's about it up to the present time.

I Fair enough ... what did you do before.

S I was in the (X) lab at (town). So I would be doing ... some ... limited amount of experimental work ... mainly evaluation of results, and reporting the results - presenting those results, sort of thing.

I Yeah, .. and how long were you at (X) lab?

S 2 years.

I 2 years .. and before?

S I was here for one year in (X) group, where I spent - well - about 1/2 my time doing experimental work - no - cross that out, a quarter of my time doing experimental work. Half my time, analysing experimental results; and the other half - the remaining bit, I suppose preparing presentations and such like. As a rough .. you know.

I Yeah - fair enough .. can you go back to where it all began?

S - in reverse order? or

I whichever is easier.

S Well .. after I got my A levels I went to (X) college, London. And did a B.Sc. in physics. And at the end of 3 years, I went round different firms - to ICI - one of the places being here, and they said we'll take you on; you go away and do 3 years PhD which is what I did. I then went on to do 3 years PhD at (X) university - Polymer physics .. then joined the lab., and ..

I - that's where you are now!

S uhm.

I How come polymer physics? .

S Er ... I suppose to be honest, I wanted to do a PhD; because I wanted the .. I wanted to go as far as I could in getting academic qualifications

(Initial introductions had been completed prior to the tape recorder being switched on, e.g. the Helpee readily agreed to the tape recording of the conversation.) Helpee response in the first area of conversation was comparatively easy and relaxed, with signs of level 3 Hec SE (Helpee Self Exploration).

The Helper introduces the idea of the career (a corrected of events) sequence into the conversation.

The Helper, again asks for more specific information.

Helpee response is still at level 3 Hec SE, although there is not yet any evidence - or disclosure of his concerns about his work experiences (e.g. emotional proximity).

The Helper introduces the more specific area of his previous work experience.

The Helper offers higher conditions of facilitative conditions (positive feelings about being at ICI-P). However, Helpee response is still mechanical (level 3 Hec SE).

The Helper continues the conversation in a mechanical way (level 3 facilitative conditions).

this seemed necessary at the time .. It's useful still .. the offer from here was a very good way of getting a PhD at the time. So, I was better than being on a grant .. there wasn't any strong desire to do polymers. I did have other choices, where I could have done a similar type of system - you know - doing research, in university for a higher degree, and being paid by a firm., this was the area which was .. seemed of the most interest of the officers, and, at that stage, I was primarily interested in physics .. and .. you know - science - science .. umm .. there's not - and of the others that came along this seemed one of the most interesting areas .

I Can you remember why you thought it was interesting?

S I think, to be honest, a lot of it was comparative - between the other things I was offered - to that type of .. position. One thing I did like - appealed to me - was .. the simple type of approach associated with polymers .. rather than the more theoretical type of approaches .. in some other areas - you know - quantum mechanics and that sort of thing .. polymers tends to be.

I When you say 'simple' type of approach, can you say what that is?

S Uhmm, well, the theory of polymers .. involves basically the theory of classical mechanics.

I Right, fair enough.

S I'm talking about reasons at the time, of course!

I it's changed now has it?

S Uhmm .. well, I'm very interested in Science; but I don't necessarily see that my future will be .. will remain in science.

I Yeah .. any idea where will it go? .. what about the future?

S Uncertainty - really, as far as .. I .. I have some fuzzy-vague sort of ideas about management-type of positions. I would be quite happy, I think, doing the administrative side - associated with a lot of management jobs.

I Yeah .. very good .. fair enough .. what - er - do you enjoy most about work?

S I think I like organising, actually .. I seem to have a tendency to start writing lists - left, right and centre .. I quite enjoy organising. I have - enjoyed - some of the administrative - types of small jobs that I have had to do .. in .. I get some sort of satisfaction when they're finished .. completing a number of small steps, I get satisfaction as they progress .. what was the question again?

I What do you enjoy?

Although Helpee response is still mechanical, there is a start of increased involvement and interest in the conversation. Further, the Helpee introduces ideas concerned with feelings although still remotely.

Helper attempts to encourage the introduction of particularly personally relevant material where self exploration may be highest.

The Helpee shows some first signs of higher levels of SE in emotional proximity of his statements about his career.

The Helpee states, albeit at a low level of self exploration, an area of personal concern in the career area.

The Helper encourages SE in this area.

The Helpee introduces personally relevant material about this issue of his career future.

The Helper continues to encourage the Helpee in exploring the background to his request for help.

S Uhm .. at the moment, I've just come into this new area, which I haven't any experience of before. I've enjoyed tackling that .. coming in; - reading the background literature; reading the background work that's been done here; and trying to decide - to carry out - an experimental .. experimental side .. so I suppose that's organising work.

I .. uh huh .. when you say 'complete a number of small steps', can you give me an example you're thinking of.

S .. uhm .. well, I've been given a number of .. during my stay at the (X) lab, I was given a number of small jobs at various meetings. You know, do this, do that; write this, write that; sort documents for him, write a letter to somebody else explaining the results, and I .. I think I enjoyed writing a list of all the things I had to do, and crossing them off as I did them!

I Great! .. very satisfying - I know .. there are times when I deliberately get myself into such a mess that I have to make a list, and I can then think - good lord, have I done all that!

S Yeah!

I Is there anything you dislike.

S .. I've found that I'm happy when I'm doing a job well... and I'm unhappy when I'm not sure that I'm doing a job well .. or, when I feel that this - uhm - work isn't really worth doing .. In some of the projects which I've been working on, towards the end of the project it's been fairly obvious that things .. are not - are not thought to be successful. Or, you know .. I've convinced myself that things are not that successful. In that case, I've found I'm not that happy working on - when I don't feel that I'm doing the job very well. There was an instance, I think, when I first came here, when I didn't .. I didn't feel as though I was doing the job as well as I should have been doing. I probably wasn't, and in that case, I wasn't very happy about it.

I .. what do you think you do well?

S Well

I What do you feel proud of - of what you've done since you've been here?

With increasing levels of Hec SE and self understanding, the Helper offers increased levels of facilitative conditions (e.g. empathy).

Helper response is especially positive (level 4 Hec SE).

The Helper now introduces what he considers might be a potentially threatening or confronting issue into the conversation.

Helper response in this area returns to level 4 Hec SE material is introduced, but in a manner (e.g. tone of voice) which is remote, and becomes more so as it continues.

The Helper returns to the area of positive work experiences.

- S I feel happy with my capability of analysing results .. and - er - converting a mass of results into a form that other people can understand - tabulating; drawing graphs and that sort of thing.
- I Yeah .. Yeah.
- S I think I'm happy with my analysis of those results, and interpretation. Lately, I've been happy with my communication - I think I can write a good report - given time, and in terms of presenting them orally. Providing I have a lot of time to prepare. Uhm .. which is an improvement on when I first came. And .. the other things I like doing ... is organising and ..
- I getting it done.
- S - getting things done - yeah.
- I Is there any particular way you like to settle down with a problem.
- S uhm ..
- I any particular method of work.
- S I suppose I tend to write - a fair number of notes - while I'm reading .. if in fact, I prefer .. I suppose it all depends on what you are trying to do really .. one more method of work is writing a list!
- I uh huh! .. it depends on the work you are trying to do?
- S Yeah
- I Like?
- S Well, I can sit down and read a book - if it's purely to collect background, and take in most of the relevant material, without writing anything ... and I'll remember the sort - roughly - of contents .. After reading it through once, if I was going to do any work based on that paper, I would read it through twice - more than once - once to get a general sort of - impression, and second, making notes as I did it. I'd probably .. I don't know whether I'm answering your question.
- I - that's OK .. fair enough ... what about when you are tackling the more abstract problems ..
- S Such as?
- I Where there aren't any immediate answers as to how to go about it .. like - thinking up an experimental programme?

Helpsee recommences to explore his ideas, and feelings, about this area of his work experience.

Helper response, similarly, verges on becoming more interested and enthusiastic.

The Helper seeks much greater specificity in this area.

S Yeah .. um .. well, I try and see some logical way of going about it - or something .. I'm thinking of an experimental programme at the moment - so - um .. what I have tried to do is .. amass the background .. I don't know when ideas arise as to likely avenues .. I .. I suppose I tend to list these, rather than keep everything in my head, I write everything down on paper .. I like to with this same problem of getting - setting up an experimental programme. I like to familiarise myself with the actual techniques involved .. see what we are trying to aim for .. I suppose that should come earlier, actually! (laughter) make sure that I understand the objectives, I suppose is the first thing actually .. it just sort of happens then.

I Yeah, right .. how do you set about getting the objectives clear?

S I usually find that this is the sort of thing which is obvious .. um.

I - Fair enough .. O.K.

I What would you like to get from the aptitude test?

S um .. well, the .. the biggest disadvantage with my experience at the moment is that it's very limited .. I've got no experience at all outside of life in a university and life in - Runcorn - and all of that has been with scientific .. um .. basis to the work .. I suppose I've had very very limited experience of - administration - just a few odd things tossed your way .. so, the biggest uncertainty is I'm not I can't be sure of how I fit in with the whole wide range of opportunities that are available.

