



UNIVERSITY  
OF NATAL

**CASS**  
DURBAN

# **PROCESS TECHNICIANS IN THE WORKING ENVIRONMENT**

## **A Study of Factors Relating to Labour Stability, Race Relations and Performance in a Major Chemical Process Plant**

**LAWRENCE SCHLEMMER  
CHRISTOPHER RAWLINS**

**CENTRE FOR APPLIED SOCIAL SCIENCES  
SENTRUM VIR TOEGEPASTE MAATSKAPLIKE WETENSKAPPE  
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LAWRENCE SCHLEMMER

CHRISTOPHER RAWLINS

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Centre for Applied Social Sciences  
University of Natal  
Durban

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## 1. INTRODUCTION

### 1.1 Background: Orientation, Scope and Methods

This report is a problem-oriented document. Our brief was to investigate factors relating to labour turnover and other salient aspects of employee behaviour in a major Chemical Process Plant in Durban. Our task, therefore, was to be critical; to uncover weaknesses in the organisation and to highlight them. For this reason the report which follows may create the impression of being too critical. We would like to correct such an impression right at the outset by stating very firmly that the problems we outline should not be seen to reflect the character of the Company and the Plant as a whole. We can attest to the fact that in terms of efficiency, production organisation, company administration and, as far as we can judge, all-round quality, the factory we have investigated ranks very highly indeed. Furthermore, the very fact that the Company had an investigation such as this undertaken by an outside body is proof of a most progressive and constructive outlook.

An investigation of labour turnover and related problems can take place within widely varying frameworks. It can be concerned, inter alia, with employee psychology, or company organisation, leadership style, the effects of technology or even the influence of external social factors. Techniques of study can vary almost as widely as the different theoretical perspectives on the topic. These may include psychometric testing of employees, depth or schedule-based interviewing, questionnaire studies, detailed observation of employee behaviour in the work setting, quantitative or systematic monitoring of employee movements and task activity, or studies of work-flow and output.

Our approach in this study, however, has been aimed at being as comprehensive as possible within a single project design. As will be pointed out presently, the methods employed have been largely dictated by the need for wide and inclusive coverage of all aspects of the personnel situation.



## 2.

In 1973, the Company engaged the Centre for Applied Social Sciences to mount a study aimed at uncovering the causes of labour turnover. The project commenced with a mixed in-depth interview and questionnaire-based investigation mainly among Process Technicians who had left the service of the company but also including selected interviews with existing employees. A report was prepared in mid 1974 which documented the findings of this investigation (Schlemmer and Weaver, 1974).

At that time, labour turnover in the company was relatively high having varied between 21 per cent and 31 per cent over preceding years. The fact that labour turnover was high meant that a great variety of motives and reasons for the termination of employment was to be discerned among ex-employees. The intensive nature of this first investigation facilitated the uncovering of a wide range of different responses among individuals which could be regarded as relevant to the decision to leave the company. It is difficult to summarise the findings of the first study because of the wealth of detail obtained - readers should consult the first report itself - but a rough sketch of the results would be as follows.

Former employees' motives for leaving appeared to relate in part to negative aspects of the image of the company or the work (although the company had a very positive image in many respects as well). These negative images included:

- the feeling that the company was more interested in production than in employees as human beings;
- a sense of job insecurity and a fear of arbitrary dismissal;
- a perception of low job status and that the job of Process Technician did not require any particular qualifications;
- a feeling that Process Technicians were treated merely as unskilled labour; and
- a view that it was somehow inappropriate for people with prospects and potential to remain with the company.

Aside from these "image" factors, a range of more specific characteristics of personnel and work organisation appeared to relate to turnover, such as:

- problems of communication within the company, particularly up and down the lines of authority;
- frustrated 'human relations' needs - the need among employees to feel that the company trusted them, was concerned about them and recognised their efforts;
- unsatisfied needs for achievement and pride in work;
- frustrations due to what was seen to be poor coordination of maintenance work with the work of the Technicians;
- perceived lack of reward for the amount of job responsibility;
- dissatisfaction with shift work;
- dangers and hazards at work;
- poor relations with supervisors and superiors generally;
- the view that decisions on promotion and performance ratings were often biased and unfair; and
- the perception of company administration as being inconsistent, particularly as regards promotion.

Wage rates were found to be relevant to labour turnover, but mainly among poorly motivated employees and among those who disliked many other aspects of the overall job situation. It was also found that lack of sympathetic attention by the company to non job-related problems (mainly the personal problems of workers) was an issue relevant to labour turnover.

More generally, the first analysis pointed to the fact that very often aspects of the work which employees valued highly in principle and which could have constituted important motivating stimuli were transformed into demotivating factors or sources of dissatisfaction, either because of a lack of recognition of employees who displayed positive motivation, or because of technical frustrations or problems of supervision. It seemed as if the company was failing to take advantage of some of the

intrinsically satisfying aspects of its work.

The findings just quoted must be seen as relevant in a situation of high labour turnover in labour marked favouring the seller. In such circumstances it is obvious that employees perceive promising opportunities elsewhere and that the decision to leave the company can be relatively lightly taken. It must be noted that the period 1973/1974 was one of high levels of economic activity in the country as a whole with a general shortage of skilled white manpower. At that stage virtually all Process Technicians were white and enjoyed the privilege of having artificial scarcity value. Some of the factors quoted as relevant to employee resignations in 1974 may therefore be regarded as marginal causes of turnover, in the sense that they would have insufficient effect to cause turnover under circumstances less favourable to job mobility (they would presumably continue to affect worker morale however).

Since 1974 and the commencement of this the second and final part of the investigation, two things have occurred to alter the opportunities and constraints in the job market of the Process Technician. Firstly, there has been an economic recession and alternative jobs are currently not nearly as freely available as in 1974. The economy has only very recently begun to show slight signs of recovery. It is also not likely that the rate of economic growth will return to pre 1975 levels for some time to come, largely due to political factors. Secondly, there has been a trend throughout the country to open avenues of employment like that of Process Technicians to Coloureds, Indians and in some cases blacks as well. This has occurred in the company under study and it has also occurred in other similar enterprises in the city. Whites no longer have the scarcity value at this level of employment which they enjoyed previously. Hence constraints on lateral job mobility have emerged which are likely to have negated the effects of at least some of the factors identified as causes of turnover in the earlier study. Labour turnover in the company under discussion is currently running at no more than 11 per

cent - less than one-half of the earlier rate.

For these reasons a follow-up study such as the one which will be reported presently was essential. The lower rate of turnover pertaining presently is likely to persist for some time and it is appropriate that an evaluation of causes of mobility within a changed job market be made.

This follow up study was planned for other reasons as well, however. As indicated above, the first report was based on an analysis of former employees, which limited the scope of the study in certain ways. Little attention could be paid to factors operating in the company situation which might have been affecting the morale and performance of non-mobile workers. The conclusions had to be fairly narrowly focussed on labour turnover alone, which limited the utility of the study for personnel policy in the broadest sense. Furthermore, the earlier investigation was intensive and qualitative, involving largely unstructured depth interviewing. As such the findings did not lend themselves easily to systematisation in such a way as to be employed as a set of criteria to aid in the selection of new recruits, which was one of the original goals of the investigation.

With these factors in mind, the present study was essentially conceived not as a supplementary probe but as a full-scale new investigation of the entire Process staff under changed external job-market conditions. As such the study had to be as comprehensive as possible and, for the sake of greatest stability in the findings, had to cover all Process employees as opposed to a sample. (Certain special categories of employees, however, such as those at one decentralised branch of the company, were purposely excluded.)

With fairly tight constraints on time and funding it was impossible to conduct personal face-to-face interviews with the Process Technicians. Bearing in mind that they were a literate and generally

well-educated group, it was decided to employ a questionnaire method; i.e., having respondents complete a schedule of questions on their own. Special methods were adopted to ensure nearly full coverage of all relevant aspects of the work experience, personal situations and personality traits of employees. One such method, for example, included asking the employees to respond to a comprehensive list of 'semantic differentials', allowing them a wide choice of associations with the work situation - a flexible and sensitive means of covering large areas of experience. (See questionnaire in Appendix I.)

No doubt certain possible insights have been lost because of a non face-to-face method of gathering data. Furthermore, we are fully aware that many deeper insights into interactions and problems among the workforce elude any investigation other than patient, unstructured observations and interviewing. We have made the assumption, however, that indications of all major problems and process relevant to the goals of the investigation would be manifest using a sensitive questionnaire approach. Our aim was not to describe the entire reality of the working world of our respondents but to obtain indices of that reality which could be systematically intercorrelated with one another in the analysis. The alternative goal of intensive study would have required very long-term observation using less-structured methods.

The respondents were prepared for the investigation by informing them that the University of Natal was to conduct a study aimed at exploring their attitudes to various aspects of their employment, that the study had been commissioned by their company but that the company would not have access to the individual responses, only to the final combined and processed statistical results. The rate of response to the questionnaire circulation was 76 per cent. This was lower than we had hoped or expected. We encountered a measure of apathy (normal and not unanticipated) but we also encountered suspicion regarding the Company's motives for conducting the study. In large measure the suspicions were that the Company was intending to employ more Indians and displace whites or, among Indians,

that the company was seeking grounds for race discrimination in the work situation. We were successful in allaying suspicions among most employees after two research assistants, an Indian man and a white woman<sup>1)</sup> were especially briefed to discuss the project informally with groups of workers. We should note, however, that these suspicions betrayed a certain lack of trust in company management and our non-response rate is in itself a finding of a sort.

The non-response rate does not appear to constitute a bias as far as labour turnover is concerned: the turnover rate in our final complement of respondents is identical to that in the workforce as a whole (11 per cent). There are also no marked biases as regards different shifts, and no marked variations in response rates between the two race groups, although some differences in response rates emerged between sections of the plant and levels of seniority. These variations in response rate are not significant, however.

The decisions as to the methodology to be employed, as already indicated, made it possible to include a far wider range of topics than would have been feasible in a more intensive study. Hence our present investigation is comprehensive, covering not only the topic of labour turnover but also closely related fields of interest in regard to job-motivation, absenteeism, and race relations in the Company. The more comprehensive nature of the coverage also means that more variables could be manipulated in the analysis of the central issue of labour turnover itself.

---

1) Mr. Logan Reddy and Ms. Linda Strydom.

## II. THE RESULTS AT A GLANCE

We begin this report on our findings with a tabulation of the distribution of all the questionnaire responses expressed in percentages and grouped according to race. This gives the reader an opportunity to orientate himself to the full set of results before we proceed to the analysis of the findings as they relate to turnover and other issues of interest. These results should be read in conjunction with the questionnaire in Appendix I.

### 2.1 Rating of the job characteristics of Process Technician. (Question 7)

These results are based on responses to a large number of 'semantic differentials' - a technique where two opposite descriptions are opposed on a six-point scale. The subject ticks a point on the scale corresponding to his perception of the work situation. Only the percentages of employees endorsing the positive poles of the scales are given below.

Characteristic rated and rank order in terms of percentage positive endorsement.

Characteristic presented to respondents (positive side of scale)	Whites (n = 89)		Indians (n = 83)	
	Per cent Positive Endorsement	Rank Order	Per cent Positive Endorsement	Rank Order
Job very interesting in itself	91%	1	71%	5
Important work	90	2	85	1
Know what is expected of me in work	88	3	77	2
Interesting job	88	4	63	12
Long-term job	87	5	70	7
Pleasant colleagues	83	6	62	14

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Characteristic presented to respondents (positive side of scale)	Whites (n = 89)		Indians (n = 83)	
	Percent Positive Endorsement	Rank Order	Per cent Positive Endorsement	Rank Order
Feel well equipped for job	83%	7	66%	9
Certain job expectations	82	8	76	3
Feel enthusiastic about work	80	9	58	16
Safety precautions good	79	10	70	6
Can use my abilities	74	11	62	13
Hardly any difficulty work- mates	73	12	63	11
Job skills will help me later	71	13	55	21
Know what to do to progress	69	14	48	24
Never feel like staying away	69	15	57	19
Helpful supervisors	66	16	54	22
Not irritated by other nationalities	65	17	75	4
Wages are good	64	18	64	10
I feel trusted	63	19	57	20
Not worried by noise	61	20	58	17
Highly skilled job	61	21	53	23
My work is fairly assessed	60	22	40	29
Opportunities to discuss problems	59	23	35	35
Not irritated by other races	58	24	61	15
Job tests my real abilities	58	25	37	32
Company selects carefully	56	26	68	8
Much opportunity for progress	53	27	42	28
Feel I have scope and opportunity	53	28	32	39
Company cares about employees	53	29	57	18
Feel noticed	53	30	38	30
Rewarded for responsibility	49	31	34	36

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Characteristic presented to respondents (positive side of scale)	Whites (n = 89)		Indians (n = 83)	
	Per cent Positive Endorsement	Rank Order	Per cent Positive Endorsement	Rank Order
Know my merit will be recognised	48%	32	36%	33
I feel recognised	46	33	33	38
Treated like responsible adults	45	34	36	34
Employees taken seriously	44	35	33	37
Understanding management	42	36	43	27
Present training and experience valuable	39	37	43	26
Never pushed around	39	38	22	44
Good people stay in company	38	39	37	31
Few daily frustrations	38	40	46	25
Safe	33	41	30	40
Job is relaxed	32	42	28	41
Easy to get through to management	27	43	22	43
Clean job	26	44	16	47
Unconcerned about danger	25	45	20	45
Good for health	25	46	19	46
Not worried about possible mistakes	20	47	11	48
No favouritism	18	48	25	42

2.2 Career patterns Aspirations and Values.2.2.1 Average Rating out of 10 of different aspirations, hopes and ambitions. (Question 8)

The higher the mean rating the more important the aspiration is for the labour force.

Ambition/hope/aspiration (presented to respondent)	Mean rating	
	Whites	Indians
Security in work	8,6	7,7
Gaining experience at different jobs	7,0	6,4
High salary	8,1	7,5
Experiencing other cities/towns	3,7	4,2
Improving education	7,4	6,3
Working in pleasant surroundings	7,4	6,9
Enjoying spare-time leisure activities	8,0	6,8
Social life	6,8	6,0
Staying in Durban	6,5	7,5
Interesting, challenging work	8,4	7,8
Being with family	8,4	8,1
Reaching a high job position	8,1	7,3
Developing own personal abilities	8,7	7,9
Status and standing in the community	6,8	6,4
Steady, dependable work	8,2	8,1
Security for later in life	8,7	7,7
Pleasant colleagues at work	7,8	7,8
Enjoying a good life socially	7,7	7,0
Being a dependable and reliable employee	8,9	8,3
Making best of things despite frustrations	8,2	7,9
Building a future for my family	8,8	8,4

2.2.2 Reasons for taking a job in the present Company. (Question 9)

Reason (more than one reason could be given hence percentages exceed 100)	Per cent in agreement	
	Whites	Indians
Good pay	54%	61%
Seemed a reasonable job at the time	18	25
Only job available	4	10
Company had good reputation	51	57
Good conditions and benefits	36	27
Actually wanted to do kind of work	13	20
Prospects in company seemed good	37	43
Wanted a job in Durban/South Africa	25	12
Wanted a job near home	3	10
I had training/skills for the job	21	16
Had heard the job worth getting	22	20
Other reason	11	4

2.2.3 Career Orientation.

'Which of the following would apply to you most closely?' (Question 10)	Per cent Selection	
	Whites	Indians
a) 'I am thinking and have worried about many different jobs and career but I am still not yet certain about what I should do in the future.'	20%	32%
b) 'I have not thought or worried very much about my career but I am not yet certain about what I will do in the future.'	2	12
c) 'I have not thought or worried much about my career but I feel reasonably happy about a future in this kind of work.'	31	22
d) 'I have worried and thought about different jobs and careers but I think that my future lies in this kind of work.'	47	34

2.2.4 Intention to stay in or leave the Company.

<i>'How likely do you think it is that you will be with this company in 3 years' time?'</i> (Question 12)	Per cent Selection	
	Whites	Indians
Very likely	61%	49%
Likely	21	24
Don't know, unlikely, very unlikely	18	27

## 2.2.5

<i>'and in 7 years' time?'</i>	Per cent Selection	
	Whites	Indians
Likely, very likely	61%	42%
Don't know	23	42
Unlikely, very unlikely	16	16

