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VOLUME II

APPENDICES

TEAMWORK IN MANAGEMENT: COMPANY ORGANISATION AND CLIMATE AND

THE RESULTS OF TRAINING IN MANAGEMENT SKILLS

Thesis presented by

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for the degree of Doctor of Philosophy of the University of Aston in

Birmingham

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CENTRAL TRAINING COUNCIL RESEARCH COMMITTEE - RESEARCH CRITERIA

1. In an article published in Occupational Psychology (No.41, 1967, pages 109-119) on industrial training, current research and future needs, the Research Committee indicated that in supporting research projects its main consideration is the potential value of the work in producing results of practical significance to industrial training; and that it will give priority to those projects likely to shape more and better ideas and methods as 'tools' for the training officer to use. In supporting work of this nature the Committee hope to further the building of 'research bridges' between academic work of a fundamental nature which shows promise of industrial application and the future practical needs of industry.
2. The Research Committee has adopted a definition of research, which now appears in the Glossary of Training Terms, as follows:

A careful search, inquiry or critical investigation designed to discover facts by the scientific study of a subject. Research is normally carried out as one or more of three distinct stages - a survey on the basis of which a hypothesis is formulated and tested by experiment.
3. Specific proposals for applied research into industrial training which are submitted for financial assistance are carefully examined to ensure that they meet five important sets of criteria:
 - (a) They must be relevant to industrial training needs.
 - (b) The design of the investigation must be scientifically sound.
 - (c) The experience of the researcher(s) and their supporting facilities must be adequate.
 - (d) The time scale of the research must be both adequate and realistic.
 - (e) The likely gain in knowledge must justify the costs incurred.

These sets of criteria may be broken down into a series of questions of equal weight. Each must merit an affirmative answer if the proposal is to be supported. Even one negative answer points to the need for a re-examination or restatement of the proposal.

4. Relevance

- (1) Is the proposal centred on a training problem of importance for the implementation of the Act?
- (2) Is the expected outcome of the research of potential value to training?
- (3) Is this outcome likely to benefit industry generally? A project of relevance to one particular industry may nevertheless be eligible for support as to 50% of its costs if proposed by the training board concerned.

5. Research design

- (1) Is the proposal firmly based on other research related to the problem, if such research exists?
- (2) Is the problem with which the research proposes to deal clearly defined?

- (3) Are the objectives, questions to be answered, or hypotheses to be tested well formulated and clearly stated?
- (4) Is the research methodology applicable to the problem defined?

e.g. sampling procedures
 use and size of control groups
 types of data to be collected
 methods of data collection
 statistical analyses to be made.

6. Personnel and facilities

- (1) Do the qualifications and research experience of the key personnel seem adequate to carry out research of the kind proposed?
- (2) Does the plan make full use of and/or develop the research knowledge and skill of existing and/or new research workers?
- (3) Are the facilities available to the investigator(s) adequate to carry out the research?

e.g. sound communication with and acceptance by industrial firms
 facilities for collection of data
 clerical assistance
 computation of results.

7. Time scale

- (1) Are the time scales of stages of the research adequately set out?
- (2) Is the assessment of total time required a realistic one?

8. Cost

- (1) Is the suggested approach to the problem reasonable in terms of estimated cost as compared with the cost of other possible approaches?
- (2) Is the total proposed expenditure justifiable in terms of the likely results of the proposed research?

THE RESEARCH COMMITTEE'S COMMENTS ON THE INITIAL SUBMISSION

The Sub-Committee were fully agreed as to the importance of the aim of the research project, which they saw to be an attempt to identify the conditions in which the lessons learned by individuals from attending management courses could be put into effect in the work situation. They accepted that the 'style' or 'climate' of particular firms was itself a major influence on subsequent management performance. They were not, however, convinced that in view of the large number of other variables (which must include the individual's own personal qualities and those of his superiors) either the measures of performance you propose or the size of the sample would be really adequate.

The Sub-Committee were accordingly inclined to the view that it might be necessary as a preliminary to the investigation you propose to explore the problem of the objective measurement of performance; and that this might be done in the firms selected from the information about styles of management you have already collected in earlier studies.



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INTRODUCTORY LETTER

Dear

Research Project on: 'How Company Organization
and Climate affect the application of learning.'

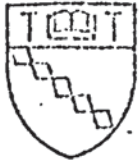
We are writing to you because we think you will be interested to learn that the Department of Employment and Productivity through its Central Training Council is supporting research at this University into a problem of concern to all companies which invest in management training. It seeks to discover how far the pay off from different courses is affected by a variety of conditions which may exist within any business.

The enclosed leaflet explains further the research objectives and what would be involved on your part should you consent to co-operate.

I hope very much that you will agree to meet me in order to discuss the matter.

Yours sincerely,

D. C. Pheysey (Miss)
Research Fellow



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OBJECTIVES AND REQUIREMENTS OF RESEARCH PROJECT ON 'HOW COMPANY ORGANIZATION

AND CLIMATE AFFECT THE APPLICATION OF LEARNING'

Business organizations differ from one another in a variety of ways. Research already completed by the Industrial Administration Research Unit at the University of Aston has shown that administrative structure is associated with constraints imposed by size, technology, relationship to other corporate bodies, and so on. Companies also differ in their climate. What is less well established is whether different forms of organization with different climates lead to under-utilization of certain managerial skills. For example, suppose a manager attended a human relations training course which taught consultative leadership skills. Suppose further that the company which employs the manager puts a premium on set procedures and central directives. Would the pay-off from the course be as great in this company as in a company which encourages its managers to hold frequent informal meetings with their subordinates? This type of situation can arise when training needs are assessed on an individual basis. What is required is a diagnosis of the organization's training needs. One aim of this research project is to provide a diagnostic instrument whereby a company can:

- (a) decide on a skill area where improvement would bring maximum returns suitable to its own administrative structure and climate;
- (b) decide on a strategy for augmenting helping conditions and reducing hindrances to the pay-off from training;
- (c) decide whether a training programme is called for or whether other forms of intervention will suffice;
- (d) decide on what type of training programme (if any) is likely to bring about the desired improvements.

The research can also be viewed as a study of how company organization and climate affect managers' activities and methods of working, and if presented to managers in this light it should be possible to avoid the response bias created by more direct methods of evaluation of training.

The research strategy employed by the Research Unit will involve comparing selected groups of managers who work together. The senior person in at least one such group should have attended a managerial skills course of one to two weeks' duration. (Examples are given at the end of this leaflet.) The attendance should have been not less than six months and not longer than eighteen months ago. This manager and his group, and another (untrained) manager and his group, perhaps about twenty managers in all, will be asked to complete two written questionnaires in their own time (approximately 45 minutes), and to return them in prepaid envelopes. Key members of the company's training department will also be asked to complete the same two questionnaires. These will provide information about the level of analytical and relational skills in the selected parts of the organization and also about the company climate as these persons perceive it. Information about the administrative structure and business environment of the company will be obtained from a single interview with the chief executive or his deputy.

- 2 -

All information supplied will be treated in strictest confidence, and neither the identity of individuals nor of the company will be disclosed without prior permission. The research involves comparison of a large number of different organizations so that the results from any one company will be incorporated in a more general set of statistics and findings. All participating companies will receive a report on the research, and, if the instrument proves to be valid and reliable for training purposes it will be made available for use by firms.

Examples of types of skills training:

T-Groups

I.S.M. Management Training Groups

Coverdale Training

Grid Training

Kepner and Tregoe Training

Decision-making Training

Discussion Group Leadership

EXCERPTS FROM REPLIES

Examples of reasons given by those who felt unable to take part in the research:

... I am sorry for the delay in answering your letter but I wanted an opportunity to consult several of my colleagues about your request and only now have I completed my round. The result of my discussions with them is that I feel the present time would not be right to impose such a survey on them. There are two main reasons for this:

Firstly, we have had a continuous bout of reorganisations lately and training has undergone a significant reduction on our previous activity. People have wanted to settle into their new jobs before identifying their training needs.

Secondly, we have had several different kinds of surveys recently and the results are not yet published to those who took part. People are, therefore, reluctant to embark on yet another investigation before hearing the results of the last one. They rightly feel at the moment that the traffic is only one way.

As I do not wish to destroy the good will towards research I feel we should let some time elapse before introducing yet another survey. I hope you will understand the present constraints. I am sorry that this is the situation now as your project is of interest and we would normally have liked to have taken part.

... Owing to pressure of work at the moment for a variety of reasons, we regret that we are unable to co-operate with your unit in this project.

... My Managing Director has asked me to thank you for your letter and for letting us know about this research project on the pay off from different forms of training.

We are interested to know about this but regret that owing to pressure of work at the present time, we do not feel able to take part.

... We would like to help but I am afraid that at the present time everyone concerned in this area is under very heavy pressure and it would be quite impossible to spare time for a consideration in depth of the subject you are studying.

... As we do not use the kind of management development 'packages' which you are researching it would not, we feel, be worthwhile including us in your study. Nevertheless, we appreciate your contacting us.

... We are not a company with a very highly developed management training activity. If anything we are in the pioneer category, recognising that there are needs to be met but not quite knowing how, in the climate of a successful, fast growing private company, to get management training fully established.

- ... Thank you for your letter. We have a great many preoccupations at the present time, and I think we must opt out of your proposed study.
- ... We have thought about the possibility of collaboration on research, but we do not think we are quite ready for such an arrangement, though it is valuable to know of your interest and we shall certainly bear it in mind if things develop a bit further here.
- ... We regret very much to confirm that we are unable to participate on this occasion in your investigation. We should like to thank you, however, for your interest in the Group and wish you every success with your research.
- ... Thank you for your letter inviting us to participate in research into the question of how company organisation and climate affect the application of learning from management courses. We do not wish to participate in this research project at the present time.
- ... Thank you for your letter. I have derived great interest in reading the information which you have appended. I do regret, however, having read the requirements of your study that we are not really in a position to assist you.
- ... Your letter has been passed to me to acknowledge and thank you for it. I do hope you will understand that it is really difficult for us to assist you at the present time owing to the fact that we have had many requests similar to your own and are having to cry a halt to undertaking any more. This is particularly so at the moment because of changes in the Organisation and in this Department.
It may not seem^a very arduous task to provide you with information but I believe that in order to be of the maximum use the subject of your programme would need to be gone into in considerable detail and given a lot of thought, and I would not want to do this without it having proper attention.

REASONS WHY COMPANIES HAVE CO-OPERATED IN THE DEPARTMENT OF EMPLOYMENTRESEARCH PROJECT

DELPHI has run an M by O programme and was trying to get the programme accepted by another factory in the group. The two factories which had had the programme consented because they were asked to by headquarters. In the third factory, which was asked to be a control, the motivation was apparently to show that they did not need the M by O. (They were resisting on the grounds that they had a better method.)

ETON had used a particular form of training extensively and had run previous evaluation and research studies on operating management, but not on headquarters staff. They were interested in comparing the previous evaluations of operating management with a new type of sample and methods.

FOCUS, GINGER, HORA, ISIS, JET, and KAB - The headquarters group trainer for these companies had his own method of evaluating his programme, and was interested in whether a quite different evaluation technique would give similar results. These six companies together provided the entire membership for one run of the course. Some of the general managers of the individual companies saw the study as a way of strengthening their hand in getting boardroom sanction for their own policies on training.

LARCH was a management services department which found the organisation in which it was embedded was not very receptive. Two members of this group had had sensitivity training and wished to know whether the research could, in quantifying the effects upon their own unit, provide them with a selling point with more senior management, so that members of other departments would be sent on T-groups. Hopefully they might then become more receptive to what management services had to offer.

METEOR was a residential staff college whose members had themselves experienced a 'package programme'. They wanted to subject themselves to the study in order to see whether an extension of the research to their own trainees might help to solve the evaluation problem they faced in justifying their own work to group headquarters.

NOAH was a company which made regular use of its central staff college. This staff college was trying various ways of evaluating its own efforts, and persuaded Noah to provide a 'trained' group and a 'control' group to match the experimental design. Noah was also privately interested in whether the training had made for higher acceptance of a job evaluation (which both groups had had).

OCTO had an organisation development manager and was thinking of moving more in the direction of team training. Knew parts of the organisation which had strongly supported headquarters management courses, and was interested in whether different groups responded differently to a high level of training exposure. Had also some areas of low previous support for comparison.

PITT was about to embark on a very extensive application of a particular programme, and was interested in a before and after study in the early stages.

THE SHORT FORM OF THE ASTON INTERVIEW SCHEDULE FOR RESOURCE VARIABLES

OWN ORGANISATION (see Figure V.1)

1. Memberships - described in text section 3.2.2.
2. Interdependence. The interdependence of a particular organisation on some other unit or group is arrived at by aggregating the scores on four scales which are given below. This measure is, however, particularly vulnerable to problems of sampling comparability. This will be explained when the scales have been given. The scales are: impersonality of origin, low status of unit, public accountability of group and size relative to group's size.

(i) Impersonality of origin	Score
Foundation by an existing organisation	1
Founded by a person or persons, not by an existing organisation	0
(ii) Low status of unit	
Branch	3
Head branch (with headquarters on same location)	2
Subsidiary (with legal identity)	1
Principal unit	0
(iii) Public accountability of group - the group is the ultimate unit/group owning the unit of organisation under study	
Local and central government	2
Voting shares/stock control quoted on the stock exchange	1
Unquoted	0

(iv) Size relative to owning group - the organisation's score is its number of employees, expressed as a percentage proportion of the total number of employees in its ultimate owning group, and transformed as follows:

	Score
Under 5% of owning group	3
5-29% of owning group	2
30-89% of owning group	1
Over 90% of owning group	0

If an organisation has no unit or group beyond itself, then it will automatically score zero for status since it is an independent principal unit. It is also likely to have been personally founded. Its public accountability score will be for itself since there is no ultimate beyond itself. There is here, however, the problem of noncomparability of the British private unquoted company and public quoted company and American corporations. In a study using the short-form (Inkson et al. 1970a) in America / this scale did not discriminate and was omitted. If there is no owning group, the organisation employs 100 per cent of employees, and scores 0 - that is, maximum independence. Two problems arise in connection with the size distributions. With large multinational companies there is often a local unit, a national conglomerate, and an international conglomerate. In assessing the dependence of the local unit vis a vis the owning group, it might be more appropriate to calculate the percentage of persons employed locally to the total employed in that nation rather than to total world employees. Secondly, the way in which 'relative sizes' have been grouped for scoring purposes

is related to the distribution of relative sizes found in the first sample of forty organisations for which the short form was employed (Inkson et al.1970b). If, in selecting one's sample on the basis of other criteria, one found that all were between 5 per cent and 29 per cent of the owning group in relative size, the contribution of this particular score of 2 to the possible maximum of 9 may be distorted in relation to the original weighting of relative size compared with the contributions of ^{the} other three scales. The simultaneous removing of public accountability from an American study may again throw some doubt on the reliability of the short form of this scale in other settings. However, when first used, the short version correlated 0.91 with the longer version, and the longer version was a consistently good predictor of concentration of authority ($r = 0.66$).

3. Technology. Technology, in the longer instrument, was measured by a composite factor, 'workflow integration', on which five scales were loaded. In the short form, the measure of workflow integration was scored by the simple aggregation of the scores of three scales only. By 'workflow' is meant the entire sequence of operations directly concerned with making the product (in manufacturing organisations) or rendering the service (in non-manufacturing organisations). Thus, a computer used to operate electric arc furnaces in a steel works would be part of the workflow equipment, but a computer used for calculating wages in the same firm would not be workflow equipment. Similarly, a computer which is used to physically process customer orders

through the warehouse of a mail order firm (through activating automated mechanical handling) would be part of the workflow, but one which was used purely for supplying statistical information to management concerning the volume or value of sales would not be.

Although one may use the word technology rather broadly to refer to the methods employed for any task, we have preferred to distinguish workflow integration as a measure concerned with the equipping and sequencing of those operations which are the primary ones of the organisation.

The three component scales of workflow integration in the short form are: (i) automaticity mode; (ii) automaticity range; and (iii) specificity of evaluation of operations.

The two automaticity scales are scored as follows:

Scale items	(i) Mode (the bulk of equip- ment)	(ii) Range (the highest scoring equipment)
Hand tools and manual machines	0	0
Powered machines and tools	1	1
Single-cycle automatics and self-feeding machines	2	2
Automatic: repeats cycle	3	3
Self-measuring and adjusting: feedback	4	4
Computer control: automatic cognition	5	5

Amber and Amber (1962) stated operational definitions, and suggested further categories:

Hand Tools: shovel, knife, pliers, axe, crowbar, hammer, scissors, wrench, file, handsaw, bellows, paintbrush, trowel, etc. etc.

Powered Machines and Tools: snag grinder, cement trowelling Machine, portable floor polisher, electric hand-drill, drill-press, air hammer, etc.

Single-cycle Automatics and Self-feeding Machines: pipe threading machines, radial drill, electro-erosion machine, precision boring machine (without accessory automatic control system), machine tools, such as grinder, planer, mill, shaper, lathe, etc.

Automatics which repeat cycles: engine production lines, self-feed press lines, automatic copying lathe, automatic gear hobbers, automatic assembly of switches, etc. etc.

Self-measuring and Adjusting by Feed-back: feedback from product, automatic sizing grinders, size-controlled honing machines, dynamic balancing, color matching or blending, level control, etc.

Computer Control: rate-of-feed cutting, machinability control, maintaining pH, error compensation, turbine fuel control, etc. etc.

For the scale of automaticity mode, the score is that which characterises the bulk of the equipment used by the organisation in its workflow. If there is, in fact, a bimodal distribution of equipment, the higher score should be taken.

For the scale of automaticity range the range is the distance from 0 to the most automatic piece of equipment, so take the highest score that applies (but ignore thermostatic governors since their inclusion does not discriminate between organisations).

The final technology scale is concerned with quality standards for the operations. The items and scores are given below.

(iii) Specificity of evaluation of operations scale.

Scale items	Score
Personal evaluation only	0
Partial measurement (of some aspects of the outputs)	1
Measurement used over virtually the whole output(s) to compare against precise specification (blueprint or equivalent)	2

The maximum aggregate score for 'workflow integration would therefore be 12 (5 plus 5 plus 2).

This short form technology measure correlated 0.96 with the longer form. The longer form discriminated meaningfully among 46 organisations as shown in the table below:

Score	Organisations	Number of organisations
17	Vehicle manufacturer	1
16	Brewery	
	Food manufacturer	2
15	Two food manufacturers	
	Packaging manufacturer	3
14	Local authority baths department	
	Metal components manufacturer	
	Metal goods manufacturer	3
13	Metal goods manufacturer	
	Metal components manufacturer	
	Vehicle tyre manufacturer	
	Vehicle electrical components manufacturer	
	Glass components manufacturer	
	Vehicle metal components manufacturer	
	Commercial vehicle manufacturer	7
12	Metal components manufacturer	1
11	Two metal components manufacturers	
	Printer	
	Component manufacturer	
	Metal goods manufacturer	
	Abrasives manufacturer	
	Domestic appliances manufacturer	
	Mechanical handling truck manufacturer	
	Engineering tool manufacturer	9
10	Vehicle metal components manufacturer	
	Carriage manufacturer	
	Local authority water department	3
9	Component manufacturer	
	Non-ferrous metal processing	2
8	Toy manufacturer	1
7	Local authority civil engineering department	1
6	Insurance company	
	Omnibus company	
	Local authority transport department	
	Government repairs factory	4
5	Research division	1
4	Civil engineering firm	
	Savings bank	2
3	Co-operative chain of retail stores	
	Chain of shoe repair stores	2
2	Local authority education department	
	Department store	2
1	Government inspection department	
	Chain of retail stores	2

PERSONAL INFORMATION QUESTIONNAIRE

METHOD OF SCORING

1. Job title

1.1 Actual title recorded

1.2 Classification by function:

ET = Education and training

GA = General administration
accounting
commercial management
office management
legal information servicesMN = Manufacturing
works management
production management
plant operationsMS = Management services
work study
systems analysis
production planning and control
operational researchPM = Personnel management
productivity negotiations
personnel management
labour relations
employee benefitsPU = Purchasing management
buyingSM = Sales and marketing
sales
advertising
distribution
export
market planningSY = Systems management
logistics
long range planning and other operations
involving management science as line functions
project management

TM = Technical management
 electrical engineering
 design engineering
 civil engineering
 metallurgical engineering
 transport management
 inspection

2. Length of service in position

Actual number of years (parts of years rounded down to actual number of years, excepting for 0.25 and 0.50, also 0.75, which are given a score of 1; less than 0.25 is scored 0)

3. Length of service in company

Actual number of years (scored the same as length of service in position)

4. Number of different employers

Actual number scored: 0-9, but 9+ = 9.

