A SURVEY OF WORKER PARTICIPATION IN BOPHUTHATSWANA

by

DAVID LEWIS

Submitted in partial fulfilment of the requirements for the

degree of

MASTER OF ARTS

in the subject

INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY

at the

UNIVERSITY OF CAPE TOWN

SUPERVISOR: DR. A.M. KELLERMAN

September 1988

University of Cape Town

The University of Cape Town has been given the right to reproduce this thesis in whole or in part. Copyright is held by the author.

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

University of Cape Town

DEDICATION

To my mother who never taught me what

the word disabled means.

ACKNOWLEDGEMENTS

I wish to express my appreciation to all who participated in this study at AECI, Bophuthatswana. My sincere thanks and appreciation to those members of staff, both management and collegues, who have supported and encouraged me in this study especially Len Larson.

A special word of thanks to my secretary, Glynis Janse van Rensburg, for the assistance in preparing this manuscript and the support so freely given during the preparation for the degree.

My most sincere thanks and appreciation to Chris Tau, for his assistance in the development and administration of the questionnaire.

I wish to convey my sincerest gratitude to Mr C Coetzee of the University of South Africa for his valuable assistance, personal time and critical advice in the statistical analysis of the present research.

David Lewis.

ABSTRACT

Worker participation and the acceptance thereof is well established in first world countries. In third world countries it is still a relatively new concept which tends to rely on legislation for its existence and continuing function. Where a free market economy is in place, labour market forces and management attitudes tend to affect the practice of worker participation.

This research explores the multi-dimensional nature of workers' attitudes towards worker participation in an international company operating in the Republic of Bophuthatswana. A questionnaire using the hypothetical conversation technique and a dichotomous scale was developed and administered to a sample of 300 male industrial workers.

Ten dimensions were proposed and subjected to a factor analysis. The results of the factor analysis revealed a unidimensional scale which suggested an underlying general attitude. This was used as a "general attitude" scale. Only two of the original dimensions were found to have some factorial validity.

These three scales were subjected to an item analysis to establish their internal consistency.

The biographical data in the questionnaire and the three scales were subjected to a correlation study and a regressional analysis to determine what relationship existed between the biographical variables and the attitudinal scales. This was done to explore the

three scales. It was found that only tenure affected all three scales; tenure and not age was the variable that affected workers' attitudes the most.

Table of Contents Page No.

CHAPTER 1

SCOPE OF THE STUDY 1

Introduction..... 1

The situation in Bophuthatswana..... 3

The present study..... 5

CHAPTER 2

AN OVERVIEW OF WORKER PARTICIPATION..... 7

Introduction..... 7

The participants in a participative system..... 7

Definition of worker participation..... 9

The objectives of worker participation..... 13

Forms, levels and degrees of participation..... 14

Worker representatives, their roles and functions..... 17

Propensity to participate..... 21

Management's reaction towards worker participation..... 26

Indirect participation in industry in works councils..... 28

Table of Contents Page No.

Worker participation in Africa..... 34

Worker participation in South Africa..... 36

Current situation 37

CHAPTER 3

THE RESEARCH ENVIRONMENT..... 39

Organizational structure..... 39

Current participative structures..... 42

Current functioning of the participative structures..... 43

Current industrial relations climate in Bophuthatswana..... 45

Conclusion..... 46

CHAPTER 4

METHODOLOGY..... 48

The problem..... 48

Instrumentation..... 49

Item development..... 49

Previous research..... 49

Group discussions..... 51

Table of Contents Page No.

Group comments..... 53

Selection of method for administration.. 57

Scaling..... 58

Pilot study..... 59

Main study..... 61

The sample..... 62

Conclusion..... 63

CHAPTER 5

RESULTS..... 64

Introduction..... 64

Statistical analysis of the questionnaire.... 65

Factor analysis..... 69

Reliability of the questionnaire as a unidimensional scale..... 89

Relating attitudinal dimensions/scales to biographical variables..... 100

CHAPTER 6

DISCUSSION AND CONCLUSIONS..... 105

Introduction 105

Qualitative feedback on the questionnaire.... 105

Table of Contents Page No.