I Good .. yeah.

S How if .. it occurred to me that .. the emphasis seems to be towards progression into management .. in the laboratory, or it certainly was, and I didn't see .. that I wouldn't fit in with this - general progression. Because I didn't mind this administrative side.

I Yeah.

S But really, I suppose I wanted you to wave a magic wand and tell me you're ideal for it.

I ... hah! .. at least you're honest! Yes, fair enough. So, you'd like to get some idea of what sort of slots - out there - you would best fit in?

S um huh!

I Yeah! - from a point of view of your interests. What would your interests fit in with. Yeah .. that's very expressive and clear.

The Helper continues to ask for greater specificity. However the Helpee has little further to offer in terms of the helping relationship as it presently stands.

The Helper turns (immediacy) to the purpose of the helping relationship being created.

Helpee voluntarily introduces personally relevant material, but in a mechanical manner. Feelings are only stated rationally (uncertainty).

The Helper responds "genuinely" at a high level to the Helpee's attempts at self exploration.

Thus encouraged, the Helpee continues, some evidence of emotional proximity (e.g. "I didn't mind").

The Helpee continues to offer high levels of facilitative conditions - genuine interest.

Helpee self exploration increases (level 4) with a distinct tendency to inward probing.

Helper response is at a high facilitative level, including empathy.

Helpee response continues enthusiastically.

S Yeah? .. good .. You see, I can understand a manager's job is in research .. I can understand what (group head's) type of job is .. um .. I could see myself fitting into that sort of job .. but, a manager in another sort of environment, I'm not so clear ..

I Yeah .. Right .. OK, um, that'll do; let's leave it at that then.

S OK, what happens now then?

I I'll arrange a room, a place and a time, for a group of you and some of the others... I'll say .. clonk - here you are; it's just a simple questionnaire, where you have a choice of three .. you-

S its the eleven-plus over again is it? -

I Yes! .. its easier than the eleven plus! .. You've got a pin, and you then have to say out of the three activities there, which you would be most interested in and which you would be least interested in, and you have to go through lots of these little boxes; and then I put a handle, and - er - we'll have a chat afterwards .. It takes about 3/4 hour and there's lots of brick-brock-brick .. and then I'll come and find you with my diary and we'll make another appointment to see what happened, and take it from there. OK?

S Very good

I Thanks very much, (A).

The Helper is now satisfied that the purpose of the first interview has been achieved (achievement of sufficient self exploration in a relevant problem area) and proceeds to arrange the administration of the applicable test, and a further meeting.

INTERVIEW TWO

I - Well, when you say leadership, what was...er..

S - Well that was covered by the course we've.. we had a certain amount of input where they were discussing the various philosophies and the models that have been put forward - the Blake-manager grid type of approach - 9:1 to attitude, and 1:9's... whereas the needs of the task, group, and individuals, and how they all intermesh...type of theory I suppose.

I - When there was a certain amount of... tests - and problems, when we were working in groups. We each had a chance to be a leader; get a bit of experience in managing a group, I suppose.

I - What sort of task was that?

S - A number of tasks. One of them was optimising profit in the construction of a tower - you've probably heard of it - with the lego.

I - -head-

S - That was first. Others were more a list of relevant skill - management skills - qualities in a subordinate and so forth. And, there's a certain element of .. in most of the problems, at the time, we all found it difficult to define the goal. You tend to get sidetracked onto what appears to be the goal. But, when you've finished, or almost finished, you've realised that it wasn't the goal! .. At the end of the problem, actions, and what have you learned - we must always be careful we have defined the problem properly, you go into the next problem, and you do exactly the same mistake - you know!

I - Yeah, Yeah,

S - Except that they have changed the problem, so that, you... its surprising.

I - Right.. OK.. that's interesting .. Let's, meanwhile, get on with what we're here for.

S - Right.

I - That's how it's going to come out ... What I'd like to do to begin with is to get you to rate yourself on how you think you've come out on these dimensions here.... outdoor, mechanical, computational, scientific, persuasive, artistic, literary, musical, social service, and clerical.

S - ... And I rate myself on 0 to 100, right?

I - Yes, those are the percentiles, Yeah, that's right .. and those columns, one is for male, and another is for female, OK ... and scores come out to be put in there - like after you've rated yourself, I'll shout out something like 19, and it'll come out there if it's 19 in that dimension or there if it's 19 in that dimension ... If you imagine 100 people in the corridor outside, the test purports to show how you stand -

S - -I see -

I - - In comparison with everybody else's liking for that particular activity .. OK?

S - Yeah .. so what do I do again? If you say clerical, I give you .. a measure of my interest in clerical work in terms of percentage involvement.

The Helper is continuing a conversation, began prior to the tape recorder being turned on, on recent events at work of interest since we last met.

The Helpee continues to show interest in exploring, and explaining, his recent experience.

The Helper directs attention towards the purpose of the present meeting.

Initially, the Helper provides specific instructions on the problem of proceeding to interpret the test results (concreteness).

- 2 -

- I - Let's do it in terms of four quarters. It'll make it easier ..OK?
- S - In 4 quarters, so I say from 0 to 25, 25 to 50, 50 to 75 ; I see, Yeah.
- I - ..And also view it in terms of - about 75, it's one of the things which you really want in a job - its the thing - that turns you on .. you like doing it. Below 25, its .. you avoid it as often as possible, and - er - its really something you don't like doing. OK?
- S - Yeah-
- I - .. and in the middle, you - sort of - you can take it or leave it. You can do it, but it's not the sort of thing you would immediately look to do, you would do it if it enables you to do something else you really like doing - or - you know, well, I'd like to get rid of it but I'll go on going it' - that sort of a feeling.
- S - Yeah!
- I - OK?
- S - Yes. So, do you just want me to start, then?
- I - Yes
- S - 50 to 75
- I - OK so you want to put / in there.
- S - there shall I mark it, in here.
- I - Yeah ... Can you give me an idea - in terms of your present job of what you're thinking of? - in clerical things.
- S - .. general written work - perhaps of a more routine nature. That is my - general definition of clerical.
- I - er - that means writing up experiments?
- S - I would think of things like writing agendas for meetings, that sort of thing.
- I - Yeah.. Oh, well, over the page, have a look at their definition and see how that ties in ...
- S - ..that might not tie in with the example I've given .. but, I've given .. I can't think of any other example .. I suppose report writing might come in there; but that contains a lot more - of -
- I - personal?
- S - yeah - personal - inventive type of thing than I get the impression from clerical. So I can't see that I have any examples of clerical, at the present time, but I would still put it in the same area.
- I - even if it's that work.
- S - .. Even - yes ..

The Helpee indicates that he understands.

The Helper, in the process of self rating for the purpose of interpreting the test results, must ensure as far as possible with each of the test dimensions that the Helpee is specifically clear about the process of judgement used by him in arriving at a self rating, and that he has explored his self understanding in each area as fully as he is capable.

- 3 -

- I - If you were constructing your ideal job, would you say that that was one of the elements you would like to see in it?
- S - ... You're discouraging me!
(laughter)
- S - I would certainly be prepared to tolerate it, but I think your're pushing me this way.
- I - I can see there's an element of clerical type work in what you've described to me. It's difficult to see where it would come in the other categories.
- S - Yeah ... I would perhaps put it down to the middle line. I mean, is it critical whether it's above or below the line?
- I - ... it can be, but I'll tell you what, just put an arrow going down, OK?
- S - Yeah.
- I - OK ... social service.
- S - ... I think that would be a valuable asset to a job.
- I - Does it happen in your job at the moment in any way?
- S - I'm becoming involved - er - my job is becoming more - Yes I have been involved more with people .. My job previously has been seeing whether their job, they are doing, is fulfilling their training needs, and their advancement... So I like to consider the well-being of the people over whom I have some - authority - control ... um ... In fact, I wonder whether I might be ultimately more interested in being involved with people rather than technical work..
- I - Do you know what sort of involvement?
- S - um ...
- I - Don't think too hard about it! it's not that important!
- S - Yup ... So, I think I would rate ... I'm not too sure because I feel I've not had the experience to back up with conviction putting it in this region .. so .. if I was to put it in this region (75 to 100), I would be guessing, I think.
- I - But you don't feel that it's down there (0 to 25)?
- S - I would put it .. I feel I'm being a little bit indecisive, because I'm not sure whether it's as the - essential for any job I was going to do, if I was modelling the job .. I would certainly put it high in the things I would like to do.
- I - Right OK.
- S - I think that's probably the best place for it .. just under.
- I - Right.
- S - Absolute essential ..

As well as general levels of facilitative conditions, the Helper has to offer action oriented conditions of behaviour towards the aim of establishing accurate and well understood self ratings by the Helpee - here, the Helper confronts the Helpee with a discrepancy in his process of achieving a self rating.

The Helper judges that the Helpee has explored this area sufficiently. Even if he does not fully explain his judgement in detail, for the purposes of this interpretation of test results, only identification of the Helpee's emotional proximity to the work activity concerned is necessary. Further exploration and better self understanding may become necessary later in the helping relationship.