5. Age

Actual age given in years

6. Salary

6.1 0 = not in paid employment

1 = below £1,000

2 = £1,001 - £1,500, etc. at £500 intervals

10 = £5,000+

6.2 Two-year and four-year salary progression. Not used. Can be scored as 6.1 above for earlier period and earlier subtracted from later.

7. Variety of experience

7.1 Total number of functional departments worked in (i.e. actual number of functions underlined)

7.2 Classified by grouped functions, as in 1.2 above. Those not carried out by respondent are coded NO.

8. First industrial post

0 = operator

1 = apprentice, clerical worker

2 = foreman, staff assignment

3 = manager

9. Course attendance

Total number of courses attended consisting of 30 hours or more instruction in subjects relevant to work
(0-9, 9+ = 9)

10. Self education

Total number of courses attended consisting of 30 hours or more instruction in subjects not required for work
(0-9, 9+ = 9)

11. Type of school attended

2 = public school

1 = grammar school

0 = other state school

(if more than two are given, score the highest one attended)

Years of schooling not used. Leaving age better.

12. School leaving age

Actual age in years

13. Duration of further education

Number of years in further or higher education, part time counted as half full time (0-9, 9+ = 9)

14. Breadth of further education

14.1 Number of subjects covered since leaving school - must have done more than ten hours study.

14.2 Subjects coded as follows

B = business

H = humanities

L = languages

M = mathematics

N = natural sciences

S = social sciences

T = technologies

0 = code for all subjects not studied

15. Qualifications

0 = no qualifications

1 = 'O' level

2 = 'A' level, ONC, OND, HNC, HND

3 = first degrees of any university - i.e. British or foreign, or membership of a professional association

4 = post-graduate study - i.e. Diploma or Certificate, or higher degree

16. Member of political party

0 = no
1 = yes

17. Religious affiliation

0 = no
1 = yes

18. Position in family

1 = first born (elder, eldest, or only one)
0 = any other position

19. Father's social class

1 = professional
2 = intermediate non-manual
3 = skilled manual
4 = semi-skilled manual
5 = unskilled labouring

20. Mother's occupation

Not scored. Could use same categories as father, but where do we put 'housewife'?

INDUSTRIAL ADMINISTRATION RESEARCH UNIT

The University of Aston in Birmingham

PERSONAL INFORMATION SHEET

The purpose of the Business Organization Climate Index is to compare the different environmental settings in which managers carry out their daily activities. However, each person's own career background is likely, to a certain extent, to affect the way in which he sees his organizational environment. It will help us in interpreting the total distribution of scores over a large and varied sample of managers, to be able to determine how far different impressions of an organization are in general attributable to a person's age, length of service, job position, education, family background, etc. When the amount of distortion from these various sources is known it is possible to allow for it in depicting the environment which actually exists in a particular organization. If you will, therefore, kindly provide the information requested on the personal information sheet it will add immeasurably to the value of the research and you may rest assured that it will be treated as confidential and will not be known to anybody except the research workers. There is no need for your name to be recorded on this form.

1. My job title is: _____

CAREER

2. Length of service in my present position with this company is _____ years

3. Total period of service with this company is _____ years

4. Number of employers I have worked for since I completed full time education is (give number of employers including present one) _____

5. My age is: _____ years My salary bracket was/is as follows:

Please place a tick in each column against the appropriate salary description:

	<u>Four years ago</u>	<u>Two year ago</u>	<u>Now</u>
6. I was not in paid employment	_____	_____	_____
below £1,000	_____	_____	_____
£1,001 - £1,500	_____	_____	_____
£1,501 - £2,000	_____	_____	_____
£2,001 - £2,500	_____	_____	_____
£2,501 - £3,000	_____	_____	_____
£3,001 - £3,500	_____	_____	_____
£3,501 - £4,000	_____	_____	_____
£4,001 - £4,500	_____	_____	_____
£4,501 - £5,000	_____	_____	_____
above £5,000	_____	_____	_____

7. Please underline the type of functional departments in which you have held a post during the course of your business career:

PRODUCTION : SALES OR SERVICE : INTERNAL OR EXTERNAL TRANSPORT : PERSONNEL

TRAINING : BUYING OR STOCK CONTROL : MAINTAINING EQUIPMENT OR BUILDINGS :

ACCOUNTS OR COSTING : PRODUCTION CONTROL : INSPECTION : METHODS STUDY :

DESIGN AND DEVELOPMENT : ORGANIZATION AND METHODS : MARKET RESEARCH :

ADMINISTRATION : OTHER (please specify) _____

8. Please underline the description which best fits the first job you had in industry.

My first industrial post was: OPERATOR : CLERICAL WORKER : APPRENTICE :

GRADUATE TRAINEE : A STAFF ASSIGNMENT : FOREMAN : MANAGER : OTHER (Please specify): _____

EDUCATION AND TRAINING

9. Have you, during the last five years, attended any course of instruction of 30 hours or longer in subjects relevant to your work?

Delete whichever is inapplicable YES / NO

If you answered YES, please give the title or brief description of the course(s) in the space provided below.

Courses attended during the last five years:

Year	Title	Provided by (name of organization)
19		
19		
19		
19		
19		

10. Have you, during the last five years, voluntarily attended any course of instruction of 30 hours or longer in any other subject(s) not required for your work?

Delete whichever is inapplicable YES / NO

If you answered YES, please give the title or brief description of the course(s) in the space provided below.

Year	Title	Provided by (name of organization)
19		
19		
19		
19		
19		

11. Which of the following types of educational institution have you attended, and for how long?

<u>School</u>	<u>No. of years</u>
Elementary	_____
Modern	_____
Technical	_____
Grammar	_____
Comprehensive	_____
Public boarding	_____
Public day	_____
Other: _____	

12. Your age on leaving school _____ years

13. Further or higher education. Please tick full time or part time and give number of years.

	<u>Full time</u>	<u>Part time</u>	<u>No. of years</u>
College of Further Education	_____	_____	_____
Technical College, or College of Technology	_____	_____	_____
Independent Educational Establishment	_____	_____	_____
Armed Services Training Establishment	_____	_____	_____
Teacher Training	_____	_____	_____
University	_____	_____	_____

14. Please underline the subject areas (if any) in which, since you left school, you have followed a course of study requiring a total of at least ten hours.

BUSINESS STUDIES (e.g. accountancy, marketing, production control)

SOCIAL SCIENCES (e.g. political science, psychology, sociology, economics)

NATURAL SCIENCES (e.g. physics, chemistry, biology)

TECHNOLOGIES (e.g. engineering, surveying)

LANGUAGES

HUMANITIES (e.g. philosophy, art, literature, history)

MATHEMATICS

- 4 -

QUALIFICATIONS

15. If you hold any of the qualifications listed below, would you please underline the appropriate words.

GENERAL CERTIFICATE OF EDUCATION - Ordinary level or School Certificate

GENERAL CERTIFICATE OF EDUCATION - Advanced level or Higher School Certificate

ORDINARY NATIONAL CERTIFICATE

HIGHER NATIONAL CERTIFICATE

ORDINARY NATIONAL DIPLOMA

HIGHER NATIONAL DIPLOMA

FIRST DEGREE OF A BRITISH UNIVERSITY

HIGHER DEGREE OF A BRITISH UNIVERSITY

FIRST DEGREE OF A FOREIGN UNIVERSITY

HIGHER DEGREE OF A FOREIGN UNIVERSITY

POSTGRADUATE CERTIFICATE

~~POST~~GRADUATE DIPLOMA

MEMBERSHIP OF A PROFESSIONAL ASSOCIATION OR INSTITUTE (obtained by qualifying examinations)

16. Are you a member of any political organization? YES / NO

If yes, would you describe your party as LEFT WING / CENTRE / RIGHT WING ?

17. Do you attend any services or other activities in connection with any religion at least four times a year? If so, please underline which denomination.

CATHOLIC / PROTESTANT / JEWISH / MUSLIM / BHUDIST / HUMANIST / OTHER

18. POSITION IN FAMILY

ELDEST / ELDER (of 2) / MIDDLE / YOUNGER (of 2) / YOUNGEST / ONLY CHILD

19. Father's occupation AT TIME OF YOUR BIRTH _____

20. Mother's last occupation prior to your birth _____

THANK YOU FOR YOUR CO-OPERATION

The short-form of the Aston Interview Schedule for Structure Variables,Own OrganisationStructuring of activities

The component scales of structuring of activities are specialisation and formalisation of role definition. (Maximum score = 35)

Specialisation: A function is specialised when at least one person performs that function and no other function. No account is taken of either (a) the specialist's status, or (b) whether an organisation has many specialists or only one. For each activity for which there is a specialist the organisation scores 1. (Maximum score = 16)

1. Develop, legitimise and symbolise the organisation's charter (public relations, advertising, etc.)
2. Dispose of, distribute and service the output (sales and service, customer complaints, etc.)
3. Carry outputs and resources from place to place (transportation)
4. Acquire and allocate human resources (employment, etc.)
5. Develop and transform human resources (education and training)
6. Maintain human resources and promote their identification with the organisation (welfare medical, safety, magazine, sports, social, fire protection, etc.)
7. Obtain and control materials and equipment (buying, material control, storing, inventory control, etc.)
8. Maintain and erect buildings and equipment (maintenance, works engineer, etc.)
9. Record and control financial resources (accounts, costs, wages, etc.)
10. Control the workflow (planning, expediting, etc.)
11. Control the quality of materials, equipment, and outputs (inspection, quality improvement, testing, etc.)
12. Assess and devise ways of producing the output (motion study, work study, OR, rate-fixing, methods study, etc.)
13. Devise new outputs, equipment, and processes.

14. Develop and operate administrative procedures (registry, filing, statistics, systems and procedures)
15. Deal with the legal and insurance requirements (legal, registrar, insurance, licensing, etc.)
16. Acquire information on the operational field (market research).

Formalisation of role definition: The degree of formalisation of role definition in the organisation is given by the number of specific role defining documents - from a set list - which exist in the organisation, and in some cases the extent of their application or distribution. (Maximum score = 19)

		Score
1. Information booklets* given to:	none	0
	few employees	1
	many employees	2
	all employees	3
2. Number of information booklets:	none	0
	one	1
	two	2
	three	3
	four or more	4
3. Organisation chart given to:	none	0
	chief executive only	1
	chief executive plus one other executive	2
	chief executive plus all/most department heads	3
4. Written operating instructions: (include any attached to equipment)		1
5. Written terms of reference or job description:		
	for direct workers	1
	for line superordinates	1
	for staff (other than line superordinates)	1
	for chief executive	1
6. Manual of procedures (or standing orders):		1

- | | | |
|----|---|---|
| 7. | Written policies (excluding minutes of governing bodies): | 1 |
| 8. | Workflow (production) schedule or programme: | 1 |
| 9. | Written research programme or reports (listing intended research work or reporting work done) | 1 |
| * | An information booklet covers a general topic or topics such as employment conditions or safety. It is not specific to a particular job but can be specific to a topic - for example, pensions. | |

Concentration of authority is represented by the negative pole of autonomy of the organisation. An organisation has autonomy if decisions are taken within its structure, and lacks autonomy if decisions are taken at a higher level of authority (e.g. controlling board of parent company, committee of council, or company board if the majority of board members are not executive subordinates of the president). To represent centralisation, the organisation's score is the reverse of autonomy - i.e., the number of decisions from the set list below which are not taken within the organisation. (A decision is 'taken' if action can proceed without further confirmation.)

Decisions:

1. Supervisory establishment (that is, fixed total of white collar and managerial personnel that can be employed)
2. Appointment of supervisory staff from outside the organisation
3. Promotion of supervisory staff
4. Salaries of supervisory staff
5. To spend unbudgeted or unallocated money on capital items
6. To spend unbudgeted or unallocated money on revenue items
7. What type, or what brand, new equipment is to be

8. To determine a new product or service
9. To determine marketing territories covered
10. The extent of market share and type of market to be aimed at
11. What shall be costed (that is, what types of expenditure shall be included under specified cost headings)
12. What shall be inspected
13. What operations shall be work studied
14. Dismiss a supervisor
15. Training methods to be used
16. Buying procedures
17. Which suppliers of material are to be used
18. What and how many welfare facilities are to be provided
19. The price of the output
20. To alter responsibilities/areas of work specialist departments
21. To alter responsibilities/areas of work of line departments
22. To create a new department
23. To create a new job.

The validity of structuring of activities and concentration of Authority

These important factors are fully discussed in Pugh, Hickson, Hinings and Turner, 'The dimensions of organisation structure', Administrative Science Quarterly, vol.13, no.1, June 1968. Structuring of activities as represented by functional specialisation and formalisation of role definition is consistently predicted by size, and lack of autonomy in decision taking is consistently predicted by dependence (though the measures are quite separate in conception and in form). Independent validation is provided by comparison with the Hemphill Group Dimension Description Questionnaire profiles designed for assessing attributes of small groups. Two companies which were

very different on Aston scales also showed corresponding differences on the Hemphill measures. (See Figures 1 and 2 attached, from the 'Hemphill Group Dimensions Description Questionnaire: A British Industrial Application', by D C Pheysey and R L Payne, Human Relations, Vol.23, No.5, p.476 and 481.) The correlations of the shortened version with the longer version of structuring of activities is 0.97, and of the shortened with the longer version of concentration of authority is 0.93.

The reliability of the structure measures

The table below shows the inter-correlations of the measures obtained on two separate occasions with 46 and 40 organisations respectively.

'FIRST STUDY' and 'SECOND STUDY' INTERCORRELATIONS BETWEEN THREE CONTEXTUAL AND TWO STRUCTURAL VARIABLES

	1	2	3	4	5
1. Size (log)		0.15) 0.23)	-0.06) 0.15)	0.69)** 0.61)**	-0.10) 0.11)
2. Workflow integration			-0.05) 0.23)	0.34)* 0.51)**	-0.30)* -0.39)*
3. Dependence				-0.04) 0.17)	0.66)** 0.66)**
4. Structuring of activities					-0.16) -0.24)
5. Concentration of authority					- -

Upper figure in each bracket refers to first study (n = 46), lower figure to second study (n = 40).

* = significant at the 0.05 level

** = significant at the 0.01 level

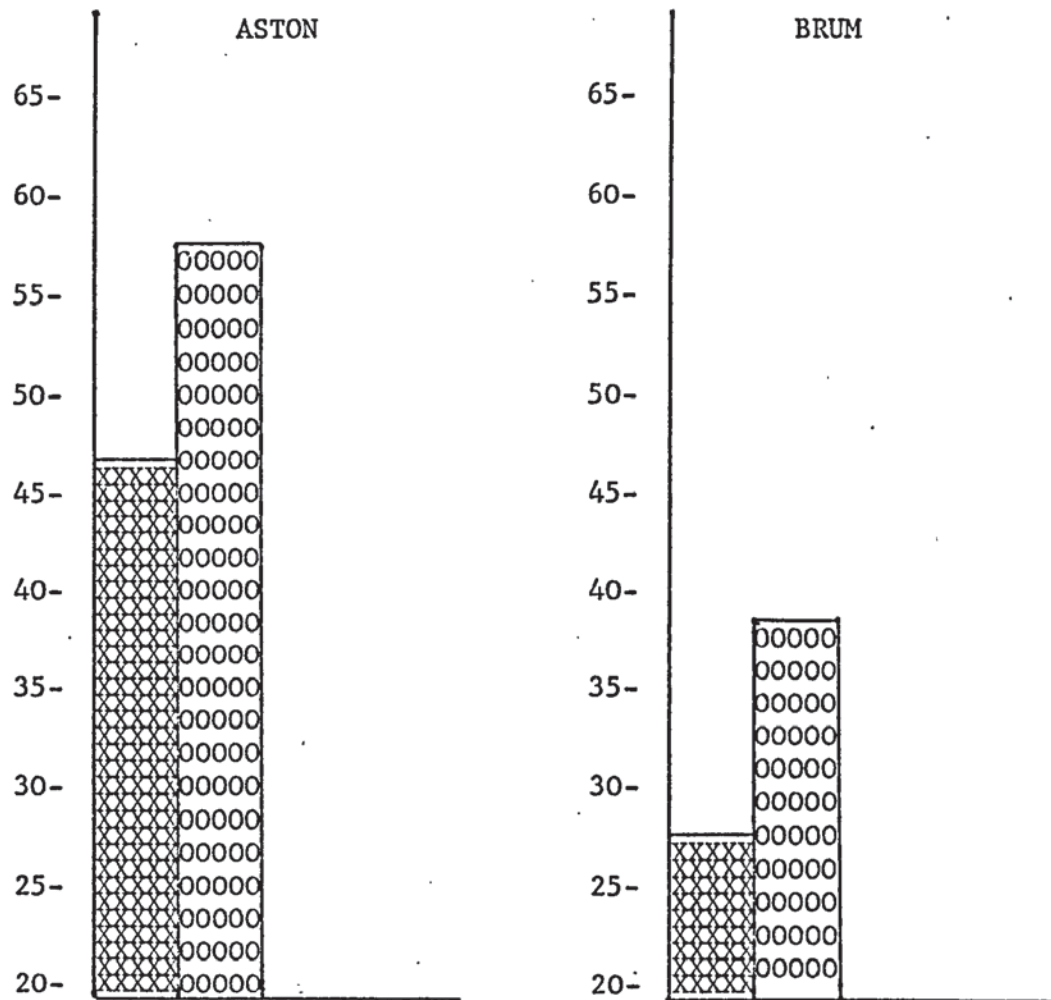
Figure 1

V.49

PROFILES OF TWO ORGANISATIONS ON SELECTED DIMENSIONS

Standard scores with mean = 50, and standard deviation = 15

(Based on 52 diverse work organisations in the Birmingham, England, conurbation, size range 250 to 25,000 employees.)



Key:



Concentration of Authority



Structuring of Activities

Figure 2

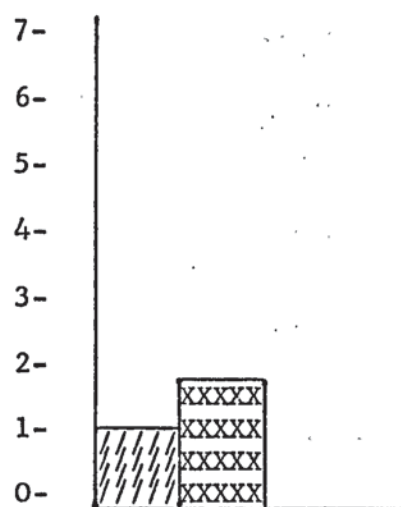
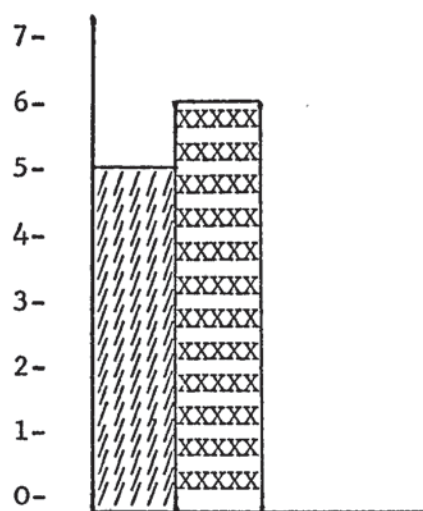
V.50

PROFILES OF THE MEAN STANINE SCORES OF THE MANAGERIAL
 GROUPS IN TWO ORGANISATIONS ON SELECTED HEMPHILL GROUP

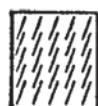
DIMENSIONS

ASTON (mean of 4 groups)

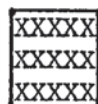
BRUM (mean of 3 groups)



Key:



Lack of autonomy
 (autonomy score reversed)



Formality
 (Flexibility score reversed)

Mann-Whitney U Tests
 one-tailed tests

p = 0.028

p = 0.028

THE BUSINESS ORGANISATION CLIMATE INDEX

C O N T E N T S

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This Appendix contains the following:	
1. Four tables relating to the reliability and validity of the 24-scale version of the BOCI, as supplied to our sponsor.	
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Table 2 Test-Retest reliability for supervisors in a commercial vehicle assembly plant as tested by analysis of variance	34
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Table 6 Loadings of ten BOCI scales on four Factors. (Information supplied by Roy Payne, University of Sheffield)	38
3. The BOCI questionnaire and answer sheet as currently used, together with a key to scoring.	39 to 51

Table 1.