2.2.6 Previous Jobs and Movement.

<i>'How many jobs in different workplaces have you had since leaving school?'</i> Question 14)	Mean	
	Whites	Indians
Average number of jobs	3,4	2,9

## 2.2.7

'How many jobs in different workplaces did you have in the 3 years before you joined this company?' (Question 15)		
Average number of jobs	Mean	
	Whites	Indians
	2,6	2,4

## 2.2.8

'How many different towns and cities have you worked in since leaving school?' (Question 17)		
Average number of towns	Mean	
	Whites	Indians
	2,9	1,4

## 2.2.9

'Why did you move to Durban (if you did)?' (Question 18)		
Reason	Per cent Selection	
	Whites	Indians
Attracted by jobs in general	10%	36%
Attracted by social life	7	9
Attracted by recreational life/sea	19	5
Attracted by specific job/transfer	27	32
Because of relatives/friends/marriage	34	32
Curious to see Durban/South Africa	12	0
Felt like leaving previous town	24	27

### 2.3 Personality Profiles.

Distribution of Personality Coding Categories derived from the Incomplete Sentence Test, according to Race. (Question 19)

IMPORTANT NOTE: *This index simply identifies evidence of a range of characteristics, whether slight or serious. Respondents classified in the 'negative' categories must not be assumed to have serious or pervasive neurotic traits.*

Tendencies	Per cent Distribution	
	Whites	Indians
Interpersonally satisfied	10%	7%
Indefinite/no evidence	52	47
Interpersonally frustrated	38	46
Relationships with authority:		
- satisfying	2	1
- indefinite/no evidence	64	56
- frustrating	34	43
Relationships with peers:		
- satisfying	6	10
- indefinite/no evidence	70	64
- frustrating	24	26
Relationships with family:		
- satisfying	6	6
- indefinite/no evidence	84	84
- frustrating	10	10
Reacts to external frustration with:		
- some depression/withdrawal/ passivity/impotence	48	61
- other	52	39
Reacts to external frustration with:		
- some aggression	31	19
- other	69	81
Reacts to external frustration with:		
- some pragmatic/cognitive restructuring	26	23
- other	74	77
Reacts to internal conflict with:		
- some acceptance	26	20
- other	74	80
Reacts to internal conflict with:		
- some denial	45	42
- other	55	58

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Tendencies	Per cent Distribution	
	Whites	Indians
Reacts to internal conflict with:		
- some projection	26%	45%
- other	74	55
Reacts to internal conflict with:		
- some escape/fantasy/alcohol	27	36
- other	73	64
Generally self-confident, self-responsible	17	16
Indefinite/no evidence	20	10
Feelings of inadequacy, denial of responsibility	63	74
Generally structures life cognitively in terms of external happenings	30	35
Indefinite/no evidence	39	39
Appears to structure life cognitively in terms of internal happenings	31	26
Some anxiety present	56	69
Other	44	31
Some need for dependency	24	27
Other	76	73
Some need for approval/acceptance	49	55
Other	51	45
Some need for achievement	51	42
Other	49	58
Some need for autonomy/mastery	29	22
Other	71	78
Some need for self-esteem	19	31
Other	81	69
Some need for structure/meaning	4	5
Other	96	95
All answers blocked or no answers given	6	1
Most blocked, some answers	10	13
No blocks but defensive answers	9	16
No blocks, all answered or a few insignificant blocks	75	70
Generally satisfied with his life	18	16
Indefinite/no evidence	22	16
Evidence of dissatisfaction with life	60	68

2.4 Other Variables.

## 2.4.1

'Which three recreational pastimes do you enjoy most?' (Question 20)	Per cent Mention	
	Whites	Indians
<u>Pastimes mentioned:</u>		
Sport in teams	47%	27%
Being with family	53	63
Fishing	28	26
Water sports	26	9
Outdoor activities	18	21
Visiting parks and scenic attractions	18	17
Sports played individually	16	6
Going for drives	11	20
Being with men friends in pubs etc.	4	9
Dating and courtship	7	21
Cinema	7	17
Hobbies	17	5
Dances and parties	11	21
Gardening	18	11
Home/car repairs	24	28
Other pastimes	12	15
Note: Percentages exceed 100 because 3 answers were given.		



## 2.4.2

	Per cent Distribution	
	Whites	Indians
<i>'How seriously or not, does or would shift-work affect your private life?' (Question 21)</i>		
<u>Alternatives presented to respondent:</u>		
Very badly	9%	10%
Badly	19	33
Not too badly	35	38
Enjoy shift-work	37	19
<i>'How well is shift-work rewarded by the company?' (Question 22)</i>		
<u>Alternatives presented to respondent:</u>		
Well	25	15
As well as expected	41	62
Poorly	34	23

## 2.4.3

	Per cent Distribution	
	Whites	Indians
<i>'How do you rate work opportunities for you elsewhere in Durban or South Africa?' (Question 23)</i>		
<u>Alternatives presented to respondent:</u>		
Many	20%	10%
Many at the same level as present	30	13
Fairly limited	34	48
Very few	16	29

## 2.4.4

<i>'How do you rate your health at the moment?'</i> (Question 24)	Per cent Distribution	
	Whites	Indians
<u>Alternatives presented to respondent:</u>		
Very healthy	69%	57%
Not bad	30	41
Have health problems	1	2

## 2.4.5

<i>'How do you rate your satisfaction with your present job?'</i> (Question 25)	Per cent Distribution	
	Whites	Indians
<u>Alternatives presented to respondent:</u>		
Satisfied	67%	39%
Neutral	20	42
Dissatisfied	13	19

## 2.4.6

Jobs presented for comparison:		Per cent Distribution across		
		Higher	The same	Lower
Clerk in bank	Whites	69	9	22
	Indians	57	25	18
Factory foreman	Whites	21	47	32
	Indians	18	26	56
Travelling salesman	Whites	62	11	27
	Indians	38	17	45

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'Is your job of higher or lower standing than the following jobs?' (Question 28)		Per cent Distribution across		
		Higher	The same	Lower
Jobs presented for comparison:				
Primary school teacher	Whites	26	22	52
	Indians	54	18	28
Owner of small engineering workshop	Whites	14	18	68
	Indians	6	12	82
Insurance agent	Whites	63	15	22
	Indians	37	21	42
Qualified fitter and turner	Whites	34	37	29
	Indians	14	37	49

2.4.7 Status Rank-Orderings emerging from previous item.

Jobs ranked from High to Low	Whites	Indians
Owner of small engineering workshop	1	1
Primary school teacher	2	7
Factory foreman	3	3
Process technician	4	6
Qualified fitter and turner	5	2
Travelling salesman	6	4
Insurance agent	7	5
Clerk in bank	8	8

## 2.4.8

'What is the highest Standard you passed at school?' (Question 31)	Per cent Distribution	
	Whites	Indians
<u>Standard:</u>		
Less than Std. 6	0%	0%

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'What is the highest Standard you passed at school?' (Question 31)	Per cent Distribution	
	Whites	Indians
Std. 6 or 7	2%	1%
Std. 6 or 7 plus tech/trade diploma	0	0
Std. 8 or 9	38	15
Std. 8 or 9 plus tech/trade/diploma	12	2
Std. 10 or matric	33	45
Std. 10 or matric plus tech/trade/diploma	15	37
Professional	0	0

## 2.4.9

Standard:	Per cent Distribution			
	Father's		Mother's	
	Whites	Indians	Whites	Indians
Less than Std. 6	5%	45%	3%	71%
Std. 6 or 7	25	33	28	23
Std. 6 or 7 plus tech/trade/diploma	3	3	0	0
Std. 8 or 9	20	13	35	3
Std. 8 or 9 plus tech/trade/diploma	7	0	0	0
Std. 10 or matric	26	1	22	3
Std. 10 or matric plus tech/trade/diploma	3	1	7	0
Professional	11	4	5	0

## 2.4.10

'Are you married or not?' (Question 36)	Per cent Distribution	
	Whites	Indians
<u>Status:</u>		
Married	81%	60%
Single/divorced/separated	19	40

## 2.4.11

'Do you have children?' (Question 37)	Per cent Distribution	
	Whites	Indians
<u>Whether children or not:</u>		
Yes	76%	53%
No	24	47

## 2.4.12

'How many children do you have?' (Question 37)	Per cent Distribution	
	Whites	Indians
<u>Number of children:</u>		
None	24%	47%
1	23	13
2	26	19
3 or 4	23	20
5 or 6	4	1
More than 6	0	0
Average number of children	1,8	1,3

## 2.4.13

'In which age groups do you have children?' (Question 38)	Per cent Distribution	
	Whites	Indians
<u>Age Group:</u>		
0 - 5 years	48%	47%
6 - 12 years	31	20
13 - 17 years	12	5

## 2.4.14

'What is your home language at present?' (Question 39)	Per cent Distribution	
	Whites	Indians
<u>Language:</u>		
English	50%	61%
English and Foreign/Indian languages	5	32
Afrikaans/both	38	0
Foreign/Indian languages	7	7

## 2.4.15

'What is your religious denomination?' (Question 40)	Per cent Distribution	
	Whites	Indians
<u>Religion:</u>		
English-speaking Protestant	39%	1%
Catholic	14	1
Jewish	0	0

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'What is your religious denomination?' (Question 40)	Per cent Distribution	
	Whites	Indians
Dutch Reformed	29%	0%
Other Christian	14	5
Hindu	0	82
Moslem	0	11
Other	4	0

2.4.16

Income Group:	Per cent Distribution			
	Monthly Income		Family Income	
	Whites	Indians	Whites	Indians
Less than R400	10%	16%	8%	6%
R400 - 499	19	71	14	51
R500 - 599	11	13	7	17
R600 - 699	25	0	20	2
R700 - 799	25	0	21	6
R800 - 899	9	0	14	4
R900 - 999	1	0	3	4
R1 000 - 1 099	0	0	7	5
R1 100 plus	0	0	6	5
Average	R612	R439	R708	R583

2.4.17 Family Income per Head. (Question 43)

Income Group	Per cent Distribution	
	Whites	Indians
R50 - 99	23%	26%
R100 - 149	5	40
R150 - 199	13	15
R200 - 249	31	14
R250 - 299	17	1
R300 - 349	7	1
R350 - 399	12	2
R400 - 449	7	1
R450 plus	5	0
Average family income per head	R269	R145

## 2.4.18

<i>'Do you find that debt is a problem?'</i> (Question 44)	Per cent Distribution	
	Whites	Indians
<u>Nature of debt:</u>		
Serious problem	20%	30%
Not really a problem	45	48
No debt	35	22



2.4.19

'How far away from your work do you live?' (Question 45)		Per cent Distribution	
		Whites	Indians
<u>Distance:</u>			
Less than 5 kms.		0%	2%
5 - 9 kms.		9	7
10 - 14 kms.		11	9
15 - 19 kms.		23	21
20 - 29 kms.		42	31
Over 30 kms.		15	30

2.4.20

'What sort of accommodation do you have?' (Question 46)		Per cent Distribution	
		Whites	Indians
<u>Accommodation:</u>			
House		69%	70%
Flat		28	22
Rooms		3	8

2.4.21

'Do you own your own dwelling?' (If house/flat) (Question 47)		Per cent Distribution	
		Whites	Indians
Yes		59%	18%
No		41	82

## 2.4.22

'Are you preparing or saving to buy a house/flat?' (Question 48)	Per cent Distribution	
	Whites	Indians
Yes	30%	62%
No	70	38

## 2.4.23

'How would you rate your home life?' (Question 49)	Per cent Distribution	
	Whites	Indians
<u>Rating categories presented to respondents:</u>		
Contented and happy	42%	52%
Some problems, not serious	55	48
Quite serious problems	3	0

## 2.4.24

'What is your length of service with the company?' (Question 1)	Per cent Distribution	
	Whites	Indians
<u>Length of service:</u>		
Less than 1 year	14%	36%
1 year but less than 3 years	21	11
3 years but less than 5 years	17	12
5 years or more	48	41

## 2.4.25

Respondent's age? (Company records)	Per cent Distribution	
	Whites	Indians
<u>Age group:</u>		
20 - 24 years	18%	25%
25 - 29 years	33	24
30 - 34 years	26	36
35 - 39 years	11	11
40 years and over	12	4

## 2.4.26

Respondent's work unit? (Company records)	Per cent Distribution	
	Whites	Indians
<u>Work unit:</u>		
Luboil	14%	24%
Catcracker	20	4
Alkylation - Grey Zone	22	6
CDI Integrated	25	7
Utilities	7	10
CD II	11	36
Off Sites	1	13

## 2.4.27

Respondent's job grade? (Company records)	Per cent Distribution	
	Whites	Indians
<u>Job grade:</u>		
Process Technician	32%	95%

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Respondent's job grade? (Company records)	Per cent Distribution	
	Whites	Indians
<u>Job grade:</u>		
Senior Technician	39%	5%
Foreman, Supervisor	29	0

2.4.28

Respondent's number of promotions (Company records)	Per cent Distribution	
	Whites	Indians
<u>Number of promotions:</u>		
None	33%	40%
1	14	53
2	36	6
3 plus	17	1

2.4.29

When last promoted? (Company records)	Per cent Distribution	
	Whites	Indians
<u>Date of last promotion:</u>		
During 1976	17%	24%
1975	9	38
1974	34	10
1973	15	16
Before 1973	25	12

## 2.4.30

Frequency of absenteeism? (Company records)	Per cent Distribution	
	Whites	Indians
<u>Frequency of absenteeism:</u>		
Less than 6 days per annum	53%	45%
6 to 11 days per annum	30	37
12 days or more per annum	17	18

## 2.4.31

Performance rating for 1975 (Company records)	Per cent Distribution	
	Whites	Indians
<u>Rating:</u>		
A (High)	1%	2%
B	46	38
C1	45	52
C2	8	8
D (Low)	0	0

## 2.4.32

Performance rating for 1976 (Company records)	Per cent Distribution	
	Whites	Indians
<u>Rating:</u>		
A or B	45%	29%
C1	48	53
CD or D	7	18

## 2.4.33

1976 Performance Rating compared to 1975 (Company records)	Per cent Distribution	
	Whites	Indians
Comparison:		
Better in 1976	24%	14%
The same as 1975	59	60
Worse in 1976	17	26

## 2.4.34

'What specific job are you going to try to achieve in 7 to 10 years' time?' (Question 11)	Per cent Distribution	
	Whites	Indians
Job:		
Same job in another company	0%	0%
Same job - in another place	1	4
More senior refinery - with present company	65	38
More senior refinery - with another company	0	0
More senior refinery - in another place	4	4
Job in another place	0	3
White collar	2	2
Management	2	3
Higher Technical/Professional	8	7
Business/farming	5	16
Higher job - unspecified	1	2
Specialised technical/management	0	3
Supervisory	0	2
Other	4	7
Same job as present	8	9

2.4.35

Three experiences over last 6 months relating to Job dissatisfactions and satisfactions (Questions 5 and 6)	Per cent Distribution	
	Whites	Indians
Type of Experience causing either satisfaction or dissatisfaction:		
Intrinsic/self expression	9%	12%
Self esteem - responsibility	4	2
Self esteem - dignity/sympathy	7	2
Recognition of performance	8	8
Job competence/facility/quality	14	12
Performance ratings	9	4
Social - interpersonal with superiors or subordinates	1	1
Social - interpersonal with peers	2	2
Social - race attitudes	1	1
Social - altruism towards co-workers	5	9
Communication - job oriented	0	1
Communication - other oriented	0	0
Feedback of information	0	0
Supervision - quality	4	5
Supervision - style	0	0
Supervision - other	0	0
Advancement and promotion	3	8
Management/work and personnel organisation	4	6
Staff allocation to jobs	4	3
Job training	3	4
Staff motivation/quality co-operation	5	6
Pressure from overtime, work load	1	0
Conditions - safety	1	0
Conditions - other	1	1
Work task frustrations	0	0
Benefits	2	1
Material rewards	4	8
Other factors	8	4