The Helper is concerned that the Helpee does not become discouraged and offers facilitative and action oriented conditions intended to ensure that the effort of Helpee self exploration is kept for other issues.

- 4 -

- I - Yeah. Yeah.
- S - .. Musical .. I think I'll put that down at zero without any doubt ..
Yes, I'll put this at zero, I'm afraid.
- I - Right! .. Do you listen to any music at all?
- S - Yes, I do listen to -er- music, but not with any great interest. I quite like having background music, for example, when I'm driving, or, in a car. I'm more interested in the light music than the classical music. I'd be more interested in pop music or jazz than classics.. Even at my age!
- I - .. don't be unfair to yourself! Right, let's move on.
- S - Literary I think there's a bit of a conflict. I'm not sufficiently interested in .. general books, to have made a continuous effort at .. reading .. I've read, an odd book when something's caught my eye, but.. and I'm not - certainly - interested in writing from the point of view of a novelist.. I find .. I like-writing .. as part of a job when it is basically getting facts down on paper.
- I - Yeah .. OK .. So how do you think you compare with the rest of the population?
- S - .. Well, I feel at a bit of a .. a bit of a conflict. Oh the reading .. I suppose I do tend to separate it into work and non-work - reading on the non work side and writing in an artistic way, I would go very low .. almost as low as my music!.. But on the work side .. I would go above average. I would probably be happier about writing reports or minutes of meetings than the average in this lab, I feel.
- I - Yeah .. tricky .. Is it an element you would like to see in your job?
- S - Some form of writing? .. Yes ... I suppose that is the aspect of it I had partly included in clerical - to some extent. .. So....
- I - The difference - really - between literary and clerical is that in literary you are putting your own expression into what you think other people ought to know... and you are listening to other people saying they think 'this is important' - whereas, clerical is more of a routine, following laid down lines ... Does that help.
- S - Yeah .. I think I'll put it up there.
- I - Right .. OK .. Fair enough.
- S - Artistic .. Let's see what they put about it No I don't think I do - anything .. eye-appeal .. creative work with eye appeal, I think I go right down .. So I'll probably rate here.
- I - Do you think there's anything in your job at the moment where you are called upon to do that sort of work?... or would you like to do that sort of thing.
- S -Um

The Helper continues to offer the facilitative and action oriented conditions relevant to achieving adequate self ratings.

Helper responsiveness is similarly higher - more confronting.

Helper level of self exploration has now reached high levels (5) for the test dimensions concerned.

- 5 -

- I - ... admittedly, its difficult to mess around with your hands in this sort of -
- S - looking at it again, I suppose I've a set image in my mind - artistic as painting and sculpture. Whereas that's not what is implied here ... I could .. You could include presentation of results in a more artistic manner -
- I - ha! Yes -
- S - and, I would probably enjoy that task. I might even enjoy that as a major part of the work - presenting results in an artistic manner - But, you know, I think there's got to be some content - er - a vague - er - 'something in me trying to get out' type of think.
- I - perhaps that comes into the next one.
- S - Yeah .. Persuasion. Yes, well that obviously does, doesn't it .. Yes, I would .. I think that certainly I would like that. Those are the aspects of the job that I... in the context of the job I'm in now, er, the persuasive aspect I like .. I can imagine some parts of the persuasive area .. some persuasive jobs I wouldn't like...
- I - such as
- S - Such as a car salesman, for example, - I feel - .. I don't know whether these are pre-set ideas in my head.
- I - why would you imagine that?
- S - Yeah - possibly not acting in the interests of the individual you are dealing with .. A selfish type attitude.
- I - ... therefore, if its - um - persuading an individual from a position of authority - where you're trying to persuade the individual what is for his own good, and with some belief in it, like -
- S - Yes, if I had some belief in it - the product .. er ..
- I - ... which is very difficult - at times!
- S - well the sort of persuasion I like .. is the sort of persuasion where I can come to a decision, yes or no, that is based on my own reading of the situation.. and I have that choice .. and I then can go out and present that result - those results to other people ..
- I - Yes - Yes.
- S - - whereas if I was another type of salesman, I wouldn't have that choice.. I might not be... I imagine that most salesmen aren't committed either way.
- I - -aren't committed.... fair enough.
- S - - with regard to the product.
- I - Yeah... fair enough... what sort of persuasive stuff do you do in the job at the moment? can you give me an example?
- S - uh .. presenting results .. um persuading people that the work is useful.. persuading them to believe it.

The Helpee continues to explore his self rating process at a high level.

- 6 -

I - Who in particular? the manager - the group.

S - Well I imagine I will have to persuade the manager. At the moment - and I'm at the beginning - I'm trying to persuade people who might be working on it with me.

I - Yeah .. OK .. and you quite enjoy that.

S - ... I think so!...I haven't started yet really!
(laughter)

I - What about the persuading you've done in the past?

S - Yes I've enjoyed that.

I - What was that about?

S - Oh, all sorts of things - sometimes persuading people to work - along the direction which I thought it was best - to go .. the work to go .. and for them to go.

I - Yeah Yeah.

S - Is that

I - There's an element of directing there as well as persuading, were they ... did you have to

S - No, I didn't direct.

I - Were they looking to you as the natural authority? perhaps to explain things to them and they would try and understand.. Was it a communication exercise?... or were you having to say - "for your own good - this is just what you're looking for" and they were saying - "don't really believe you". And you were then pulling out the bits that were good for them to see ...

S - I think in the particular - you know - area .. project I was thinking of, I had.. It so happened that I had ideas, and it was communicating those ideas to others.. umm .. in such a way that they believed it was the right thing to do .. I certainly gave them a balanced picture; I don't think I manipulated anybody..

I - .. So its a bit of a mixture of both?

S - Umm.

I - OK. fair enough ... How would you -

S - Oh! persuasion - I've still got to ..

I - understanding persuasion as it's put there, how would you rate yourself, in comparison with everybody else...

S - I imagine I'm up here again.

I - Just above?

One of the dimensions (persuasive) however requires longer discussion. The Helpee does disclose that he is not sure he has any evidence, yet he is keen to maintain a particular self rating. The laughter, on the part of the Helpee, indicates some nervousness with this particular subject. The self exploration becomes more mechanical, inward probing less spontaneous and emotionally positive. (The tone of voice becomes strained).

Helpee response, and self exploration seems to have stopped.

- 7 -

- S - Yeah
- I - OK.
- S - ... scientific...
- I - Ah!
- S - Now this is one I should be right at the top of, as its the job I'm doing .. means 'you like to discover new facts and solve problems' .. well, I think I like to solve problems. ... Yes, I think .. in the definition there, which is different to the general definition of-you know-science maths and chemistry, I think I'd score high.. I think .. I think solving problems in particular - would go as an essential part ..
- I - Yeah. Yeah.
- S - Even if it's solving the problems of how I should talk to people..
- I - Therefore, as I said, in general terms, it's a fascination with asking questions about things rather than a fascination with chemistry - or - a fascination with physics.
- S - Yes, Yes.
- I - OK, so it's more general.
- S - Yes, a general solving problems, I think.
- I - Yeah, Yeah.
- S - ... So, well,
- I - That's another one you would like definitely to have in your job.
- S - Yes
- I - Right .. OK ..
- S - computational ... I think, uhm - I would put that to the high side of the desirable.
- I - that is also something you would definitely like as part of your job?
- S - Not definitely, but towards the high side of something I would like.
- I - Right ... OK...
- S - Er... I've got a feeling this is going to come out rather differently to the way I put my pin in the ..
- I - Do you!
- S - .. I'll wait and see ..
- I - What are you thinking of under computational.

The Helpee is satisfied, although his tone of voice suggests less satisfaction than with his other self ratings. Helper response is similarly limited, and the Helper decides not to confront the Helpee with a potentially sensitive problem at this stage. The Helper senses that the Helpee is on more familiar ground. The Helpee, indeed reacts with some relief.

Helpee self exploration is again at a high level.

The Helpee declares some inward probing concerning the consistency of his process of self understanding.

The Helper responds with high levels of facilitative conditions but the Helpee's exploration of this does not continue.