Dimensional structure of the questionnaire... 105

Relationships between attitudinal and

biographic variables..... 107

Regression analyses..... 110

Future research..... 111

Conclusion..... 111

List of Tables Page No.

1. Breakdown of Sample by Tenure and Grade..... 66

2. Breakdown of Sample by Qualification and Grade..... 67

3. Age Distribution in the Sample..... 68

4. Varimax Rotated 10 Factor Solution:
Factors 1 to 10..... 71

5. Eigenvalues for the 60 Factors..... 79

6. Varimax Rotated 6 Factor Solution..... 83

7. Varimax Rotated Single Factor Solution 90

8. Item Analysis Results for the entire Section B of the Questionnaire..... 93

9. Item Analysis Results for Scale 5
"Workers' perceptions of the effectiveness of the worker representatives communication skills."..
96

10. Item Analysis Results for Scale 7
"Workers' perceptions of what a trade union is and if they are in favour of having a trade union". 97

11. Means and Standard Deviations of the Scales of Section B of the Questionnaire..... 99

12. Pearson Product Moment correlations between the Biographical Variables and Attitudinal Dimensions... 102

13. Summary of Stepwise Regression Analyses Results : Biographical Variables as Independent Variables and Attitudinal Scales as Dependent Variables..... 104

Figures Page No.

Figure I: Scree plot of Eigenvalues..... 81

List of Appendices Page No.

A. Original items for group discussions..... 123

B. Questionnaire used in the pilot study..... 132

C. English questionnaire :

Worker representation structures :

An attitude survey..... 146

D. Tswana questionnaire :

Worker representation structures :

An attitude survey..... 161

E. Correlation matrix..... 176

CHAPTER 1.

SCOPE OF THE STUDY

Introduction

As an extension of our western democratic process it is becoming more and more accepted that the individual will have some form of say or input into those things that affect his life at work. He has come to expect to have some form of involvement in the decision making processes (Nel, 1984; Wall and Lischeron, 1977). Involvement by workers in the decision making process is known as worker participation (Nel, 1984).

When a person joins a firm he brings with him his own particular needs. It is assumed that if these needs are not wholy satisfied that the employee will make some effort to do so. This effort can range in variety and form, it can be done individually, or with the help of others as it is an inherent characteristic of humans to form groups for mutual protection and advancement (Terblanche, 1983).

Using the needs deficiency model postulated by Terblanche (1983) one of the mediums through which workers can try to satisfy their individual or group needs is through the use of worker participation structures with management to resolve issues that affect them.

When considering Gilbert's (1980) model of determinants and manifestations of inter-groups conflict it can be seen that the individual's part, in this case the worker, in the conflict process is but one of many variables. What is of

importance are his perceptions, attitudes, values and actual behaviour.

There are things that are external to the work place that can and do have an ongoing effect on the work place and the organization. One of the ways that this process occurs is through the workers as they are subjected, both directly and indirectly, to environmental factors that affect their attitudes and therefore the role they play in an organization (Blunt, 1983).

Slabbert (1984) contends that this conflictual process of what he terms "the haves and the have nots" is as old as time. This would then be consistent with the pluralistic view point of industrial relations, i.e., that conflict is inherent in a situation and it is considered to be normal.

The reality of the Bophuthatswana work place at present is that little has changed, even though the country has become politically independent. The jobs in the primary labour markets are still held by white expatriates and the jobs in the secondary labour markets are held by Tswanas.

The secondary labour market is made up of the semi-skilled and unskilled jobs and because of past practices there is a vast surplus of labour in this area. Lombard's (1981) study predicted that this would happen to the sub-continent if major changes were not made.