2.4.36

'What type of work was your previous job?' (Question 16)	Per cent Distribution	
	Whites	Indians
<u>Job Category:</u>		
School/Army/Navy	2%	1%
Unskilled Blue collar	1	0
Semi-skilled Blue collar	14	23
Drivers/Cranedivers etc.	4	3
Junior clerical/clerical - public service	7	0
Junior clerical/clerical - private sector	16	20
Sales	4	0
Agents	0	0
Skilled Blue collar	22	12
Supervisory Blue collar	5	1
White collar - stores, security, lab. assistant	12	18
Superior technical	1	16
Salaried Professional	0	15
Services	10	0
Executive levels	0	0
Managerial	2	1



2.3.37

	Per cent Distribution							
	Q.13 all answers		Q.16b		Q.16c		Q.16d all answers	
	W	I	W	I	W	I	W	I
<u>'What things generally make you think of leaving your present job?' (Question 13)</u>								
<u>'What did you like most about your previous job?' (Question 16b)</u>								
<u>'What did you dislike most about your previous job?' (Question 16c)</u>								
<u>'What were the most important reasons for leaving it?' (Question 16d)</u>								
<u>Category of factor causing either a positive or negative response:</u>								
Intrinsic enjoyment/self expression	3%	2%	22%	32%	13%	9%	5%	4%
Self esteem - responsibility	0	1	2	7	0	0	0	1
Self esteem - dignity/sympathy	0	2	0	0	0	0	1	1
Recognition of performance	4	1	2	3	1	0	0	2
Job competence/facility quality	0	0	1	4	0	1	1	1
Performance ratings	1	1	0	0	0	0	0	0
Social - interpersonal with superiors/subordinates	5	6	0	2	0	1	2	1
Job competence/facility/quality	0	0	1	4	0	1	2	1
Performance ratings	1	1	0	0	0	0	0	0
Social-interpersonal with superiors/subordinates	5	6	0	2	0	1	2	1
Social-interpersonal with peers	0	3	1	3	5	1	2	0
Social - race attitudes	0	1	1	0	0	0	0	1
Social - altruistic towards co-workers	0	0	0	0	0	0	0	0
Communication - job oriented	0	1	0	0	0	0	0	1
Communication - other oriented	2	0	0	0	0	0	1	0
Feedback of information	0	0	0	0	0	0	0	0
Supervision - quality	3	2	0	0	0	2	1	0
Supervision - style	2	6	0	4	0	3	0	1
Supervision - other	2	3	0	0	1	3	1	3

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	Per cent Distribution							
	Q.13 all answers		Q.16b		Q.16c		Q.16d all answers	
	W	I	W	I	W	I	W	I
<u>Category of factor causing either a positive or negative response:</u>								
Advancement and promotion	9%	8%	0	1%	3%	4%	5%	5%
Management/work and personnel organisation	1	1	4	0	0	3	1	4
Staff allocation to jobs	0	0	0	0	0	0	0	0
Job training	2	1	0	0	0	0	0	0
Staff motivation/quality/co-operation	2	1	3	6	3	0	2	0
Pressure-overtime, workload	1	2	1	7	16	3	4	4
Conditions - safety	1	1	0	0	1	2	1	1
Conditions - other	3	5	7	6	3	3	2	1
Work task frustrations	1	1	0	0	3	6	1	1
Benefits	1	1	3	0	0	0	2	4
Material rewards	17	6	11	1	25	46	28	31
Other	1	2	7	6	12	4	5	1
<u>Question 13 only:</u>								
Wish to leave city	4	1					2	1
Wish to leave country/travel	6	1					8	3
Shift work	19	20					2	3
Status of work	0	1					0	0
Better of other work available/prospects	4	4					1	1
Desire for skilled/more recognised job	0	1					0	1
Community and housing benefits	1	0					0	1
Security	4	2					6	4
Transport problem	1	2					0	1

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	Per cent Distribution							
	Q.13 all answers		Q.16b		Q.16c		Q.16d all answers	
	W	I	W	I	W	I	W	I
Category of factor causing either a positive or negative response:								
<u>Question 16b only:</u>								
Free time/holidays			3%	3%				
Fresh air/pollution free air			7	0				
Regular hours			10	9				
Convenient location/travelling			7	0				
Meeting people/moving around			15	6				
<u>Question 16c only:</u>								
Insecurity					3%	0%		
Shift schedule/hours					5	5		
Location/travelling					6	3		
<u>Question 16d only:</u>								
Travelling time/absence from home							0%	5%
Personal situation							3	1
Future prospects							12	11

2.4.38

'What would you like to do or do more of in your spare time?' (Question 26)	Per cent Distribution	
	Whites	Indians
<u>Activity:</u>		
Being with friends	4%	7%
Being with family	16	10
Playing sport	14	8
Fishing	4	4

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<i>'What would you like to do or do more of in your spare time?' (Question 26)</i>	Per cent Distribution	
	Whites	Indians
<u>Activity:</u>		
Water sports	7%	3%
Outdoor activities	4	4
Going for drives	0	1
Dating and courtship	2	3
Cinema	0	0
Hobbies	12	7
Gardening	4	1
Home building/car repairs	2	10
Farming	3	0
Travelling	11	8
Reading	1	8
Studying	10	15
Improving job ability	1	3
Recuperating from work	1	1
Other	4	7

2.4.39

<i>'What prevents you from doing things in your spare time?' (Question 27)</i>	Per cent Distribution	
	Whites	Indians
<u>Prevention:</u>		
Shift work	34%	42%
Time	16	10
Travelling distance	0	2
Family obligations	6	10
Money	16	7

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<i>'What prevents you from doing things in your spare time?' (Question 27)</i>	Per cent Distribution	
	Whites	Indians
<u>Prevention:</u>		
Laziness	5%	6%
Fatigue	2	10
Nothing	6	7
Overtime	5	0
Other	10	6

IMPORTANT NOTE: In the sections which follow, where a relationship between two variables is mentioned to exist or where it is specifically stated to be significant, the particular relationship was found to be significant at the 95% level of confidence or above, using either a Chi-square test or a test of the significance of the difference between two percentages. In cases where the tests failed to yield levels of confidence at the 95% level or above, the particular result is specifically stated; usually the 90% level is mentioned.

In many instances, however, relationships are mentioned which are not statistically significant. Although lesser importance is attached to such relationships, they cannot be discounted since The sample represented almost a complete census of employee opinion, and therefore, for estimates relating to the 1977 workforce, any trend, however slight, is a real phenomenon.

Tests of significance were calculated despite this, however, for two reasons. Firstly, they provide an index of the importance of relationships, and secondly one may regard the respondent group as a sample in time or as a sample of a kind of a universe of Process Technicians in similar job situations elsewhere. Making these assumptions does not entitle us to interpret the results of statistical tests very strictly (the 'sample' does not meet certain critical assumptions associated with probability theory) but such tests nevertheless assist us in deciding on the importance of variables.

### III. JOB PERFORMANCE

The availability of a company executed performance rating for the year prior to the study enabled the scope of the investigation to be extended to a consideration of factors relating to worker output and quality. The wide range of variables included in the study made it possible to cover all the major issues commonly considered to relate to employee morale and output. While we were satisfied that the performance rating procedure of the company had sufficient face validity to be used as an index of job performance, the pattern of ratings did contain certain anomalies which will be referred to in due course. These irregularities most probably do not detract from the overall validity of the findings in regard to performance.

Job performance appears to be significantly related to the race of respondents. While 46 per cent of all respondents were Indian, only 35 per cent of those rated A or B were Indian and as many as 68 per cent of those rated C2 or D were Indian. Of all 163 respondents rated on their performance during 1976, 38 per cent were A or B, 50 per cent were C1 and 12 per cent were C2 or D. (See also relevant tables in 2.4.31, 2.4.32 and 2.4.33.)

What is surprising is that the performance ratings of Indians deteriorated between 1975 and 1976. In the former year 40 per cent obtained A or B ratings compared with 29 per cent in 1976. This difference in part, must be due to the low ratings of new Indian recruits. Other results in Section II, however, show that unlike whites, Indians were more likely to have had their ratings lowered rather than improved between 1975 and 1976. These differences, however, by no means relate only to race as such. Indians tend to be unfavourably placed on a number of variables which relate to performance, and their relatively poor showing on the performance ratings is in large measure due to factors other than race.

There is consistent evidence that factors intrinsic to the job are related to a technician's performance. Good performers are significantly more likely to feel well-equipped for the job and to see the job as interesting in itself. At the 90 per cent level of confidence, poor performers are more likely to feel that the job does not test their real abilities whereas high performers are more likely to feel strongly (as measured by responses at the extreme end of the scale), that they can use their real abilities. Good performers are more likely to say that they know what is expected of them in their work and poor performers are more likely to feel indifferent about their work. Poor performers are also more likely to give an experience related to job competence which caused them satisfaction over the previous six months. This may reflect a need which is not fulfilled in the everyday working experience. (Also significant at the 90 per cent level, high performers are less likely to feel that their work is unfairly assessed.) These relationships would seem to support the hypothesis that the more intrinsic satisfaction a technician obtains from his job the more likely he will be a high performer.

Various aspects of supervision appear to have a significant bearing on performance. In general terms poor performers are more likely to mention some aspect of supervision as causing the most irritation, frustration or disappointment on the job during the previous six months. They are also more likely to say that the style of supervision was what they disliked most about their previous job. At the 90 per cent level of confidence, good performers are less likely to feel pushed around, and more likely to feel trusted. Poor performers are more likely to be dissatisfied with the esteem, dignity or trust accorded them and less likely to feel strongly, as measured by responses at the extreme end of the scale, that they are treated as responsible adults. Overlapping the areas of intrinsic job satisfaction and supervision is the finding that poor performers are more likely to say that recognition of their performance was what they liked most about their previous job. They are also more likely, at the 90 per cent level of confidence, to feel



unnoticed in their present job.

There was an indication that the quality of performance is related to individual foremen or supervisors, although this was based only on the performance of those employees responding to the particular item, not the whole respondent group. One particular foreman, who was himself rated favourably, supervised a shift of eight men who were all rated highly as well. What makes this observation more remarkable is the fact that all eight men on the shift were Indians, whereas only 29 per cent of Indians overall were rated high performers. Conversely all five responding foremen supervised by one shift supervisor were rated high whereas another shift supervisor was in charge of three poor performers out of the four who responded. These patterns suggest two possibilities. One is that there is considerable selection of particular men into certain work groups; the other is that foreman and supervisors bias the ratings in some cases. We cannot say which of the two alternatives is most likely.

Human relationships in the workplace are related to job performance in other ways. Poor performers are more likely to feel that they have unpleasant colleagues, whereas high performers are more likely to say that they have hardly any difficult workmates. In apparent conflict, however, is the finding that high performers are more likely to be irritated by other nationalities, although this relationship was not significant. If this contradiction is true, it may be explained by the proposition that high performers are more 'sensitive' people and consequently more easily disturbed by others while concentrating on doing their job well. This is supported by the fact that high performers are significantly more worried by noise at work.

Perception of his working conditions is also related to a technician's performance. Poor performers are more likely to feel strongly that their job is dangerous. They are also more likely to feel strongly that the job is bad for their health. Poor performers are also

more likely to experience job-pressure as a result of overtime or the workload. They are more likely to say that pressure of work is the factor that makes them think of leaving their present job. It was the most important reason for leaving their last job. The absence of pressure was what they liked most about the previous job, suggesting an invidious comparison with their present job. Conversely high performers were more likely to say that the work pressure was what they disliked most about their previous job.

It is a reasonable hypothesis that the degree to which work is experienced as stressful is related to the technician's home life and activities outside the working sphere. Poor performers are more likely to have problems at home and to be in debt, but these relationships were not quite significant at the 90 per cent level of confidence. Poor performers are significantly more likely to enjoy recreational activities that may be regarded as less compatible with shift-work and less likely to leave one prepared to meet the pressures of work. They are more likely to enjoy dating and courtship as well as dances and parties. They are more likely to enjoy going to the cinema and, at the 90 per cent level of confidence, are more likely to enjoy outdoor activities. Although not significant they are more likely to want to recuperate from work-fatigue in their spare time. On the other hand high performers are more likely to enjoy gardening and more likely to enjoy being with their family, the latter relationship, however, not being significant. Poor performers are more likely to live over 30 kilometres away from work and more likely to say that travelling distance was what they disliked most about their previous job.

Performance was also found to relate to the perceived status of the job. Poor performers are more likely to see their work as unimportant, although not significantly so. Specifically, they are significantly more likely to see their job as having lower status than a primary school teacher, a qualified fitter, a factory foreman and at

the 90 per cent level an insurance agent. There was also a tendency, not significant, for poor performers to be more likely to see their job as lower in status than a bank clerk and a travelling salesman. Also not significantly, poor performers are more likely to place importance on having status and standing in the community.

It is instructive to consider the performance of respondents relative to their ambitions, motivations and career perceptions. High performers are more likely to see the job as a long term one. Although not statistically significant, they are more likely to think that their future lies in their present kind of work, and to have taken the job because their training equipped them for it. There is a trend, also not significant, for high performers to place more importance on reaching a high job position and to place more importance on improving their education. There is a trend for low performers to be less likely to have gone beyond matric and to have not thought about their job as a career but to be happy nevertheless. In contrast poor performers are significantly more likely to want to achieve a higher technical or professional job in 7 to 10 years' time. It would seem therefore, that high performers have more commitment to their job as a career and to be more ambitious within the career. However, it is possible that the ambitions of low performers may be less visible because of their job dissatisfactions.

High performers are more likely to have moved to Durban because they were curious to see Durban or South Africa and they are more likely to say that a desire to emigrate or travel was the most important reason for leaving their last job. At the 90 per cent level they are more likely to have taken their job because they had wanted a job in Durban. On the other hand poor performers are more likely to have taken their present job because it was the only job available, and more likely to have moved to Durban because they were attracted by a specific job or they were transferred to a specific job. High performers are more likely to have worked in more towns and cities at the 90 per cent level of

significance.

High performers are more likely to place importance on security in their work and, at the 90 per cent level, more concerned with security for later in life. There was a trend for them to be more concerned with being a dependable and reliable employee. There was also a trend for them to be more concerned with building a future for their family. High performers are more likely to have a higher income, a higher family income, a higher job grade and to have had more promotions. Poor performers are significantly more likely to be in the youngest age group, to have had shorter service, to give material rewards as the prime job satisfier and to say that material rewards was what they disliked most about their previous job. It would seem that high performers are more likely to have motivations and to be receiving satisfaction over and above the financial reward.

It also seems probable that high performers are more firmly socially rooted and integrated with their social environment. They are more likely to be married and to have children aged between 12 and 17 years. There was also a trend for them to have been more likely to be attracted to Durban by the social or recreational life. There was a trend for poor performers to be more likely to find it easy to leave Durban.

A factor analysis carried out on all attitudinal items did not reveal very much with regard to the order of priority of variables associated with job performance. Only one factor in a factor analysis, which accounted for only some 2 per cent of the total variance, had a high loading on performance rating. In this factor high performance was perhaps most clearly related to a liking of colleagues at work. Also highlighted were an attitude of enthusiasm for and interest in the job, a belief that work is assessed on a fair basis and that the job has safe working conditions. High performance was also related to a stress on the importance of being with one's family.

The responses to the incomplete sentence test included in the questionnaire were content-analysed by a clinical psychologist and coded according to a set of categories derived from the content analysis so that observations can be made on the relationship between aspects of personality and performance. Broadly speaking, these observations are consistent with the relationships already commented on. Thus high performers are more likely to show need for achievement. Although not statistically significant, the results show that they are more likely to have satisfying relationships with authority and more likely to be satisfied with life generally. High performers are significantly less likely to react to external frustration with depression, by withdrawing, becoming passive or feeling impotent. On the non-significant level, they are less likely to react to internal conflict with denial, less likely to generally feel inadequate and deny responsibility for self and less likely to be generally anxious. At the 90 per cent level of confidence, they are more likely to structure life cognitively in terms of external events rather than internal or subjective experience. This may be indicative of avoidance behaviour in that the respondent may be unwilling to allow himself to consider his subjective reaction to events. In general, however, the personality profiles of high performers suggest that they are more likely to be coping successfully with their problems, and thus be better able to concentrate on their work.

#### IV. ABSENTEEISM

Details of absenteeism were extracted from company records and a rate per annum was calculated based on each employee's total period of employment. For the purposes of this analysis less than six days per annum was regarded as low absenteeism. Six to eleven days per annum was defined as moderate absenteeism and twelve days or more as high absenteeism. Of the 169 respondents for whom information was available 83 were categorised as low, 57 as moderate and 29 as high absentees.