- 8 -

- S - ... Making things quantitative. I wouldn't say that was an essential part of the job .. But, I would say I am happy dealing with - er - numbers .. and .. mathematical equations... I'm not happy simply adding them up. But I'm happy managing numbers, I think.
- I - Fair enough .. and that again distinguishes from the clerical.
- S - Yeah ..
- I - Fine, let's go back and
- S - .. Mechanical? Yes I think I like that ... certainly, at home, I enjoy doing a lot of jobs around the house, working on the car... I think there is a sense of achievement - in doing that sort of thing.
- I - Right
- S - .. I enjoy doing it at work as well ...
- I - Such as
- S - .. Well I actually enjoy .. I enjoy going into the Lab. and doing some experiments now and again.. er .. there is an element of having a change to some extent. Because, especially lately, I've become involved with a lot of theory work ... And I found it was a real relief to get into the lab and start pulling a few things around I think perhaps it might only be desirable though, in a job.
- I - Not formally necessary.
- S - - Not formally necessary - in my leisure time I'm bound to do that sort of activity anyway. I wouldn't want to do that sort of activity all the time.
- I - Right. O.K.
- S - So I think we'll put that .. on the credit side - a bit - not essential ... Outdoor I'd like a job that took me outdoors some of the time. I wouldn't like one that took me outdoors most of the time.
- I - OK..
- S - Er .. I thin probably .. I would that in the undesirable, but not...
- I - OK - what outdoor sort of thing are you thinking of?
- S - Er .. I was thinking in terms of .. anything that took me outdoors ..
- I - Is there anything at work that does?
- S - No....Nothing at the moment.
- I - Nothing at all.... You don't do anything ... other people in the divisions, or ,
- S - Oh - er - well ... well I have ... this says outside. I didn't interpret it as that. When I go and see other people in Divisions I interpret that as indoors really.

The Helpee continues the process of self rating.

I - OK, OK... OK well, I was thinking just as you find getting into the lab, a bit of a release, do you find getting outside of this place - getting out - out and about, a bit of a relief... out of the office - even though you end up in another somewhere else... some people regard it as a change.

S - .. Er ... Rather than being in one particular - behind one desk all day?

I - Yes - if you were constrained to one desk all day, would that bug you?

S - ... I don't think it would ... I don't think so.

I - Right! - as long as you meet people.

S - .. as long as there's a change - I think I would be alright sitting at my desk.

I - So you wouldn't mind if - er - sitting there while all the problems were brought into the 'IN' tray at a vast rate of knots.

S - No, I don't think so.

I - Would you like to sit at a desk where you had to manufacture your own problems, and make your own contacts?

S - I think that's right, yeah.

I - OK! ... Right, well if you shout out the number you rated yourself, I'll shout out the score.

S - This 50 you mean.

I - Yeah... OK, so

S - Well, what.... 50.

I - 37 - make a cross - or a line in the column ... this is the actual score in the test.. Each one of these numbers can be marked in the column, and checked against the percentile - ranking you in comparison with everybody else's score for interest in the activity...OK?

S - So - that exactly to these numbers....

I - Well, the test, being statistical, compares your scores with everybody else's scores, and compares you with average -

S - -Ah! - there's an average distribution for each of these?

I - That's right....

S - and you're going to 37 refers to this number, and tells me I'm in the bottom quarter of the population.

I - That's right - so 3/4 of the population are much better at it!

S - I see ... good

I - So make a line across.... that's male that's female

S - I see

The Helper continues to facilitate the process of self rating.

The Helpee has rushed the last few self ratings. Self exploration has gradually become somewhat superficial.

The Helper recognises the Helpee's concern about the coming confrontations (of test ratings and self ratings) and moves on quickly. If the Helpee is interested to consider the implications of the test results, then that would be a more important area to explore. Furthermore, the Helpee may understand better the relevance of fuller exploration of self ratings.

The Helper provides some further (concrete) instructions regarding the interpretation of the test results.

I - so what's next?

S - 50

I - 51

S - Oh ... oh: that's 76%

I - next - musical

S - zero

I - You got 4 on that .. literary

S - 23

I - You got 12 ... artistic

S - 19

I - You got 12 again --- persuasive

S - 42

I - you got 33

S - Oh dear!

I - There's a discrepancy in that!

S - 58

I - 49

S - computational - 32

I - -34

S - 51 - chemical -

I - 56

S - and 39 - for outdoor

I - and 54 well, any reaction

S - umm - chemical ... computational ... scientific .. well, persuasive still comes down doesn't it ..

I - Don't forget the test is not absolute .. but I would interpret this discrepancy as probably meaning that you are not very confident... if you rate yourself higher than you score. Like you are probably interested in these activities, but you didn't have the confidence to choose them in the test.

S - Yeah

I - ... there's an interesting bit of development going on there

S - Yeah.

The subject of the persuasive dimension reoccurs when the test rating suggests a confrontation of the Helpee's self understanding in this area.

The Helper rapidly offers facilitative dimensions of behaviour to help maintain Helpee self exploration, and self understanding of the discrepancy between the test and his own rating.

The Helper continues to emphasise with the Helpee's difficulty, and tries to be both empathic and concrete in helping him arrive at a satisfactory understanding.

I - OK ... its not absolute - saying for all time. At the moment - when you took the test - you might have just had a bad experience trying to persuade somebody, and you've gone right off persuasive.

S - ... Yeah .. Oh, that's quite interesting ... what do we get out of that then?

I - Well, ... how you go from here, is to take the one's here, which is mechanical, scientific and social service.. Oh, that's 1, 3 and 8 - with a proviso on one actually, because you said, as an activity you like it, but - er - in a job, you're not necessarily very keen on it -

S - -Yeah-

I - because you do a lot of it at home, OK?

S - Yeah

I - You take a look at these things here - 5 - 6 and 7. That's a bit suspicious as well, because from what you said earlier, you have a greater desire to be more expressive in you job than you've actually come out at.. therefore one wouldn't go too much by those results ... Well, with other people, one would say, well - let's say with clerical, one would say don't go for a job which is predominantly clerical. When you are thinking of a job - think in terms of what activities does it actually require me to do' - like - personnel work - a lot of it can be clerical. Er - so you say to yourself, I like a lot about personnel work - I like the social service bit, but unfortunately it's got clerical, so let's take a closer look what are its good points and its bad points...

S - Yeah

I - what does a personnel officer do most of his day he may spend being persuasive - persuading people. And you can actually then rate a job in terms of - 'well its got a lot of bad things about it - or one or two good things, whereas this other job has 4 or 5 of the things I really look for.

S - Yeah - Yeah!

I - I do have a manual ... one is given a manual, which goes with the test... and it has a rough classification of occupations according to major interest.. So, it says for each of the dimensions. So, if you score highest on 8 - have a look at these types of careers

S - Yeah....

I - -It's also American!

S - -Yeah. Oh, I see....

I - Just to give you an idea.... And they also do a double one. Like they combine 0 and 6; 0 and 7; 0 and 8.

S - Yeah

I - ...Now, the two you combined were 8 and 3 weren't they. Let's see ... 3 - 8 ...scientific - social service ... and they suggest things like that ... which isn't immediately helpful to you sitting here in ICI!

S - -ah!

The Helpee has been listening carefully, and although his tone of voice suggests that he is convinced of his possible interest in exploring this further; he feels somewhat shocked.

The Helper decides that the Helpee would not benefit from further exploration of the discrepancy in the persuasive area at this stage, and turns to a different area.

The Helper begins the process of interpreting an interest profile and relating this to the choice of career and its development.

XX

The Helper makes a specific and concrete attempt to relate the test interpretation to the Helpee's area of self exploration - his career.

The Helpee responds with a high level of emotional proximity to the reintroduction of this area of concern.

- I - but if gives you a flavour!
- S - ...consulting and guiding psychologist!
- I - Yes!
- S - hah hah!
- I - that's a bit surprising
- S - .. Yeah! ...
- I - ...but what we can do, is to think about all the jobs around us in ICI which actually have these activities as their predominant ones.
- S - Yeah ... Yeah..
- I - .. but what - if these have given you an idea so far, what I suggest is - have a go at the sister test of this which does it from a different point of view... 5 dimensions, and those 5 activities... OK? It's rather the same idea - just a different list of questions....
- S - ...well ... What do you want me to do? - take this away and have a go at it?
- I - The booklet and the pin - take it away - home, have a go at it... Let me have it back, and we'll chat and discuss that... There's also a manual for this one - and the ideas about jobs will probably be more relevant - to ICI and your position here now - rather than forest rangers and things.
- S - Yeah, OK....
- I - ... that will be very useful, because we've started, and got a good base - 3 and 4 and perhaps a bit of two.... We'll then get both together and have a think about how it might affect you - OK.
- S - Yeah! very good.... so I'll leave that with you, then.
- I - Yeah - fine ... I'll bring it along for next time.. How do you feel about.... the results so far?
- S - Yeah.... I quite like the idea of science and social service
- I - Fine, OK, we'll see what we can do for you next time.

Despite Helpee interest, and exploration tending towards a particular item of interest, the Helper offers high level concrete conditions towards Helpee action in his problem area.

The Helpee continues to respond with indications of a high level of self exploration of the problem.

The Helper arranges to continue the helping process further.

Finally, the Helper inquires directly about the effect of the helping process so far. Some re-formulating and re-emphasis of necessary self understanding and direction is occurring. The Helpee is demonstrating level 4 self exploration of his problem.

INTERVIEW THREE

The interaction commences, here, with the helper offering facilitative conditions towards the helpee's obvious (observed non-verbal behaviour) interest in the status of the surroundings (his boss's office).

The next subject introduced by the helper turns, at a general level, to the helpee's work situation.

Helpee response is adequate but mechanical.

Helper response is genuine, but at a level which lacks enthusiasm.

The helpee seeks to contribute more to his explanation.

The helper's response becomes more interested (higher level 'genuine' response).