ITEM ANALYSIS VALUES FOR ORIGINAL AND REDUCED SCALES IN BOCI					
Scale Title	Original number of items	Mean General Biserial Correlation	Reduced number of items	Mean General Biserial Correlation	Split-half Reliability
<u>AUTHORITY SCALES</u>					
(a) Leaders' Psychological Distance	12	0.63	8	0.68	0.64
(b) Questioning Authority	9	0.75	7	0.77	0.76
(c) Egalitarianism	6	0.77	6	0.77	0.82
(d) Management Concern for Employee Involvement	10	0.76	10	0.76	0.88
<u>RESTRAINT SCALES</u>					
(a) Open-mindedness	10	0.74	8	0.74	0.82
(b) Emotional Control	11	0.60	7	0.71	0.64
(c) Physical Caution	5	0.72	4	0.81	0.58 *
<u>WORK INTEREST SCALES</u>					
(a) Practical Orientation	10	0.64	6	0.75	0.72 *
(b) Future Orientation	7	0.82	6	0.83	0.86
(c) Scientific and Technical Orientation	8	0.72	8	0.72	0.88
(d) Intellectual Orientation	11	0.73	11	0.73	0.46
(e) Job Challenge	11	0.65	11	0.65	0.66
(f) Task Orientation	9	0.75	8	0.77	0.84
(g) Industriousness	20	0.74	14	0.75	0.86
<u>PERSONAL RELATIONS SCALES</u>					
(a) Altruism	7	0.69	7	0.69	0.62
(b) Sociability	18	0.71	10	0.75	0.92
(c) Interpersonal Aggression	10	0.71	6	0.76	0.78
(d) Homogeneity	5	0.65	4	0.68	0.26 *
<u>ROUTINE SCALES</u>					
(a) Rules Orientation	8	0.68	6	0.73	0.72
(b) Administrative Efficiency	20	0.67	9	0.75	0.78
(c) Conventionality	14	0.69	10	0.71	0.82
(d) Readiness to Innovate	10	0.71	9	0.72	0.80
(e) Variety in Physical Environment	7	0.73	5	0.77	0.60 *
<u>COMMUNITY SCALES</u>					
(a) Orientation to Wider Community	16	0.65	12	0.66	0.72
TOTAL	254		192		

Overall mean item analysis value 0.74

* These scales were omitted in later version

Table 2.

TEST-RETEST RELIABILITY FOR SUPERVISORS IN A COMMERCIAL VEHICLE ASSEMBLY
PLANT AS TESTED BY ANALYSIS OF VARIANCE

Scale Title	n = 17		n = 11		F ratio
	First Administration Mean	S.D.	Second Administration Mean	S.D.	
<u>AUTHORITY SCALES</u>					
(a) Leaders' Psychological Distance	5.05	2.04	5.21	2.39	0.03
(b) Questioning Authority	4.47	2.47	4.64	2.02	0.04
(c) Egalitarianism	3.29	2.05	2.78	2.12	0.43
(d) Management Concern for Employee Involvement	6.29	3.02	5.21	3.17	0.96
<u>RESTRAINT SCALES</u>					
(a) Open-mindedness	4.76	2.32	5.28	3.20	0.27
(b) Emotional Control	5.88	1.92	4.64	2.13	3.03
(c) Physical Caution	2.82	1.05	2.78	1.34	0.00
<u>WORK INTEREST SCALES</u>					
(a) Practical Orientation	6.94	2.04	6.50	1.91	0.33
(b) Future Orientation	3.47	1.79	2.71	1.82	1.34
(c) Scientific and Technical Orientation	3.29	2.21	1.78	1.81	4.37*
(d) Intellectual Orientation	4.94	2.99	3.35	2.15	2.47
(e) Job Challenge	6.18	1.91	4.85	1.96	3.55
(f) Task Orientation	3.76	2.38	4.28	2.65	0.34
(g) Industriousness	9.52	4.09	8.71	5.51	0.22
<u>PERSONAL RELATIONS SCALES</u>					
(a) Altruism	2.94	2.23	2.85	2.44	0.00
(b) Sociability	7.88	3.53	7.50	4.70	0.06
(c) Interpersonal Aggression	5.70	2.38	5.85	3.03	0.02
(d) Homogeneity	1.52	1.16	1.14	1.09	0.91
<u>ROUTINE SCALES</u>					
(a) Rules Orientation	5.58	1.55	5.21	1.97	0.35
(b) Administrative Efficiency	8.88	2.98	7.71	3.73	0.94
(c) Conventionality	7.52	2.42	6.07	2.40	2.90
(d) Readiness to Innovate	3.82	1.47	3.71	1.82	0.03
(e) Variety in Physical Environment	1.76	0.93	2.28	0.83	2.77
<u>COMMUNITY SCALES</u>					
(a) Orientation to Wider Community	6.23	2.93	6.07	2.81	0.02

* p is less than 0.05 (with 29 df F_{must} = 4.18 at p = 0.05)

Table 3.

THE BUSINESS ORGANISATION CLIMATE INDEX

PRINCIPAL COMPONENTS ANALYSIS OF THE 24 BOCI SCALES

	Factor* I	Factor** II	Factor*** III	Factor IV	Factor V	h^2
<u>AUTHORITY SCALES</u>						
(a) Leaders' Psychological Distance	-54	54	28	00	-20	70
(b) Questioning Authority	67	-39	21	-22	-01	69
(c) Egalitarianism	40	-22	-33	46	-13	55
(d) Management Concern for Employee Involvement	80	-20	-21	-16	19	78
<u>RESTRAINT SCALES</u>						
(a) Open-mindedness	74	-48	-13	-17	-02	82
(b) Emotional Control	-33	48	-11	52	30	71
(c) Physical Caution	54	46	-16	-45	01	73
<u>WORK INTEREST SCALES</u>						
(a) Practical Orientation	72	04	-09	12	22	59
(b) Future Orientation	82	11	-06	08	01	69
(c) Scientific and Technical Orientation	77	18	-07	01	22	68
(d) Intellectual Orientation	83	-02	14	03	19	75
(e) Job Challenge	79	07	32	05	01	73
(f) Task Orientation	75	07	16	20	-28	71
(g) Industriousness	69	-09	14	37	-32	74
<u>PERSONAL RELATIONS SCALES</u>						
(a) Altruism	65	-06	-15	-06	34	57
(b) Sociability	68	14	08	-16	-04	52
(c) Interpersonal Aggression	-53	37	35	-14	-24	62
(d) Homogeneity	-22	00	-73	-09	38	73
<u>ROUTINE SCALES</u>						
(a) Rules Orientation	42	56	-21	-25	-23	65
(b) Administrative Efficiency	64	28	-16	03	-26	58
(c) Conventionality	30	59	-11	26	16	54
(d) Readiness of Innovate	26	16	50	13	-28	44
(e) Variety in Physical Environment	59	30	-06	17	20	51
<u>COMMUNITY SCALES</u>						
(a) Orientation to Wider Community	73	41	04	-27	06	78
% variance	36.3	9.3	5.7	5.3	4.5	

* Factor I = Organisational Progressiveness (developmental press)

** Factor II = Normative Control (control press)

Decimal points have been omitted

(Compare with profiles in Figures 1 and 2 of Appendix 3)

Table 4.

ANALYSIS OF VARIANCE BETWEEN ASTON AND BRUM BOCI

	ASTON (50)		BRUM (22)		F.ratio
	Mean	S.D.	Mean	S.D.	
<u>AUTHORITY SCALES</u>					
(a) Leaders' Psychological Distance	1.76	1.20	2.58	1.50	8.58**
(b) Questioning Authority	4.59	1.73	3.52	2.22	5.36*
(c) Egalitarianism	4.18	1.87	3.42	2.14	0.79
(d) Management Concern for Employee Involvement	8.51	1.94	7.89	2.23	2.46
<u>RESTRAINT SCALES</u>					
(a) Open-mindedness	5.65	2.15	4.68	2.45	3.44
(b) Emotional Control	3.88	1.68	3.47	1.50	0.26
(c) Physical Caution	3.55	0.61	3.10	0.99	5.20*
<u>WORK INTEREST SCALES</u>					
(a) Practical Orientation	5.40	0.96	4.42	1.74	11.92**
(b) Future Orientation	4.84	1.14	3.68	1.91	13.36**
(c) Scientific and Technical Orientation	5.74	1.68	3.68	2.40	18.73**
(d) Intellectual Orientation	7.06	1.72	5.00	2.79	16.08**
(e) Job Challenge	7.38	1.97	5.63	2.67	10.73**
(f) Task Orientation	5.72	1.84	4.47	2.39	8.39**
(g) Industriousness	10.42	2.82	5.84	4.10	31.55**
<u>PERSONAL RELATIONS SCALES</u>					
(a) Altruism	3.92	1.84	5.11	1.66	7.60**
(b) Sociability	5.84	2.31	5.58	3.08	0.28
(c) Interpersonal Aggression	1.71	1.76	1.84	1.80	0.16
(d) Homogeneity	1.41	0.99	1.11	0.94	0.71
<u>ROUTINE SCALES</u>					
(a) Rules Orientation	5.41	0.79	4.52	1.39	13.55**
(b) Administrative Efficiency	6.67	2.07	4.00	2.91	20.59**
(c) Conventinality	7.37	1.52	5.63	1.92	16.35**
(d) Readiness to Innovate	5.02	1.66	3.89	1.97	9.91**
(e) Variety in Physical Environment	2.61	0.93	2.16	1.12	2.98
<u>COMMUNITY SCALES</u>					
(a) Orientation to Wider Community	5.40	2.41	7.37	3.23	9.53**
<u>FACTORS</u>					
1. Organizational Progressiveness	108.42	6.30	101.45	9.70	12.74**
2. Normative Control	103.24	6.90	100.86	7.84	1.61

* p < 0.05

** p < 0.01

APPENDIX V.4 (continued)

Table 5: Examples of Items from the 20 B.O.C.I. Scales, and Means and Standard Deviations, and Mean Item Analysis Values for each Scale (N = 387).

V.56

Scale Title	Mean	S.D.	Mean Item Analysis Value
1. Leaders' Psychological Distance (8 items). Senior personnel are frequently jealous of their authority.	3.60	1.87	0.64
2. Questioning Authority (8 items). People who get pushed around here are expected to fight back.	4.50	1.83	0.58
3. Egalitarianism (8 items). There are no favourites in this place - everyone gets treated alike.	4.14	2.73	0.80
4. Management Concern for Employee Involvement (8 items). Senior personnel will go out of their way to help you with your work.	4.73	2.32	0.72
5. Open-mindedness (8 items). People here speak out openly.	4.43	2.30	0.69
6. Emotional Control (7 items). People here tend to hide their deeper feelings from each other.	3.32	1.69	0.65
7. Future Orientation (8 items). The ability to plan ahead is highly valued here.	4.14	2.07	0.68
8. Scientific and Technical Orientation (8 items). A discussion about the latest scientific inventions would not be uncommon here.	3.37	2.25	0.71
9. Intellectual Orientation (8 items). Careful reasoning and clear logic are highly valued here.	3.41	2.05	0.70
10. Job Challenge (8 items). Most activities present a real personal challenge.	4.21	1.96	0.64
11. Task Orientation (8 items). People here follow the maxim "business before pleasure".	3.68	2.06	0.66
12. Industriousness (8 items). There is so much to do here that people are always busy.	4.24	2.44	0.75
13. Altruism (8 items). Most people here seem to be especially considerate of others.	4.31	2.27	0.70
14. Sociability (8 items). There is a lot of group spirit.	2.85	2.09	0.70
15. Interpersonal Aggression (7 items). There always seem to be a lot of little quarrels going on here.	3.94	2.34	0.77
16. Rules Orientation (7 items). Formal rules and regulations have a very important place here.	3.75	1.53	0.64
17. Administrative Efficiency (8 items). Work is well organized and progresses systematically from week to week.	3.47	2.30	0.74
18. Conventionality (8 items). People are always carefully dressed and neatly groomed.	4.30	1.95	0.65
19. Readiness to Innovate (8 items). New ideas are always being tried out here.	3.64	2.06	0.71
20. Orientation to Wider Community (8 items). It's easy to find people here to give talks to clubs and social groups.	3.88	2.02	0.67

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BUSINESS ORGANIZATIONAL CLIMATE INDEX

AUTHORITY SCALES

- 1. Leaders' Psychological Distance 1, 21, 41, 61, 81, 101, 121, 141.
- 2. Questioning Authority 2, 22, 42, 62, (82) 102, 122, 142.
- 3. Egalitarianism (3), (23), (43), 63, (83) 103, 123, (143).
- 4. Management Concern for Employee Involvement 4, 24, 44, (64), (84), (104), 124, 144.

RESTRAINT SCALES

- 5. Open-Mindedness 5, 25, (45), 65, (85), 105, (125), 145.
- 6. Emotional Control (6), (26), (46), 66, 86, (106), 126, (146).

WORK INTEREST SCALES

- 7. Future Orientation 7, (27), (47), 67, (87), 107, (127), 147.
- 8. Scientific and Technical Orientation 8, 28, (48), (68), 88, 108, 128, 148.
- 9. Intellectual Orientation 9, (29), (49), (69), 89, 109, (129), 149.
- 10. Job Challenge 10, 30, 50, 70, 90, (110), 130, 150.
- 11. Task Orientation 11, 31, 51, 71, (91), 111, 131, 151.
- 12. Industriousness (12), 32, 52, (72), (92), (112), (132), (152).

PERSONAL RELATIONS SCALES

- 13. Altruism 13, 33, 53, 73, 93, 113, 133, (153).
- 14. Sociability (14), 34, 54, 74, 94, 114, 134, 154.
- 15. Interpersonal Aggression 15, (35), 55, 75, 95, 115, 135, 155.

ROUTINE SCALES

- 16. Rules Orientation 16, 36, 56, (76), 96, 116, (136), 156.
- 17. Administrative Efficiency 17, 37, 57, 77, 97, 117, 137, 157.
- 18. Conventionality 18, 38, 58, (78), (98), 118, 138, 158.
- 19. Readiness to Innovate (19), (39), (59), 79, (99), 119, (139), 159.

COMMUNITY SCALE

- 20. Community 20, (40), 60, 80, 100, 120, (140), (160)

* 'True' is scored 1, and 'False' is scored 0, except for the circled items where 'False' is scored 1 and 'True' is scored 0.

BUSINESS ORGANIZATION CLIMATE INDEX

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Industrial Administration Research Unit
The University of Aston in Birmingham

- 1 -

1. Important people here are always addressed as 'Sir'.
2. Criticism of policies and practices is encouraged.
3. It's important here to be in the right club or group.
4. Policy, goals, and objectives are carefully explained to everyone.
5. Errors and failures are talked about freely so that others may learn from them.
6. People here express their feelings openly.
7. The ability to plan ahead is highly valued here.
8. Applications of research, experimental analysis, and other forms of scientific methods are encouraged.
9. People here spend a great deal of time thinking about and discussing complex problems.
10. Policy matters often provoke widespread discussions that are both earnest and lively.
11. People will work hard here even if they realise that someone else may get the credit.
12. It is fairly easy to keep up here without working too hard.
13. 'Lend a helping hand' could very well be the motto of this place.
14. Receptions or formal social affairs are seldom held here.
15. People here are always trying to manipulate the activities of others for their own advantage.
16. People are expected to report violations of rules and regulations.
17. Work is well organised and progresses systematically from week to week.
18. People take care of their personal appearance.
19. Policy changes occur slowly here and only after considerable deliberation.
20. The organization's activities are often featured in the newspapers.

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21. It's necessary to be polite under all circumstances to stay out of trouble here.
22. When people disagree with a decision, they work to get it changed.
23. Personality and pull are more important than competence in getting on here.
24. Criticism or advice from a superior is usually welcomed.
25. No one needs to be afraid of expressing extreme or unpopular viewpoints here.
26. Discussions get quite heated, with a lot of display of feeling.
27. Few people here have time to think ahead.
28. A discussion about the latest technical developments would not be uncommon here.
29. Few people here would be interested in attending a lecture by an outstanding industrialist.
30. People here hope to achieve recognition and advancement.
31. People here can get so absorbed in their work they often lose all sense of time or personal comfort.
32. People here put a lot of energy into everything they do.
33. Most people here seem to be especially considerate of others.
34. Everyone here has a strong sense of being a member of a team.
35. People can get into very heated arguments with one another and be the best of friends next day.
36. Attendance is checked carefully.
37. Most activities here are planned carefully.
38. Good manners and making a good impression are important here.
39. Quick decisions and actions are not characteristic of this place.
40. This place has a reputation for being indifferent to the needs of the wider community.

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41. Senior personnel rarely refer to one another by their first names.
42. People here are not likely to accept managerial ineptitude without complaint or protest.
43. Family, social, or financial status are necessary elements for advancement or success here.
44. Regulations are interpreted and enforced in an understanding manner.
45. The expression of strong personal belief is pretty rare here.
46. People here do not try to hide their feelings.
47. Most people here are concerned with the present rather than the future.
48. Few people would be interested in attending a lecture by an outstanding scientist.
49. Few people here are stimulated by intellectual activities or problems.
50. People here are provided with opportunities to develop skills and talents in directing or co-ordinating the work of others.
51. Pressure of work is not accepted as an excuse for inferior performance.
52. There is so much to do here that people are always busy.
53. People find others eager to help show them the ropes.
54. There is a lot of group spirit.
55. Almost anyone is likely to be blamed, even those who had little to do with it, if something happens to go wrong.
56. People quickly learn what is done and not done here.
57. People get sufficient notice of policy decisions to be able to plan their own work accordingly.
58. Individuals who are untidy in their appearance are likely to have this brought to their attention.
59. Thinking of alternative ways in which problems might be solved or things done differently is discouraged here.
60. The activities of charities and social agencies are strongly supported.

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61. The important people in this place expect others to show proper respect for them.
62. When people dislike policy they let it be known in no uncertain terms.
63. There are no favourites in this place - everyone gets treated alike.
64. There are few opportunities for informal conversation with senior personnel.
65. One of the values most stressed here is open-mindedness.
66. There are very few issues here which arouse much excitement or feeling.
67. People here are encouraged to take a long-term view.
68. Few people in this organization have any background in science.
69. Few people here are challenged by deep thinking.
70. There is plenty of scope and encouragement for individual creative activity.
71. People set high standards of achievement for themselves here.
72. People are always ready to stop work and have a break.
73. The underdog always gets sympathy here.
74. Social events get a lot of enthusiasm and support.
75. Personal rivalries are fairly common in this place.
76. Most people pay little attention to rules and regulations.
77. Work is checked to see if it is done properly and on time.
78. People are encouraged to dress for personal comfort rather than for appearance.
79. New ideas are always being tried out here.
80. Service to the wider community is regarded as a major responsibility of this organization.

81. People here are always looking for compliments.
82. People avoid direct clashes with senior personnel at all costs.
83. Anyone who knows the right people here can get a better break.
84. This organization does not concern itself with the personal problems of the people who work here.
85. People here tend to be cautious and restrained.
86. Open displays of emotion have no place here.
87. People here often start projects without trying to decide in advance how they will develop, or where they may end.
88. A discussion about the latest scientific inventions would not be uncommon here.
89. Most people here are well-read.
90. Good work is really recognised here.
91. The standards set here are not particularly hard to achieve.
92. No one takes his work too seriously here.
93. People often run errands or do other personal services for each other.
94. There are many opportunities for people to get together in planned social activities after hours.
95. A lot of people in this place walk around with a chip on their shoulder.
96. People ask permission before deviating from common policies or practices.
97. The flow of information downwards is smooth and efficient.
98. Proper social forms and manners are not particularly important here.
99. The latest scientific discoveries make few changes in the way this place is run.
100. It's easy to find people here to give talks to clubs and social groups.

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101. Senior personnel are frequently jealous of their authority.
102. Many people will not hesitate to give strong support to a project that senior management is opposed to.
103. Everyone has the same opportunity to make good.
104. Senior personnel have little tolerance for complaints and protests.
105. People here speak out openly.
106. When people dislike someone here they make no secret of it.
107. Senior management is quite often occupied with serious considerations of basic goals and purposes.
108. Magazines about new developments in science and management techniques are read by many people who work here.
109. People here often get involved in long serious intellectual discussions.
110. Not too many people want to become top leaders here.
111. People here follow the maxim 'business before pleasure'.
112. Having a good time comes first here.
113. The people here are easily moved by the misfortune or distress of others.
114. Everyone is helped to get acquainted.
115. There always seem to be a lot of little quarrels going on here.
116. Formal rules and regulations have a very important place here.
117. There is no wasted time here; everything has been planned right to the minute.
118. Most people dress and act pretty much alike.
119. Unusual or exciting plans are encouraged here.
120. Special events are given a great deal of publicity.