In studies of labour turnover the relationship between turnover and absenteeism often has been found to be co-variate. In this study, however, there is no significant relationship between the two, as the distribution of resignees to date is roughly equivalent to that of the total sample in terms of absenteeism. High absenteeism, however, would appear to be related to a desire to resign (see later). In discussing the factors associated with absenteeism we again have little indication as to their order of importance. In the factor analysis only one minor factor was characterised by a high loading on absenteeism. In this factor grouping high absenteeism is related to a feeling that supervisors were unhelpful, a negative emphasis on interesting, challenging work (work was therefore perhaps seen as dull) and a positive emphasis on social life. There was no significant relationship between race and absenteeism.

Several significant relationships testify to the strength of the interdependence of absenteeism and supervision. When asked to mention their most irritating, frustrating or disappointing recent job experiences, high absentees are more likely to quote an incident in which they suffered a blow to their self esteem or human dignity or in which they felt untrusted. The possibility exists that this group is more sensitive to the kind of incident described. From the personality test it was found that high absentees are more likely to show a need for self esteem. They

are also more likely to quote an experience concerning criticism of the quality of supervision in general. They are more likely to describe their job as having unsympathetic management, unhelpful supervisors and uncertain expectations. In addition they are more likely to feel that they are not treated responsibly, that there are hardly any opportunities to discuss problems and that favouritism exists. At the 90 per cent level of significance they are more likely to feel strongly that they are often pushed around, and less likely to think it easy to get through to management.

High absentees are more likely to say that recognition of their performance was the factor they liked the most about their previous job. At a non-significant level they are more likely to mention an event recognising their performance when asked about the most satisfying recent job experiences. It seems probable that respondents are projecting an unfulfilled need in giving these answers. There is also evidence that absenteeism is related to particular supervisors. High absentees are more likely to work under particular foremen and also to belong to a specific unit.

The manner in which respondents' role of shiftworker is related to their non-working roles has obvious relevance in a study such as this. Various studies have highlighted the problems associated with a work role involving some kind of abnormal hours. Brown (1975) has attempted to substantiate the hypothesis that a culturally sanctioned time schedule for social activities is a mechanism of social integration in society. He maintains that studies of shiftwork need to be aware of the rhythms of social life in the social environment of the shiftworker and how far socially sanctioned time schedules, other than the globally dominant day-night pattern, are common to the community in which the shiftworker lives.

The present research did not focus on these questions in any depth. It is useful, however, to analyse responses according to the idea

that an individual's activities can be conceptualized as a role system. No significant relationship was found between absenteeism and the respondents' estimation of how shiftwork affects his private life. There was a slight tendency for low absentees to be more likely to say they enjoyed the pattern of shiftwork. There was also no relationship between absenteeism and an estimation of how well shiftwork is rewarded by the company.

Other cross tabulation results present a different picture, however. High absentees are more likely to say shiftwork impedes their spare time activities. They are more likely to rate social life as important, to enjoy spending time with men friends in public houses or elsewhere, to enjoy dating and courtship and to enjoy dances and parties. They are also more likely to want to spend their free time with their family and to want to spend their free time enjoying a social life. None of these relationships except the last one are significant, but taken together they suggest a clash between the role of shiftworker and the non-working roles of social relationships.

When asked about their favourite recreational pastimes, high absentees are significantly more likely to say they enjoy outdoor activities whereas (at a non-significant level) low absentees were more likely to enjoy hobbies or gardening, and (at a significant level) being with their family. It may be that this group find satisfaction in their outside activities, whereas high absentees find they cannot fulfill their social needs satisfactorily.

There are other indicators of social integration. Low absentees are more likely not to want to leave Durban whereas high absentees are more likely to say it would be easy to leave Durban, though this relationship is not significant. Also non-significant but indicative is the fact that low absentees who had moved to Durban are more likely to have been attracted by the social life or the recreational life, suggesting that they now find fulfillment in these activities. At a



statistically significant level high absentees are more likely to say that a desire to leave South Africa or to travel makes them think of leaving their present job. At the 90 per cent level of confidence high absentees are less likely to live in a house.

As with job performance it is useful to consider absenteeism in relation to job motivation, satisfaction and career development. Low absentees are more likely to place importance on interesting, challenging work. They are more likely to have taken their job because they actually wanted to do the work offered and because they had heard it was worth getting. On the other hand, high absentees are more likely to have taken the job because prospects in the company seemed good or because of good pay. Only the last relationship was significant.

While not statistically significant, low absentees are more likely to say that they have not thought or worried much about their career, but that they feel reasonably happy in the kind of work they are doing. High absentees are more likely to want to have their own business or to go farming in 7 to 10 years' time. They are more likely to say that the opportunity to meet people or travel around was what they liked most about their previous job. At a significant level of confidence they are more likely to give material rewards as the factor they disliked most about their previous job. At the 90 per cent level of confidence low absentees are more likely to say that they are aiming to achieve a higher technical or professional job in 7 to 10 years' time.

The pattern of these relationships appears to be that the low absentees are more likely to be interested in the intrinsic aspects of the present job, whereas high absentees are more concerned with the external reward factors and less committed to the work itself. High absentees are also significantly more likely to have had fewer promotions and to have obtained a low performance rating for 1975 and 1976. A related finding was that high absentees were, at the 90 per cent level of confidence more likely to feel that they need wider training or experience.

It may be that a lack of intrinsic motivation is connected to this feeling. High absentees are also significantly more likely to say they often feel like staying away from work.

Another area in which there were differences between high and low absentees is in the area of attitudes towards working conditions. Low absentees are more likely to feel that the job is safe and not hazardous to health, and high absentees are more likely to regard their job as dangerous and as having inadequate safety precautions. High absentees are less likely to feel that the job is relaxed. At a non-significant level, they are more likely to be worried by noise and to feel strongly that the job is dirty.

High absentees are also more likely to hold negative attitudes with regard to the status of their job. At the 90 per cent level of confidence they are more likely to say that their job has lower status than a factory foreman or the owner of a small engineering workshop. At a non-significant level they are more likely to say the same with respect to an insurance agent and a qualified fitter and turner. They are significantly more likely to feel that the company employs anybody rather than select carefully and also that good people leave the company. Perhaps consistent with this status perception is the finding, not significant however, that high absentees are more likely to have fathers with higher education.

Other descriptive variables contribute towards the picture of low absentees being more highly motivated, having fewer problems and being more stable. They are more likely to have higher education but not significantly so. They are significantly more likely to have a higher family income and, at the 90 per cent level, more likely to have a higher monthly income. High absentees were more likely to have short service and to be in the youngest age group. They are more likely to have a serious debt problem, to live over 30 kilometres away and to have children less than 6 years old. None of these relationships were

significant.

Finally, the incomplete sentences test personality profiles provide evidence that the frustrations and conflicts which, it has been suggested, high absentees are more likely to experience, find a parallel in relatively higher personality maladjustment. At the 90 per cent level of confidence, high absentees are more likely to be interpersonally dissatisfied and at a non-significant level, less likely to be satisfied with life generally. At the 90 per cent level high absentees are more likely to react to frustration with aggression, less likely to react to internal conflict with acceptance, more likely to use projection as a reaction to internal conflict and to deny self-responsibility. They are also more likely to structure life cognitively in terms of external events suggesting behaviour designed to avoid subjective feelings. At a level of confidence below statistical significance, they are less likely to show a need for autonomy or mastery, less likely to show a need for dependency and less likely to show a need for approval or acceptance. The latter two relationships may mean that high absentees are less concerned with staff reaction to their behaviour. At a significant level low absentees were more likely to show a need for achievement.

## V. RACE AND RACE RELATIONS

Eighty-nine whites and 83 Indians completed the questionnaire. Cross tabulations of responses according revealed considerable differences in the attitudes and characteristics of these two groups as we have seen in Section 2. This section will begin by examining these differences, and conclude with a discussion of race relations primarily based on the information obtained from the questionnaires.

### 5.1 Biographical and Social Factors.

Some differences are obviously related to the relatively recent company policy of employing Indian technicians. Thus Indians are more likely to have short service and to be in a lower job grade. They are more likely to have higher education and to have had more recent promotions. They are also more likely to be in the youngest age group and less likely to be married and to have children.

Whites are likely to have had more jobs and to have worked in a greater number of towns or cities since leaving school. Indians are more likely to have been previously occupied as a salaried professional especially a teacher, whereas whites are more likely to be drawn from the services, clerical jobs in the public service or skilled blue collar jobs.

### 5.2 Intrinsic Work Motivation.

Indians are more likely to feel that their job needs few real skills, is boring and never tests their real abilities. They are also more likely to feel indifferent about their work, to feel that the job skills will not help them later and to feel limited and restricted. Whites, on the other hand, are more likely to feel enthusiastic about their work. Whites were also more likely to have been dissatisfied by a recent job experience that concerned some intrinsic motivational aspect. At first glance this may seem a contradictory finding, but it is consistent with the idea that whites are more likely to be motivated

by an intrinsic job factor and conversely to be dissatisfied by an experience that impedes intrinsic satisfaction. When asked to rate the importance of various goals, whites were more likely to place importance on interesting, challenging work.

Another side of the same coin concerns attitudes towards job competence; Indians were more likely to feel poorly equipped for the job. Whites were more likely to place importance on gaining experience at different jobs. They were also more likely to value improving their education, developing their own abilities and being dependable and reliable as an employee. The last relationship was significant at the 90 per cent level of confidence.

### 5.3 Supervision or Management.

Indians are more likely to feel that the supervisors are unhelpful, that it is difficult to get through to management and that there are hardly any opportunities to discuss problems. They are more likely to feel pushed around. At the 90 per cent level of confidence, they are more likely to be uncertain about what is expected of them. At a non-significant level they are more likely to be dissatisfied with a job experience relating to the style of supervision generally. Two out of the four Indians who had resigned within one year of the research, specifically quoted dissatisfaction with supervision as the reason for their resignation.

### 5.4 Self-esteem.

Indian respondents are more likely to feel that employees are not taken seriously, more likely to feel unnoticed and less likely to feel treated like responsible adults, the latter relationship not reaching the 90 per cent level of confidence, however. Also at a level of confidence below 90 per cent, Indians were more likely to have quoted some kind of enhancement of their self-esteem as the factor they liked most about their previous job.

Whites are more likely than Indians to regard their job as having higher status than all but one of the occupations given for comparison in the questionnaire. The only occupations which Indians are less likely to accord higher status are those of primary school teacher and bank clerk.

#### 5.5 Recognition of Performance.

Indians are more likely not to feel recognised, less likely to feel that their merit will be recognised and more likely to feel that their work is unfairly assessed. At the 90 per cent level they are less likely to feel they are rewarded for responsibility. Whites are more likely to feel that shiftwork is well rewarded.

#### 5.6 Working Conditions.

Indians are more likely to regard the job as being dirty and to feel that the safety precautions are bad. When asked to quote a recent dissatisfying job experience Indians were more likely to mention work task frustrations. They are also more likely to feel strongly that the job is strained and tense.

Contributing to this experience of tension may be working relationships. Indians are more likely to feel that they have many difficult workmates, whereas whites are more inclined to see the job as having pleasant colleagues.

#### 5.7 Job Commitment and Career Aspirations.

Whites are more likely to see the job as long-term rather than short-term. Indians are more prone to say they have not thought or worried much about a career and are uncertain about their future intentions. When they have thought about it they are more likely to be uncertain about their future career (90 per cent level of confidence).

Indians are more likely to have moved to Durban, if they have moved, because they were attracted by jobs in general. They are more

inclined to have disliked the material rewards in their previous job, and to have left their last job because of the material rewards. They are also more likely to be aiming to have their own business in 7 to 10 years' time.

Whites are more likely to have moved to Durban because they were attracted by the recreational life or because they were curious to see Durban (90 per cent level of confidence). They are more likely to have most disliked the work pressure in their previous job, whereas Indians are more likely to have most liked the work pressure in their previous job (90 per cent level of confidence). Whites are more likely to be aiming for a more senior job with the company in 7 to 10 years' time.

Indians are more likely to say that they often feel like staying away from work even though there is no significant difference in absenteeism. Whites are more inclined to say that they know what to do to progress, to place importance on security in their work, and on building a future for their family security for later in life. At the same time they rate work opportunities elsewhere in Durban or South Africa as good.

#### 5.8 Work and non-working Roles.

Indians are more inclined than whites to feel that shiftwork affects their private life; this may reflect in part a lesser acceptance of irregular time schedules among the Indian workers. It may also be related, however, to negative perceptions of the job already discussed as well as to actual differences in lifestyle. As already observed the Indian technicians are likely to be younger. They, more than whites, mention dating, courtship and going to the cinema as their favourite recreational pastimes. They are also more likely to enjoy dances and parties (90 per cent level of confidence). They are also more inclined to do home maintenance or car repairs in their spare time, as well as to go for drives and spend time with their families (not statistically significant). Whites, on the other hand, enjoy hobbies, team sports and

water sports. Whites generally give higher ratings of importance to enjoying spare time leisure activities and social life.

Attitudes towards shiftwork may also be influenced by other objective circumstances. Indians are more likely to live over 30 kilometres away from work while whites were more likely to have a higher personal income, a higher family income and a higher income per head of family. There is also some evidence that Indians have greater debt problems, although this is not statistically significant. The greater material welfare of whites may account for some of the differences in the lifestyle mentioned above, but the nature of any relationship between income, lifestyle and degree of acceptance of shiftwork is not at all clear.

#### 5.9 Aspects of Personality.

The profiles of responses to the incomplete sentences reveal some differences between whites and Indians although these are mostly not statistically significant. Whites appear to be generally more satisfied with their interpersonal relationships, and to be broadly more satisfied with their lives as a whole. In particular they seem to experience greater satisfaction with their authority relationships but are less satisfied with their peer relationships than is the case among Indians.

Whites are more likely than Indians to reveal a need for achievement and a need for autonomy or mastery, but less likely to show a need for approval, acceptance or a need for self-esteem. In some ways, therefore, whites may be more independent of the behaviour and responses of others in their work environment than is the case with Indians.

Indians tend more than whites to give answers which suggest that they react to internal conflict with escape, with fantasy of some kind, or with projection, and they seem less likely than whites to react



to conflict with acceptance. The sentence completions suggest that Indians structure life cognitively in terms of external events, rather than responding subjectively, which is possibly also an escapist reaction of a type. Indians seem more anxious than whites, and more likely to react to external frustration with depression or withdrawal. Whites, on the other hand seem more inclined to react to external frustration with aggression.

#### 5.10 Assessment.

The consistency of the results point strongly to the conclusion that whites show higher levels of job commitment, work motivation and job satisfaction. It seems fair to say that they accept the job with a greater sense of freedom of choice, with greater enthusiasm for the work and with a higher evaluation of the job relative to other occupations. They also show more commitment to the job as a career. Indians, on the other hand, seem more likely to have accepted the job out of a need for higher pay and not because of an interest in and, perhaps, an aptitude for the kind of work. It is noteworthy that several Indian technicians were previously teachers and highly dissatisfied with remuneration in the teaching profession.

Indians tend to show markedly higher levels of job dissatisfaction and alienation. Relative to whites, they also find the working conditions uncongenial, are more critical of the supervision, of methods of performance appraisal and they feel that shiftwork adversely affects their non-working lives. This disenchantment with the job does not, however, manifest itself in the form of higher rates of turnover; in fact the rate of labour turnover is lower among Indians than for whites. Only 7 Indian technicians had resigned 16 months after the study compared with 14 whites. Nor does the job dissatisfaction manifest itself in the form of higher absenteeism than is the case among whites. As has been observed, however, job performance is lower among Indians. Whatever the full reasons for this there would appear to be a relationship between the greater job dissatisfaction among Indians and the way they

are appraised as workers. One may also note that the rate of dismissals is higher among Indians. Finally, the personality characteristics of Indian technicians appears to be more conflict-ridden and less able to cope adaptively with these conflicts and frustrations.

#### 5.11 Race Relations.

The existence of such marked differences in job outlook between the two race groups in the light of the concern shown by most respondents for the quality of human relations in the workplace emphasises the importance of the issue of race relations in the company. Race relations were not specifically investigated but it is pertinent to examine responses on this topic as they arose spontaneously.