Although the de jure discriminatory practices have been removed, many de facto ones still occur. The de facto

discriminatory issues are a political heritage from the Republic of South Africa (RSA).

Galin's (1981) statement, that once major political issues have been settled the more economic ones are likely to bring pressure to bear in the work place, is only partially true for Bophuthatswana at this stage of its development as many people, workers and trade unions do not accept Bophuthatswana as independent from the RSA.

The situation in Bophuthatswana

The country of Bophuthatswana has used political democracy as the means of involving its people in the social decision making process. Nel (1984) says that political democracy is a prerequisite for industrial democracy and Bophuthatswana has allowed for a path to make formal worker participation possible by making provision for it in terms of the Industrial Conciliation Act of 1984.

The problem that many industrialists face is that, in a developing country, industrial democracy may not have taken root to its full extent as described by Nel (1984).

An issue for industry in Bophuthatswana is that it has to find constructive ways in which to interact with its employees so that it can satisfy both parties' needs. As Slabbert (1984) puts it, "any organization employing workers has an industrial relations system, be it formal or informal, and at the core of the system lies the manner in which problems that lead to disruptive conflict are resolved" (p.1). One of the ways to

achieve this is through the use of worker participation.

There are various forms of worker participation found in Bophuthatswana, both direct and indirect. This process is still at a very early phase of development, with consultative committee systems being put forward by the Bophuthatswana National Development Corporation (BNDC) as one possible interim measure. A few industries, because of their proximity to the RSA have retained some form of contact with worker organizations in the RSA. This contact occurs on an informal basis and at times is involuntary.

When the participating company was established in Bophuthatswana in 1981, its management brought with it the then values and attitudes about labour relations from the RSA. Because of the absence of trade union activity it established an internal consultative committee system.

Industrial democracy is a relatively newcomer to the industrial society of Southern Africa and more so in the independent national states. As consultative committees, which are a category of indirect worker participation and a form of industrial democracy, are by and large a first world phenomenon; it does not necessarily mean that they will function in the same way in a third world environment (Blunt, 1983).

An industrial relations climate survey conducted at the company in 1986 indicated that the company's worker participation efforts, i.e., the consultative committees, were not achieving their objectives and were being rejected by the workers

(Terblanche, 1986). As a result of this process, the present study can be seen as being a continuation of the work of Terblanche in this area.

The present study

This study sets out to investigate what the attitudes of workers are towards worker participation, their propensity to participate in decision making and what perceptions the workers have about the effectiveness of present structures.

The present consultative committee system is viewed negatively by the workers because they believe that:

- Management uses the system to control the workers.
- The consultative committees are failing as a means of two-way communication.
- Worker representatives will be victimized by management and they have no power.
- Worker representatives are afraid to take up the workers' case through the consultative committees.

To achieve a clearer and wider understanding of the workers' attitudes and perceptions about worker participation and the consultative committees, a questionnaire with ten scales containing 60 items was developed. This was done by means of discussions with groups of workers, industrial relations personnel and analysing the minutes of the Factory Consultative Committee for the years 1987 and 1988. The questionnaire was administered to a sample of 300 workers.

This study deals with indirect participation through

consultation and consultative structures. For a wider perspective of worker participation see Guest and Knight (1979), Jain (1980) and Shutt (1975).

CHAPTER 2

AN OVERVIEW OF WORKER PARTICIPATION

Introduction

In reviewing the literature on worker participation in both first and third world, there are common basic issues that are always present to a greater or a lesser degree. These general areas are reviewed and then specific attention is given to the functioning of consultative type committees with a brief review of worker participation in Africa and South Africa.

The participants in a participative system

Before commencing with any discussion relating to the field of worker participation it is important to clarify who the main actors are that take part in the process, and in what context it takes place.