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121. There is a lot of boot-licking here.
122. People who get pushed around here are expected to fight back.
123. As long as you are good at your job you'll get ahead here.
124. Senior personnel will go out of their way to help you with your work.
125. Criticism is taken as a personal affront in this organization.
126. People here tend to hide their deeper feelings from each other.
127. This organization is satisfied to achieve short-range goals and objectives.
128. Senior personnel here are considered experts in their respective fields.
129. People who attempt discussions on serious subjects are made to feel foolish or out of place here.
130. Most activities present a real personal challenge.
131. People are always very serious and purposeful about their work.
132. Day to day activities do not require a sustained or intensive effort.
133. People here are usually quick to help each other out.
134. It's easy to get a group together for games, outings, or other social activities.
135. People here are always trying to win an argument.
136. Procedures to be followed in case of fires and accidents are not prominently displayed.
137. There is a specific place for everything and everyone here.
138. Looking and acting 'right' is expected.
139. There are conventional ways of doing things here which are rarely changed.
140. Any form of publicity is frowned on here.

141. There is a recognised group of leaders who receive special privileges.
 142. People delight in challenging official policies.
 143. If your face fits, you're all right here.
 144. Senior personnel are prepared to listen to people as well as direct them.
 145. People here feel free to express themselves impulsively.
 146. People here can be wildly happy one minute and hopelessly depressed the next.
 147. Failure to plan ahead is regarded as a very serious error here.
 148. This organization is research conscious.
 149. Careful reasoning and clear logic are highly valued here.
 150. People here generally look for novelty and variety.
 151. People here feel they must really work hard because of the important nature of their work.
 152. The successful performance of day to day duties is routine and undemanding.
 153. People have always put themselves first.
 154. People spend a great deal of time together socially.
 155. Many people here seem to brood a lot, act moodily, and it is hard to make them out.
 156. It is expected that there will be no deviation from established practices, no matter what the circumstances.
 157. The quality of your work is rated or evaluated frequently.
 158. People are always carefully dressed and neatly groomed.
 159. Programmes here are quickly changed to meet new conditions.
 160. Social issues are rarely discussed here.
-

Please put this questionnaire and answer sheet in the enclosed envelope and return it to:

Industrial Administration Research Unit
The University of Aston in Birmingham
Birmingham
B4 7PG

Thank you

FIRST PAGE OF ANSWER BOOK FOR THE BOCI (ORDINARY VERSION)

THE BUSINESS ORGANIZATION CLIMATE INDEX

The purpose of the Business Organization Climate Index is to compare the different environmental settings in which managers carry out their daily activities. (Whether the daily activities are affected by the environment can only be answered when the environment itself has been described.)

INSTRUCTIONS FOR COMPLETING THE QUESTIONNAIRE

This questionnaire contains 160 statements which describe the environment in which people work. The statements refer to daily activities, to rules and policies, to typical interests and ways of doing things. Please decide which statements are characteristic of the organization for which you work and which are not. Your answers should tell us what you believe the organization is actually like, and NOT what you might personally prefer. You won't know the answer to many of these statements because there may not be any definite information on which to base your answer. YOUR RESPONSE WILL SIMPLY MEAN THAT IN YOUR OPINION THE STATEMENT IS PROBABLY TRUE OR PROBABLY FALSE ABOUT YOUR ORGANIZATION.

DO NOT OMIT ANY ITEM

On the back of this page you will find an answer sheet. It consists of boxes, each containing a T for True and an F for False, plus a number ranging from 1-160 which corresponds to the numbered questions in the accompanying Business Organization Climate Index Questionnaire. You will find the questionnaire has 20 questions on each page and the answer sheet over the page has 20 answer spaces along each row. Please make sure you put your answer to the questions in the correctly numbered box. If you think a statement is True (i.e. things are rarely black or white, but it is more True than False), then put a tick through the T in the answer box, e.g. \checkmark F. If you think it is False (i.e. it is more False than True), put a tick through the F in the answer box, e.g. T \checkmark . Be sure to answer either T or F for ALL questions, and that your ticks go through the correct letter, not above it, or below it, or to the side of it, but through it.

FIRST PAGE OF ANSWER BOOK FOR THE BOCII (IDEAL VERSION)

INSTRUCTIONS FOR COMPLETING THE BUSINESS ORGANIZATION
CLIMATE INDEX - 'THE PERFECT ORGANIZATION'

The purpose of this questionnaire is to discover how far people have shared ideals about what the perfect business organization would be like.

This questionnaire contains 160 statements which describe the environment in which people might work. The statements refer to daily activities, to rules and policies, to typical interests and ways of doing things. Please decide which statements in your view would be characteristic of the ideal (or perfect) organization.

DO NOT OMIT ANY ITEM

On the back of this page you will find an answer sheet. It consists of boxes each containing a T for True and an F for False, plus a number ranging from 1 to 160, which corresponds to the numbered statements in the questionnaire. The questionnaire has twenty statements on each page and the answer sheet has twenty answer spaces along each row. Please make sure you put your mark in the correctly numbered box. If you think a statement would be True (or more true than false) in an ideal (or perfect) organization, then put a tick through the T in the appropriate answer box, e.g. \checkmark F. If you think a statement would be False (or more false than true) in an ideal organization, put a tick through the F in the answer box; e.g. T \checkmark . Be sure to answer either T or F to all statements, and that your ticks go through the correct letter, not above it, below it, or to the side of it, but through it.

ANSWER SHEET T — TRUE F — FALSE Please put a tick through the one that represents your view

Org.

No. e.g. T F or T F

Q.No. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F
Q.No. 21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F
Q.No. 41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F
Q.No. 61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F
Q.No. 81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F
Q.No. 101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F
Q.No. 121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F
Q.No. 141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F	T F

THE EVALUATION OF MANAGEMENT TRAINING

This bibliography will be organised in three parts:

1. Some general work on the evaluation of training and performance
2. Some particular forms of training
 - (a) research studies
 - (b) measures and measurement problems; and
3. Some writings which contain criticisms of attempts to appraise and evaluate

1. SOME GENERAL WORKS ON THE EVALUATION OF TRAINING AND PERFORMANCE

Bates, J, and A J M Sykes

1962 Studies of executive behaviour and their significance for management education, Management International, No.6, pp.44-53

Bellows R.M. A tool for analysing training needs: The training evaluation check list: Personnel 29, 412-418.

Bennet, W E

1959 Managerial Selection, Education and Training, McGraw-Hill

Besco, R, J Tiffin and D C King

1959 Evaluation techniques for management development programs, Journal of the American Society of Training Directors, 10, pp.13-27

Campbell, J P

1966 Management Training: the Development of Managerial Effectiveness, Greensboro, NC: The Richardson Foundation

Campbell, J P, M D Dunnette, E E Lawler and K E Weick

1970 Managerial Behavior, Performance and Effectiveness, New York, McGraw-Hill

Caro, Francis G

1969 Approaches to evaluative research: a review, Human Organization, 28, 2, pp.87-99

Castalanello, R F, and D L Kirkpatrick

1968 Evaluating training programs: the state of the art, Training and Development Journal, 22, 5 May, pp.2-9

Clift, J C

- 1969 An approach to training research, Technical Education and Industrial Training, 11, 2, pp.58-59

Hesseling, P

- 1966 Strategy of Evaluation Research, Assen, Van Gorcum

Kohn, Vera

- 1970 A Selected Bibliography on Management Training and Development Programmes, American Foundation for Management Research

McGehee, W, and P W Thayer

- 1961 Training in Business and Industry, New York, Wiley

Martin, A D

- 1957 The assessment of training, Personnel Management, 39 pp.88-93

Meigneiz, R (ed)

- 1962 Evaluation of Supervisory and Management Training Methods, Paris, OECD, Part 111A

Odiorne, George S

- 1970 Training by Objectives: an economic approach to management training, Collier Macmillan

Tracey, William R

- 1968 Evaluating Training and Development Systems, American Management Association, New York

Warr, P,M Bird and W Rackham

- 1970 Evaluation of Management Training, Gower Press

Wickert, F R, and D E McFarland

- 1967 Measuring Executive Effectiveness, New York, Appleton Century Crofts

Whitelaw, Matt

- 1972 The Evaluation of Management Training - a review, Institute of Personnel Management

Williams, Derek

- 1971 Identification, Measurement and Satisfaction of Management Training Needs, Final report of the Principal Investigator to the Department of Employment in respect of the industrial training research project carried out at the University College, Cardiff (1967-1969)

Wittrock, M C, and D E Wiley (eds)

- 1970 The Evaluation of Instruction, New York, Holt Rinehart and Winston

2. SOME PARTICULAR FORMS OF TRAINING

(a) Research Studies

Andrews, K R

- 1966 The Effectiveness of University Management Development Programmes, Harvard

Baum, B H, and P F Sorensen, Jr

- 1970 The effect of managerial training on organization control: and experimental study, Organizational Behavior and Human Performance, Vol.5, pp.170-182

Bunker, D R, and E S Knowles

- 1967 Comparison of behavioural changes from Human Relations Training Laboratories of different lengths, Journal of Applied Behavioural Sciences, 3, 4

Cooper, Gary L, and Iain Mangham

- 1970 T-group training: before and after, Journal of Management Studies, 7, 2, May, pp.224-239

Cowell, D W

- 1972 Evaluating the effectiveness of management courses, European Training, 1, 1, pp.55-65

Friedlander, F

- 1967 The impact of organizational training laboratories upon the effectiveness and interaction of on-going work groups, Personnel Psychology, XX, 3, pp.289-308

Hillman, H A

- 1962 Measuring management training: a case study, Journal of American Society of Training Directors, 16, 3, pp.27-31

Georgiades N. et al. Management Training: evaluation within the organisation. Bulletin of The British Psychological Society 21, 1968, 54

Hood, Paul D, M Showell and E C Stewart

- 1967 Evaluation of Three Experimental Systems for Non-commissioned Officer Training, Technical Report No.67-12, Human Relations Research Organization of the USAF

Jerkedal, A

- 1967 Top Management Education: an evaluation study, PA Council (Swedish Council for Personnel Administration)

Miner, J B

- 1960 The effect of a course in psychology on the attitudes of Research and Development supervisors, Journal of Applied Psychology, XLIV.

Schein, E H

- 1967 Attitude change during management education, Administrative Science Quarterly, 11, pp.601-628

Stroud, P V

- 1959 Evaluating a Human Relations training program, Personnel, XXXVI, Nov-Dec, 52-60

Thorley, S

- 1972 Evaluating in-company management raining, The Training Officer, Vol.7, No.3, March, pp.76-77

Wilson, J,R B Morton and D P Mullen

- 1972 The trend in laboratory education for managers - organization training or sensitivity?, Training and Development Journal, Vol.26, No.6, pp.18-25

(b) Measures and Measurement Problems

Argyris, C

- 1968 Issues in evaluating laboratory education, Industrial Relations, 8, 1, pp.28-40

Bass, B M

- 1962 Reactions to twelve angry men as a measure of sensitivity training, Journal of Applied Psychology, 46, pp.120-124

Buchanan, Paul C

- 1957 Testing the validity of an evaluation program, Personnel, 34, 3, pp.78-81

Fitzgerald, Edward T

- 1966 Measurement of openness to experience, Journal of Personality and Social Psychology, 4, 6, pp.655-663

Forehand, G A

- 1963 Assessments of innovative behaviour: partial criteria for the assessment of executive performance, Journal of Applied Psychology, 27, pp.206-213

Frederiksen, N, D R Saunders and B Wand

- 1957 The In Basket Test, Psychological Monographs, 71

Korb, L D

- 1956 How to measure the results of supervisory training, Personnel, Vol.32, March, pp.378-391

Lawshe, C H, R A Bolda and R L Brune

- 1958 Studies in management training evaluation: scaling responses to human relations training cases, Journal of Applied Psychology 42, pp.396-398

Litterer, J A

- 1957 How 47 companies measure their executives, Personnel Journal, 36, pp.97-100

Shaw, M E and J M Wright

- 1967 Scales for the Measurement of Attitudes, New York, McGraw-Hill

Smith, P C, and L M Kendall

- 1963 Retranslation of expectations: an approach to the construction of unambiguous anchors for rating scales, Journal of Applied Psychology, XLVII, pp.149-155

Uhrbrock, R S

- 1961 2000 scaled items, Personnel Psychology, Vol.14, pp.375-420

Weitz, J

- 1961 Criteria for criteria, American Psychologist, 16, pp.228-231

3. SOME WRITINGS WHICH CONTAIN CRITICISMS OF ATTEMPTS TO APPRAISE AND EVALUATE

Hamblin, A C

- 1972 Controlling the training process, Management Education and Development, Vol.e, No.2, pp.92-97

Hopwood, A G

- 1972 The relationship between accounting and personnel management: past conflicts and future potentials, Personnel Review, Vol.1 No.2, pp.44-47

House, R J

- 1968 Leadership training: some dysfunctional consequences, Administrative Science Quarterly, 12, March, pp.557-571

Jackson, D N, and S Messick (eds)

- 1967 Problems in Human Assessment, McGraw-Hill

McGregor, D

- 1957 An uneasy look at performance appraisal, Harvard Business Review, 35, pp.89-94

Ridgway, V F

- 1956 Dysfunctional consequences of performance measurements, Administrative Science Quarterly, Vol.1, pp.240-247

Rowe, K H

- 1964 An appraisal of appraisals, Journal of Management Studies, Vol.1 (1), p.1

Stewart, R

- 1965 Reactions to appraisal interviews, Journal of Management Studies, Vol.2, p.83

Williams, R, and M Berger

- 1972 Management development: its possible relevance to a levy/grant system, Management Education and Development, Vol.3 Part 1, pp.37-48

Definition of Testable Training Objectives by Hemphill Items.ANALYTICAL SKILLS

On completion of training managers should be able to carry out the following tasks:

5. Forecast the volume of work to be done in the near future.

Given statistical data on work accomplished and demand for work in specific time periods, extrapolate a trend for a future specified period, accurate to within + or - 10% per specified period. (Statistics exercise)

39. Compare reports to detect discrepancies among them.

Given two reports on a specified topic list all discrepancies. (Verbal and numerical error recognition)

79. Prepare agenda for meetings.

Given a set of reports and memoranda prepare an agenda for a meeting. All topics on which action is required should be included in a logical order. There should be no omissions.

94. Recommend changes in company policy.

Given a memorandum on company policy and an account of malfunctionings, draft a memorandum on what changes you think are required. Each change you suggest must be supported by evidence as to why the proposed change is necessary and by a logical argument as to why the proposed change is likely to be effective.

99. Initiate improvements in work methods.

Given a detailed description of the way in which a particular task is currently performed, and a set of criteria for task performance showing areas in which there is a failure to achieve the standard, suggest improvements. Each change you suggest must be supported.

115. Assign priorities for the completion of work.

Given details of current capacities, loadings, breakdown frequencies, and job completion times, and details of materials availabilities, assign incoming orders according to a rational scheme of priorities so that 90% or more of required work is accomplished within the period specified. (Very simple OR problem)

180. Analyse operating performance reports.

Given a table of current performance under ten specified headings and a list of performance criteria, identify those areas where

attention is required. Given verbal material stating reasons for each of the current performance statistics, isolate those arguments which appear to you to be falacious, specifying the nature of the falacy.

213. Chair meetings.

Could only be tested by observation with a rating sheet allocating points under the following headings:

Outline subject	a - e
Guide discussion	a - f
Crystallize discussion	a - c
Establish conclusions	a - d
Get agreement on action	a - c

218. Set goals for future performance.

Given information on markets, competitors, own company's previous performance, and a set of possible alternatives, set goals for the future performance of the company which are consistent with the information available and which optimise the possibilities.

468. Plan my own activities.

Given an in-tray, deal with all the business in the prescribed time, and in a systematic manner. Solutions will only be regarded as satisfactory if consistent with the content and of the in-tray and the prescribed circumstances.

HUMAN RELATIONS SKILLS

4. Counsel subordinates on the selection of employees.

Given information re company policy and given particulars of a post to be filled, and given details of three applicants referred to your subordinate after initial screening, list the pieces of advice you would give your subordinate on how to handle the selection.

45. Make assignments of jobs to subordinates.

Given details of the strengths and weaknesses of three hypothetical subordinates and given a series of tasks you wish to delegate, state which tasks you would allocate to which man, giving your reasons. The reasons must be consistent with the known facts.

48. Conduct regular staff meetings.

As for 213, but with the following rating categories:

Noticing and responding to cues provided by others.
Tolerance for the views of others.
Readiness to disclose own feelings.
Correctly interpreting the motives and feelings of others.
Contributing in a supportive way to the resolution of problems.

97. Stimulate subordinates toward greater productivity.

and

234. Review work progress of subordinates.

Given a knowledge of company policy and given three hypothetical subordinates of known strengths and weaknesses (see 45) and given additional information on the personal motivations of these men, conduct an appraisal interview with each man in such a way that he feels encouraged to greater productivity. (Role play - subordinate to rate extent of increased motivation after role play)

141. Show staff members and/or other employees the relationship of the work they are doing to the objectives of the company.

From your knowledge of your own company and work situation, draft out a list of the points that you would make in an induction talk of fifteen minutes' duration which you have been asked to give to new employees in your department. You should aim to explain in terms which they will understand, the relationship of the work they will be doing to the objectives of the company. Intelligibility and interest value to the novice will be the criteria for assessing your communication.

193. Make use of staff people.

Given a problem which requires expert help, approach such staff people as are likely to be able to help you, put to them such questions as are appropriate and supply such information as is needed to enable them to give you the assistance you require. (Exercise: critical incident type of approach?)

194. Co-ordinate the activities of others.

Given certain feedback from operations being carried out separately by three hypothetical subordinates, issue at appropriate time intervals such instructions as shall enable the work to process conjointly. (Simulation?) (Rating on acceptability of instructions as received by subordinates as well as on their effectiveness in maintaining conjunctivity)

234. See 97.

382. Sizing up people.

Given a filmed case study involving accusations and counter-accusations leading to an impasse, write your considered judgment of the motives and truthfulness of the parties concerned and your recommendations for breaking the impasse and securing the co-operation of the parties in implementing your proposals.

The numbers refer to the item numbers in The Executive Position Description Questionnaire given in J. K. Hemphill, Dimensions of Executive Positions, 1960, Ohio State University Bureau of Business Research, Research Monograph No.98.

Appendix VI.3

First Draft (August 1969) of
QUESTIONNAIRE ON MANAGERIAL BEHAVIOUR AND TRAINING OBJECTIVES

The purpose of this questionnaire is to enable direct comparisons to be made of the training aims of different training programmes and different employing organizations. We are interested in the following managerial activities:

Interpreting performance reports.
 Briefing subordinates.
 Investigating problems.
 Making use of specialists.
 Co-ordinating people's activities.
 Setting goals for future performance.
 Advising on personal problems.
 Conducting meetings.
 Reviewing the progress of subordinates.
 Planning activities.

First we should like some estimate of THE PART YOU THINK THESE ACTIVITIES PLAY in the job of THE AVERAGE MANAGER WHO COMES TO YOU for training.

You will find below each activity a set of paired adjectives. Please place a tick (✓) in one of the seven spaces on each scale which most accurately represents your opinion of the part the activity plays.

Example:

IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES ASSIGNING WORK PRIORITIES IS:

central	:	:	:	✓	:	:	:	:	:	peripheral
rare	:	:	:	:	:	:	✓	:	:	common

Please be careful to place your tick in the middle of a space and NOT BETWEEN the spaces - for example:

this: : : ✓ : : NOT : : ✓ :

If you conduct a range of managerial skills programmes, please write below the title of ONE course (at senior or middle management level) which you regard as characteristic and which you will bear in mind in making your ratings.

Name of course: _____

level of management: Senior Middle
 (delete whichever is inapplicable)

IN THE JOB OF THE AVERAGE MANAGE WHO ATTENDS OUR COURSES.
INTERPRETING PERFORMANCE REPORTS IS:

Important	unimportant
infrequent	frequent
obligatory	optional
routine	non-routine
time consuming	not time consuming

This wording was repeated for:

BRIEFING SUBORDINATES

INVESTIGATING PROBLEMS

MAKING USE OF SPECIALISTS

CO-ORDINATING PEOPLE'S ACTIVITIES

SETTING GOALS FOR FUTURE PERFORMANCE

ADVISING ON PERSONAL PROBLEMS

CONDUCTING MEETINGS

REVIEWING THE PROGRESS OF SUBORDINATES

PLANNING ONE'S OWN ACTIVITIES

We should now like to have your assessment of the way managers who attend your courses TYPICALLY BEHAVE BEFORE RECEIVING YOUR TRAINING. Please place a tick (✓), as before, in one of the seven spaces on each scale which most accurately represents your opinion of how managers behave.

BEFORE RECEIVING OUR TRAINING THE BEHAVIOUR OF MANAGERS WHEN INTERPRETING PERFORMANCE REPORTS IS TYPICALLY:

methodical	unmethodical
sensitive	insensitive
casual	thorough
guarded	frank
realistic	unrealistic
concerned	unconcerned
illogical	logical
suspicious	trusting
direct	devious
self-reliant	dependent on others
inappropriate	appropriate
effective	ineffective

This wording was repeated for each of the job categories underlined above.