Forty-five per cent of Indian respondents made special reference to experiences of race discrimination or to various forms of unacceptable behaviour by whites. These experiences came to light particularly when Indians were asked to name the three experiences on the job during the previous six months which had caused the most irritation, frustration or disappointment. Their grievances seem to take several forms. Generally Indian respondents complain of authoritarian, bullying behaviour by seniors and foremen whom the Indians readily classified as racialsists. They also dislike what they see as a 'superior' attitude on the part of the whites with its corollary of making them feel inferior. Criticism of the perceived quality of supervision could be summed up by the comment of one man who said *'The company should embark on a program of public relations and teach the whites to treat us as human beings.'*

Indians feel that management adopts double standards in its policy towards white and black employees. They suspect that there is discrimination in the recruitment policy, reflected, for instance, in the higher education required of Indian recruits. They also feel that there is discrimination in the allocation of jobs, believing, for instance, that Indians are given the dirty work to perform. They sense

discrimination in the policy of advancement and promotion because they see their own chances of progress restricted by the attitude of foremen who evaluate their performance. They also seem to believe that there is discrimination in the way management or supervision responds to initiatives from technicians; one man, for example, said he was disappointed that a suggestion of his had been disregarded simply because of his being a non-white. There is a feeling that in the event of a dispute between technicians and foremen, Indians do not get a fair hearing from management, which is believed to invariably accept the report of the white foreman. There is also felt to be discrimination in the selection of the works committee: one man complained that the Indian representatives on the committee had not been nominated by the Indian staff but by the company.

There are unfortunately few indications of white race-attitudes in the questionnaire responses. Those that appeared tend to support the observations of Schlemmer and Weaver in the earlier study of labour turnover. In summarising the attitudes of white ex-employees towards the policy of Indianisation they suggested that the negative feelings which were observed represented a vague disquiet which has as much to do with perceived threats to a superior racial status as with more concrete fears about job competition. In illustration of the former factor one white in the present study complained about *'having to work with so called high and mighty 'white' Indians.'* With regard to the latter one white said *'We whites must always run out of the way to hand over to the Indians.'* Another white commented *'It looks like the company is not interested in our social problems. It looks like the company prefers the colour people.'* Another white expressed the opinion that the standard of job performance had dropped since the introduction of Indian technicians.

It would seem appropriate to interpret these inter group attitudes within the context of their industrial setting. Race relations are interwoven with the supervisory relationship. Both supervisor and

supervised may well be channelling their job frustrations into the easily identifiable factor of race. What is perceived by Indians to be race discrimination may in many cases simply be an expression of poor supervisory skills or of inadequate human relations which derive from other causes.

It would seem that the race relations problem cannot be seen in isolation of the wider issue of human relations on the plant. One Indian respondent observed that *'the majority of white senior operators change for the worse when they become foremen!'* It is noteworthy that white technicians voiced many of the same criticisms of supervision and management as their Indian colleagues. It is also noteworthy that for every complaint that related specifically to race, there were three more which were critical of a perceived deficiency in human relations generally. A common strand running through these criticisms is the poor communication between job levels.

In conclusion it can safely be stated that a substantial number of Indian technicians, if not a majority, are unhappy in their relations with whites within the company. An interesting additional indication of this may be seen in the fact that 20 per cent of Indian respondents refused to give any answer to the question about irritating, frustrating or disappointing job experiences over the previous six months. During the fieldwork several Indians expressed concern about the anonymity of the questionnaire, and it is a reasonable assumption that some did not respond for this reason. Hence in both direct and indirect forms, considerable evidence seems to exist pointing to the salience of the issue of race relations. Even if no race discrimination exists, it is clear from many of the results quoted earlier in this section that Indians are more troubled than whites by factors affecting their dignity, self-esteem and morale on the job. Since these dimensions of response are always readily interpreted in racial terms, a problem of 'race relations' can be caused by factors quite independent of race discrimination as such. In this sense, in a racially mixed workforce in a

divided society, the quality of race relations can be barometer of other problems in the workplace. The greatest danger of all, perhaps, lies in the fact that such effects can be self-reinforcing. The more the Indians believe a problem of race discrimination, the lower their morale, leading to or reinforcing behaviour and performance which does set them apart from whites in objective terms. Such circular processes must be interrupted at all costs.

## VI. FACTORS RELATING TO LABOUR STABILITY\*

We turn now to the major focus of this analysis - that of labour turnover. We base our analysis initially on certain indices of labour stability included in the questionnaire before turning to a study of actual resignees in the next section.

Computer cross-tabulations were run between a wide range of subjective and objective variables, as independent variables, and the following dependent variables; these dependent variables being taken as indexes of labour stability/instability:

- 1) Perceived likelihood of employment in the firm in 3 years' time;
- 2) Perceived likelihood of employment in the firm in 7 years' time;
- 3) Rating of overall job satisfaction.

The use of these dependent variables as indicators of potential labour turnover can be validated by reference to an analysis of the 18 resignations among respondents, which had taken place since the time of the research.

	Resignees (n = 18)	Still employed (n = 148)
	%	%
Likely to be with firm in 7 years	28	55
Undecided	28	32
Unlikely to be with firm in 7 years	44	12
	100	100

We note from the above relationship, which is significant at the 98 per cent level of confidence (Chi-square test), that resignees are much more likely than those still employed to have indicated that they would not be with the company in 7 years' time. A relationship of

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\* Results relating to Labour Turnover are presented in more detail than that given in earlier sections since this was the major focus of the investigation.

similar strength and significance holds between the stated likelihood of being with the company in 3 years' time and whether or not the employee has resigned. The relationship between the stated degree of job satisfaction and resignation is as follows:

	Resignees	Still employed
	%	%
Satisfaction with work	33	55
Ambivalent	28	32
Dissatisfaction	39	13
	100	100

The relationship between stated satisfaction and job stability which appears in the Table above is significant at the 98 per cent level of confidence (Chi-square test).

On the number of resignations to date, therefore, it would seem that the three dependent variables are appropriate predictors of a predisposition to resign. Resignations, it seems, are most likely to come from those respondents who anticipate their departure in the questionnaire or who express dissatisfaction, even though, obviously, many have not yet resigned; the rate of resignations is likely to be low in any case, because of the presently restricted job situation in the city and the country at large. Under the normal circumstances of a freer job market, the relationships between our stability variables and the tendency to resign would almost certainly have been stronger.

There is also a highly significant relationship between the dependent variables (the stability indicators) as can be seen from the following Table, which gives the two variables of job satisfaction and stated likelihood of being with the company in 3 years' time as an example:

	Those unlikely to be with company in 3 years	Those uncertain	Those likely to be with company in 3 years	Total
	%	%	%	%
Satisfied	25	44	69	54
Uncertain	36	41	25	31
Dissatisfied	39	15	6	15
TOTAL	100	100	100	100
Percentage	22	23	55	100

The coefficient of correlation between the two variables in the Table above is ,40; sufficiently high to demonstrate a firm relationship.

In view of the demonstrated external validity and of the internal consistency between the variables, it seems that fairly substantial reliance can be placed on the three dependent variables as indices of predispositions to stability or mobility.

By the above criteria, a perusal of relationships between items in the results shows that predispositions to labour instability/stability relate to:\*

#### 6.1 Frustration of Intrinsic Work Motivation.

e.g. "Unstable respondents" were significantly more likely than others to express the following feelings about their job (Question 7).

- Job needs few real skills
- cannot really use my abilities
- job never tests my real abilities
- job is boring
- unimportant work
- feel limited and restricted

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\* The following results are not presented in any order of importance.



### 6.2 Frustration of or Low Level of Need for Job Competence.

The 'stable' respondents showed a concern for doing their job well by placing high importance on gaining experience at different jobs (Question 8). A reasonable assumption is that they were interpreting this to mean within the company. The 'stable' respondents were more likely to mention a concern with their job competence when completing the personality test stimuli (Question 19). 'Unstable' respondents were more likely to say that they felt poorly equipped for the job, indicating that frustration of the need for job competence may be associated with instability (Question 7).

### 6.3 Dissatisfaction with Supervision or Management.

'Unstable' respondents were more likely to express the following feelings about their job (Question 7).

Unsympathetic management  
 uncertain about what is expected of me  
 often feel pushed around.

'Unstables' were also more dissatisfied with the quality and style of supervision when describing their three most irritating, frustrating or disappointing experiences on the job (Question 5).

Perceptions of difficulties in supervision are not limited to the unstable group. When completing the personality test sentences\* 'stables' were more likely to indicate a problem or show a concern with the quality of supervision. This suggests that the problem may be very widespread but that the more stable employees tend to or are able to curb or repress emotional reactions to supervision; the problem only appears when a disguised technique is employed.

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\* The incomplete sentences test was analysed twice: once in order to classify what it revealed about overt reactions to the job situation; and as a follow up by a clinical psychologist who classified the answers in terms of personality variables (see later).

6.4 Factors Contributing to Low Self-Esteem or Revealing Low Trust Relations in the Work Situation.

'Instability' was found to be related to these job descriptions (Question 7).

Employees not taken seriously  
often treated like children  
don't feel trusted  
feel unnoticed

When completing the personality test sentences 'unstable' were more likely to mention a problem with the dignity, sympathy or trust accorded them (Question 19).

6.5 Social Status.

The higher a respondent rated the social standing of his job relative to alternative jobs proposed in the questionnaire, the more stable he was likely to be (Question 28). Stability was also related to the higher job grades (Question 2).

6.6 Race Relations.

Race attitudes can contribute towards a lowering of self-esteem. When completing the personality test sentences 'unstable' were more likely to refer to a problem connected with race attitudes (Question 19). The respondents involved in most instances were Indians.

6.7 A Perceived Lack of Recognition for Job Performance or Reward in Relation to Job Demands.

'Unstable' were more likely to express these feelings about their job (Question 7):

Not rewarded for responsibility  
my work is unfairly assessed  
don't feel recognised  
not sure whether merit will be recognised

The higher a respondent's performance rating for 1976, the more likely he would be with the company in 3 years' time. (Company records).

#### 6.8 Material Reward.

Wages are a material form of recognition. 'Unstables' were more likely to feel that wages are not good. This is unlikely to mean that 'unstables' simply have higher salary expectations, since 'stables' (Question 7) were more likely to place importance on a high salary, and 'stables' (Question 8) were also more likely to have taken their present job because of good pay (Question 9).

Therefore, it may be that 'unstables' rate wages as being low *in relation* to job demands and frustrations. This is to some extent supported by the finding that 'unstables' are relatively more likely to perceive pressure of work as excessive (Question 5).

#### 6.9 A Perceived Lack of Opportunity for Advancement

'Unstables' were more likely to express these feelings about their job (Question 7):

Little opportunity for progress  
uncertain of what to do to progress

'Unstables' were also more likely to refer to impediments to promotion when describing the three most irritating or frustrating experiences on the job (Question 5).

#### 6.10 A Lack of Social Rootedness.

The more the respondent is committed to his social environment in terms of investment in social relationships or things of a more material kind, the more likely he will be stable. 'Stables' placed a high importance on enjoying a good social life and on building a future for their family (Question 8). 'Stables' were more likely to have

larger accommodation and were more likely to own their dwelling (Questions 46 and 47). 'Stables' were also more likely to rate their home life as happy (Question 49). 'Unstables', on the other hand, were more likely to have ephemeral commitments; they were more likely to say that they moved to Durban because they felt like leaving the previous town. They were also more likely attracted to Durban by the recreational life or the sea (Question 18).

6.11 Frustrations of the Need for Social Relationships or of Private Life.

'Unstables' were more likely to say that shift-work adversely affected their private life. Among all employees, 35% of respondents said shift-work had a bad effect on their private life, 35% said that it was not too badly affected and 30% said they quite enjoyed the pattern of shift-work (Question 21). 'Unstables' were more likely to enjoy dances and parties; pastimes that shift-work tends to impede (Question 20). On the other hand 'stables' were more likely to enjoy spending time with men friends in pubs or elsewhere, activities of a type less affected by shift-work (Question 20).

6.12 A Negative Perception of Working Conditions or Benefits and/or a Sensitivity to Conditions.

'Unstable' respondents tended to feel that their job was (Question 7):

Dirty  
dangerous

'Stables' were more likely to select good conditions and benefits as a factor leading to their employment with the company (Question 49). 'Unstables' were more likely to have given working conditions as the factor they most disliked about their previous job (Question 16). On the other hand 'stables' were more likely to refer to working conditions when describing the three most irritating or frustrating job experiences (Question 5). Also 'stables' were more likely to mention

a problem concerning safety conditions when completing the personality test sentences (Question 19). Here again, it would seem that stable employees are able to curb or repress reactions to the above conditions, only exhibiting them when a test of underlying or latent attitudes is employed.

#### 6.13 Other Relationships.

There were other significant relationships not directly related to the above categories:

- whites were more likely to be stable than Indians. However, this finding (Question 38) is not confirmed by the terminations of respondents to date. This suggests that given equal outside opportunities, Indians may be less stable than whites as a category of employees;

- Afrikaans speakers were more likely to be stable than others, and those who spoke a foreign language were more likely to be unstable (Question 39);

- 'Stables' were likely to have a higher income per head of their total dependents (Question 42);

- 'Unstables' were more likely to rate themselves as unhealthy, (Question 24), perhaps indicating a relatively greater sensitivity to certain job conditions;

- 'Unstables' were more likely to be absent and more likely to say they often felt like staying away (Question 7 and Company records).

#### 6.14 Career Trajectories of Respondents.

The more committed to his job as a career (not necessarily in the same firm), the more likely the respondent was to intend to stay and to express job satisfaction (Question 10). Among all employees, about 40% of respondents were undecided about their present job as a future career (Question 10). Of those respondents who were least likely to stay, 23% said they were going to try and achieve the

same or a more senior similar job, but in another place. (These may represent the type of employee committed to the refinery type of work, but not to the company.) Twenty-three per cent were aiming for a higher technical or professional job, 23% wanted to go into business or farming and 16% were aiming for a specialised technical or management job (Question 11).

#### 6.15 The Relative Importance of Key Variables.

Certain key variables with the highest loadings on a 'mobility' factor in a Factor Analysis were selected as potentially most discriminating in regard to labour turnover. Five personality variables and nine attitude variables from the rest of the questionnaire were combined in a Multiple Regression Analysis with the dependent variable being the likelihood of working for the Company in three years' time. The analysis was run for all respondents as well as separately for whites and Indians.

In the Regression Analysis conducted among *all* respondents, the tendency to react to external frustrations with aggression was found to have the highest regression coefficient and hence contributes most to the explanation of variance in the dependent variable. Next in importance was the feeling that shiftwork affects private life, followed by the personality variable indicating the presence of anxiety. The presence of two personality variables in the three variables with the highest regression coefficients suggests that personality characteristics may be very useful predictors of stability; at least as useful as specific perceptions of the job which cannot be assessed among job applicants anyway. The fourth most important variable was the belief that work is unfairly assessed, the fifth was the feeling that one was often pushed around by supervisors, and the sixth was a feeling of being ill equipped for the job. The overall Multiple Regression Coefficient was 0,56 and the percentage explanation of variance in the dependent variable was 31 per cent.

The separate treatment of Indian and white respondents revealed

one noteworthy distinction; the priority of variables which emerged for the Indian group was almost identical to the overall pattern while that for whites was markedly different. In the former, anxiety was the most important followed by the aggressive reaction to frustration. Then came the feeling that shiftwork affected private life, a belief that work is unfairly assessed, self-confidence and in sixth position the feeling of being poorly equipped for the job. The Multiple Correlation Coefficient was 0,57 and the percentage explanation of variance 32 per cent.

Among whites the variable with the highest regression coefficient was the view that the job does not test real abilities. This was followed by frustrating relations with authority, a perception that the job is dangerous, feeling poorly equipped for the job, the belief that the work is unfairly assessed and the tendency to react to frustration with aggression. Here the Multiple Correlation Coefficient was 0,68 and the percentage explanation of variance in the dependent variable was 45 per cent.

This rank-ordering of variables, which places relatively great emphasis on attributes of the job and the respondents' performance at work, suggests once again that whites are more inclined than Indians to be motivated by intrinsic aspects of their work in the company and hence are likely to think of leaving if they lack the intrinsic satisfaction.