Worker participation occurs within organizations in both the public and private sectors (Butteriss, 1971). Blunt (1983) discusses organizations in terms of formal organizations and social organizations. Formal organizations are aimed at the pursuit of specific goals by people grouped together and have objectives that they try to achieve. In doing so they make use of rules and formal authority structures. They have clear boundaries within which they operate. Social organizations are less clearly defined in terms of boundaries as they tend to operate without a formal framework.

Examples of social organizations given by Blunt (1983) are kinship groups or communities while formal organizational

examples include schools, businesses, government departments etc.

The relationship between the main actors i.e., management, workers and the state is pluralistic by nature as each party is in some way competing with the other and this results in an inherent conflict.

The two main actors within an enterprise or organization are those who are in charge and those who do the work i.e., managers and workers. Walker (1981) defines managers as "those who are accountable for the work of their subordinates" (p.435). The role and process of management is to take decisions and to determine the means by which the aims of the organization will be achieved (Butteriss, 1971).

For Walker (1981) managers are those people who are at the very top of an enterprise compared to those at the bottom who are the workers. For him the functions of management deal with the planning, organizing, motivating and controlling of the business.

Both Butteriss (1971) and Walker (1981) describe workers to be in subordinate roles and not having any authority outside that area which is required by their work. They are also only accountable for that area.

Douwes Dekker (1986) describes work as a process of exchange in which the worker receives wages in return for physical and mental effort. This process is the basis for the resulting interdependence between worker and employer and the inherent conflict that accompanies it.

A worker today is not just seen as somebody who is part of

the production process. He is viewed as a special kind of factor of production (Walker, 1981).

The third party involved in participation is the state. Its roles are legislative and statutory in that it provides controls and systems. It must also render assistance to management and/or workers when required (Nel and van Rooyen, 1985).

Definition of worker participation

There is an abundance of definitions defining worker participation. For the purpose of this study some of these will be compared.

Butteriss (1971) defines it as "Any or all of the processes by which employees rather than managers contribute positively towards the reaching of managerial decisions which affect their work. Participation is confined deliberately to processes of decision making, thus communication or co-ownerships are not necessarily participation" (p.6).

Loveridge (1979) and Walker's (1981) definitions each have the same thing in common. For them it is essential for those at the lower levels of an organization to participate in decision making. Both of their definitions imply ascending and descending participation.

A more comprehensive definition is offered by Wall and Lischeron (1977) and supported by McCullum (1987). "Participation refers to influence in decision making exerted through a process of interaction between workers and managers and

based upon information sharing" (Wall and Lischeron, 1977, p. 38).

The commonality between these definitions is that they all deal with decision making and the influence that workers will try to exert on it through the use of worker participation. They do not want to manage the organization but they want to influence the decisions that affect the organization.

Workers' attitudes about influencing decision making, about perceived psychological participation and/or objective participation will be the focus of this study. The workers' need for more information, because it is such an intricate part of the process, will also be considered.

A review of some of the literature with regards to the meaning of worker participation shows that a central theme running through it is one of worker involvement in the enterprise. This involvement is more than just that of workers doing their work as described above. This involvement is primarily concerned with influencing or exerting influence on the decision making process so as to ensure that the workers' point of view is heard. It also provides for the incorporation of workers' views into the final decisions taken.

Jain (1980) sees worker participation as narrower than industrial democracy in that it primarily deals with the process of influencing management in an enterprise. It deals with changing the power relationship between workers and management. For McCullum (1981) it is a process that facilitates industrial

democracy, while Walker (1981) sees it as a means of bridging the gap between worker and management and a means of increasing worker power and influence.

Barra (1987) describes it as a feeling on the part of workers, that they, the workers, do not just want to be a cog in the wheel in business but want some way of expressing themselves, to let it be known what it is that they feel. These feelings do not have to agree with management's and can even run counter to management's feelings (Walker, 1981).

The British Institute of Management (BIM) (1978) sees participation as a concept that is based on the common interests that workers and employers have in furthering the long term prosperity of the firm and they for themselves. The BIM emphasizes commonality of interests rather than a separation of interests.