- 1 -

- I one .. two .. yes ... would you like to put your feet up! -
- S - hah - hah! -
- I - shall I move the desk back a bit - and -
- S - that's alright! .. This is the chair to have, isn't it!
- I What, the one with the swivel back?
- S - umm .. and it swings!
- I ... hah! - You wouldn't be thinking of flying aircraft, would you - testing aircraft ..
- S hah!
- I .. Well, where are we .. How .. How have you been getting on, first .. has anything happened?
- S You mean what?
- I - Project wise .. and work wise
- S um .. No .. No very significant steps .. We've started work on the project now .. well .. on the 'area'. Project isn't a word you can use clearly now
- I Oh really?
- S Well - I mean - it's not designated a project yet, it's still exploratory... project means something in the lab now .. an area of work has got to progress to a definite stage, and we have defined objectives before you can label it 'a project' .. so we've started the research now anyway.
- I .. You were working out an area, weren't you .. sort of spending 3 months writing and reading .. last time I saw you
- S umm ..
- I .. You always seem to be sitting at the desk, poring over the
- S Yeah .. I was doing more-desk work. We've now started .. to define the Program .. we're going to do .. and it's getting underway.
- I ... And how's it going?
- S ooh .. we've got no real results, yet
- I .. are you expecting any
- S No - No .. it's a long term sort of thing really .. We've .. we've just start .. we've been thinking about - particular compositions to examine. We've decided what we are going to look at, and now, we are just starting the process of making those compositions - and - it'll involve a lot of routine - sort of - work now ..

- 2 -

- I Ah! so you're getting stuck in
- S Yeah .. we're finally stuck into it
- I Well, well do you remember this piece of - bit of patching that you did?
- the second -
- S - Yeah - Yeah -
- I How do you feel about it? ... what were your reactions? ... when you were going through it, can you remember whether -
- S - Er, I can't remember any particular reaction at the time, No.
- I Um ... what about the other one - that we went through. Can you remember if we -
- S - the other one that we went through?
- I Yes
- S Similar to this?
- I That's right
- C Um ... Well, I felt the results of that were quite fair - really - I was quite happy with the sort of picture that emerged ... I wasn't .. I wasn't so sure whether that would tie in - with the results - of that one ..
- I - of this one?
- S - of the tests .. of the computer tests. You know, the original punching thing
- I Yeah - the one where you had to imagine what you were .. first - rate yourself.
- S .. the one with the pin .. going through the booklet
- I Yeah .. Yeah
- S Yeah .. I don't think the results will tie in .. I was happy with the results you gave me there .. but I don't know about the other one, so much ..
- I Yeah .. O.K. ... can you tell me a bit about how you were happy about the other one .. didn't I hear you say something about .. picking two of the dimensions out and saying those seemed to be a good combination?
- S .. um .. what were we .. um .. social science, were we ..
- I - social service -

The Helper offers level 4 conditions of empathy concerning the Helpee's work issue. The Helpee responds with some attitude of confidence about this. The Helper moves the conversation towards the purpose of the meeting - gradually, offering higher conditions of immediacy and specificity as the Helpee response improves in this area.

The Helpee is responding with a high level of self exploration (level 4).

The Helper seeks more specific information about the present self exploration.

S - social service .. and scientific .. the other one was mechanical .. but I was happy going that in my spare time, I think

I - Yeah - fine .. so you got something fairly concrete out of that .. that you could identify?

S .. Yeah .. I think so, yeah .. it ties in with my ideas .. and allows me to ... really, I suppose it gets my ideas straight in a clearer perspective than they were before, I suppose ..

I - Yeah .. that's what it's supposed to do .. Yeah ..

S - Yeah

I - Fair enough .. let's turn to this one ... this one has got five dimensions .. so can we ..

S - O.K. -

I - So through them one by one .. draw these four quarters, and ask you where you think you would stand in each ... have a read of them first

S - four?

I - five -

S - Yeah

I .. clunk!

S - Yeah .. so what do I have to do?

I - Well, let's draw .. can I borrow your pencil

S - Yeah ..

I .. one at 50 .. one at 25 .. and one at 75 ... if you take the first one - preference for being active in groups, could you think of how that I would apply to your job .. either now, or the one that you would like .. and say whether it's something which is a vital component of the one you want, or is not .. or it's one which gets in the way .. or, it's one which you can take it or leave it - you'll do it ..

S - Yeah

I - and what sort of thing are you thinking of ...

S .. I don't think it's a vital .. um .. part .. of the job I'm working in now .. um .. it's certainly not undesirable ... so I've really got to put it I think probably .. it's A .. probably about here ..

I - O.K. ... make your mark ..

The Helpee has integrated the results of the first test and interpretation with his particular personal needs and concerns in the career development area, but in a still hesitant and uncertain manner, at this stage.

The Helper offers further action oriented dimensions towards the purpose of this meeting, ensuring meanwhile to obtain some indication from the Helpee as to his ongoing reactions to the change in area of conversation.

The Helpee has chosen a dimension and quickly explores his response to the problem.

S .. Yeah

I .. what sort of thing are you thinking of?

S .. er .. well .. it's rather a general sort of thing .. um .. I'm .. I don't .. I quite like being .. working along with other people .. working in groups on the training courses you go on - you know, this group .. um .. solving a problem .. but that's more or less a game, really .. but .. um .. I'm not so .. I don't really feel a need to meet new people ..

I - Yeah -

S and I don't really feel a strong need .. that I've got to be working with people all the time .. doing the job .. so I'd probably put it down ..

I when you're working along with other people .. what does that entail ..

S - at the present time?

I - um -

S er ... working .. I'm getting some help on the experimental side .. so I suppose working with some .. junior .. people .. I do have contact with .. I don't have a lot of contact in the work with .. er .. people at the same level .. there's nobody else at the same level, or higher, involved in the same topic of work .. although I work in the group in some extra topic or areas .. that would be in the new ideas group .. ideas - in a group evaluating new ideas in an area .. so that is the limit of my contact at the moment ..

I fair enough .. right .. what about the next one ..

S - familiar and stable situations ... well, I like .. I think like most people, I have a liking for a stable situation .. but .. um .. on the other hand .. I've enjoyed the change .. of work .. or environment, perhaps .. that I've had at two yearly intervals .. something like that, you know .. um .. so I don't know where you'd rate that ..

I what sort of thing - situation - at the lab would that be?

S Well, in the lab, I worked just over one year, here .. then I went to Manchester - joint lab - for just over two years .. came back here .. so that I have had this change .. both in the work .. and in the surroundings .. um .. I've found that kept my interest .. whereas if I'd been working in the same area I would have been less interested .. on the other hand, I do tend to naturally stick with what I know .. I don't tend to rush into the future .. a new situation - eagerly ..

I - very natural!

S - um ... I really .. I think I'd have to put it down here .. I definitely wouldn't want to stay in the same stable environment for the next twenty years .. so ..

The Helper seeks greater specificity about the response.

As with the first test dimensions, Helpee self understanding and self exploration in the self rating process only proceeds with some difficulty by the helpee.

The Helper decides to move to the next problem area.

The Helpee continues to rate himself.

I Right .. what about in comparison with the rest of the population, you know this mythical hundred ..

S Yes

I - or does that complicate matters?

S Yes .. it does rather .. I'll put it down there ..

I O.K.! .. fine .. dealing with ideas ..

S well, I quite like working with ideas, but I wouldn't want to say I'd like to work with ideas to the exclusion of things .. does that necessarily .. - mean, it tends to imply one at the expense of others .. am I saying ideas up here .. things down here?

I What is the difference, to you, between ideas and things .. what sort of things are ideas .. and what sort of things are - things

S Oh .. I see .. um .. well, the picture I had in mind was that .. at the moment .. I'm .. er .. I'm doing a certain amount of ideas .. formulating what I think we should be working with .. I'm also .. doing a little bit of the .. producing some of the materials .. which .. I suppose is working with things .. testing some of the things ..

I What other .. people - are they ideas or things?

S Oh! I didn't include .. I didn't see people as being .. do you want me to include thinking of people?

I Well .. not necessarily .. but it struck as possibly being part of the job it sounds as though it's something you can take or leave .. you're not strongly one way or the other

S Yeah .. that's right ..

I O.K. .. well ..

S well, I'll put it up here, then ..

I Right .. Yeah.

S .. avoiding conflict .. um .. yes .. I think I've got a strong preference for avoiding conflict ..

I in what way .. how does that show up in the job? ..

S .. um ...

I - You don't tell (group head) what you think of him!

S .. er .. yes .. I - well .. um I have a tendency to avoid conflict anyway ..

I - Yeah -

The Helper offers empathy.

The Helpee responds strongly.

The Helpee continues to rate himself.

S - I definitely prefer .. pleasant social situations, rather than bringing out conflict .. I don't think I would tend to - er - drift .. I wouldn't let that dictate matter, though .. er .. under all circumstances, though, I wouldn't be totally avoiding conflict .. because, obviously, it's necessary and so on ..