#### 6.16 Conclusions.

In studies of this nature there is a danger that relationships found to exist between dissatisfaction (or the inclination to leave the company) and specific variables, are due not to specific patterns of cause and effect, but to a type of generalised tendency among dissatisfied or potentially mobile employees to be critical of the Company. This is the so-called 'halo effect' and it can be a way in which certain employees seek to justify their own rejection of the company when given the opportunity to do so in a questionnaire. In perusing our results,

however, we have been able to isolate a number of items where the negatively-oriented employees had the opportunity to be critical, and yet where relationships in the results do not distinguish significantly between the negatively-oriented and more positively-oriented employees. Therefore, we are reasonably confident that the patterns in the results outlined above relate to features in the employment situation which are relevant to labour turnover in specific ways. This observation, incidentally, is equally applicable in other sections of this report.

The findings reveal that generalised instability in the labour force is related to some of the factors which are very often mentioned in the literature as bearing upon employee dissatisfaction: i.e., frustration of employees' needs to express themselves or feel competent in their work, frustration of needs for self-esteem and recognition, perceptions of blocks to advancement and problems of supervision. These are also factors which are essentially part of the *human organisation* of the workplace.

The importance of these factors i.e. the human factors, is underscored by the fact that not all 'unstable' technicians are uncommitted to their *type* of work. They may consider the same work in a different setting.

More pragmatic factors are also important, like the perception of the adequacy of material rewards in relation to job conditions and in relation to frustrations in the working environment. The results also make it clear that the labour turnover problem is to a degree a matter of selection: some less stable employees tending to be socially unsettled or unrooted or to have interests outside the workplace which conflict with the demands of the job - shiftwork in particular.

Of key importance among Indians, are personality factors - the tendency to react to frustration with aggression and anxiety. Among



whites the issues which emerged as being of key importance were impediments to self-expression in work, poor relationships with authority and a perception of the job as dangerous.

Very broadly, the results, tentatively at this stage, point to a need for improvements in supervision patterns, some judicious 'job enrichment', the establishment of better relations of trust between employees, middle management and supervisory levels, increased emphasis on safety precautions and a form of selection aimed at minimising the numbers with personalities sensitive to the working conditions on the plant. We have to await the results in the next section before confirming the conclusions just given as they apply to the problem of labour turnover. Our dependent variable in the section just discussed isolated the factor of *predisposition* to resign. Not all people with such a predisposition will in fact resign, even under favourable circumstances. Therefore, while the results given above are powerful pointers to the problem of labour instability, they have to be refined in the light of an analysis of actual resignees, to which we turn in the next section. It must be emphasised however, that our index of 'instability' in this section is in a broad sense also an index of job satisfaction, and for this reason the results in this section should be taken seriously within the broad perspective of company morale.

## VII. FACTORS RELATING TO LABOUR STABILITY CONTINUED: ACTUAL RESIGNATIONS

Here the analysis bears upon the employees with the strongest dispositions to be mobile, in the sense that they have resigned since the fieldwork, in conditions of limited general availability of alternative jobs. It is theoretically possible that factors bearing upon this 'hard core' mobile category may be different to the factors which have already been discussed in relation to the rather weaker but more widespread desire to leave the company. It is appropriate, therefore, that a separate analysis be made of those employees who have actually resigned, rather than automatically regarding them as representative of a wider group with predispositions to leave the service of the firm.

As in the previous analysis, a large number of variables relate significantly to the distinction between resignees and non-resignees. These factors will be dealt with under the same broad headings as those in the previous section.

### 7.1 Intrinsic Work Motivation.

It is noteworthy that none of the major items relating to intrinsic work satisfaction or the frustration thereof are significantly related to actual resignation. Only one item vaguely suggestive of intrinsic motivation relates significantly to resignation; this being the relatively greater tendency among resignees to express a need for wider training and experience (Question 7).

### 7.2 The Need for Job Competence.

It is also noteworthy that resignees are not distinguished from others on any of the items which relate to a need for job competence or the frustration of such needs.

### 7.3 Perceptions of Supervision or Management.

Resignees are significantly more likely to express dissatisfaction with the quality of supervision in mentioning their most

frustrating experiences over the past six months (Question 5). However, in contrast to the analysis in Section VI, resignees do not emerge as significantly different on the supervision items in Question 7. We must assume, therefore, that although this factor relates to resignation, it may not be particularly strong or general. (Some additional evidence of the importance of supervision, however, is provided by the responses of the first six employees who resigned and who had indicated their intention to leave; four of them referred to the quality of supervision when describing the three most irritating experiences on the job. Furthermore, of the first four respondents who had been dismissed two did not report any dissatisfying experiences, but the other two referred to some aspect of supervision.)

#### 7.4 Factors contributing to Self-esteem or reflecting Trust Relations in the Workplace.

Here again, unlike the analysis in the previous chapter, factors which injure or threaten the self-esteem of employees do not appear to relate significantly to actual resignation.

#### 7.5 Social Status.

Resignees are significantly more likely than non-resignees to place emphasis on reaching a high position and on status in the community. Resignees are also more likely to see their jobs as Process Technicians as having higher status than primary school teachers; it should be recalled that in the analysis in the previous section, it was the 'stable group' which displayed this tendency. This contradiction could be due simply to Indian resignees' very poor view of primary school teaching, however. In general, it would seem that resignees are highly status motivated and, since they are significantly more likely than others to see their present job as 'dirty' (Question 7), they may not view the status attributes of their present job positively. There is some indication, at the 90% level of confidence, that resignees view their job in the company as higher in status than that of bank clerks and artisans. This may not counter-indicate their

ambivalence about the status attributes of process technicians, however; it may reveal a tendency to want to accord themselves as much status as possible.

#### 7.6 Race Attitudes.

The resignees reveal a significant tendency to be strongly irritated by other races at work (Question 7). Race relations, as in the analysis in the previous section, appear to be a problematic feature as regards labour stability. To a considerable extent, this is due to the particular frustrations which Indians experience (see Section V).

#### 7.7 Perceptions of Recognition of Job Performance or Reward in Relation to Job Demands.

Resignees feel no more strongly than others that lack of recognition of job performance is a problem. This again is in contrast to the previous analysis in which this factor related strongly and consistently to the 'instability' variables.

#### 7.8 Material Reward.

Resignees, like the 'unstable' category in the previous section, clearly perceive wages as being poor (Question 7). Resignees do not, however, appear to have higher salary expectations than others, hence it is probable that wages are seen to be poor *in relation* to job demands and frustrations.

#### 7.9 Perceptions of Opportunity for Advancement.

There is little evidence that resignees see relatively greater impediments to promotion than others. One curious finding, however, is that resignees are more certain than others about what to do to make progress (Question 7). This may mean that they feel that they know what to do but find it unacceptable. We will return to this in due course.

#### 7.10 Social Rootedness.

Resignees, like the 'unstabes' in the previous section, display signs of a lack of social rootedness. They are more likely than others to live in a flat or a room and to say that it would be very easy to leave Durban. Resignees, however, do not display the full range of indications of lack of rootedness that is manifest among the broader 'unstable' category in the earlier section.

#### 7.11 The Need for Social Relationships, Recreation and a Private Life.

Resignees are not any more concerned about shiftwork than others and consistent with this they do not appear to find their personal lives frustrated by the nature of their work to a greater extent than anyone else.

#### 7.12 Perceptions of Working Conditions.

Resignees contain a group which is more likely than others to feel strongly that their work is 'dirty'. This, however, is the only item relating to conditions which emerges strongly for the resignee group. Conditions do not appear to weigh as strongly for resignees as they do for the broader 'unstable' category analysed in the previous section.

#### 7.13 Career Trajectories of Respondents.

Eleven of the eighteen resignations come from 'committed' respondents, indicating that career disillusionment is not salient in the decision to terminate employment; in fact, the resignees are significantly more likely than others to say they are aiming at the same job in another firm in 7-10 years' time. It is important to note, however, that the resignees were less likely than others to be aiming at a senior job in the present company. These results would suggest that the particular grievances and frustrations of 'unstable' employees do not produce job re-orientation, i.e. a general reaction against the job of Process Technician as a type of employment. They may leave for specific rather

than for general reasons.

#### 7.14 Job Frustration and Personality.

Resignees clearly experience higher levels of job-frustration than others. They contain a substantial group which experiences strongly many daily frustrations, which experiences the job as 'tense', and which often feels like staying away from work (Question 7). These reactions may be due in part to actual working circumstances, but in addition it may be substantially due to what seems like a *frustration-aggression* pattern which appears to be relatively more characteristic of resignees than of others. In the projective personality test, the resignees proved to be significantly more prone than others to give answers indicating that they react to frustration with aggression.

The resignees are very significantly more dissatisfied with the job than others; a feature which can easily be related to the high frustration content of their work experience. It is worth noting that, despite the evidence of general frustration, there is little of a *specific* kind which appears to block, impede or irritate the resignees; they experience relatively less favouritism than others (Question 7) and they appear to contain a group which is relatively more satisfied than others with staff co-operation and the quality of colleagues generally (Question 7). They do not reveal very strongly the range of heightened specific frustrations evinced by the broader 'unstable' group described in the previous section. All this seems to point to the probability that the location of the frustration of resignees is rather more 'internal' than externally situated in the job situation. The only consistent 'external' factors are the quality of supervision and (for Indians) race relations.

#### 7.15 Achievement Attitudes and Performance.

The resignees are a group which appears to be somewhat less likely than others to reveal a need for achievement on the projective personality test, and this seems to be mirrored in their relatively poor

performance. They are more likely than others to have had a poor performance rating in 1975 and 1976 and they are more prone to absenteeism. Generally they are in the lowest grades and have had fewer promotions (although this is largely due to a shorter length of service than the average). Finally, consistent with the fact that they have resigned, this group contained a significant number which sees work opportunities elsewhere as favourable.

#### 7.16 The Relative Importance of Key Variables.

The key variables that emerge from the preceding analysis were included in a Multiple Regression Analysis in order to attempt to determine the order of priority among various items in respect of their contribution to labour turnover. Fourteen variables were used. The dependent variable was whether or not the employee had resigned (dismissals excluded) from the time the survey was conducted up to the end of April 1978.

The following order of priority in terms of their contribution to the explanation of the variance in the dependent variable emerged from the items included - only the six with the highest regression coefficients are given below:

- 1) Living in a room or a flat as opposed to a house;
- 2) *Dissatisfaction* with present job; knowing what to do to make progress;
- 3) The tendency to respond to frustration with aggression; *not* giving good pay as a reason for taking a job in the company; and
- 4) A perception of favourable work opportunities elsewhere.

The relevance of living in a room or a flat is readily grasped - these employees are less likely than others to be socially rooted, to have invested in building a future and to have committed themselves to a career in Durban. The second variable; that of general dissatisfaction

is also fairly obvious in its denotation - one would not expect employees who resign to experience anything other than a low degree of job-satisfaction. Of significance, however, is the fact that it emerges in second highest position in terms of explaining turnover while none of the specific variables usually associated with satisfaction or dissatisfaction reveal a significant relationship with resignation. This is either due to the fact that certain important variables were omitted from the investigation (unlikely in view of the extensive range of issues included) or perhaps to the tendency for employees who intend resigning to find reason to indicate job dissatisfaction, or to the fact that employees who resign are inclined in a very general sort of way to have higher expectations of a job, or, finally, to the possibility that employees who resign are more prone to frustration than others that this produces job dissatisfaction of a general kind without any specific factors striking these employees. Both the latter two possibilities, if they are valid, would seem to indicate that if the things which make up job satisfaction could be improved decisions to leave employment in the company would be less easily taken.

The other variable which occupies second position in the ranking above is somewhat perplexing. Employees who resign seem to know more clearly than others what to do to make progress in their jobs, yet they choose not to or find it difficult to commit themselves to making progress. As said before, the possibility also exists that there is a degree of cynicism; these resignees feel they know what to do to make progress but consider the 'price' (effort) too high in the context of low overall job satisfaction. It seems to be another way of saying 'I know what to do but the system is such that I am simply not motivated to try.'

The tendency to respond to frustration with aggression - third in order of priority - would seem to indicate a low frustration tolerance. This, as already suggested, may well be one of the reasons why the job is experienced as dissatisfying in spite of the fact that few specific



objective factors could be isolated by respondents to support their feelings. The resignees appear to be people whose irritation is easily aroused and who do not resolve these irritations internally.

The significance of not having taken jobs in the company because of high pay is perhaps simply an indication that the material rewards of the work are not rated very highly. The fact that other indices of a perception of inadequate material reward are not endorsed may indicate that resignees cannot claim that the pay is poor in objective terms but that subjectively the material rewards in the company are not seen as particularly attractive.

The last variable listed indicates a particularly obvious relationship; i.e. that under present conditions employees are unlikely to resign unless they see definite prospects of obtaining work elsewhere.

All fourteen variables included in the regression analysis do not explain a great deal of the variation in the dependent variable. The multiple correlation coefficient is 0,47 and the percentage of variance explained is 22 per cent. From this low figure we gain the impression that the decision to resign is an expression of a cumulation of a large number of diverse reasons and causes (not all of them able to be included as variables in the regression analysis above) and, more importantly, that specific factors operate - just prior to actual resignation, which account substantially for the decision to leave. These would be factors which could not possibly be included in the study, like noticing an attractive job going elsewhere, for example. Despite the low percentage of variation explained, however, the rank-ordering we have given provides some indication of the factors operating consistently within the company which predispose employees to take work opportunities elsewhere when these arise.

Additional refinement of this analysis is required, however, since the results just presented are for all employees and findings in

the previous section suggest significant differences between whites and Indians. Accordingly, all resignations up to September 1978 (20) were included in separate Regression Analyses for Indians and whites.

The variables selected for the analysis were those that emerged as being of top priority for actual turnover in the combined Regression Analysis discussed immediately above, as well as the key variables emerging in the separate Regression Analyses for whites and Indians dealt with in the previous section, in which the dependent variable was not labour-turnover as such but the stated likelihood of being with the company in three years' time. The results are as follows:

#### Indian Employees.

Multiple Correlation Coefficient = 0,59.

Contribution to variance (unadjusted) 35 per cent.

Top 7 items in order of size of partial regression coefficients:

- tendency to react to frustration with aggression (sentence completion test);
- lives in flat or room;
- anxiety evident (sentence completion test);
- know what to do to progress;
- perception of work opportunities elsewhere;
- shiftwork affects private life;
- job perceived as safe.

#### White Employees.

Multiple Correlation Coefficient = 0,54.

Contribution to variance (unadjusted) 30 per cent.

Top 7 items in order of size of partial regression coefficients:

- did not take job in company for reasons of pay;
- satisfying relations with authority figures (incomplete sentences test);
- job does not test real abilities;
- lives in flat or room;

- know what to do to progress;
- job perceived as dirty;
- no anxiety present.

We note from the results that white and Indian resignees project almost completely distinctive profiles. Both groups tend to be socially less-well rooted (live in flats or rooms as opposed to houses) and both groups know what to do to make progress but choose not to, but apart from these similarities the patterns are completely different. Among Indians the 'psychological' factors of frustration - aggression and anxiety are prominent whereas among whites specifically work-related perceptions are the most meaningful - a feeling that the job does not test abilities and that it is dirty. These patterns will be further discussed in the conclusions.

## VIII. SOME BROADER OBSERVATIONS ON THE COMPANY AS A WORKING ENVIRONMENT

In previous sections attention has been given specifically to employee performance, absenteeism, labour turnover and race relations. In this penultimate section we will make a broader assessment of some of the features in the working environment which appear to affect the *general morale* of employees, partly because this may be of interest in its own right and partly in order to provide a background to some of the conclusions in the final section which is to follow.

### 8.1 Human Relations in the Workplace.

The discussion of labour stability in Section VI emphasised the importance of factors which are part of the human organisation of the workplace. As with the subject of race relations the questionnaire was not designed to probe the nature of human relationships in any depth. However, it may be illuminating to examine in detail the way in which respondents took the opportunity in the few open-ended questions to articulate their frustrations and irritations at work. It is important to note that the results which follow do not reflect the views of a majority of employees, but they are accorded significance because they emerge from *substantial* minorities of the men.