For Loveridge (1979) a central theme in worker participation is the concern about the lack of involvement by employees in the control of their task environment. This acts as the basis for motivating participation.

Loveridge (1979) goes further and discusses psychological and objective participation. Psychological participation is the influence that the participants think they have while objective participation is the actual amount of influence they have. Managers try to maximize psychological participation and minimize objective participation because the latter can place constraints on them.

People, today, invest their lives in an enterprise and should therefore be involved in the decision making of those decisions that will and do affect them (McAllister, 1982).

Douwes Dekker (1987) refers to worker participation as a procedural system by which management representatives and worker representatives are guided. This is important when a substantive agreement is in place between management and a trade union. For him, real participation is based on respect.

In describing the elements that are contained in the meaning of worker participation viz., influence, interaction and information, Wall and Lischeron (1977) clearly state that although the elements are seperate they are part of a whole and therefore cannot stand alone.

The ability to influence is fundamental to the process. When the two parties, workers and management, have an equal balance of power, then participation is seen to be at its highest level. It is at its lowest when there is a disequilibrium, management control when management holds the power or workers control when workers hold the power (Wall and Lischeron, 1977).

Interaction is the process of constructive problem solving. The emphasis is on a constructive process rather than trying to reach agreement by force.

Information, the last element, usually keeps the process alive as it is essential for both parties to have relevant facts about the issues with which they are dealing.

Although there is to a large degree, a broadly accepted

understanding of what worker participation is, the basis from which it develops differs from country to country. This difference is related to the values and ideologies of the country, society or organization in which worker participation takes place.

An individual is affected by the cultural milieu in which he lives. The values and attitudes that are present in that environment will affect the ways in which the individual views industrial democracy and worker participation (Orpen, 1980). Therefore different ideologies in different countries, at a particular moment in time, affects the way participation is expressed and the form it takes.

The countries of Western Europe have socialism as an underlying doctrine of there participative systems (Cordova, 1982; Koch and Fox, 1978). The United States of America (USA) on the other hand has been more interested in economic values and beliefs.

Lynas and O'Neill's (1987) statement on worker participation effectively summarizes what has been said, "Worker participation, whatever its form, is an emotional issue regardless of its national context. This should not be unexpected, given that participation in its truest sense, is a practice aimed at the equalization of power" (p.48).

The objectives of worker participation

A review of the literature reveals a host of objectives, aims and purposes that worker participation should achieve. Some

of the more common ones are briefly summarized as follows: It should improve the overall efficiency of the enterprise, raise the satisfaction of employees and reduce alienation by means of increasing worker motivation and counteracting anomie, powerlessness and lack of worker involvement. Conflict between workers and management should be reduced and power sharing should be increased. The social responsiveness of the firm should be increased (Landers, 1976; Orpen, 1980; Rosenstein, Ofek and Harel, 1987).

Douwes Dekker (1987) sees it as a means by which potential restrictive practices that workers can resort to can be averted. Loveridge (1979) believes it is a way in which workers get the vote in an industrial society.

The common element in these objectives is that they offer positive results for both the worker and the organization. These results can only be achieved by actively involving workers. This involvement is not just for show. If the objects are to be achieved then workers must be more actively and sincerely involved in the decision making processes of the enterprise.

Forms, levels and degrees of participation

Two definite groups of participative forms have been identified. These are direct and indirect participation. (Blunt, 1983; Loveridge, 1979; Nel, 1984; Robson, 1981; Wall and Lischeron, 1977). Walker (1981) uses the terms descending and ascending participation.

Direct participation deals with the situations in which a

worker is personally, directly involved in the decision making. The worker is directly responsible for a part of the organization, i.e., he makes the decisions. The decisions are generally limited to immediate tasks that he is involved in and can be done individually or in groups (Loveridge, 1979).