I - Yes -

S in fact .. it's probably necessary - desirable - to bring things out rather than smooth over the cracks .. but, um .. that really is one way of avoiding future conflict, if you can bring conflict out earlier ..

I - Yes --

S um .. I think I'm willing to make considerable effort to preserve friendly relations

I and you think of an example?

S um .. well, I think I'm very .. before I - er - speak to people .. in a lot of cases .. where I'm going to say things that - er - which will - er .. could hurt them .. or make them feel .. er .. dissatisfied .. I'd take quite a lot of .. put quite a lot of thought into how I'm going to present things .. um .. rather than just .. present things as they come into my head .. er .. I think I would put that probably high .. although, as I say, in some cases, it's better to bring conflict out early on, as a method of avoiding conflict later on .. I think .. so could I put that somewhere up here?

I - Yes -

S so ...

I Right ..

S ... Yeah, well I think I do. I haven't had much experience but I definitely seem to like being in a position where I can influence the thoughts and activities of others ..

I what sort of experience have you had?

S well, over the last two years .. in .. I felt really that I .. I have had this chance, to some extent .. working in the joint lab .. we were .. really responsible for .. defining the work .. and keeping it going .. (x) and myself .. and there were three other people from the university .. but .. generally, they weren't as familiar with the work .. um .. they were more suited to actually doing the work - preparing the chemicals - than thinking about the long-term way the experiments were going. So, I think we did have the chance .. to .. um .. to do - to take more of a planning position.

I and you found that was definitely a good thing?

The Helpee marks down a self rating

... and moves to the next test dimension (directly and leading others).

S well .. I .. Yes .. I - I enjoyed that, yeeh .. but .. the chances for doing that in the lab, here, are rather limited .. of course, you know .. there's a lot of people at my level, and above .. and not a lot below really!

I huh! - a lot of indians!

S yeah! so ..

I well, where are you going to put that

S yeah 62

I blimey! Right ..

S well .. in a general way ..

I O.K.! .. so .. settle on these, then? ..

S Yes

I Right .. let me put out the actual scores ... If I shout out the percentages

S - these scores?

I Yes, you tell me the number you circled, so I can keep a copy ..

C .. Oh, I see, so I shout this out .. 33

I Right .. 29 .. so that's 45%

S so, I put a line there ..

I Yes

S which is equivalent to 29 .. next is 41

I 32

S .. 36

I .. 45

S .. 47

I .. 65

S .. 62

I .. and, 75 any reaction

The Helper offers the helpee a chance to explore these self ratings once more, but this suggestion is not followed up.

The Helper presents the Helpee's test ratings for comparison with his self ratings.

The Helper immediately turns attention towards the Helpee self exploration from the confrontation of self ratings and test ratings.

S the biggest one was 'B' - my preference for stable situations ... so that I have a very keen preference, compared to other people .. that means .. Yeah ..

I what does that mean .. that you probably like a particular type of work compared to other people .. people who don't like to be tied down to a particular line, or job .. They are much more changeable .. they like .. being .. Given opportunity to chop and change .. according to their whim and fancy ..

S - uh huh -

I - whereas you're liable to say, well, I can do what's to be done, and I don't mind committing myself - getting stuck in to actually doing it ..

C Yeah ..

I does that make sense?

C Yeah, I think so .. Yeah ..

I because - er - .. it means that you like in a job that you can take a fairly deep view .. and know that all the work you are doing is relevant to one main aim, or objective .. Yes ..

S Yes ..

I what about any other reactions.

S well .. i'm high on this one, of course ..

I Yeah .. and as you said, you haven't really had much experience

S No ... on the lower side there's A .. and C .. I suppose they are really right in the middle, aren't they.

I .. it's a bit unfair to call them low, really

S .. Yes

I .. well, do you think that ties in with the other one in any way?

S ... I don't know ..

I .. O.K. .. well, any surprises?

S .. um ..

I or, does it confirm ..

S - No, not a lot really .. I think that's - er - .. that would .. I would be reasonably happy with that - er I picture .. as a picture of .. my-self ..

I Yeah! .. what about this gap .. here .. on B ..

As with the first results, in the previous interview, the Helpee has reacted to a confrontation of his own self understanding. The test indicates that he is not as interested in some activities as he would like to understand himself to be. The self exploration in this area is low.

The Helper offers high levels of facilitative behaviour in an attempt to provide the Helpee with some self understanding.

As Helpee confidence and new self understanding builds up, his response indicates a greater willingness to explore the area. However, the Helper suggests other areas, for the meantime.

The Helpee explores the implications of other results.

The Helper attempts to help the Helpee to explore his reactions more openly but ...

The Helpee is reluctant to explore his feelings further

... and the Helpee contents himself with one part of the possible conclusions that could be drawn.

The Helper confronts, more directly, the helpee with one of the discrepancies between self understanding and test rating.

- 9 -

- S uhm ... well, that .. the gap means that you're simply comparing my reaction with everybody else's, which means that .. uhm .. everybody must have a preference for ..
- I - familiar and stable situations ..
- S uhm .. Yeah .. so everybody must .. want to change
- I Yeah .. well, that's one way of putting it .. or rather
- S -there is a tendency for people to want to get away from stable situations, anyway ..
- I Yeah .. Yeah .. and it seems to say here that this appears to be an important part of *any* job you get into .. unless it was a part of the job .. at the moment, it might be a reflection of the sort of job you do .. as you are, at the moment
- S - Yeah -
- I but, E and E show very much the sort of things you would like to have in a job
- S - Yeah ..
- I .. there's nothing that you want violently to do without
- S - Yeah -
- I and - interestingly enough, you can make do with more conflict than you think..
- S - Yeah ... uhm ...
- I Have you been putting any ideas to a career plan of any sort?
- S Er ... not a lot .. No .. I'd decided that I would - this year - take much more of an interest in the .. vacancies .. to see what would come along ..
- I Yes -
- S - to see what sort of positions are available .. and how I think I would fit into them .. uhm .. not from a point of view of immediately trying to jump out, necessarily ..
- I Yeah ..
- S .. I think that's about all .. You know, I think I decided it wouldn't be a bad thing for me to .. have a couple of interviews .. with .. uhm .. any jobs I saw I was interested in .. just .. to see .. how .. I stand - from the point of view of acceptability .. for these sort of jobs
- The Helpee now accepts this new understanding of himself.
- The Helper relates this new self understanding to the implications for decisions and actions on career.
- The Helper confronts the Helpee with the need to look at other implications to be drawn from the test.
- The Helper suggests discussion of another related area concerned with the overall purpose of vocational guidance. Although this problem area was not directly brought up by the Helpee, his response shows itself to be very much a present concern. The Helper does not pursue the confrontation further, but directs the discussion towards the implications of this exercise of self understanding towards the career problem. Helpee self exploration in the career plan area returns to level 3, although, the response is quite mechanical and hesitant.
- Helpee self exploration becomes more definite.

- I Yes
- S inside or outside ICI, I think .. although, probably I would be happier staying inside ICI ..
- I Yes
- S I think I would probably find it very difficult to .. get the same sort of opportunities outside as I would get inside
- I .. Would you like to have a go at actually putting the picture we've got so far .. together, and seeing how they fit with some of the jobs on the notice board .. and seeing how they .. might .. fit in ..
- S - Yes .. Yes .. that seems fair, yes ..
- I Have you noticed any .. on the notice boards?
- S .. Not really .. during the - sort of - time that I've actually been - looking .. I haven't really seen anything - with my picture of the job - which really fits in with what .. er .. would be feasible for me - really.
- I Well, a practical idea might be to go along to (the personnel office) and ask for a list of the past - when - jobs that have come up - sift through them and get a wider view of what comes up
- S Yes - Yes -
- I if you then wanted to discuss - and perhaps apply these .. you would have a better idea in future when something does come up .. you'll be able to have something to latch on to
- S Yes - Yes - that would be very good .. quite useful .. so I'll get a list of past vacancies ..
- I - Get the actual form .. plus any job descriptions .. so you'll have a bit of meat to actually look into.
- S Yeah - Yeah ..
- I - for a whole range of jobs -
- S - so I want - job descriptions
- I and be sure to look into those that seem - at first glance - totally unsuitable - they may actually have some surprising points of interest to them
- S - Yeah .. Yeah ..
- I O.K. .. so would you like to leave it at .. come back if you want any chance to discuss any points that come up ..
- S Yeah .. Alright then

The Helper suggests a specific course of action that he considers the Helpee would be interested in (empathy).

Helpee response is positive.

The Helper again presents specific, concrete suggestions.

Helpee response continues to be positive for this sort of action to follow up his ideas on progressing his career.

The Helpee gives indications that he will act on the ideas being discussed that will then add further understanding to his career situation. The high level exploration (4) of these ideas about further action suggest that the Helpee's main need at the moment concerns opportunities for understanding the issues involved in career decisions.

The Helper leaves open an opportunity to continue the helping relationship, but this Helpee next continued to seek help from the Personnel Group on the matter of surveying different types of job.