The overall impression gained from answers to the questions on recent job experiences is of somewhat of an authoritarian, intolerant, one-sided relationship between supervisors and technicians. There were complaints about instructions being given in a bullying manner. Foremen were described as having no manners, being loud-mouthed and using uncouth foul language. Technicians saw themselves as being '*pushed around*' and having to endure the bad temper of supervisors. A common feeling appeared to be that there is too much harsh criticism and not enough recognition from supervisors. Much of this criticism was seen as taking the form of '*backbiting*', a word used by several respondents. One man said his most irritating job experience was listening to foremen criticising technicians while the foremen drank their tea. Another man disliked

the *'sarcastic'*, critical supervision. Yet another complained about getting no recognition for work well done but having mistakes pointed out immediately without fail. Foremen were perceived to be unconcerned about correcting mistakes in an instructive way and overly concerned with fault finding. There was a feeling that reprimands were not always in proportion to the seriousness of the mistake. One man complained about being *'hailed over the coals for minor mistakes'*, another about *'small mishaps leading to big arguments later'*. A common feeling among respondents was that supervisors were not interested in improving the abilities of their juniors. One man criticised *'the reluctance of a few of the senior technicians to teach you on the job'*, another *'the lack of interest by senior personnel in new recruits'*.

The criticism by supervisors was felt to be distinctly unjustified in some cases. One man complained of being shouted at by a foreman for a reason which he later found out was wrong. Another said he disliked *'senior technicians who blame you for a mistake incorrectly and fail to apologise'*. Some respondents felt that their efforts were not appreciated. One complained about *'doing certain jobs and not even being thanked for them'*. Another said he was aggrieved because he had tried to help out on an upset unit and it was not appreciated by management.

Respondents described several examples of how their self-esteem was lowered by the behaviour of supervisors. One man said he disliked *'being belittled by a senior from a different shift in front of colleagues'*. Another said that *'when approaching seniors for explanations of a new job they treat it like a joke and embarrass us in the presence of others'*. Some technicians complained of being treated like children. Others gave specific examples of how they were made to feel untrustworthy or irresponsible. One man complained of *'senior technicians sneaking on you, especially during night shift, to see*

*what one's doing'*. Another was unhappy with *'the way my boss continually stands over me on dayshift as though I'm not capable of handling the job'*. Some technicians felt that their seniors adopted a superior attitude and made the technicians feel inferior.

What was perceived by technicians to be the inability of supervisors to issue instructions in a civil and sympathetic manner seemed to be highlighted during radio communication. One respondent resented being *'given instructions over a walkie-talkie by our seniors in a bullying tone, especially when the big bosses are around'*. Another disliked being asked awkward questions by a senior technician over the radio.

Another set of problems seemed to arise less from a lack of consideration of feelings, than from a simple neglect of the basic essentials of good communication. Several respondents objected to the fact that they received instructions from too many people at the same time. On occasion these instructions were seen to be conflicting. One man said he disliked *'being instructed over the radio to carry out numerous tasks by two or more people at a time'*. Another said his most frustrating experience was a misunderstanding as a result of poor mutual communication between the foreman, the day assistant and himself, with the *'blame eventually being attached to me'*. A foreman complained of *'very bad communications within our department with my boss often bypassing me, giving work to or questioning my workmen'*. A senior technician complained of *'no discussion or information from higher levels'*. There were other indications of poor communication. One man said his most frustrating experience was *'getting no explanation for the reason for carrying out a job'*. Another's was *'being prevented from transferring to daywork after being given the impression that I could'*. Another man objected to *'many staff changes without being notified'*.

There was also dissatisfaction because it was felt that communication was one-sided and that the opinions of those lower in seniority were not considered. One man said he was irritated when the foreman or senior technician did not see his point of view even when he was right. Another said that *'the foreman does not accept any method other than his own'*. Yet another said *'you cannot express your views if they go against those of your seniors'*. A technician felt that a suggestion of his had been disregarded *'just because he was a junior'*.

Some respondents referred directly to their feeling of being exploited by their supervisors. One man complained about *'the misuse that process foremen make of their powers'*. Another said that he *'felt used as for example by being selected for an unpleasant task in an untactful manner'*. Another said *'the foreman tried to treat us like machines'*.

Various kinds of behaviour from supervisors also upset technicians sufficiently for them to report it as the most irritating or frustrating job experience during the previous six months. Several respondents complained about favouritism being shown to some. A few technicians complained about foremen who bore grudges. A few referred to the servile, obsequious behaviour of foremen when relating to their superiors.

Although in relative terms, more of the negative observations about the equality of supervision emanated from Indians, substantial numbers of whites had essentially the same perceptions of the weaknesses of supervision. This, plus the fact that there was substantial consistency in the views of a wide range of respondents leads us to believe that human relations problems are widespread. We realise that the views quoted above represent only one side of the picture, as it were, and that in many or most cases, supervisors might have felt completely

justified in responding in ways which might not have been popular. It is not our task, however, to assess the relative merits or demerits of the employees complaints but to outline the *perceptions* of Technicians as evidence of a problem.

## 8.2 Patterns in the Responses of Employees

In an attempt to gain greater insight into the overall pattern of the data obtained in the study, a Factor Analysis (briefly referred to earlier) was conducted on the attitudinal variables included in the enquiry. After the 'rotation' of factors, only one factor was obtained which provided a meaningful pattern and which contributed substantially to the overall variance. This factor was a *communication cum supervision* factor, explaining 10% of the variance. The items with high loadings (.5+) on this factor (described in the direction of the loading) were *job dissatisfaction, unsympathetic management, company unconcern about employees, unhelpful supervision, employees not taken seriously, not rewarded for responsibility, not sure whether merit will be recognised, feeling being limited and restricted, often pushed around, work unfairly assessed, often treated like children, hardly any opportunities to discuss problems, much favouritism and lack of personal recognition.*

The relative prominence of this factor in the patterning of the variation in the data tends to bear out the broad qualitative description given in 8.1. It needs to be noted that race, seniority, performance, motivation, material reward items, and reactions to shiftwork had very low loadings on this factor, indicating that it is rather general, cutting across the kind of groupings in the labour force which might be expected to respond differentially to supervision and communication in the company. We are satisfied that this analysis provides yet further evidence of a general problem in the company which affects both the higher-performance and less well-motivated respondents.



A broad inspection of the other meaningful factors which emerged, none of which contributed more than 4% of the variance, suggests that commitment to the company is often associated with perceived opportunities to use 'real' abilities (an intrinsic type of work motivation) and that this type of motivation and interest in work is relatively (but not exclusively) associated with whites as opposed to Indians, thus bearing out certain other results given earlier.

A second factor analysis was conducted on the results of the personality scale - the sentence completion battery - with the addition of our major dependent variables. As would be expected with this type of instrument, the factor with the largest contribution to overall variance (15%) was what appears to be a general neuroticism factor, mildly associated with low achievement need and a poor relationship with authority. Since none of the dependent variables had meaningful loadings on this factor we need not concern ourselves further with it.

The results generally are aligned with previous conclusions. The factor on which the 'instability' index (unlikelihood of being with the company in 3/7 years) had a high loading, also revealed meaningful loadings on job dissatisfaction and an aggressive reaction to external frustration.

The results once again show low performance ratings to be associated with Indian employees, and to a degree with low achievement need and frustrating relationships with authority. One factor represents a rather curious deviation from the expected results. This factor reveals a weak loading of *low* performance in association with satisfying relationships with authority, peers and family and low 'neuroticism' generally. It alerts us to the possibility that there may just be a small subgroup among the employees composed of people who are rather normal, happy, sociable low performers. This would

be a phenomenon of a relatively minor order among the broader patterns which this study has revealed fairly consistently.

## IX. CONCLUSIONS AND RECOMMENDATIONS

One of the problems affecting this analysis has been the fact that the majority of indices of attitudes and job-responses included in the questionnaire are surprisingly discriminating. Very large numbers of significant correlations have been obtained, producing rather dense webs of interconnection in the data. Hence it has been extremely difficult to draw out the more salient links between the dependent variables and employee responses. This problem has alerted us to the possibility that there may be so-called 'halo-effects' in the data; tendencies among respondents to use their specific questionnaire responses as a means of expressing very general attitudes to the job and the company. On closer perusal, however, it is clear that there is sufficient patterning in the replies to indicate that the results are reasonably free from such 'halo effects' and that the relationships yielded in the analysis must be taken seriously. To use a colloquialism, there is simply 'a lot happening' in the workplace; very many inter-relating and cross-cutting patterns of cause, effect and association. The conclusions which follow are an attempt to make sense of these patterns.

### 9.1 The Pattern of Responses to Work and the Working Environment.

The preceding sections have been largely problem-oriented and hence the discussion has tended to emphasise the negative features in the work environment. A more balanced picture can be presented here.

A broad perusal of Section II shows that, among all Process Technicians and whites in particular, there is a range of very favourable job attitudes. Substantial majorities feel enthusiastic about, interested in and committed to their work as Process Technicians, feel well-equipped for their jobs, know what is expected of them, feel they can use their abilities, appreciate their workmates (peers), view the wages positively, find supervision helpful (or at least some of it) and feel trusted. Nearly seven out of ten whites state that they are satisfied with their work. Indians have

less-favourable views than whites but even among them responses on these issues are more positive than negative.

On other important issues, however, there tends to be a rough balance between positive and negative reactions. Here we note that no more than around 50% of employees feel that the company cares about employees, that they have scope and opportunity for progress and that they are noticed, recognised and rewarded.

Distinct problems seem to be manifested when we note that substantially fewer than a majority of employees feel that they are treated as responsible adults, taken seriously and never pushed around. There is apparently also a widespread sense of daily frustrations, of a lack of understanding from management, of tensions on the job, worry about making mistakes, of communication difficulties and of favouritism.

A broad generalisation, then, would be that while the reaction to the work itself tends to be positive and peer relationships are generally sound, there are substantial human relations and communication problems up and down the hierarchy of control, and, to a somewhat lesser extent, problems of recognition, reward and promotion in the company. Broadly these results, based on a near-complete coverage of the views of Technicians, tend to support the findings of the earlier study among employees who had left the company.

## 9.2 Problems of Supervision.

Among the human relations and communication problems, the quality of some of the supervision assumes what must be seen as fairly critical proportions for a substantial group among the Technicians. In an environment populated by practical, technically-oriented people, one would not expect supervision to be 'soft', in the sense of it being accommodating of weakness or permissive. One would expect some rigour, toughness and 'masculinity' of leadership. The problem extends beyond

these characteristics, however; there is evidence of harshness, hurtfulness and even humiliation. Some supervision is also inconsistent, too critical and negative.

Factor Analyses of the results show clearly that this problem represents one of the more clear-cut and consistent patterns in the personnel environment. Most importantly, the problem affects at least some people in all types of employee categories - high-performers as well as low-performers, whites as well as Indians, committed and uncommitted employees, juniors and less junior men.

Even among those high-performers who, in responding to the attitude items, indicated that they were happy with patterns of supervision, there were many who indicated in a less-direct way in the sentence completion test or other open-ended items that the quality of supervision troubled them. Their concern may lie at a subliminal level notwithstanding successful conscious adaptation to patterns of authority. There seems little doubt that this problem is of a kind requiring high-priority action from management.

### 9.3 Authority and Personality.

While any index of personality characteristics included in a comprehensive study of work attitudes must of necessity be brief and fairly crude, producing results which should be viewed with some caution, results were obtained in this study which were sufficiently consistent and clearly crystallised to be highly suggestive. What becomes clear when considering the overall pattern in all the results is that personality intervenes between the social structure of the workplace and the appearance of problems like poor morale, dissatisfaction, turnover, absenteeism etc. One sees this in the sense that employees who perform well, who are socially well-rooted in the community and who appear to be generally well-adjusted to life and social relationships are less sensitive to the characteristics of

supervision and authority relationships than others. In a sense, this is a circular argument, of course, since their positive adjustment implies an acceptance of or compatibility with authority. Conversely, there is no way that responses to a personality index of this type can be kept free of environmental effects; in this case somewhat punitive patterns of supervision. The more punitive the environment, the more 'neurotic' the personality responses will appear to be. However, the degree of reaction is what the analysis was focussed upon. One can say that some are more sensitive to the social structure of the workplace than others. There is also some evidence of a well-adjusted small group of low-performers, socially well-integrated and happy, but apathetic. Here again, it might be that personality intervenes to 'insulate' the individual from the negative aspects of the social structure.

#### 9.4 Employee Performance.

There is some difficulty in the analysis of results relating to the issue of worker performance. As noted in the preceding text, the official company performance ratings for 1975 and 1976 showed some distinct patterns of irregularity according to the supervisor making the performance ratings. In fact this may be evidence of the validity of many of the doubts expressed by Process Technicians about the performance ratings. It probably is fair to assume, however, that the performance ratings have sufficient general validity and reliability to be used as an index of employee effort and motivation, with the qualification that to some degree, they must contain an element of adjustment to supervisor expectations.

Broadly the results tend to support what is already well-known, namely that motivation is related to the satisfaction of employee needs. High performance among Technicians relates to a range of so-called intrinsic work satisfactions (satisfactions derived from the work itself), as well as rewarding relations with peers, the

absence of felt frustrations due to working conditions, to safety, and to pressures of work and to the perceived status-rewards of the work. A relationship also obtains between higher performance and a settled family orientation, concern with security and quieter forms of recreation. Hence the best employees constitute a social type. In terms of evidence from the index of personality, we find the higher performers showing greater needs for achievement, general life satisfaction and a positive adjustment to life (of which good performance at work is, of course, a component).

These results are very much what one would expect. However, they tend to contradict the well-known theory of Herzberg (1966) who argued that 'motivational factors' are concentrated in the area of intrinsic rewards, responsibility and recognition needs; our results reflect a more widely-based set of needs and interests which relate to performance.

Generally, the pattern of results shows that work-in-itself is very highly valued by Technicians. This reflects what is perhaps a creditable achievement on the part of the industry and the company in having been able to structure what is basically a semi-skilled operation in such a way as to inject into it considerable interest and meaning.

One clear finding is that Indian Technicians are much less concerned with the intrinsic rewards of the work than whites. This difference in attitude may contribute very substantially to the relatively lower levels of performance among Indians. One should not assume, however, that Indians necessarily have a different outlook on work than whites. The lower order motivational pattern among Indian Technicians may be the result of factors operating in the workplace or the employment situation. Firstly it should be noted that Indians have higher educational qualifications than their white colleagues.

This raises the possibility that Indians may be 'overqualified' for the type of work involved, and hence may not be able to discover the same meaning and interest in the work as their white colleagues. Secondly, the Indians as newer employees may not have had time to develop the job-commitment that exists among whites. Thirdly, the problems of supervision are almost certainly interpreted differently by Indians than is the case with whites; Indians because of their sensitivity to race discrimination are much more likely than whites to be positively demotivated by human relations problems. Balancing these considerations, however, is the evidence from the personality index that Indians may be less 'intrinsically' motivated than whites as a function of their personal commitments. It is possible that non-white employees, because of their collective experience of occupational disadvantage, will tend to be differently motivated than whites in job situations for a time to come; shared sentiments may have produced a tendency to be motivated more by the avoidance of the negative than appreciation of the positive aspects of work. All these views are tentative, however, and would have to be confirmed by further research.

A final thought on the topic of motivation, relevant to all employees, is that a striving for recognition of performance is one of the higher level motivations that one would expect among employees who are obviously interested in job content and are motivated at the 'higher' levels of need satisfaction. Yet, in our employee group, this aspect of job rewards is less prominent than other types of satisfaction. Mindful of the fact that suspicions of favouritism and the unfair assessment of work is a serious problem, we may have to do with a situation in which one of the 'higher' level motivations is being blocked by a specific problem. Favouritism, if it exists, will certainly have wider implications than the specific disadvantages for those workers who feel that their work is incorrectly appraised.

#### 9.5 Race Relations.

We have already noted that whites tend to reveal more



job-commitment and interest in their work than Indians, and have commented on possible reasons for this. In addition to this pattern, however, Indians also tend more than whites to find working conditions uncongenial, and are more critical of supervision, human relations in the workplace and standards of performance appraisal. To a large degree these responses can be traced to a sensitivity to perceived or actual race discrimination. This, as we have noted, is a self-reinforcing problem since to the extent that Indians become demotivated by these perceptions so their work must suffer and so, in turn, will they find that responses of supervisors and colleagues are negatively affected, thereby making the human relations problems all the worse.