Walker (1981) describes descending participation, which is a form of direct participation, as those situations in which workers are able to "discharge managerial functions in their own jobs, thus gaining some authority over their own work and some control over the structuring of their own work situation" (p.436).

Indirect participation takes place through an elected representative (Wall and Lischeron, 1977). Here the worker is not directly involved in the decision making process as it is done through the representative on behalf of the workers.

Ascending participation is when the worker is able to "exert influence at the levels of the enterprise hierarchy where authority and managerial functions are supposed to reside" (Walker, 1981, p.436). This is a form of indirect participation.

Walker (1981), contrary to other authors, does not exclude conflictual actions such as restrictive practices, strikes, work to rule and go slows, as forms of participation.

Wall and Lischeron (1977) and Marchington (1980) both discuss similar distinct levels of participation at which participation takes place. The lowest level of Wall and

Lischeron's (1977) hierarchy is called local participation and Marchington's is the task level. The focus at this level is on those tasks that directly affect the worker in his job and the decisions that relate to the tasks.

Jain (1980) notes that this takes place at the shop floor level on a day to day basis and involves operating decisions like the scheduling of work, work methods, quality and quantity of output. It is a direct form of participation that includes amongst others job rotation, job enrichment and semi-autonomous work groups. The work done at the Volvo plant in Sweden is one of the best known examples (Blunt, 1983).

The second level in the hierarchy is termed by Wall and Lischeron (1977) and Marchington (1980), respectively as medium participation or co-ordinative participation. This level deals with departmental decision making that is normally associated with middle management and involves short term decisions. This level of participation can be direct or indirect. Indirect participation at this level would normally take place in works councils or joint consultative committees (Jain, 1980).

The highest level, distant or strategic participation, involves long range decisions. This takes place at the corporate level and involves employee directors or corporate boards (Jain, 1980).

The levels described by Koch and Fox (1978) are in effect the same as those described above. They label them as technical

(job level), managerial (mid level) and institutional (high level).

In describing degrees of participation Asplund (1972) says "Participation refers to a process where two or more parties mutually influence each other when establishing plans, lines of action and decisions. Participation is not thus a phenomenon that can be put in a clear cut alternative: existing or non existing. There are in fact degrees of participation" (p. 10).

Pateman (1983) defines three degrees of involvement in the participation process. They are pseudo participation, partial participation and full participation.

In pseudo participation management makes a decision and then tries to persuade workers to agree with it. Partial participation exists when the parties exchange information, consult and influence each other but one group (usually management) retains the right to make the final decision. In full participation all have an equal right in the final decision making.

Worker representatives, their roles and functions

Due to the size of the work force and the fact that it is not possible for management to have one to one discussions with the whole work force the workers elect people to represent them. They then become the mouth piece of the people (Slabbert, 1984).

The representative, as the voice of the mass, uses the workers' collective experiences and needs as his frame of reference. He has to do so if he wants to gain the workers'

commitment (Marchington, 1980). For Walker (1981) his capabilities to fulfill his role as a person are more important than those of the worker in the participation process. He views the breakdown of communication between worker and worker representatives as a particularly weak link in the participation process.

McAllister (1982) supports this view as he sees the core of the process to be the roles that representatives and management play. The representatives are at the centre because they are there on behalf of the workers. Their skills and ability to effectively deal with both workers and management is a very important factor.

The effectiveness of a worker representative will also depend on his freedom from fear of victimization by management. It is very important that he is guaranteed protection from reprisal from management for voicing an opposite opinion (Mansell, 1980).

For worker representatives to be effective they have to have or acquire relevant skills and knowledge. As they are often not properly trained or have the skills to deal with many issues that they get involved in their effectiveness is reduced (Boyd et al, 1977). The skills and knowledge that are needed range from simple things like the knowledge of meeting procedures to the expertise that is required by representatives who sit on board level. They, for instance, would require some expertise in finance, marketing, personnel and production.