Finally we should like a realistic appraisal of how you think the same managers actually will behave after attending your training. Please place a tick (✓) in one of the seven spaces on each scale which most accurately represents your ATTAINABLE TRAINING OBJECTIVE. (Do not refer back to your earlier assessment of behaviour before training.)

AFTER ATTENDING OUR TRAINING THE BEHAVIOUR OF MANAGERS WHEN INTERPRETING PERFORMANCE REPORTS WILL BE:

methodical	unmethodical
sensitive	insensitive
casual	thorough
guarded	frank
realistic	unrealistic
concerned	unconcerned
illogical	logical
suspicious	trusting
direct	devious
self-reliant	dependent on others
inappropriate	appropriate
effective	ineffective

This wording was repeated for all the job categories underlined.

The questionnaire was concluded as follows:

THANK YOU VERY MUCH FOR YOUR CO-OPERATION.

May we ask you to disclose your position and organisation in the space below. Your replies are all confidential and will be combined anonymously with other replies in the analysis of the data. The identity of individual respondents will not be revealed.

Position

Name of organisation

QUESTIONNAIRE ON MANAGERIAL BEHAVIOUR AND TRAINING OBJECTIVES

The purpose of this questionnaire is to enable direct comparisons to be made of the training aims of different training programmes and different employing organizations. We are interested in the following managerial activities:

1. Briefing subordinates (e.g. at a daily review or control meeting).
2. Trouble shooting (e.g. finding causes for delays, breakdowns, or rejected work).
3. Forward planning (e.g. setting targets for the next quarter).
4. Taking an interest in personal problems (e.g. making allowances for domestic crises).
5. Conducting meetings (i.e. taking the chair or deputising for the chairman).
6. Reviewing the progress of subordinates (e.g. at annual merit award or salary review).

First we should like some estimate of THE PART YOU THINK THESE ACTIVITIES PLAY in the job of the AVERAGE MANAGER WHO COMES TO YOU for training.

You will find below each activity a set of paired adjectives. Please place a tick (✓) in one of the seven spaces on each scale which most accurately represents your opinion of the part the activity plays.

Example:

IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES ASSIGNING WORK PRIORITIES IS:

Central : : : ✓ : : : : Peripheral
 Rare : : : : : : ✓ : : Common

Please be careful to place your tick in the middle of the space and NOT BETWEEN the spaces - for example:

this : : ✓ : : NOT : : ✓ : :

If you conduct a range of managerial skills programmes please write below the title of the course (at senior or middle management level) which you regard as characteristic and which you will bear in mind in making your ratings.

Name of course:

Level of Management:

Senior/Middle *

* delete whichever is inapplicable

1. IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES
BRIEFING SUBORDINATES IS PROBABLY:

important	: : : : : : : :	unimportant
obligatory	: : : : : : : :	discretionary
time consuming (2 or more hours per week)	: : : : : : : :	not time consuming (less than 1 hour per week)

2. IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES
TROUBLE SHOOTING IS PROBABLY:

important	: : : : : : : :	unimportant
obligatory	: : : : : : : :	discretionary
time consuming	: : : : : : : :	not time consuming

3. IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES
FORWARD PLANNING IS PROBABLY:

important	: : : : : : : :	unimportant
obligatory	: : : : : : : :	discretionary
time consuming	: : : : : : : :	not time consuming

4. IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES
TAKING AN INTEREST IN PERSONAL PROBLEMS IS PROBABLY:

important	: : : : : : : :	unimportant
obligatory	: : : : : : : :	discretionary
time consuming	: : : : : : : :	not time consuming

5. IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES
CONDUCTING MEETINGS IS PROBABLY:

important	: : : : : : : :	unimportant
obligatory	: : : : : : : :	discretionary
time consuming	: : : : : : : :	not time consuming

6. IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES
REVIEWING THE PROGRESS OF SUBORDINATES IS PROBABLY:

important	: : : : : : : :	unimportant
obligatory	: : : : : : : :	discretionary
time consuming	: : : : : : : :	not time consuming

We should like now to have your realistic appraisal of how you think the managers who attend your courses will actually behave on completion of training. Please place a tick (✓) in one of the seven spaces on each scale which most accurately represents your ATTAINABLE TRAINING OBJECTIVE.

1. AFTER ATTENDING OUR TRAINING THE BEHAVIOUR OF MANAGERS
WHEN BRIEFING SUBORDINATES COULD BE:

intuitive ^(a)	: : : : : : :	methodical
guarded	: : : : : : :	frank
sensitive to feelings	: : : : : : :	indifferent ^(c) to feelings
systematic	: : : : : : :	flexible ^(b)

2. AFTER ATTENDING OUR TRAINING THE BEHAVIOUR OF MANAGERS
WHEN TROUBLE SHOOTING COULD BE:

intuitive ^(a)	: : : : : : :	methodical
guarded	: : : : : : :	frank
sensitive to feelings	: : : : : : :	indifferent ^(c) to feelings
systematic	: : : : : : :	flexible ^(b)

3. AFTER ATTENDING OUR TRAINING THE BEHAVIOUR OF MANAGERS
WHEN ENGAGED IN FORWARD PLANNING COULD BE:

intuitive ^(a)	: : : : : : :	methodical
guarded	: : : : : : :	frank
sensitive to feelings	: : : : : : :	indifferent ^(c) to feelings
systematic	: : : : : : :	flexible ^(b)

Twelve more trainers commented on this questionnaire, modified as indicated below:

- (a) intuitive was amended to flexible
- (b) flexible was amended to experimental
- (c) indifferent to feelings was amended to unbiased by feelings.

4. AFTER ATTENDING OUR TRAINING THE BEHAVIOUR OF MANAGERS
WHEN TAKING AN INTEREST IN PERSONAL PROBLEMS COULD BE:

intuitive (a)	: : : : : : : :	methodical
guarded	: : : : : : : :	frank
sensitive to feelings	: : : : : : : :	indifferent (c) to feelings
systematic	: : : : : : : :	flexible (b)

5. AFTER ATTENDING OUR TRAINING THE BEHAVIOUR OF MANAGERS
WHEN CONDUCTING MEETINGS COULD BE:

intuitive (a)	: : : : : : : :	methodical
guarded	: : : : : : : :	frank
sensitive to feelings	: : : : : : : :	indifferent (c) to feelings
systematic	: : : : : : : :	flexible (b)

6. AFTER ATTENDING OUR TRAINING THE BEHAVIOUR OF MANAGERS
WHEN REVIEWING THE PROGRESS OF SUBORDINATES COULD BE:

intuitive (a)	: : : : : : : :	methodical
guarded	: : : : : : : :	frank
sensitive to feelings	: : : : : : : :	indifferent (c) to feelings
systematic	: : : : : : : :	flexible (b)

THANK YOU FOR YOUR CO-OPERATION

(a) intuitive was later amended to flexible
 (b) flexible was later amended to experimental
 (c) indifferent to feelings was later amended to unbiased by feelings.

Concordance of ratings for magnitude of six activities
in managers' jobs (statistical evidence)

The statistic used was the Kendall coefficient of concordance w . This is a nonparametric statistic which measures the association among several (k) sets of rankings of N entities. w was computed separately for each activity. The entities to be ranked were the 26 jobs held by the 26 managers in our third pilot study. There were three sets of rankings:

1. The importance of the activity for each job.
2. The degree to which the activity was obligatory in each job.
3. The extent to which the activity was time consuming in each job.

The table below gives the results of this analysis.

Kendall's w coefficient of concordance for 3 rankings of the magnitude of an activity in 26 managers' jobs

Type of activity	w	chi square	level of significance
Briefing subordinates	0.63	47.25	0.01
Trouble shooting	0.60	45.00	0.01
Forward planning	0.78	58.50	0.001
Taking an interest in personal problems	0.68	51.00	0.01
Conducting meetings	0.86	64.50	0.001
Reviewing subordinates' progress	0.68	51.00	0.01

A full description of coefficient w is given on pages 229-239 of S. Siegel, Non-Parametric Statistics for the Behavioral Sciences McGraw-Hill, 1956.

Further justification for aggregating the rankings of importance, obligatoryness and time consumed is given in the

table of correlations below, but the nonparametric statistic is preferable as the distribution of scores was skewed with means for briefing subordinates, trouble shooting and forward planning being above the midpoint, and means for taking an interest in personal problems, conducting meetings and reviewing subordinates' progress tending to fall below the midpoint.

Correlations between three different rankings of the magnitude of an activity, for six different activities. N = 75 (subjects from second and third pilot studies)

Type of Activity	Ranking Criteria				Alpha coefficient of reliability (see Appendix VI. 7 for details)
	importance and obligatoriness	importance and time consumed	obligatoriness and time consumed	average correlation	
Briefing subordinates	0.643	0.681	0.689	0.671	0.86
Trouble shooting	0.579	0.765	0.650	0.664	0.85
Forward planning	0.793	0.747	0.710	0.750	0.90
Taking an interest in personal problems	0.520	0.576	0.650	0.582	0.84
Conducting meetings	0.848	0.720	0.657	0.741	0.89
Reviewing subordinates progress	0.892	0.663	0.624	0.726	0.88

MANAGERS' ACTIVITIES AND METHODS OF WORKING

We should like you to indicate how you, and the managers who work with you, carry out these same activities. By 'managers who work with you' we mean your immediate superior and your immediate subordinates, plus any colleagues in your own department at your own level, or at other levels, with whom you are in daily contact. Of course it will be difficult to describe how these people behave collectively, since some people differ markedly from others. However, we should like you to place your tick (/) in the one of the four spaces, (a), (b), (c), or (d) which represents the behaviour which is MOST GENERALLY CHARACTERISTIC of this group of managers.

	<u>Scoring Key</u>
1. WHEN BRIEFING SUBORDINATES WE	Methodical
(a) as far as possible modify strategy when something unforeseen occurs	- 0
(b) on the whole modify strategy when something unforeseen occurs	- 1
(c) on the whole follow a prepared strategy even when something unforeseen occurs	- 2
(d) as far as possible follow a prepared strategy even when something unforeseen occurs	- 3
2. WHEN BRIEFING SUBORDINATES WE	Guarded
(a) as far as possible are wary of what we say or do in front of others	- 3
(b) on the whole are wary of what we say or do in front of others	- 2
(c) on the whole are frank and open with others in word and deed	- 1
(d) as far as possible are frank and open with others in word and deed	- 0
3. WHEN BRIEFING SUBORDINATES WE	Insensitive
(a) as far as possible take people's feelings fully into account	- 0
(b) on the whole take people's feelings fully into account	- 1
(c) on the whole leave people's feelings out of account	- 2
(d) as far as possible leave people's feelings out of account	- 3
4. WHEN BRIEFING SUBORDINATES WE	Systematic
(a) as far as possible solve problems through a standard step-by-step procedure	- 3
(b) on the whole solve problems through a standard step-by-step procedure	- 2
(c) on the whole solve problems without resort to a standard step-by-step procedure	- 1
(d) as far as possible solve problems without resort to a standard step-by-step procedure	- 0
5. WHEN BRIEFING SUBORDINATES WE	Analytical
(a) as far as possible pay much attention to analysing facts	- 3
(b) on the whole pay much attention to analysing facts	- 2
(c) on the whole pay little attention to analysing facts	- 1
(d) as far as possible pay little attention to analysing facts	- 0

	Not feeling oriented
6. WHEN BRIEFING SUBORDINATES WE	
(a) as far as possible encourage people to express their feelings	___ 0
(b) on the whole encourage people to express their feelings	___ 1
(c) on the whole discourage people from expressing their feelings	___ 2
(d) as far as possible discourage people from expressing their feelings	___ 3
7. WHEN TROUBLE SHOOTING WE	Methodical
(a) as far as possible modify strategy when something unforeseen occurs	___ 0
(b) on the whole modify strategy when something unforeseen occurs	___ 1
(c) on the whole follow a prepared strategy even when something unforeseen occurs	___ 2
(d) as far as possible follow a prepared strategy even when something unforeseen occurs	___ 3
8. WHEN TROUBLE SHOOTING WE	Guarded
(a) as far as possible are wary of what we say or do in front of others	___ 3
(b) on the whole are wary of what we say or do in front of others	___ 2
(c) on the whole are frank and open with others in word and deed	___ 1
(d) as far as possible are frank and open with others in word and deed	___ 0
9. WHEN TROUBLE SHOOTING WE	Insensitive
(a) as far as possible take people's feelings fully into account	___ 0
(b) on the whole take people's feelings fully into account	___ 1
(c) on the whole leave people's feelings out of account	___ 2
(d) as far as possible leave people's feelings out of account	___ 3
10. WHEN TROUBLE SHOOTING WE	Systematic
(a) as far as possible solve problems through a standard step-by-step procedure	___ 3
(b) on the whole solve problems through a standard step-by-step procedure	___ 2
(c) on the whole solve problems without resort to a standard step-by-step procedure	___ 1
(d) as far as possible solve problems without resort to a standard step-by-step procedure	___ 0
11. WHEN TROUBLE SHOOTING WE	Analytical
(a) as far as possible pay much attention to analysing facts	___ 3
(b) on the whole pay much attention to analysing facts	___ 2
(c) on the whole pay little attention to analysing facts	___ 1
(d) as far as possible pay little attention to analysing facts	___ 0
12. WHEN TROUBLE SHOOTING WE	Not feeling oriented
(a) as far as possible encourage people to express their feelings	___ 0
(b) on the whole encourage people to express their feelings	___ 1
(c) on the whole discourage people from expressing their feelings	___ 2
(d) as far as possible discourage people from expressing their feelings	___ 3

Scoring key

	Methodical
13. WHEN ENGAGED IN FORWARD PLANNING WE	
(a) as far as possible modify strategy when something unforeseen occurs	_ 0
(b) on the whole modify strategy when something unforeseen occurs	_ 1
(c) on the whole follow a prepared strategy even when something unforeseen occurs	_ 2
(d) as far as possible follow a prepared strategy even when something unforeseen occurs	_ 3
14. WHEN ENGAGED IN FORWARD PLANNING WE	Guarded
(a) as far as possible are wary of what we say or do in front of others	_ 3
(b) on the whole are wary of what we say or do in front of others	_ 2
(c) on the whole are frank and open with others in word and deed	_ 1
(d) as far as possible are frank and open with others in word and deed	_ 0
15. WHEN ENGAGED IN FORWARD PLANNING WE	Insensitive
(a) as far as possible take people's feelings fully into account	_ 0
(b) on the whole take people's feelings fully into account	_ 1
(c) on the whole leave people's feelings out of account	_ 2
(d) as far as possible leave people's feelings out of account	_ 3
16. WHEN ENGAGED IN FORWARD PLANNING WE	Systematic
(a) as far as possible solve problems through a standard step-by-step procedure	_ 3
(b) on the whole solve problems through a standard step-by-step procedure	_ 2
(c) on the whole solve problems without resort to a standard step-by-step procedure	_ 1
(d) as far as possible solve problems without resort to a standard step-by-step procedure	_ 0
17. WHEN ENGAGED IN FORWARD PLANNING WE	Analytical
(a) as far as possible pay much attention to analysing facts	_ 3
(b) on the whole pay much attention to analysing facts	_ 2
(c) on the whole pay little attention to analysing facts	_ 1
(d) as far as possible pay little attention to analysing facts	_ 0
18. WHEN ENGAGED IN FORWARD PLANNING WE	Not feeling oriented
(a) as far as possible encourage people to express their feelings	_ 0
(b) on the whole encourage people to express their feelings	_ 1
(c) on the whole discourage people from expressing their feelings	_ 2
(d) as far as possible discourage people from expressing their feelings	_ 3
19. WHEN TAKING AN INTEREST IN PERSONAL PROBLEMS WE	Methodical
(a) as far as possible modify strategy when something unforeseen occurs	_ 0
(b) on the whole modify strategy when something unforeseen occurs	_ 1
(c) on the whole follow a prepared strategy even when something unforeseen occurs	_ 2
(d) as far as possible follow a prepared strategy even when something unforeseen occurs	_ 3

		<u>Scoring key</u>
20. WHEN TAKING AN INTEREST IN PERSONAL PROBLEMS WE		Guarded
(a) as far as possible are wary of what we say or do in front of others	---	3
(b) on the whole are wary of what we say or do in front of others	---	2
(c) on the whole are frank and open with others in word and deed	---	1
(d) as far as possible are frank and open with others in word and deed	---	0
21. WHEN TAKING AN INTEREST IN PERSONAL PROBLEMS WE		Insensitive
(a) as far as possible take people's feelings fully into account	---	0
(b) on the whole take people's feelings fully into account	---	1
(c) on the whole leave people's feelings out of account	---	2
(d) as far as possible leave people's feelings out of account	---	3
22. WHEN TAKING AN INTEREST IN PERSONAL PROBLEMS WE		Systematic
(a) as far as possible solve problems through a standard step-by-step procedure	---	3
(b) on the whole solve problems through a standard step-by-step procedure	---	2
(c) on the whole solve problems without resort to a standard step-by-step procedure	---	1
(d) as far as possible solve problems without resort to a standard step-by-step procedure	---	0
23. WHEN TAKING AN INTEREST IN PERSONAL PROBLEMS WE		Analytical
(a) as far as possible pay much attention to analysing facts	---	3
(b) on the whole pay much attention to analysing facts	---	2
(c) on the whole pay little attention to analysing facts	---	1
(d) as far as possible pay little attention to analysing facts	---	0
24. WHEN TAKING AN INTEREST IN PERSONAL PROBLEMS WE		Not feeling oriented
(a) as far as possible encourage people to express their feelings	---	0
(b) on the whole encourage people to express their feelings	---	1
(c) on the whole discourage people from expressing their feelings	---	2
(d) as far as possible discourage people from expressing their feelings	---	3
25. WHEN CONDUCTING MEETINGS WE		Methodical
(a) as far as possible modify strategy when something unforeseen occurs	---	0
(b) on the whole modify strategy when something unforeseen occurs	---	1
(c) on the whole follow a prepared strategy even when something unforeseen occurs	---	2
(d) as far as possible follow a prepared strategy even when something unforeseen occurs	---	3
26. WHEN CONDUCTING MEETINGS WE		Guarded
(a) as far as possible are wary of what we say or do in front of others	---	3
(b) on the whole are wary of what we say or do in front of others	---	2
(c) on the whole are frank and open with others in word and deed	---	1
(d) as far as possible are frank and open with others in word and deed	---	0

	<u>Scoring Key</u>
27. WHEN CONDUCTING MEETINGS WE	Insensitive
(a) as far as possible take people's feelings fully into account	. 0
(b) on the whole take people's feelings fully into account	. 1
(c) on the whole leave people's feelings out of account	. 2
(d) as far as possible leave people's feelings out of account	. 3
28. WHEN CONDUCTING MEETINGS WE	Systematic
(a) as far as possible solve problems through a standard step-by-step procedure	3
(b) on the whole solve problems through ⁿ standard step-by-step procedure	. 2
(c) on the whole solve problems without resort to a standard step-by-step procedure	1
(d) as far as possible solve problems without resort to a standard step-by-step procedure	0
29. WHEN CONDUCTING MEETINGS WE	Analytical
(a) as far as possible pay much attention to analysing facts	. 3
(b) on the whole pay much attention to analysing facts	. 2
(c) on the whole pay little attention to analysing facts	. 1
(d) as far as possible pay little attention to analysing facts	. 0
30. WHEN CONDUCTING MEETINGS WE	Not feeling oriented
(a) as far as possible encourage people to express their feelings	. 0
(b) on the whole encourage people to express their feelings	. 1
(c) on the whole discourage people from expressing their feelings	. 2
(d) as far as possible discourage people from expressing their feelings	. 3
31. WHEN REVIEWING THE PROGRESS OF SUBORDINATES WE	Methodical
(a) as far as possible modify strategy when something unforeseen occurs	. 0
(b) on the whole modify strategy when something unforeseen occurs	. 1
(c) on the whole follow a prepared strategy even when something unforeseen occurs	. 2
(d) as far as possible follow a prepared strategy even when something unforeseen occurs	. 3
32. WHEN REVIEWING THE PROGRESS OF SUBORDINATES WE	Guarded
(a) as far as possible are wary of what we say or do in front of others	. 3
(b) on the whole are wary of what we say or do in front of others	. 2
(c) on the whole are frank and open with others in word and deed	. 1
(d) as far as possible are frank and open with others in word and deed	. 0
33. WHEN REVIEWING THE PROGRESS OF SUBORDINATES WE	Insensitive
(a) as far as possible take people's feelings fully into account	. 0
(b) on the whole take people's feelings fully into account	. 1
(c) on the whole leave people's feelings out of account	. 2
(d) as far as possible leave people's feelings out of account	. 3

		<u>Scoring Key</u>
34. WHEN REVIEWING THE PROGRESS OF SUBORDINATES WE		Systematic
(a) as far as possible solve problems through a standard step-by-step procedure	---	3
(b) on the whole solve problems through a standard step-by-step procedure	---	2
(c) on the whole solve problems without resort to a standard step-by-step procedure	---	1
(d) as far as possible solve problems without resort to a standard step-by-step procedure	---	0
35. WHEN REVIEWING THE PROGRESS OF SUBORDINATES WE		Analytical
(a) as far as possible pay much attention to analysing facts	---	3
(b) on the whole pay much attention to analysing facts	---	2
(c) on the whole pay little attention to analysing facts	---	1
(d) as far as possible pay little attention to analysing facts	---	0
36. WHEN REVIEWING THE PROGRESS OF SUBORDINATES WE		Not feeling oriented
(a) as far as possible encourage people to express their feelings	---	0
(b) on the whole encourage people to express their feelings	---	1
(c) on the whole discourage people from expressing their feelings	---	2
(d) as far as possible discourage people from expressing their feelings	---	3

THANK YOU FOR YOUR CO-OPERATION

Please return to: Miss D. C. Pheysay
 Research Fellow
 Industrial Administration Research Unit
 The University of Aston in Birmingham
 62 Coleshill Street, Birmingham, 4.