APPENDIX 7CAREER DEVELOPMENT DISCUSSION

As mentioned in 3.2, in order to obtain subjects for the operation of a helping programme, the research student took up an opportunity to become involved in a programme of career development discussions in one of the work groups in the laboratory that was being discontinued.

A Senior Project Leader in the group was appointed to coordinate the discussions, and with the help of the research student, a proposal for the programme of discussions was constructed and circulated to each group member. The proposal was presented as:-

"It is now proposed to bring the group members together in groups of four to five people to discuss the problem of career development and exchange views. In this way it is intended that everyone who is willing to join in will be helped to think constructively about:-

1. Where his career stands at present?
2. How he hopes it will develop?
3. What action he needs to take to attain the desired development?
4. What are the obstacles to development?
5. What are the alternative pathways if the planned development is impossible?
6. How does his view of the situation mesh with the Company's?
7. What specifically should the Laboratory management and Personnel Department etc. be doing to help?
8. What specifically might he be doing himself?

Jeremy Ridge has expressed a willingness to help with these discussion groups and to use his experience in discussing these issues with many people in the laboratory itself, and in the Company as a whole. For your information, Jeremy's expertise lies in the field of assisting people to make the best use of their training and qualifications in an industrial situation."

Forty of the forty-six group members volunteered to participate in the small group discussions. The research student acted as the chairman or discussion leader for each group.

Each group discussion was structured according to four main headings, and ideas generated concerning each were recorded on flip charts. Each group's product was later collected and assimilated into a final report. The four headings were:-

1. State what you feel are the problems or concerns
2. What ideas do you have that might help these problems
3. What lessons have you learned in your career to date
(that you would pass on to your children).
4. What do you consider to be the most important immediate action for you personally.

A typical example of the end product of one of the groups is presented here, under the headings of 'concern', 'ideas' and 'lessons'

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1 (a) CONCERNS

- A What jobs suit what qualifications - in ICI and outside ICI.
- B What to do when job/qualifications match not possible.
- C CL-R experience not necessarily useful in getting on in ICI.
- D CL-R offers a small range of experience only.
- E Any standing still in one's career appears to be dangerous these days.
- F The Haslam system appears to provide ceilings through which progress is difficult.
- G Moving to another job may require new or different experience.
- H There is such irresistible pressure to move at present.
- I People may be pressurised into taking a job they don't really want.
- J Doubt about ICI's genuine interest in people making a life-long career in the Company.
- K Very little information is available.
- L It would be important to get information on what job suits a particular individual.
- M What questions should we be asking.
- N "Unofficial" efforts are discouraged, yet the official system seems of limited value.
- O Old solutions to career problems don't seem to work with new problems.
- P The official system (eg. ICI "internal" job applications) needs to be worked very carefully if it is to be effective - wrong impressions happen easy.
- Q Jobs are too specialised - narrow at CL-R.
- R Much of the "personal development programmes that are done are of little value in C.D. - eg. SDP.
- S There are so many people trying to change jobs at present that competition is great.
- T There always appear to be people with more suitable qualifications/ experience for any vacancy.
- U Some jobs are ignored as possibilities - through not understanding what they actually entail. They may be very suitable.

- V It may be difficult to leave a job at CL-R for a considerably lower salary, eg. if retraining is necessary.

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- 1 (b) IDEAS (on how to meet concerns)
- 1 Start a "situations wanted" system in ICI, eg. circulate an indiv C.V.
- 2 Encourage Divisions to create the desired job.
- 3 Make Cl-R more a part of ICI eg. people are seconded, eg. split CL-R up.
- 4 Write to Divisions as a "member of the public".
- 5 Cultivate contacts with Divisions.
- 6 Cultivate a reputation with Divisions.
- 7 Choose the right Division eg. their form/a good part of the UK.
- 8 Contact people formerly concerned with CL-R, for a possible sympathetic ear.
- 9 Eric Howells - choose the approach 'I want this job for this man' rather than 'how about a job'.
- 10 Let it be widely know - what you would like.
- 11 Try a 'skills' - 'job' matching approach (NB. less valuable where job depends on experience)
- 12 Read G Meacock's report.
- 13 D.E.P. professional register (NB. for jobs up to approx. £2,000 pa).
- 14 Get things moving yourself - don't rely or wait on others - the system.
- 15 Be able to present a good image of yourself, eg. learns quickly.
- 16 Be ready to be clear about what you are 'selling' to a prospective employer.
- 17 Get actual experience of possible career paths as soon as possible.
- 18 Appreciate how awake to our problems we are in comparison with a lot of other job hunters (eg. university graduates)
- 19 Read widely about various techniques that may come in useful (eg. value analysis).
- 20 Try to undertake some spare time courses.
- 21 Be careful to present the appropriate information to potential employers.
- 22 Make sure you have thought of all your skills, that may be applicable to a new job.

- 23 Contact people in Cl-R with outside contacts, eg. with universities eg. Prof Allen.
- 24 Try your old university appointments board's current list.
- 25 Newspapers - especially D. Telegraph and Sunday Times.
- 26 Some Group Heads have had special training in helping people in career development decisions.
- 27 Could Group Head be encouraged to be involved at an earlier stage than "when your mind is made up".
- 28 Some Group Heads have special interest in helping people in C.D. eg. Jim Bland.
- 29 Could the Personnel Group circulate more information on 'available ICI jobs'.
- 30 Adopt a speculative attitude, go for a job interview even if you don't expect to get the job - you may hear of others coming up.
- 31 The VG counsellors can offer constructive advice.
- 32 Petrochemicals circulates a 'job abstraction bulletin' from newspapers.
- 33 Psychological test for aptitudes eg. J Ridge, B Hopson.

WHAT LESSONS HAVE YOU LEARNED FROM YOUR CAREER SO FAR

(How would you advise your son if he was starting out on his career)

- 1 Decisions are made for you (being good in subjects at school) you get into a career before you realise it.
(Be broad minded in thinking about areas you could go in to).
- 2 Think clearly and early about life (his) in 20 years time.
- 3 Take no notice of careers masters.
- 4 Listen to experience of real situation (in the discipline).
- 5 Realise you may need to change your profession, don't get tied to a discipline that may restrict your career.
- 6 Leave options open as long as possible. Education does keep your options open. Procastinate on choice.
- 7 Don't choose 1st appointment on salary size. Be sure of where it leads you.
- 8 Look hard at yourself and be honest about your personality.
- 9 Be prepared for the shock of facing new situations.
- 10 Recognise that working environments differ.
- 11 Recognise that you are working with people not sums/exams.
- 12 Don't expect to get "right" answer in your job - answers depend on opinions.

LESSONS

- 13 Don't be afraid of sampling new things, but don't change for the sake of it.
- 14 Get some confidence by jumping into deep end somewhere.
- 15 Do your homework - know your subject so that you don't get caught out at a wrong time.

APPENDIX 8

A report on PhD work into the problems of effective interpersonal relationships in the staff assessment situation.

SECTION 1 - Summaries

- (i) A summary of the project work
- (a) Initial discussions with laboratory officials indicated a general need to stimulate more creative behaviour by the (graduate) staff.
 - (b) A subsequent survey of particular problems that were considered important by key laboratory staff (both management and technical) emphasised unsatisfactory co-operation between staff (eg commercial and technical); unsatisfactory relationships between hierarchical levels (eg between supervisor and supervisee in the staff assessment situation) and dissatisfaction with the career development of graduate staff.
 - (c) The major cause of these problems, chosen for the particular attention of the project, was defined as inadequate conditions of interpersonal behaviour in the relationship between members of staff, particularly between manager/supervisor and supervisee in the staff assessment situation.
 - (d) A programme of research was carried out in order to test and apply the conditions of effective interpersonal relationships indicated by recent developments in the social sciences.
 - (e) The results of this research are presented in a PhD thesis in order to show clearly the improvements in staff activity gained by the work of the project.
- (ii) The conclusions of the project
- (a) The origins of many organisation problems can be traced to the inadequate relationships between members of the organisation.
 - (b) The formal relationship between manager/supervisor and supervisee in the staff assessment system provides a good opportunity for systematic development and maintenance of effective work relationships.
 - (c) Developments in the understanding and measurement of the basic dimensions of effective (interpersonal) relationships now provide valuable guidelines for the evaluation and training of the work relationships in organisations.
- (iii) Recommendations for further action
- (a) That the organisation should take steps to increase the awareness and appreciation by staff of the importance of effective work relationships between members.
 - (b) That the organisation should take steps to increase awareness and appreciation of the tools that are now available for ensuring effective work relationships.

cont'd

SECTION II - Details of the Research

(i) The theory of effective relationships

The purpose of an organisational relationship can be defined as the exchange of information relevant to the need for action to be taken by either or both of the parties. The variables that determine the effectiveness of the relationship can be defined, generally, as:

- (a) FIRST PERSON (the 'more knowing' party)
- (b) SECOND PERSON (the 'less' knowing party)
- (c) THE CONTEXT (the circumstances of the actual meeting)
- (d) THE ENVIRONMENT (the circumstances surrounding the need for action)

Furthermore, the variables that will most frequently be critical to the outcome will be the FIRST PERSON behaviour in relation to the SECOND PERSON's behaviour during the process of their interaction.