There is some evidence, however, that the particular group of Indians employed is more affected by shiftwork than whites generally are, and there is also some evidence, although tentative, that Indians as a group experience personal adjustment problems to a greater degree than whites. This latter response, however, may well be a collective reaction to a troubled race relations situation, actual or perceived.

It would be extremely unwise to generalise for all Indian Technicians. The reactions cited above are modal and disguise great variation within the Indian employee group. Just as whites represent a variety of employee-response patterns, so do Indians. What does affect Indians as a group, however, is the presence of an actual or perceived problem of race relations in the workplace.

#### 9.6 Absenteeism.

As with performance ratings, absenteeism is significantly correlated with a large number of variables. As indicated in the opening remarks in this section the large number of inter-connections in the data make the identification of causal relationships extremely difficult.

A Factor Analysis conducted on the attitudinal variables shows

that high absenteeism forms a cluster with the perception of supervision as being unhelpful, a feeling that the work is dull and, as would be expected, with an active social life.

Straightforward cross-tabulations of the data reinforce the impression that absenteeism is clearly connected with greater social restlessness, and hence with a clash of demands between shiftwork and social life. This type of analysis also bears out the relationship between absenteeism and supervision problems. It also highlights the reason why supervision is experienced so negatively, in that the high absentee group seems to have a greater sensitivity in the area of self-esteem and recognition needs of the absentees would seem to be centred on status rather than on interpersonal relations, however. They seem to have no greater need than others for achievement or approval from others and are no more dependent, but they do see their job as having lower status, they are less-committed than others to technical work and aspire more to entrepreneurial activity. This is consistent with the fact that their fathers tend to have relatively higher educational status. They tend to view their jobs instrumentally, being more concerned than average with pay and less involved with the intrinsic aspects of the work. This is repeated in lower performance ratings than average. Tentatively, there is also evidence of a degree of personal adjustment problems in the high absentee group, including a tendency to respond to frustration with aggression.

Finally, we need to note that absenteeism is related to an inclination to resign within a few years. In the section which follows we will consider the extent to which absenteeism and the inclination to resign are part of the same general problem.

#### 9.7 Labour Turnover.

Absenteeism may be related to the inclination to resign and it is, for obvious reasons, associated with dismissals, but it does not

correlate with actual labour turnover over the period since the field-work ended. We must be alerted to the possibility, therefore, that absenteeism is not a precursor to resignation and that the two phenomena may be analytically distinguishable from one another.

There is a large overlap between the factors associated with absenteeism and those associated with the inclination to resign. Within this area of overlap we find that those inclined to resign, like the high absentees, are likely to have problems with the supervision, experience dissatisfaction with rates of pay, experience clashes between social life and shiftwork, tend to be the less socially rooted type of employee, tend to have somewhat lower performance ratings than average, and also experience some frustration of needs for self-esteem.

Here the similarity in the pattern of association bearing upon absenteeism and inclination to resign ends, however. Those inclined to want to resign include a substantial group which is less instrumentally motivated than high absentees; in fact there is evidence of frustrations of the need for self-expression in the work and of the need for job competence and advancement as career Technicians. This group is quite substantially committed to the work as a potential career. The impression is gained that dissatisfaction with rates of pay in this group is caused more by the evaluation of pay in relation to job frustrations than by a relatively materialistic orientation.

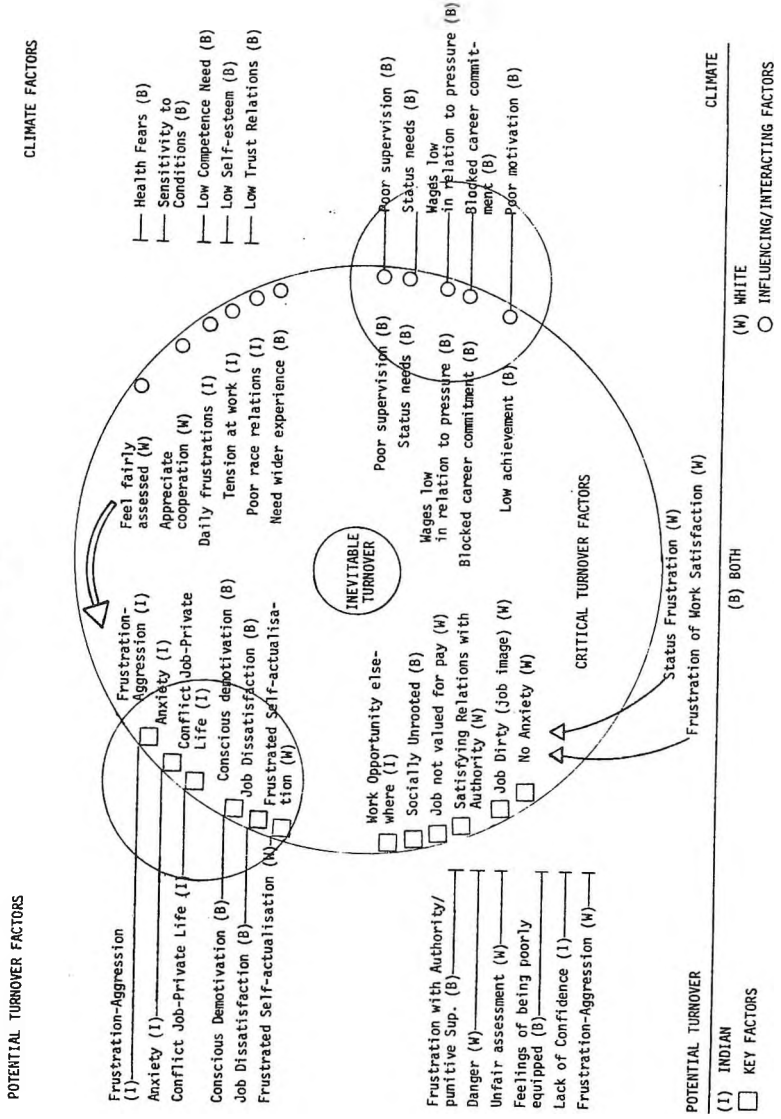
As a broad generalisation, we would suggest therefore that while a substantial group among those inclined to resign is highly similar in job-responses to the high-absentee group, there is a more-or-less equally substantial group which derives its disinclination to remain with the company from the frustration of some rather positive job motivations. This is one of the more serious problems revealed by this analysis, since it would seem that the company is running the risk of losing promising employee material.

The significance of the results pertaining to inclination to resign has to be seen within the context of the very restricted job-market which exists at the present time. *These results help us to understand why labour-turnover was relatively high in the company in preceding years.* The inclination to resign as measured in the current study is not simply a surrogate measure of job dissatisfaction; the pattern of results makes it quite clear that there is a distinct pre-disposition to be mobile embodied in this orientation, which is distinct from although closely related to job dissatisfaction.

There is a complex pattern of association and disassociation between *inclination* to resign and *actual* resignation at the present time. The factors bearing upon inclination to resign, as already intimated, can be seen as describing a wider pool in the labour force which may provide the source of a *potential* for higher labour turnover when the economy improves. These factors can also be seen as creating a *climate* conducive to low commitment to the company among a proportion of employees.

Actual resignation is in large measure rooted in these factors - indeed most of them flow through into the causation of immediate mobility. Some do not, however, and to some extent this discontinuity reflects the fact that turnover at the present time is in *some* respects (or in *some* men) a qualitatively different phenomenon to turnover in a freer job-market. The patterning of factors has been set out in Diagram I.

DIAGRAM 1.



The diagram is self-evident and each particular factor has already been discussed in the text, therefore only a few key concluding comments will be made. The 'hard core' or inevitable turnover that stands at the centre of the wider labour stability problem does not reflect an intensification of the major personnel problems in the company. Among Indians it is primarily due to *personal adjustment problems*, aggravated by job dissatisfaction, supervision, status frustrations, problems of shiftwork, race relations and job pressures of various kinds. Among whites it is critically due to *frustrated self-actualisation in work, job dissatisfaction and the image of work*, aggravated by supervision, lack of opportunities for wider training, job pressures of various kinds and status frustrations. Among both groups the lack of social ties and roots, the awareness of opportunities elsewhere and work-problems picked up as a result of poor-motivation and low performance 'release' the men for resignation, as it were. Among both groups, the 'hard core' labour turnover does not seem to be due to the objective level of wages (although stability could always be bought by extraordinarily high wages). Among the hard core white 'turnovers', problems of supervision and work assessment are fully recognised but do not worry the men - they adjust well and positively to the various communications in the workplace. This is unlike the Indians where communication and supervision is a critical aggravation problem (because of their personal sensitivity and race-sensitivity problems), *and* unlike the potential white 'turnovers', for whom supervision, communication and work assessment are serious problems.

The broader analysis of factors associated with actual mobility also shows that the labour turnover which exists *at the present time* is drawing away the type of employee who is less automatically achievement oriented than others, less highly motivated within the company, and less committed to work in the company, but who is nonetheless generally committed to a career as a Technician. Unlike the typical 'absentee', the 'resigner' at present does not seem to be the type of person who is seeking an alternative career.

In general, then, one might say that the person who resigns tends to be someone who is not unhappy with the *type* of work but for whom there are fewer constraints on occupational mobility. The 'push' factors which are critical in the decision to move we may finally list then as job-content dissatisfaction and sensitivity to job-frustration and communication in the workplace.

#### 9.8 Brief Overall Comments.

The company is not losing its better employee material at the present time, but the results indicate that if there is an upswing in the economy, a not insubstantial number of more highly-motivated workers would resign. As already intimated, we have no doubt that lower labour turnover could be 'bought' with higher wages, but this would not solve the problem of job dissatisfaction, to the extent that it exists in the workplace.

The reader will have noticed that the issues of supervision, communication and employee recognition have appeared in association with virtually all the problems analysed in this report. While punitive supervision, as broadly experienced by men in the labour force, does not *in itself* relate closely to actual resignations among whites at the present time, the responses to this supervision among employees with psychologically-rooted or racially-located sensitivities is an important factor in current turnover.

Our judgement is that the problems of race relations experienced mainly by Indian employees, can readily be traced back to the more general problems of supervision and communication. Equally seriously, it would seem that these same problems, as well as that of performance recognition, prevent a substantial minority of employees from becoming involved in the positive rewards of the work itself, which are actually and potentially a powerful source of employee commitment in the company. Not all people in supervisory roles perpetuate the problems which have appeared in our results; there is strong evidence of great variability in the quality and

mode of supervision. All employees, however, have certain aspects of their image of the company subtly shaped by the presence of these problems, and this is particularly true in the area of race relations.

Inasmuch as certain of our results have shown that there is considerable variation in reactions to supervision, depending on certain personality characteristics, it could conceivably be argued that the problem is not one of supervision, but of an unfortunate selection of too many Technicians who are 'oversensitive' or whose work performances invite close and even punitive control. Our results, however, show that quite substantial numbers of men who have positive job attitudes and sound performance ratings are affected by the problems. Even if certain personality types could be completely eliminated, the problem would persist.

#### 9.9 Some Suggestions for Action.

Many of the specific findings in this report contain implications for remedial action by the company. It is strongly suggested, therefore, that a plan of action be based on a careful perusal of the entire document, so as not to miss the implications contained in interesting points of detail. Our suggestions which follow are rather broader in scope since they are addressed to the major rather than the minor findings.

As might have been anticipated, our first suggestion concerns the need to improve the quality of some of the supervision. A first step might be to provide feedback to supervisors on the consequences of supervisory styles, and the distribution of this report may in itself provide a vehicle for feedback. In-company procedures for feedback in group situations should also be established, involving perhaps the Personnel Officer in group discussion sessions, first without supervisors present, then later as priority issues emerge, with the participation of supervisors. These sessions are extremely difficult to run successfully - men often fear victimisation for speaking out in the presence of a supervisor and



supervisors are often defensive and negative in such group situations. The presence of a very senior member of management in such group sessions often alleviates fears and serves to emphasise the importance of the operation. If, however, such direct feedback techniques are not feasible then anonymous feedback boxes could be provided by the Personnel Officer and the complaints and comments of staff could be collated into feedback information sheets for distribution to supervisors. A course in supervision skills involving 'behaviour modelling' could also be included. It should be noted that the typical 'works committee' is normally not very effective in dealing with problems of this nature.

Related to the issue of supervision, the procedures adopted in the company for the ratings of performance and more generally, the recognition of merit and the processing of work-related feedback from the Technicians have to be improved and made more consistent. The company has to improve its image of impartiality and of sensitivity to talent, effort and feedback from the lower levels of employment.

As a tentative thought, it might also be advisable to examine the structure of supervision. In view of the high return to the company from the positive job-commitment of those employees who experience the work-in-itself as rewarding, consideration should be given to granting greater work autonomy to employees, at least at a certain level of experience. This may not be easy, in fact, due to the need for co-ordination by supervisors and foremen. Nevertheless, wherever the scope of autonomy and decision-making by employees can be enlarged (job-enrichment) this should be introduced. It must be emphasised here that job-enrichment is strongly indicated by the results bearing on current turnover among whites.

Another area in which suggestions can be made on the basis of the research concerns employee selection. If it were to be possible to use a personality test or tests to identify certain traits in prospective employees, some improvement in both absenteeism and labour turnover could

result. (The test used in the study was a research instrument and as such does not have sufficient reliability to be used in the testing of individual recruits.) A Thematic Apperception Test, some other projective test would be suitable if a skilled interpreter were available; we understand that the Personnel Officer may possess such skills. If projective tests are regarded as too time consuming, a multi-dimensional paper and pencil battery would probably be helpful. The main traits which would be of interest are: the tendency to respond to frustration with aggression and anxiety, and at a somewhat lower level of importance, lack of self-confidence, prominent needs for esteem and status, generalised dissatisfaction with interpersonal relations, generalised dissatisfaction with life, and tendencies to denial or projection in the area of personal responsibility. The reduction of these traits in the new recruit groups could contribute to less labour turnover and lower absenteeism. One realises, however, that such traits may be difficult to identify and suitable tests difficult to administer. This avenue of selection should be explored, however.

Even more problematic would be to identify social and occupational aspirations in would-be recruits. It seems clear from the results that adjustment to work in the company tends to be poor among people with ambitions to become small scale entrepreneurs, to move into white collar work or who have high status aspirations. The problem, obviously, is that no one will admit to these aspirations in any selection interview. Consideration should be given to the devising of a disguised test of social, occupational and status aspirations which could be given to new recruits for completion.

Our results have made it clear that an important background factor connected with labour stability is 'social rootedness' - living in a house as opposed to a flat or room, having a family, having quieter and less time-consuming recreational interests and the like. This can hardly be a criterion in selection, however, since most younger recruits will display the characteristics counter-indicated by the results, and

a good job with prospects for improvements may very well be what the recruit needs and wants in order to put down social roots. Provided great caution is exercised in interpretation, however, this type of criterion can at least be borne in mind in the selection procedures.

Finally, we would suggest that the company examine whether or not the advantages of employing relatively very highly educated Indians (and other non-whites) outweigh the possible disadvantages. We have referred to the possibility of Indians viewing the work negatively because they are 'over-qualified' for the tasks involved. The problem would be greatly augmented if well-qualified blacks felt that their prospects for promotion were in any way constrained.

As said at the outset, many of the comments and conclusions contained in this report have been negative and, by implication perhaps may have the appearance of being critical. This is entirely understandable since our brief was to identify problems. This report has not done justice to the very many positive features in the work environment; the organisation of work, employee benefits, safety, pollution control, the advancement of black employees, and a host of other company characteristics. The mere fact that the company has entrusted an outside organisation to investigate its problems is also a sign of a very progressive outlook. We would ask the reader to bear these last few comments strongly in mind when assessing the bulk of the text.

REFERENCES

- Brown, David (1975) "Shiftwork: A Survey of the Sociological Implications of Studies of Male Shiftworkers", *Journal of Occupational Psychology*, Vol. 48, pp. 231-240.
- Herzberg, F. (1966) *Work and the Nature of Man*, Cleveland. World Publishing.
- Schlemmer, Lawrence and Weaver, Carol (1974) *A Study of Labour Turnover Among Whites in a Process Industry*, Durban. Centre for Applied Social Sciences, University of Natal.



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