Statistical Evidence from the Second Pilot Study

(Discrimination, reliability and validity)

The composition of the sample is given in section 4.5.1 of the text. The replies of the lecturer are omitted from this analysis so $n = 49$ middle managers attending post-experience courses. They were fairly typical of the type of middle management student for whom the questionnaire was being designed. The material in the courses they were attending was, however, in no way related to the questions asked here, so that they were not being exposed to any systematic bias on that account.

The second pilot study version of the 'methods of working' section of MAM is given in full in Appendix 6, which shows how the items were scored. The maximum possible range in each case was 0-3, and the midpoint was therefore 1.5. The distribution of scores for items 5, 11, 17, 23, 29 and 35 (which all deal with paying much, versus little, attention to analysing facts) was skewed, as was the distribution for items 6, 12, 18, 24, 30 and 36 (discourage people from expressing their feelings versus encourage them). The means and standard deviations for the remaining items are given below.

The use of the statistics which follow assumes that there are equal intervals between the responses 'as far as possible do', 'on the whole do', 'on the whole do not', and 'as far as possible do not'. George W Bohrnstedt asserts in chapter 3 of G. F. Summer's book 'Attitude Measurement' (Rand McNally 1970) 'it is unlikely that the decision to assume interval measurement when it does not exist will lead to spurious over-estimation of results'. We believe that, from a pragmatic point of view, it is more fruitful for research to use the more powerful analytical techniques which are available if we assume equal intervals.

Means and Standard Deviations for 24 Methods of Working Items

Activity to which the method relates	'Methodical' items		'Guarded' items		'Insensitive' items		'Systematic' items	
	Q. No.	Mean Standard Deviation	Q. No.	Mean Standard Deviation	Q. No.	Mean Standard Deviation	Q. No.	Mean Standard Deviation
Briefing subordinates	1	0.959 0.727	2	1.082 0.966	3	0.939 0.712	4	1.571 0.898
Trouble shooting	7	0.674 0.585	8	1.694 0.994	9	1.367 0.941	10	1.776 1.093
Forward planning	13	0.776 0.708	14	1.306 0.908	15	1.347 0.980	16	1.939 0.998
Interest in personal problems	19	0.980 0.892	20	1.816 0.919	21	0.531 0.673	22	1.204 0.989
Conducting meetings	25	1.143 0.881	26	1.510 0.906	27	1.306 0.952	28	1.735 0.898
Reviewing subordi- nates' progress	31	1.122 0.848	32	1.735 0.921	33	0.952 0.955	34	1.571 0.990

It can be seen from the above table that it is in the 'guarded' and 'systematic' columns that the means consistently fall between a score of 1 and 2, and the standard deviations are consistently high (bearing in mind that the maximum possible score = 3). For four of the methodical items (1, 7, 13 and 19) the means are rather low, indicating a tendency for respondents to say they 'modify strategy when something unforeseen occurs'. Similarly, for items 3 and 21 there is a tendency to skewness, with respondents preferring to 'take people's feelings fully into account' when briefing subordinates, reviewing their progress, or taking an interest in their personal problems.

A correlation matrix of the above 24 items was obtained, and analysed for clusters as recommended by McQuitty (1957) in his article 'Elementary Linkage Analysis' in *Educational and Psychological Measurement*, vol.17, pages 207-209. The full matrix is reproduced below.

CORRELATION MATRIX ON 24METHODS OF WORKING ITEMS FROM SECOND PILOT STUDY

N = 49

Decimal points are omitted

Q.No.	1	2	3	4	7	8	9	10	13	14	15	16	19	20	21	22	25	26	27	28	31	32	33	34	
1	-																								
2	44	-																							
3	59	54	-																						
4	13	-06	-17	-																					
7	45	19	10	16	-																				
8	15	35	18	-10	-03	-																			
9	20	17	31	03	-12	10	-																		
10	07	-18	-07	57	-05	-18	12	-																	
13	06	15	-03	-05	02	25	09	01	-																
14	42	60	47	-02	19	18	04	-03	08	-															
15	36	01	21	12	06	15	35	28	35	25	-														
16	08	-04	-01	24	-10	21	05	16	-05	-02	00	-													
19	38	31	35	18	30	34	20	14	06	34	17	21	-												
20	11	34	23	-22	19	14	13	-10	06	31	09	-15	12	-											
21	25	31	32	03	13	12	11	08	04	30	12	02	26	03	-										
22	10	07	08	50	-13	23	-01	46	-11	04	05	43	40	-18	14	-									
25	23	06	31	-09	13	21	36	05	25	12	20	20	47	11	01	13	-								
26	03	47	08	-32	01	40	21	-22	40	28	08	-08	42	50	-01	-09	14	-							
27	25	31	54	-13	-04	34	15	11	10	27	32	-09	15	34	16	15	-00	22	-						
28	08	-19	-06	41	11	-09	26	36	-22	-15	-03	51	25	-08	-10	43	28	-18	-19	-					
31	44	26	25	06	37	09	-13	-01	25	40	15	01	33	26	21	-01	22	13	36	-23	-				
32	-02	46	07	-11	-01	40	25	-14	32	34	17	00	29	52	19	-03	12	72	21	-06	15	-			
33	24	05	10	-17	28	14	05	-02	30	13	29	03	05	31	31	-19	02	12	26	-28	45	12	-		
34	23	-18	-10	40	11	05	10	50	15	-13	30	10	20	-18	16	36	12	-05	10	45	-01	08	-06	-	

The short formula for calculating Alpha is:

$$\text{Alpha} = \frac{nr_{ij}}{1+(n-1)r_{ij}}$$

where n = the number of separate items in the scale.

In this case $n = 5$ for each scale.

and r_{ij} = the average of all the inter-item correlations for a scale.

$r_{ij} = 0.45$ for the 'guarded methods' scale.

$r_{ij} = 0.44$ for the 'systematic methods' scale.

All the inter-item correlations within the two separate scales are significant beyond the 0.05 level of probability with an n of 50, and if each correlation is multiplied by the appropriate Alpha reliability coefficient, 16 of the 20 correlations remain significant beyond 0.05.

Validity

Reliability reflects the degree of agreement among maximally similar methods (items 2, 14, 20, 26 and 32 in this case for guarded methods and items 4, 10, 22, 28 and 34 for systematic methods). Validity would be established by correlating guarded methods with a maximally independent measure of guardedness, and systematic methods with a maximally independent measure of being systematic. It was predicted that there would be a high negative correlation between guarded methods and social skills training targets and a high positive correlation between systematic methods and analytical skills training targets. These tests were not made on this particular version of the questionnaire for the reasons given in section 4.6.1 of the text.

Some evidence of discriminant validity between guarded behaviour and systematic behaviour is given in the ordered matrix in this appendix, which shows that the correlations in the triangles on the diagonal are higher than the correlations in the off-diagonal box. This indicates, for example, that being 'wary of what we say or do in front of others when briefing subordinates^{at}' (item 2) is much more like being 'wary of what we say or do in front of others when engaged in forward planning' (item 14, $r = 0.60$ with item 2) than either of these behaviours is to solving 'problems through a standard step-by-step procedure when briefing subordinates' (item 4, correlated 0.06 with item 2 and 0.02 with item 14).

QUESTIONNAIRE ON MANAGERIAL ACTIVITIES AND METHODS OF WORKING

The purpose of this questionnaire is to compare managerial activities and methods of working in different environmental settings.

We are interested in the following activities:

1. Briefing subordinates (e.g. at a daily review or control meeting).
2. Trouble shooting (e.g. finding causes for delays, breakdowns, or rejected work).
3. Forward planning (e.g. setting targets for the next quarter).
4. Taking an interest in personal problems (e.g. making allowances for domestic crises).
5. Conducting meetings (i.e. taking the chair or deputising for the chairman).
6. Reviewing the progress of subordinates (e.g. at annual merit award or salary review).

First we should like some estimate of the part these activities actually play in your work.

You will find below each activity a set of paired adjectives. Please place a tick (✓) in one of the seven spaces on each scale which most accurately represents the part the activity plays in your own job.

Example:

IN MY JOB ASSIGNING THE WORK PRIORITIES IS:

central	:	:	:	✓	:	:	:	:	:	peripheral
rare	:	:	:	:	:	:	✓	:	:	common

Please be careful to place your tick in the middle of the space and NOT BETWEEN the spaces - for example:

this	:	:	✓	:	:	NOT	:	:	✓	:
------	---	---	---	---	---	-----	---	---	---	---

Would you please write in the space below the title of your job.

My job is: _____

1. IN MY JOB BRIEFING SUBORDINATES IS:

VI.70

important : : : : : : : :
 obligatory : : : : : : : :
 time consuming : : : : : : : :
 (2 or more hours
 per week)

unimportant
 discretionary
 not time consuming
 (less than 1 hour
 per week)

2. IN MY JOB TROUBLE SHOOTING IS:

important : : : : : : : :
 obligatory : : : : : : : :
 time consuming : : : : : : : :

unimportant
 discretionary
 not time consuming

3. IN MY JOB FORWARD PLANNING IS:

important : : : : : : : :
 obligatory : : : : : : : :
 time consuming : : : : : : : :

unimportant
 discretionary
 not time consuming

4. IN MY JOB TAKING AN INTEREST IN PERSONAL PROBLEMS IS:

important : : : : : : : :
 obligatory : : : : : : : :
 time consuming : : : : : : : :

unimportant
 discretionary
 not time consuming

5. IN MY JOB CONDUCTING MEETINGS IS:

important : : : : : : : :
 obligatory : : : : : : : :
 time consuming : : : : : : : :

unimportant
 discretionary
 not time consuming

6. IN MY JOB REVIEWING THE PROGRESS OF SUBORDINATES IS:

important : : : : : : : :
 obligatory : : : : : : : :
 time consuming : : : : : : : :

unimportant
 discretionary
 not time consuming

MANAGERS' METHODS OF WORKING

We should like you now to indicate how the managers who work with you carry out these same activities. By 'managers who work with you' is meant (a) any colleagues on your own level who work for the same immediate superior as you do, and (b) your immediate superior.

You will find below descriptions of three possible ways of behaving in connection with each activity. To the right are columns headed 'colleagues' and 'superior'. Of course, it is difficult to be accurate in describing other people's behaviour since considerable variation is possible. However, we should like you to place a tick in each column against the description which you think gives the closest approximation to the way these managers usually behave.

	Most generally true of colleagues (please tick one)	Most generally true of superior (please tick one)
BRIEFING SUBORDINATES (at a review or control meeting to allocate responsibility for work)		
1. The manager gives his briefing, which he is prepared to clarify, but he will not disclose additional information.		
2. The manager gives his briefing, which he is prepared to clarify. He will also disclose additional information on request.		
3. The manager takes his subordinates into his confidence, fully disclosing the facts as he sees them and inviting free and frank discussion of the merits or demerits of his instructions.		
4. None of the above apply. The best description would be: (please insert)		

	Most generally true of colleagues (please tick one)	Most generally true of superior (please tick one)
<p>TRouble SHOOTING (finding causes for delays, breakdowns, failures, or unsatisfactory work in operations for which the manager is responsible)</p>		
<p>1. Generally, when the manager has some initial information, he formulates the problem so that he can employ a predetermined search procedure.</p>		
<p>2. Generally, when the manager has some initial information, he classifies the problem, decides on the most logical causal explanations, and determines investigation requirements accordingly.</p>		
<p>3. Generally, when the manager has initial information, he makes a provisional assessment of the problem and of the area to be investigated. He uses intuition and experience to determine investigation requirements</p>		
<p>4. None of the above apply. The best description would be: (please insert)</p>		

	Most generally true of colleagues (please tick one)	Most generally true of superior (please tick one)
FORWARD PLANNING (setting quarterly targets for the operations for which the manager is responsible)		
1. Generally the manager assembles relevant information, and uses pre-determined decision rules to arrive at future targets.		
2. Generally the manager assembles relevant information and makes target projections partly by pre-determined decision rules and partly using assumptions derived from experience.		
3. Generally the manager assembles relevant information and makes target projections based entirely on assumptions derived from experience.		
4. None of the above apply. The best description would be: (please insert)		
* decision rule. = a formula, algorithm, or equation which prescribes steps for converting a set of values into another set.		

	Most generally true of colleagues (please tick one)	Most generally true of superior (please tick one)
TAKING AN INTEREST IN THE PERSONAL PROBLEMS OF SUBORDINATES (making allowances for domestic crises)		
1. The manager listens to what the employee has to say, and tells the employee what allowance, if any, can be made. He will answer questions for clarification but will not discuss the basis for his decision.		
2. The manager listens to what the employee has to say and tells the employee what allowances can be made. He will answer questions for clarification and will also give his reasons on request.		
3. The manager takes the employee fully into his confidence, encouraging a free and frank discussion of the total situation.		
4. None of the above apply. The best description would be: (please insert)		

	Most generally true of colleagues (please tick one)	Most generally true of superior (please tick one)
<p>CONDUCTING MEETINGS (taking the chair or deputising for the chairman at a meeting called to collect and disseminate facts and opinions)</p>		
<p>1. The chairman expects a written agenda to be circulated in advance. He makes sure that people keep to the point and he summarises the discussion.</p>		
<p>2. The chairman does not normally expect a written agenda to be circulated, but he guides the discussion and sums up at the end.</p>		
<p>3. Meetings are very informal without written agenda and the chairman lets the discussion develop spontaneously. He may draw attention to key points but he does not usually attempt to summarise.</p>		
<p>4. None of the above apply. The best description would be: (please insert)</p>		

	Most generally true of colleagues (please tick one)	Most generally true of superior (please tick one)
<p>REVIEWING THE PROGRESS OF SUBORDINATES (e.g. for salary or merit awards or for promotion)</p>		
<p>1. The manager tells the subordinate what he (the manager) thinks of his (the subordinate's) progress. The manager is prepared to clarify his assessment but not to discuss it.</p>		
<p>2. The manager tells the subordinate what he (the manager) thinks of his (the subordinate's) progress. The manager is prepared to clarify his assessment and also to give further information on request.</p>		
<p>3. The manager takes the subordinate fully into his confidence, and encourages a free and frank discussion of the total situation.</p>		
<p>4. None of the above apply. The best description would be: (please insert)</p>		

QUESTIONNAIRE ON MANAGERIAL ACTIVITIES AND METHODS OF WORKING

The purpose of this questionnaire is to compare managerial activities and methods of working in different environmental settings.

We are interested in the following activities:

1. Briefing subordinates (e.g. at a daily review or control meeting).
2. Trouble shooting (e.g. finding causes for delays, breakdowns, or rejected work).
3. Forward planning (e.g. setting targets for the next quarter).
4. Taking an interest in personal problems (e.g. making allowances for domestic crises).
5. Conducting meetings (i.e. taking the chair or deputising for the chairman).
6. Reviewing the progress of subordinates (e.g. at annual merit award or salary review).

First we should like some estimate of the part these activities actually play in your work.

You will find below each activity a set of paired adjectives. Please place a tick (✓ /) in one of the seven spaces on each scale which most accurately represents the part the activity plays in your own job:

Example:

IN MY JOB ASSIGNING THE WORK PRIORITIES IS:

central	:	:	:	✓	:	:	:	:	:	peripheral
rare	:	:	:	:	:	:	✓	:	:	common

Please be careful to place your tick in the middle of the space and NOT BETWEEN the spaces - for example:

this	:	:	✓	:	:	NOT	:	:	✓	:
------	---	---	---	---	---	-----	---	---	---	---

Would you please write in the space below the title of your job.

My job is: _____

1. IN MY JOB BRIEFING SUBORDINATES IS:

important : : : : : : : :
 obligatory : : : : : : : :
 time consuming : : : : : : : :
 (2 or more hours
 per week)

unimportant
 discretionary
 not time consuming
 (less than 1 hour
 per week)

2. IN MY JOB TROUBLE SHOOTING IS:

important : : : : : : : :
 obligatory : : : : : : : :
 time consuming : : : : : : : :

unimportant
 discretionary
 not time consuming

3. IN MY JOB FORWARD PLANNING IS:

important : : : : : : : :
 obligatory : : : : : : : :
 time consuming : : : : : : : :

unimportant
 discretionary
 not time consuming

4. IN MY JOB TAKING AN INTEREST IN PERSONAL PROBLEMS IS:

important : : : : : : : :
 obligatory : : : : : : : :
 time consuming : : : : : : : :

unimportant
 discretionary
 not time consuming

5. IN MY JOB CONDUCTING MEETINGS IS:

important : : : : : : : :
 obligatory : : : : : : : :
 time consuming : : : : : : : :

unimportant
 discretionary
 not time consuming

6. IN MY JOB REVIEWING THE PROGRESS OF SUBORDINATES IS:

important : : : : : : : :
 obligatory : : : : : : : :
 time consuming : : : : : : : :

unimportant
 discretionary
 not time consuming

COLLEAGUES' METHODS OF WORKING

The statements which follow represent ways in which people may behave when engaged in management activities. The statements are descriptive and do not imply judgment of whether the behaviour is desirable or undesirable.

You are asked to indicate the degree to which each statement is true or false of the managers who work with you, that is of colleagues at your own level who work for the same superior as you do. To the right of each statement you will find the following letters:

DT MT N MF DF

DT means definitely true

MT means mostly true

N means neither true nor false (if you are undecided about any particular statement you would choose this category)

MF means mostly false

DF means definitely false.

Please circle the letter or letters that best represent the way you see the behaviour of COLLEAGUES AT YOUR OWN LEVEL WHO WORK FOR THE SAME SUPERIOR AS YOU DO.

Example:

BRIEFING SUBORDINATES

They explain things clearly

DT (MT) N MF DF

means 'it is mostly true that colleagues at my level explain things clearly when briefing subordinates'.

1. TROUBLE SHOOTING

They decide on, and follow, a fact-finding sequence. DT MT N MF DF

2. BRIEFING SUBORDINATES

They disclose a minimum of information. DT MT N MF DF

3. FORWARD PLANNING

They use predetermined decision rules. DT MT N MF DF

4. CHAIRING MEETINGS

They make sure people keep to the point.

DT MT N MF DF

5. REVIEWING SUBORDINATES' PROGRESS

They explain how they have measured performance.

DT MT N MF DF

6. TAKING AN INTEREST IN PERSONAL PROBLEMS

They keep discussion as brief as they can.

DT MT N MF DF

7. TROUBLE SHOOTING

They follow no particular fact finding sequence.

DT MT N MF DF

8. BRIEFING SUBORDINATES

They take the subordinates fully into their confidence.

DT MT N MF DF

9. FORWARD PLANNING

They use assumptions from past experience as the chief guide to future targets.

DT MT N MF DF

10. CHAIRING MEETINGS

They let the discussion develop spontaneously.

DT MT N MF DF

11. REVIEWING SUBORDINATES' PROGRESS

They encourage a frank discussion.

DT MT N MF DF

12. TAKING AN INTEREST IN PERSONAL PROBLEMS

They make time for the employee to have his say.

DT MT N MF DF

SUPERIOR'S METHODS OF WORKING

Sometimes people behave in a similar way to their boss, and sometimes they act quite differently. We have, therefore, asked you to describe how you see the behaviour of colleagues separately from how you see the behaviour of your immediate superior.

We should like you now, without looking back at your answers to the previous pages, to reply to the statements as before, but this time with reference TO YOUR IMMEDIATE SUPERIOR.