The core dimensions of FIRST PERSON behaviour that determine the effectiveness of a relationship are:

A facilitative category

- (a) empathy
- (b) specificity
- (c) genuineness
- (d) respect

and,

An action oriented category

- (a) concreteness
- (b) immediacy
- (c) confrontation
- (d) self-disclosure

The effectiveness of a relationship (or ineffectiveness) will depend on the effective operation of these dimensions of behaviour by the FIRST PERSON in relation to the SECOND PERSON.

(ii) The application of the theory

In order to apply this theory to the problem of the organisation, the researcher developed the behaviour necessary to the FIRST PERSON role in the area of Vocational Guidance, relevant to career development problems of graduate staff arising from the operation of the staff assessment system.

Various samples of staff (eg actual assessment interviews) were used by the researcher to develop, firstly, effective facilitative skills of behaviour, and secondly, effective action oriented skills of behaviour. Finally, a sample of staff with career development problems was offered a programme of help based on these researcher skills.

(iii) The results of the research

A Case Study examination of the tape recorded interviews made during the research programme provides a clear demonstration of the interaction of FIRST PERSON variables (facilitative and action oriented behaviours) with SECOND PERSON variables (helpee self-exploration). These results are summarised in Figure 1. Figure 2 summarises the scale of second person self-exploration used in the analysis of the results.

Figure 1 : A demonstration of the development in Second Person self-exploration achieved by the operation of the Helping Programme

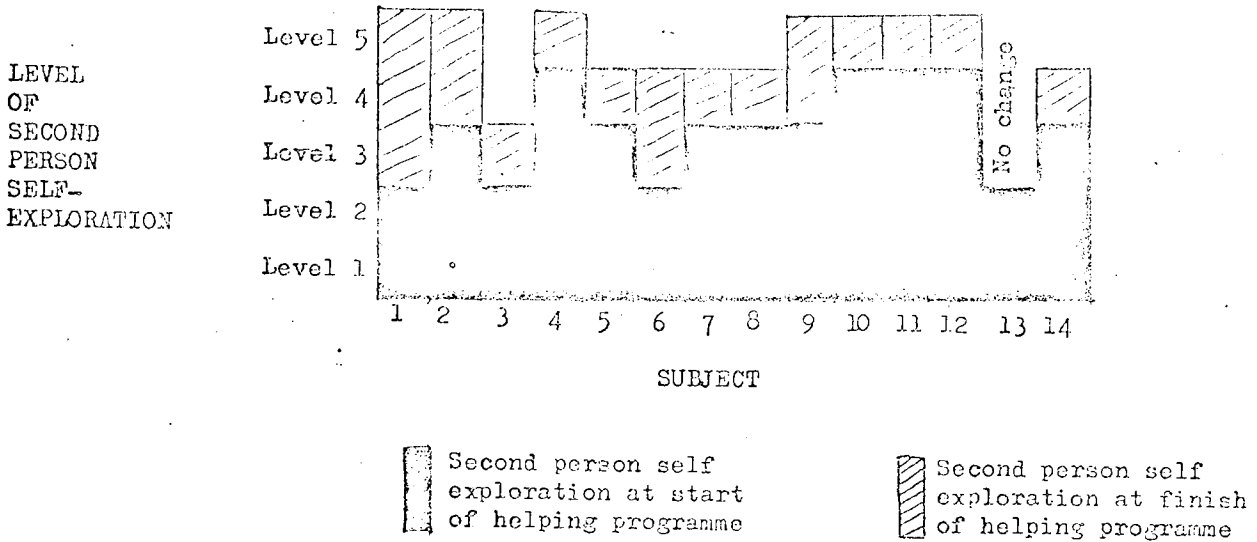


Figure 2 : A summary of the levels of Second Person self-exploration

- LEVEL 1 The person admits the existence of a problem but avoids all discussion of his responsibility to act in order to change the circumstances.
- LEVEL 2 The person discusses the problem but as though it belongs, is caused by, is the responsibility of others.
- LEVEL 3 The person attempts to explore the problem constructively, but his attempts are often limited to restatements of previous, ineffective, attempts to solve it.
- LEVEL 4 The person begins to express his concerns clearly, developing and creating new insights that helps him to attempt different actions for overcoming the problem.
- LEVEL 5 The person is fully, and actively, involved in probing towards a progressive understanding of the problem and the actions required for overcoming it.

(iv) The conclusions of the project

- (a) The origin of many organisation problems can be traced to the inadequate relationships between members of the organisation:

The effectiveness of the Corporate Laboratory depends to a considerable measure upon the effectiveness of the relationships established by its members of staff - either within the laboratory, or between the laboratory and other organisations (eg ICI Divisions). The success of other organisations may depend on the specific directions of authority, or technical, even physical/mechanical relationships between parts of the organisation. However, where the encouragement of risk taking and the development of the attitudes of staff in the organisation are a priority, the human

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relationships are a significant part of the effective organisation.

The project found evidence of relationships with widely diverging levels of effectiveness during the investigation. For example, some assessors had established excellent relationships with some assessees, and not with others, and, in some cases, the relationship had deteriorated to a point where the work itself deteriorated.

- (b) The formal relationship between supervisor (manager) and supervisee in the staff assessment system provides a good opportunity for systematic development and maintenance of effective work relationships.

The purpose of the staff assessment system is to formalise, and help, the supervisor/manager exercise his responsibility for the effective organisation of the supervisee. The system in use at the Laboratory reflects the various areas of this responsibility (eg performance, career development). The 'personnel' systems used in the Company provide many of the elements for the system (eg job evaluation categories). However, the operation of various of the elements of the staff assessment system depend on the relationship between assessor and assessee.

In general, the project found that staff expected formal evaluation and development of their relationship with the organisation (eg feedback on performance is an essential part of the development of effective work practice). However, different areas of assessment received varying attention, according to the individual manager's/supervisor's prerogative. Although the more experienced assessors usually coped well, there was much scope for ensuring thorough attention to all aspects of assessment, and thus more effective relationships between key relationships in the organisation (for example, performance appraisal, career development).

- (c) Developments in the understanding and measurement of the basic dimensions of effective (interpersonal) relationships now provide valuable guidelines for the evaluation and training of the work relationships in organisations.

The professional study of effective human relationships has developed considerably in recent decades, and has been undertaken in various settings eg clinical, as well as organisational. These developments have now reached a point where technical standards of operation can be set up and evaluated, rather than continuing a reliance on 'years of experience'.

The project was able to identify considerable variation in the effective operation of the core dimensions by supervisors/managers. Some were excessively facilitative, and others were excessively action oriented in relation to assessees. Although these personal 'styles' received little effective feedback concerning the consequences on the assessee, the supervisor/manager was quite often sensitive to the deteriorative effects, and willing to consider different approaches if some specific indication was given by the researcher.

(v) Recommendations for further action

- (a) That the organisation should take steps to increase the awareness and appreciation by staff of the importance of effective work relationships between members.

At present, the Company statement of minimum practice for performance appraisal lays down a set of simple standards for the operation of the relationship between supervisor and supervisee in this area.

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However, the generality of the statement and standards does not provide a recipe for ensuring an effective relationship. The Corporate Laboratory has developed a staff assessment system, based on the guidelines of the statement of minimum practice, that has attempted to improve the guidelines for supervisory relationships. In order to continue this development, the Personnel Group in the Laboratory, has undertaken annual reviews, in consultation with staff (eg staff committee) and proposed various further developments (eg changes in format of documentation).

Although these developments have resulted in useful formulations of the general areas relevant to the supervisory relationships in the laboratory, these general areas have sometimes lacked the conditions necessary for effective attention to them in the assessment relationship. For example, the rating scale provided for the assessment of performance did not ensure its proper or effective use in the assessment system. The operation of the staff assessment system could be improved by ensuring that future reviews gave more attention to the need to develop standards of performance in the operation of the system.

- (b) That the organisation should take steps to increase awareness and appreciation of the tools that are now available for ensuring effective work relationships.

The intention, and achievement, of this project was the successful demonstration of the factors critical to effective work relationships in organisation. As the researcher, I have been able to provide detailed evidence of the levels of discrimination and communication required to help solve certain staff problems in career development. During my experience of doing the work for this project, I have realised that the constructs and methods that have been applied, here, to a small area, have a considerable relevance to many other areas concerned in work relationships between staff (eg other areas of the assessment relationship such as objective setting). Further applications could be direct (eg use of my own levels of effective skills with other suitable problems) or indirect (eg by the design of programmes to develop the effectiveness of other staff with responsibility for effective relationships).

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EPILOGUE

"The difference between 'popular' and 'philosophical' is the amount of time a thing takes. Ask a man : do you know this, or do you not know it - if he answers immediately then the answer is popular, he is an undergraduate. If it takes ten years for the answer to come, and if it comes in the form of a system, if it is not quite clear whether he knows it or not: then it is a philosophical answer and the man a professor of philosophy - at least that is what he ought to be".

Soren Kierkegaard.