Example:

BRIEFING SUBORDINATES

He explains things clearly.

DT (MT) N MF DF

means 'it is mostly true that my immediate superior explains things clearly when briefing subordinates'.

1. TROUBLE SHOOTING

He decides on, and follows, a fact-finding sequence.

DT MT N MF DF

2. BRIEFING SUBORDINATES

He discloses a minimum of information.

DT MT N MF DF

3. FORWARD PLANNING

He uses predetermined decision rules.

DT MT N MF DF

4. CHAIRING MEETINGS

He makes sure people keep to the point.

DT MT N MF DF

5. REVIEWING SUBORDINATES' PROGRESS

He explains how he has measured performance.

DT MT N MF DF

6. TAKING AN INTEREST IN PERSONAL PROBLEMS

He keeps discussion as brief as he can.

DT MT N MF DF

7. TROUBLE SHOOTING

He follows no particular fact finding sequence. DT MT N MF DF

8. BRIEFING SUBORDINATES

He takes the subordinates fully into his confidence. DT MT N MF DF

9. FORWARD PLANNING

He uses assumptions from past experience as the chief guide to future targets. DT MT N MF DF

10. CHAIRING MEETINGS

He lets the discussion develop spontaneously. DT MT N MF DF

11. REVIEWING SUBORDINATES' PROGRESS

He encourages a frank discussion. DT MT N MF DF

12. TAKING AN INTEREST IN PERSONAL PROBLEMS

He makes time for the employee to have his say. DT MT N MF DF

THANK YOU FOR YOUR CO-OPERATION.

Statistical evidence from the third pilot study
(discrimination, reliability and validity)

The full questionnaire to which this appendix relates is given in Appendix 9. It contains 12 Methods of Working items which are applied to colleagues (pages 3 and 4), and to superiors (pages 5 and 6).

The statistics presented here refer to the colleague version. This is because teams are the prime focus of this research. The conclusions to be derived from either version are the same as regards distribution of scores, reliability and validity.

There were four items out of the twelve which had very low mean correlations with other items. They are shown below.

Item	Mean r with the 11 other items (both sets)
Use predetermined decision rules in forward planning	0.15
Use assumptions from past experience in forward planning	0.10
Let the discussion develop spontaneously in meetings	0.17
Keep discussion as brief as they can when taking an interest in personal problems	0.17

Dispersion

All items were rated from definitely true to definitely false and were scored 1-5. Maximum range was used in all the

items below except the first where the range was 2-5. The means and standard deviations for the 8 retained items are given for the third pilot and for the first 51 subjects from the main project.

	Mean* n=25*	Mean* n=51*	s.d.* n=25*	s.d.* n=51*
1. trouble shooting (use sequence)	3.680	3.851	0.802	0.890
2. meetings (keep to point)	3.200	3.596	1.155	0.815
3. review progress (explain measure)	3.400	3.177	1.143	1.023
4. trouble shooting (not random)	3.160	3.412	1.143	1.088
5. briefing subordinates (disclose)	3.080	3.407	1.077	1.313
6. briefing subordinates (take into confidence)	3.000	3.333	1.080	1.042
7. review progress (be frank)	3.360	3.451	1.075	0.956
8. personal problems (make time)	3.440	3.608	1.044	0.951

* n = 25 - third pilot study
n = 51 - main study

Eight-item correlation matrix on Methods of Working.

Third Pilot Study - 8.3.71 - n = 25 (Decimal points omitted)

Appendix 9
page 3, Q.No.

	1	2	3	4	5	6	7	8	
1. trouble shooting (use sequence)	-								1
2. meetings (keep to point)	48	-							4
3. review progress (explain measure)	31	45	-						5
4. trouble shooting (not random)	56	35	40	-					7
5. briefing subordinates (disclose)	42	05	12	43	-				2
6. briefing subordinates (take into confidence)	48	30	41	37	50	-			8
7. review progress (be frank)	28	48	69	39	30	36	-		11
8. personal problems (make time)	13	41	45	36	08	11	71	-	12
Mean correlation of the item with the remaining 7 items	38	36	40	40	27	36	45	32	

As an index of reliability, coefficient λ (see Appendix 7) = 0.82

If one multiplies a correlation coefficient by 0.82, one will get an estimate of what its true value is likely to be. This would mean that for a sample of 25 most of the above correlations could have occurred by chance.

We therefore repeated the above analysis on the first 51 respondents from the main study with the following results.

Eight-item correlation matrix on methods of working - n = 51
 21.07.72. (Decimal points omitted)

	1	2	3	4	5	6	7	8	Appendix 9 page 3, Q.No.
1. trouble shooting (use sequence)	-								1
2. meetings (keep to point)	42	-							4
3. review progress (explain measure)	41	41	-						5
4. trouble shooting (not random)	61	23	36	-					7
5. briefing subordi- nates (disclose)	34	50	29	34	-				2
6. briefing subordi- nates (take into confidence)	46	48	39	45	52	-			8
7. review progress (be frank)	50	25	46	31	22	40	-		11
8. personal problems (make time)	35	28	45	31	28	49	56	-	12
Mean correlation of item with remaining 7 items	44	37	40	37	36	46	39	39	

As an index of reliability, coefficient A (see Appendix 7) = 0.91.
 With n = 51 only 8 of the 28 correlations would be below the
 0.05 confidence level.

Validity

It can be seen in both matrices that there is no difference between the correlations in the triangles on the diagonal and those in the off-diagonal box, indicating that the first 4 items do not represent a different skill from the second 4 items. All eight items probably distinguished 'approved behaviour' from 'non-approved behaviour'. For further discussion of this problem see the whole of section 5 of the text.

The matrix from the third pilot study should be compared with the ordered matrix for the second pilot study shown in Appendix 7. One can conclude that the clear segregation of 'systematic' items and 'guarded' items found in the second pilot was not reproduced in the third. The change in wording has led to high inter-correlations between analytical and social items. If the wording of the second pilot questionnaire was causing spurious responses, this change can be regarded as a gain. If, however, the second pilot was discriminating validly between two separate behaviours then the loss of discrimination in the third pilot is to be regretted. The 8 items do not provide a 'criterion-referenced' scale of managerial skill in the sense that an increment in 'proficiency' can be represented by each additional item. What we have is a set of related behaviour ratings.

QUESTIONNAIRE ON MANAGERIAL BEHAVIOUR AND TRAINING OBJECTIVES

The purpose of this questionnaire is to enable direct comparisons to be made of the training aims of different training programmes and different employing organizations. We are interested in the following managerial activities:

1. Briefing subordinates (e.g. at a daily review or control meeting).
2. Trouble shooting (e.g. finding causes for delays, breakdowns, or rejected work).
3. Forward planning (e.g. setting targets for the next quarter).
4. Taking an interest in personal problems (e.g. making allowances for domestic crises).
5. Conducting meetings (i.e. taking the chair or deputising for the chairman).
6. Reviewing the progress of subordinates (e.g. at annual merit award or salary review).

First we should like some estimate of THE PART YOU THINK THESE ACTIVITIES ACTUALLY PLAY in the job of the AVERAGE MANAGER WHO COMES TO YOU for training.

You will find below each activity a set of paired adjectives. Please place a tick (✓) in one of the seven spaces on each scale which most accurately represents your opinion of the part the activity plays.

Example:

IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES ASSIGNING WORK PRIORITIES IS:

central : : : ✓ : : : : : peripheral
 rare : : : : : ✓ : : : common

Please be careful to place your tick in the middle of the space and NOT BETWEEN the spaces - for example:

this : : ✓ : : NOT : : ✓ : :

If you conduct a range of managerial skills programmes please write below the title of the course (at senior or middle management level) which you regard as characteristic and which you will bear in mind in making your ratings.

Name of course

Level of Management

senior / middle *

* delete whichever is inapplicable

1. IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES
BRIEFING SUBORDINATES IS PROBABLY:

important	: : : : : : : :	unimportant
obligatory	: : : : : : : :	discretionary
time consuming (2 or more hours per week)	: : : : : : : :	not time consuming (less than 1 hour per week)

2. IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES
TROUBLE SHOOTING IS PROBABLY:

important	: : : : : : : :	unimportant
obligatory	: : : : : : : :	discretionary
time consuming	: : : : : : : :	not time consuming

3. IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES
FORWARD PLANNING IS PROBABLY:

important	: : : : : : : :	unimportant
obligatory	: : : : : : : :	discretionary
time consuming	: : : : : : : :	not time consuming

4. IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES
TAKING AN INTEREST IN PERSONAL PROBLEMS IS PROBABLY:

important	: : : : : : : :	unimportant
obligatory	: : : : : : : :	discretionary
time consuming	: : : : : : : :	not time consuming

5. IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES
CONDUCTING MEETINGS IS PROBABLY:

important	: : : : : : : :	unimportant
obligatory	: : : : : : : :	discretionary
time consuming	: : : : : : : :	not time consuming

6. IN THE JOB OF THE AVERAGE MANAGER WHO ATTENDS OUR COURSES
REVIEWING THE PROGRESS OF SUBORDINATES IS PROBABLY:

important	: : : : : : : :	unimportant
obligatory	: : : : : : : :	discretionary
time consuming	: : : : : : : :	not time consuming

- 3 -

TRAINING OBJECTIVES

The statements which follow represent ways in which people behave when engaged in management activities.

You are asked to indicate the degree to which YOU WOULD LIKE each statement to be true or false of managers who have attended your courses.

To the right of each statement you will find the following letters;

DT MT N MF DF

DT means I would like it to be DEFINITELY TRUE.

MT means I would like it to be MOSTLY TRUE.

N means I would like it to be neither true nor false, or I am undecided.

MF means I would like it to be MOSTLY FALSE.

DF means I would like it to be DEFINITELY FALSE.

Please circle the letter or letters which best represents the way YOU WOULD LIKE YOUR PAST TRAINING COURSE MEMBERS TO BEHAVE on the job.

Example:

BRIEFING SUBORDINATES

They explain things clearly.

DT MT N MF DF

means: 'I would like it to be definitely true that past course members explain things clearly when briefing subordinates.'

1. TROUBLE SHOOTING

They decide on, and follow, a fact-finding sequence. DT MT N MF DF

2. BRIEFING SUBORDINATES

They disclose a minimum of information. DT MT N MF DF

3. FORWARD PLANNING

They use predetermined decision rules. DT MT N MF DF

4. CHAIRING MEETINGS

They make sure people keep to the point. DT MT N MF DF

- 4 -

- | | |
|---|---------------|
| 5. REVIEWING SUBORDINATES' PROGRESS
They explain how they have measured performance. | DT MT N MF DF |
| 6. TAKING AN INTEREST IN PERSONAL PROBLEMS
They keep discussion as brief as they can. | DT MT N MF DF |
| 7. TROUBLE SHOOTING
They follow no particular fact-finding sequence. | DT MT N MF DF |
| 8. BRIEFING SUBORDINATES
They take the subordinates fully into their confidence. | DT MT N MF DF |
| 9. FORWARD PLANNING
They use assumptions from past experiences. | DT MT N MF DF |
| 10. CHAIRING MEETINGS
They let the discussion develop spontaneously. | DT MT N MF DF |
| 11. REVIEWING SUBORDINATES' PROGRESS
They encourage frank discussion. | DT MT N MF DF |
| 12. TAKING AN INTEREST IN PERSONAL PROBLEMS
They make time for the employee to have his say. | DT MT N MF DF |

Appendix VIII.1D E P PROJECT - TIMETABLE

January 1970	Trainer Promoter Questionnaires sent out to about 25 training organisations
January - February 1970	Training Promoter Questionnaires analysed Initial interview arranged in companies for sample selection purposes
February 1970	University Council approves grant
	Research worker paid from grant as from 1st March 1970
March 1970	Data collection begins in first two or three companies selected
April - October 1970	Data collection continues. Aim to study ten companies and 20-30 groups, approximately 300 individuals
August 1970	First interim report to D.E.P.
October 1970 - April 1971	Data collection continues. Aim to have about thirty companies and 60-80 groups, approximately 600-800 individuals
March 1971	Second interim report to D.E.P.
April - July 1971	Preliminary data analysis
July - December 1971	Preparation of initial findings
August 1971	Third interim report to D.E.P.
March 1972	Fourth interim report to D.E.P.
August 1972	Fifth interim report to D.E.P.
January 1972 - March 1973	Completion of data analysis and writing up of all aspects of project
March 1973	Final report submitted

GROUPS TRAINED ON FOCAL PROGRAMME (FROM MATCHED PAIRS)

Appendix VIII.2

VIII.29

COURSE ATTENDANCE (30+ hours) DURING FIVE-YEAR PERIOD				
Groups (Trained)	Functional Courses (I = Internal; E = External)	No. of attendees	General Management Courses (I = Internal; E = External)	No. of attendees
The courses marked * are the ones being evaluated				
DELPHI				
W (n = 3)	E Plant layout and materials handling	1	I SENIOR MANAGEMENT COURSE *	3
	E Training officers course	1	E General management	1
			E Future leaders study group	1
			E Senior managers (university)	1
T (n = 4)	E Standard costs and budgetary control	1	E MANAGEMENT *	1
	E Preproduction and design	1	E Human relations	1
			E Leadership	1
ETON				
O (n = 11)	I Maths, computer systems	4	I/E PRACTICE OF MANAGEMENT PRINCIPLES *	11
	I Economics and planning own industry's product	4	E MSc Business Studies(university)	1
	I Finance and Accounting	2	E Business summer school(university)	1
	E Design of communication systems	1	E Grid	2
	E Interviewing techniques	1	E Managers in Industry (university)	1
	E Presenting ideas	1	E Business Management (university)	1
	E O R and computing	1	I/E Practice of management principles (second part)	5
NOAH				
O (n = 4)	E Computer course	1	I MANAGEMENT PRACTICE *	2
			E Supervision	3
OCTO				
L (n = 12)	I District sales managers	6	I MANAGEMENT COURSE *	7
	I Representatives development	3	E T-group	1
	I Security	1	E Grid	1
	I Discussion leading	1		
	E Field sales	1		
	E Training of trainers	1		
	I Multiple account controllers course	6		
	E Effective speaking	1		
	I Methods of instruction	2		
	I Computer appreciation	1		
	I Office supervision	1		
	E Field management	2		
N (n = 13)	E Industrial relations (university)	1	I MANAGEMENT COURSE *	6
	E Technology of production (university)	1	E T-groups	1
	E Safety	2	E Grid	2
	I Security	3	E Management for the young executive	1
	I Discussion leading	3	E Modern management (university)	1
	E Advanced maths and statistics (univ.)	1	E Management and O D (university)	1
	E Radioactive materials handling	1		
	I Computer appreciation	1		
	I Personnel management	2		
	E Personnel management	2		
	I Quality control	1		
	E Marketing management (university)	1		
	E Skills of interviewine and bargaining	2		

GROUPS NOT TRAINED ON FOCAL PROGRAMME (FROM MATCHED PAIRS)

Appendix VIII.2 (continued)

VIII.30

Course attendance (30+ hours) during five-year period

1.

Groups (untrained)	Functional Courses (I = Internal; E = External)	No. of attendees	General Management Courses (I = Internal; E = External)	No. of attendees
DELPHI R (n = 6)	E Statistical methods	1	I Management (1966)	1
	E Computer appreciation	2	E Management(university) (1966)	2
	E Accounts	1		
	E Production engineering	1		
	E Time study	1		
	E Production control	1		
ETON P (n = 3)	E Construction contracts	1	E Managers course (university) (1968)	1
			I/E Practice of management principles(1968)	1
NOAH U (n = 4)	E Glass blowing	1	E BSc (university) (1968)	1
	I Supervision	2		
OCTO S (n = 12)	E Management information systems	3	I Management (1968)	2
	E Computer appreciation	3	I Middle management (1970)	2
	E Systematic layout	1	I Introduction to management (1971)	1
	E Economics of storage distribution	1		
	I Work study	1		
	E Advanced work design (university)	1		
	I Industrial relations	1		
	I Network course	1		
	I Primary standard data statistics	1		
	E Project evaluation	1		
	I MTM	1		
	E Cobol programming	3		
	E Systems analysis	2		
	E Maths and statistics	1		
	E Accounting for O R (university)	1		
	E Long range planning (university)	1		
E O R managers conference (university)	1			
E Computer manufacturers courses	5			
OCTO A (n = 15)	I Computing	2	E Executive programme for international managers (1968)	1
	I Senior staff	2	I Introduction to management (1968)	1
	I Office supervision	2		
	E Professional summer school	4		
	E Financial and management accounting (university)	1		
	E Programming appreciation	1		
	E Data processing appreciation	1		
	E Management information	3		
	E Cash forecasting	1		
	E University summer school	2		
	E Systems analysis	1		
	E Discounted cash flow	1		
	E Systems design	1		
	E Business planning and capital expenditure	2		
	E ICA Final	1		
I Production processes	1			

Course attendance (30+ hours) during five-year period

3.

Groups (trained)	Functional Courses (I = Internal; E = External)	No. of attendees	General Management Courses (I = Internal; E = External)	No. of attendees
FOCUS (n = 3)	E Work simplification	2	I MANAGEMENT TRAINING *	3
	E Communications and negotiating techniques	2	I M by O	2
	E Group organisation	1	I Management development	1
GINGER (n = 3)	E Work study	1	I MANAGEMENT TRAINING *	2
HORA (n = 2)	E Computer appreciation	1	I MANAGEMENT TRAINING *	1
	E Work study	1		
KAB (n = 3)	E Inspection training	1	I MANAGEMENT TRAINING *	2
	E Managing in a work study department	1	E Business studies	1
	E Works managers course	2	E Foremanship	1
	E Productivity bargaining	1		
	E Industrial relations	1		
<u>Untrained Groups</u>				
LARCH (n = 6)	E Management organisation and planning		E T-GROUP *	2
	I Work study	2	E Grid	1
	E Work study	3	E Practice of management principles	1
	E Operational research (university)	1	I Senior management	5
	E Method study	2		
METEOR (n = 9)	E Techniques of instruction	2	E DECISION MAKING *	3
	E Product preparation	1	E Modern management dynamics	1
	E Clerical work measurement	1	E Executive programme (university)	3
	E Rapid reading	1	E Advanced management (university)	2
	E Marketing (university)	1	E General management	1
	I Sales analysis	1		
	I Production management	2		
	E Quantitative techniques	1		
<u>Pre-trained group (this group subsequently all attended a team-building course of two days' duration all together)</u>				
PITT (n = 19)	E Marketing management (university)	1	E Managing change	1
	E Sales and marketing	1	E General management	3
	E Programming	1	E Senior management (university)	3
	E Job specifications	1	I Management development	1
	E Quality control	1	I Modern management	2
	E Management of R & D	1		
	E Human factors in operation of company's product	1		
	E Operational research	2		
	E Input-output analysis	1		
	E Long range planning	1		
	E Technological planning	1		
	E Private sector - public sector relations	1		
	E Engineering management	1		
	E Prototype assembly methods	1		
	E Advanced maths and statistics	2		
	E Computer introduction	1		
	E Computer engineering	1		
	E Industrial marketing	1		
E Publicity course	1			
E Service managers course	1			

INSTITUTIONS MENTIONED AS HAVING PROVIDED MANAGEMENT TRAINING FOR THE MANAGERS IN OUR SAMPLE DURING THE LAST FIVE YEARS

(Figures given = number of individuals mentioning the institution)

AMERICAN UNIVERSITIES		COLLEGES OF TECHNOLOGY AND POLYTECHNICS		CONSULTANTS	
Columbia	2	Birmingham	3	Anne Shaw	1
Harvard	3	Bristol	1	Ardell	1
Total	<u>5</u>	Coventry	3	B I S Ltd	1
BRITISH UNIVERSITIES		Harrow	1	Cooper Bros	1
Aston	1	Lanchester	1	C R A C	1
Birmingham	6	Leicester	1	Industrial Society	2
Bradford	5	North Gloucester	1	Inter-Nepcom	1
Bristol	1	Slough	2	Kepner Tregoe	3
Cambridge	3	Solihull	1	Leigh Edmonson	1
Edinburgh	1	West Ham	1	Management Services Ltd	1
Lancaster	1	Total	<u>15</u>	P A Consultants	1
Leeds	2	EUROPEAN INSTITUTIONS		Scientific Methods Inc (Blake)	5
London Business School	2	I M E D E Lausanne	3	Schlackman	2
Loughborough	1	Management Centre Europe	2	Tack	3
Manchester Business School	1	Total	<u>5</u>	Tavistock Institute	2
Oxford	6	INDEPENDENT COLLEGES IN THE U K		Training Partnerships (Coverdale)	16
Sheffield	1	Ashridge	2	Urwick Diebold	1
Southampton	1	Cranfield	1	Urwick Orr	3
Stathclyde	1	Henley	2	Total	<u>46</u>
Sussex	1	Sundridge Park	3		
Total	<u>34</u>	Total	<u>8</u>		
FIRMS OTHER THAN OWN COMPANY (mainly computer courses)		PROFESSIONAL BODIES, RESEARCH ASSOCIATIONS, TRADE ASSOCIATIONS, etc.			
English Electric	1	AEUW	1		
IBM	3	BACIE	4		
ICL	9	BCIRA	2		
IEI	1	ICA	5		
Isotype School (The)	1	ICMA	2		
NCC	2	Institute of Materials Handling	1		
Total	<u>17</u>	IPS	1		
		ISWP	3		
		MANTRA	1		
		MINISTRY OF LABOUR (sic)	1		
		PERA	3		
		RIPA	1		
		ROSPA	1		
		West of England Employers	5		
		Total	<u>31</u>		
Total External Courses					
				153	
Courses provided by manager's own company				<u>146</u>	
TOTAL COURSES MENTIONED				<u>299</u>	
Number of managers citing courses				121	
Number of managers not citing any course				<u>11</u>	
Total managers from the 18 groups				<u>132</u>	
				Mean number of courses per manager <u>2.25</u>	

EXTENDED COMMENTARY - BUSINESS ORGANISATION CLIMATE

Seventeen of Pitt's middle managers produced scores for certain BOCI scales which were significantly lower than the scores of the senior management. The seventeen were invited to comment freely on two of the scales concerned: Egalitarianism, which is the key scale in the factor we have called 'support'; and Task Orientation which is a key scale in the factor we have called 'stimulation'. Everyone of the seventeen managers responded.

The invitation sent to them reminded them of the areas in which their views were sought as follows:

1. The extent to which the Pitt organisation is felt to be fair and just.

There are no favourites in this place - everyone gets treated alike.

Anyone who knows the right people can get a better break.

Everyone has the same opportunity to make good.

As long as you are good at the job you'll get ahead here.

2. The extent to which there is concern for high work standards at Pitt.

People will work hard even if they realise that someone else may get the credit.

The standards here are not particularly hard to achieve.

People are always very serious and purposeful about their work.

Pressure of work is not accepted as an excuse for inferior performance.

There were eleven statements saying the organisation is fair and just (with respect to welfare and fringe benefits); and forty statements saying it is unjust (with respect to internal promotions).

There were eleven statements saying there is concern for high work standards (in the technological area), and twentyseven statements saying there is low concern with standards among managerial

and support staff.

All the favourable statements are reproduced here, and twentytwo of the unfavourable comments.

VERBATIM STATEMENTS AGREEING WITH THE PROPOSITION THAT 'THE ORGANISATION IS FELT TO BE FAIR AND JUST'

1. This is true when considering sickness, death or fringe benefits such as time off and overlooking slight indiscretions.
2. This organisation is in many respects fair and just - particularly in the welfare field - probably second to none in the whole of the country. It is also very lenient with regard to disciplinary measures.
3. I have always found the organisation to be fair and just but there are always exceptions to the rule and the bad things stick out always in people's minds to the good. (sic)
4. In the main, I would say this is felt to be so, but there are areas in which very strong feelings are evident. (This statement continues by citing things which upset people. These are included among those statements disagreeing with the statement at the top of this page.)
5. Yes. It still has some characteristics of the best type of family business. The top management try to know about various branches of the business. We have a very high percentage of people who have served many years.
6. I have encountered very little nepotism at this site, but.....
7. Conditions, fringe benefits, etc., are generally fair and just but these are within the framework of negotiation and policy, however.....
8. overall justice but relative injustice to a minority.
9. Although I still feel this to be a basic truth, I am, in my job, mainly concerned with people who feel that something has not been fair and just.
10. I am aware that of the 1,500 people in the salary structure activity under my personnel control, only a small percentage have problems that they deem worthy of a complaint.
11. On reflection, with regard to the organisation it is felt to be fair and just. In completing a questionnaire one is, of course, trying to reflect the average or norm situation. As the company is spread across many sites the reflections one gets is a very limited point of view and not necessarily across the board as one would hope from a survey of this nature.

VERBATIM STATEMENTS DISAGREEING WITH THE PROPOSITION THAT 'THE ORGANISATION IS FELT TO BE FAIR AND JUST'

1. Promotion seems to be geared in all levels of the company to whom you know and have worked with previously, and in some cases what section, i.e. Work Study v Planning, etc., or even by relationship.
2. This is not a true statement, favourites do exist and benefit from this favouritism.
3. Knowing the right people does tend to give an unfair advantage.
4. Certain vacancies for promotion, etc., have been allocated before being advertised, i.e., the advert is a formality. Also some applications for internal vacancies are held back due to the value of the person in his current job.
5. There is a strong feeling that when lower grade management become consistently successful at their jobs other people will be given promotion, particularly if their 'face fits', so the output is still achieved without upsetting the 'balance'.
6. Management is cliquy in some areas and justice is not seen to be done.
7. Older more 'reliable' men may be favoured more than younger able men.
8. The organisation is cumbersome and slow like a large wheel, whilst being controlled by a majority of persons who, although able to distinguish between one situation and another, do not, either by choice or instruction, decide to exercise the correct justice to suit the particular situation. This will only be overcome by implementation more frequently of what is known to be right, whether the decision be controversial or otherwise, and that needs to start at the top.
9. There is no equal opportunity here. There is no system (that works) whereby all available talent is considered when improvement opportunities arise.
10. a small percentage have problems that they deem worthy of a complaint. The result usually shows that some missaplication (sic) of company instructions is the cause of the trouble - i.e. the organisation is as fair and just as the managers who run it.
11. In all too many cases expensive people are brought in from outside when there are equally capable people already employed within the firm. These people become frustrated through being in a static situation for too long and consequently leave (what can be done anyhow when the place is run by the unions).

VERBATIM STATEMENTS AGREEING WITH THE PROPOSITION THAT 'THERE IS CONCERN WITH HIGH WORK STANDARDS'

1. Where this refers to the quality of work produced by the company this is very true.
2. There are individuals with their own personal high standards.
3. I feel this is basically true. It is clear to me that people are proud of their association with a highly technical activity. This feeling is to be expected at the design engineer - creative level but it also shows in the actions of very routine job-holders, e.g. a progress chaser shows a desire to be associated with his complex equipment and feels part of the complete team package.
4. People do work hard here even though other people get the credit. This happens especially in a one to one relationship.
5. There is concern with high work standards. Indeed. Unfortunately not always achieved but probably higher than in many companies. This is helped by the company being in high technology - i.e. the products are complex and difficult to make. This is a great morale builder.
6. High work standards are influenced partly by the type of industry we are in, but also by the majority of employees who are concerned about their performance standards and the recognition they receive for their efforts.
7. Most people recognise we are in a industry (sic) where high standards are required, and when operators ask if this particular standard is required it is usually found to be so.
8. People will work hard here even if they realise that someone else may get the credit is basically true because people set high standards of achievement for themselves, but it can also be because it is an inducement counting towards promotion.
9. People are very serious and purposeful about their work. Usually this comes from a sense of purpose and urgency about the job.
10. Pressure of work is not accepted as an excuse for inferior performance. This is true and can often mean taking work home for peace and quiet to get it correct.
11. I am sure the Division achieves high work standards both in quality and performance in many spheres and it is a feature which many look upon with pride.

VERBATIM STATEMENTS DISAGREEING WITH THE PROPOSITION THAT 'THERE IS CONCERN WITH HIGH WORK STANDARDS

1. As with most large organisations there are some areas where standards are not difficult to achieve. What is surprising is that they are tolerated in a rather benevolent way, almost as though it were an endearing quality! It can be frustrating running a Section of similar work content in a different environment, using fewer people with greater pressures yet having identical rates of pay.
2. Time and charts often are made more important than actual working facts.
3. People do not set high standards of achievement for themselves. Targets are only those set by those above.
4. Someone else may get the credit. Section leaders, etc., when one of a lower grade does the work.
5. People being what they are, few will work hard to allow someone else to get the credit, why should they? Where is the motivation in this system? Some people set high personal achievement standards, others are prepared to reach what they think is a reasonable standard, due I think in many instances to lack of incentive. I think if credit was given where it is due in many cases it would make for a more satisfied and consequently happier work force (so reducing labour turnover).
6. The quality of middle management in production and engineering is very low, particularly in their abilities to direct their subordinates.
7. There is concern with high work standards. Not true in many areas. There are pockets of resistance which successfully apply (sic) complicated management techniques.
8. The general rule is, 'as long as it all happens all right - let it!'. It must be accepted that the majority of people in the site could work harder but are not really encouraged either visually or verbally. Remember this can prove difficult as most people follow the national standard - 'I could - but what do I get out of it?'
9. The problem is that they won't pay people more even if they far exceed the requirements of their position.
10. The considered opinion is that the organisation is not sufficiently concerned with high work standards. In many cases it is the fault of supervision who are too lenient with work of poor quality.
11. Standards not hard to achieve? This I think is correct due to the poor standards set by many managers, a situation I found most disconcerting.

Appendix IX.1SCORING OF THE CRITERION AND FURTHER ITEM ANALYSIS

As explained in Chapter Six, section 5, trainers scored 4-5 on each of eight items on a 5-point grading, which meant that their scores ranged from 32 points to 40 points. The median for the 30 trainers who finally completed questionnaires was 37 points. (Three in-company trainers co-operated after Chapter Six was written.) The interquartile range for trainers was 3 points.

Full data are available for 127 of the 135 managers in the sample. The scores from these 127 managers ranged from 11 points to 40 points (a range of 29). Only seven of these 127 persons recorded scores above the trainer median. No group median was as high as the trainer median.

We felt justified in using group median scores because the within group variation was low. In only two groups was the interquartile range more than 7 points for colleague behaviour. For boss behaviour, five groups had a range of 8 or 8.5 points between the quartiles, but the remainder were all less than this.

We subtracted group medians from the trainer median. The group closest to the trainers' target therefore had the lowest score. To prevent confusion we therefore reversed these scores, by subtracting them from 20. A group's score is therefore: 20 minus (37 minus group median).

We rechecked the reliability of the items themselves and the advisability of treating them as a single scale by obtaining a correlation matrix for all the subjects on all the original items, whether retained or rejected. We also factor analysed the items.

The results are shown in the following table.

See Table 1

The reliability coefficient Alpha is calculated as described in Appendix VI.7 and Appendix VI.10. The Pilot Study Matrix in Appendix VI.10 is set out so as to be directly comparable with the present matrix, but there were only 25 subjects in the pilot study whereas there are now 127.

It can be seen that the four rejected items still have very low correlations with the eight items retained. All eight retained items load on the first factor produced from the twelve-item matrix. The rejected items load much more strongly on three subsequent factors. The original concept of an antithesis between analytical and social behaviour is hinted at in the negative loading of item 8 (personal problems) and the positive loading of item 9 (decision rule usage) on factor 3. The second factor looks like 'haphazard behaviour' !

Appendix IX.1 (Table 1)

RE-ANALYSIS OF THE EIGHT RETAINED AND FOUR REJECTED ITEMS IN THE MANAGERS' METHODS OF WORKING SECTION OF MAM		METHODS OF WORKING SECTION OF MAM								
Managers' Methods of Working. Analytical and Social Behaviour. 12 items Correlation Matrix n = 127 (Decimals omitted)		Managers' Methods of Working. Analytical and Social Behaviour. 12 items' Loadings in Principal Components Analysis (unrotated factors) n = 127								
Retained items		1	2	3	4	5	6	7	8	
<u>Analytical</u>										
Trouble shooting sequence	1	-								
Meetings keep to point	2	25	-							
Progress Review - measure	3	37	18	-						
Trouble shoot not random	4	48	25	23	-					
<u>Social</u>										
Briefing - disclose information	5	28	33	16	38	-				
Briefing - take into confidence	6	29	33	25	40	56	-			
Progress review - frank	7	28	36	43	29	25	41	-		
Make time for personal problems	8	18	35	29	16	25	44	55	-	
Mean item correlation		30	29	27	31	31	28	37	31	
<u>Rejected items</u>										
Planning use decision rule	9	22	17	00	25	11	13	12	00	
Planning use past experience	10	02	-05	17	11	13	12	16	12	
Let meetings develop spontaneously	11	-05	-23	-09	05	12	31	17	06	
Keep discussion of personal problems brief	12	14	16	00	19	07	10	14	26	
										% of var.
										8

A reliability coefficient for the 8 retained items = 0.81

THE LOADING OF TWENTY BOCI SCALES ON FIVE FACTORS AFTER VARIMAX ROTATION

(Decimal points omitted)

(n = 135 managers)**

Scale	Factor I*	Factor II*	Factor III*	Factor IV*	Factor V*
Task orientation	81	15	04	-17	03
Readiness to innovate	71	27	00	-01	-09
Scientific and technical orientation	70	-03	39	-03	12
Future orientation	62	28	15	05	21
Intellectual orientation	74	07	38	-21	17
Job challenge	76	14	21	-28	08
Industriousness	81	26	-12	-07	05
Egalitarianism	28	81	-03	-09	06
Interpersonal <u>non</u> aggression	22	78	34	-06	00
Management concern	21	62	22	-26	27
Leaders psychological closeness	31	68	-08	-22	-37
Sociability	29	13	78	03	14
Community orientation	19	04	76	01	28
Altruism	-02	49	63	-09	12
Emotional control	-04	01	03	83	12
<u>Not</u> questioning authority	-21	-20	-03	78	-01
Closedmindedness	-26	-55	-13	63	-08
Rules orientation	-18	-08	12	07	84
Administrative efficiency	34	29	20	03	70
Conventionality	-03	-09	45	12	55
Percent variance	22.26	15.49	12.00	17.07	9.73

* Factor I = Stimulation
 II = Support
 III = Public Spirit
 IV = Inhibition
 V = Regulation

** 131 plus 4 extra from Delphi W

COMPARISON OF MEANS AND STANDARD DEVIATIONS OF 132 MANAGERS IN THE PRESENT RESEARCH WITH 178 SUPERVISORS AND MANAGERS FROM PAYNE'S STUDY ON THE BOCI SCALES, AND WITH IDEALS OF 35 MANAGERS AND TRAINERS **

BOCI Scales	n = 132		n = 178		Ideal:n=35	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
STIMULATION						
*Task orientation	4.4	2.4	4.3	2.0	6.5	1.3
Readiness to innovate	4.4	2.0	4.5	1.9	6.4	1.1
Scientific and technical orientation	5.3	2.3	4.4	2.0	7.5	0.6
Future orientation	5.3	2.0	4.8	2.0	7.4	0.7
Intellectual orientation	5.1	2.2	4.0	1.9	7.1	1.0
Job challenge	5.2	1.9	5.1	1.7	6.9	0.8
Industriousness	<u>5.2</u>	2.5	<u>5.3</u>	2.1	<u>7.1</u>	1.0
	<u>5.0</u>		<u>4.6</u>		<u>7.0</u>	
SUPPORT						
*Egalitarianism	5.3	2.6	5.9	2.0	7.6	0.6
Interpersonal non-aggression	5.7	2.3	5.2	2.0	7.5	0.9
Management concern	5.9	2.6	5.9	1.7	7.7	0.6
Leaders Psychological closeness	<u>5.4</u>	1.8	<u>4.5</u>	1.5	<u>6.7</u>	1.2
	<u>5.6</u>		<u>5.4</u>		<u>7.4</u>	
PUBLIC SPIRIT						
Sociability	3.6	2.1	2.9	1.9	5.3	1.6
Community orientation	4.5	2.1	4.2	1.9	6.0	1.6
Altruism	<u>5.3</u>	2.2	<u>5.0</u>	2.0	<u>6.6</u>	1.2
	<u>4.5</u>		<u>4.0</u>		<u>6.0</u>	
INHIBITION						
*Emotional control	4.5	2.0	3.5	1.8	3.3	1.8
Not questioning authority	3.7	2.2	2.1	2.0	2.2	1.5
Closed mindedness	<u>3.1</u>	2.4	<u>2.7</u>	1.9	<u>0.8</u>	1.0
	<u>3.8</u>		<u>2.8</u>		<u>3.1</u>	
REGULATION.						
*Rules orientation	4.3	1.9	4.7	1.9	3.8	1.7
Administrative efficiency	4.2	2.0	3.8	2.2	6.4	1.2
Conventionality	<u>5.2</u>	2.2	<u>4.7</u>	2.1	<u>4.1</u>	2.4
	<u>4.6</u>		<u>4.4</u>		<u>4.8</u>	

*Scales used in Figure IX.1 to represent the factor.

** The first 24 trainers who responded plus 11 management students on an executive development programme whose responses were not statistically different.

SCORES FOR THE EIGHTEEN GROUPS ON PERSONAL BACKGROUND DATA

	Functions of members	Median Breadth of Further Education	Median Qualifi- cations	Median Variety of Experience	Modal Salary*
Delphi T	mixed	2	3	4	5
Delphi W	mixed	1	3	5	5
Delphi R	mixed	2	3	3	4
Eton O	long range planning	3	4	4	9
Eton P	purchasing	3	3	6	7
Focus	mixed	2	2	3	4
Ginger	mixed	3	2	7	4
Hora	mixed	1.5	2	3	4
Kab	mixed	4	1	3	4
Larch	work study	3	3	5	7
Meteor	education	3	3	3	9
Noah O	planning	0	0	2	4
Noah U	process quality and development	3.5	3	1	4
Octo S	systems and OR	2	3	2	7
Octo A	accounts	2	3	1	7
Octo L	sales	1.5	1	2.5	7
Octo N	mixed (mainly production)	2	3	3	7
Pitt	mixed	3	3	3.5	10

* Individual salaries are in £500 bands, 4 = £2,000 - £2,500;
10 = £5,000 upwards.

25 MIDLANDS MANUFACTURING ORGANISATIONS STUDIED BY INKSON ET AL.
(1970) AND USED AS THE BASIS FOR THE STRUCTURAL COMPARISONS IN
FIGURE IX.1

Products	Size in number of employees	Logarithm of size
Electrical components	18,000	4.26
Gas byproducts	9,700	3.99
Chocolate	7,500	3.88
Vehicle components	4,580	3.66
Civil Engineering	4,400	3.64
Vehicle components	3,200	3.51
Commercial vehicles	2,910	3.46
Machine tools	2,000	3.30
Large transport and cranes	1,700	3.23
Plastics	1,500	3.18
Domestic appliances	1,500	3.18
Car batteries	1,460	3.16
Vehicle steering gear	1,200	3.08
Aluminium castings	1,100	3.04
Vehicle components	950	2.98
Aluminium products	700	2.87
Paint	500	2.70
Metal plating finishes	495	2.70
Control equipment	430	2.63
Building goods	400	2.60
Metal goods	290	2.46
Electrical goods	280	2.45
Golf balls	262	2.42
Paint	260	2.41
Chemicals	235	2.37

THE LOADING OF TWENTY BOGII SCALES ON FIVE FACTORS AFTER VARIMAX ROTATION
(Decimal points omitted) n = 35 trainers and managers

Scale	Factor IV*	Factor V*	Factor III*	Factor I*	Factor II*
Task orientation	<u>36</u>	47	-05	-46	28
Readiness to innovate	09	02	17	<u>-52</u>	<u>-60</u>
Scientific and technical orientation	<u>80</u>	29	10	-12	-09
Future orientation	<u>33</u>	20	32	-57	20
Intellectual orientation	<u>67</u>	03	09	-25	-19
Job challenge	<u>34</u>	22	-13	-37	22
Industriousness	<u>56</u>	08	-37	08	08
Egalitarianism	10	<u>04</u>	17	-01	-01
Interpersonal <u>non</u> aggression	04	<u>85</u>	01	-20	-13
Management concern	<u>67</u>	<u>49</u>	28	-26	-02
Leaders psychological closeness	04	<u>51</u>	02	-37	<u>-54</u>
Sociability	-11	16	<u>64</u>	04	21
Community orientation	11	02	<u>89</u>	11	-05
Altruism	08	51	<u>65</u>	22	-06
Emotional control	-04	01	06	<u>77</u>	-14
<u>Not</u> questioning authority	-08	-12	-06	<u>85</u>	-06
Closedmindedness	-28	-15	05	<u>78</u>	07
Rules orientation	14	<u>-64</u>	07	22	<u>45</u>
Administrative efficiency	00	-26	-06	-08	<u>70</u>
Conventionality	-16	-26	40	04	<u>70</u>
Percent variance	11.80	12.26	11.13	16.73	10.77

* Factor IV = Stimulation; V = Support; III = Public Spirit; I = Inhibition; II = regulation.

The sequence of factor concepts from left to right is for comparison with Appendix IX.2. Scales with high loadings are underlined for ease of visual comparison with Appendix IX.2.