Partially as a result of this, worker representatives have had little success; neither have they demonstrated the ability to influence decisions on boards of directors and work councils in the Netherlands, Belgium and Norway (Loveridge 1979). They have also failed to communicate effectively with the workers that they represent. This is also detrimental because if representatives are to be effective they need to be in contact with their constituents and share the same understandings about the constitution within which they, as a group are functioning and their role and powers within it (McAllister, 1982).

If representatives suffer from a lack of role clarity there is the potential for a gap between their expectations and performance (Walker, 1981). When there is no clarity they run the risk of becoming part of the management team, or being seen to be, and therefore loose contact with and the support of the workers.

If the position of the worker representative is considered in terms of role conflict, role ambiguity and stress as discussed by Blunt (1983), it is possible that a black worker representative due, to the marginal position that he occupies in a white controlled enterprise, is subjected to more stress than his counterpart in Europe.

There is also a greater potential for exogenous role conflict in rural areas because many traditional customs are still covertly functioning. Because of the strong kinship system that is still prevalent in rural Tswana societies there is

the potential that a Tswana representative is subjected to conflicting demands from within his own role set. This results in intersender conflict and the representative is subjected to endogenous role conflict.

Role ambiguity could be heightened because of the opposing feedback he would get from managers and workers. Many of the representatives can be viewed to be in boundary spanning roles and are assessed in terms of non-organizational criteria.

In fulfilling their roles worker representatives interact with management in two primary ways. They make use of consultation and/or negotiation. In discussing consultation McAllister (1982) emphasises that it is a way in which decision making is influenced. In consultation it is only an attempt because the responsibility for making the decision is still retained by management. Douwes Dekker (1987) sees the consultation process as providing union leaders the opportunity to influence management. He concludes with the point that the final decision rests with management.

McCullum (1987) is more specific in his definition of the concept of consultation. For him "Consultation is the process of seeking employees' opinions prior to making decisions. Management is, however, not bound by these opinions, but the intention is to give due consideration to these opinions in the decision-making process" (McCullum, 1987,p.44). Consultation is viewed as an effective communication tool if used correctly.

Negotiation, on the other hand is a process of formal

bargaining. It can be intergrative or distributive and usually takes place between management and trade unions (Butteriss, 1971). Both of these types of bargaining are forms of joint decision-making. Integrative bargaining takes place around problems where there is an area of common interest between workers and management and in the resolution of the problem each party's gains are not at the expense of the other party. They endeavor to find solutions in an integrative way rather than in a conflictual one. Distributive bargaining deals with conflict between two parties and the way in which they try to resolve the conflict situation. In distributive bargaining gains by one party are made at the expense of the other party. (Walton and McKersie, 1965).

Propensity to participate

The actual involvement by workers in participation is affected by two sets of factors, viz., situational and human factors (Walker, 1981). Situational factors are those structural elements of an organization that will promote or retard labour-management interactions. These structural elements are responsible for the participation potential of the organization.

Firstly, the autonomy of the enterprise, which deals with the manner in which decisions are taken within a particular organization, is important as it determines the freedom with which the internal parties can act without the need for consent from external parties. This then allows changes to take place

within the organization, including power structures, without reference to outside parties who could prevent or inhibit such changes.

Secondly, the technical factors such as the technology of the processes used is important, e.g., is the process labour intensive versus capital intensive, is the production process machine paced or is it human paced? These aspects of the technology used are important because the simpler the technology used the more likely the workers will be able to participate. The importance of the technological aspect lays in the fact that it affects the ways in which workers interact with each other, the knowledge and skills that they must have and the relationship they have with management.

Thirdly, the actual size of the enterprise can have a bearing on participation. Normally the bigger the enterprise the more likely that participation will be an indirect form of participation, as a large number of people will not be able to participate directly.

The final element, the structure of the enterprise, is affected by the above three plus any relevant legislation pertaining to it.

In many countries in Western Europe the type of participatory structure for industry is legislated and does not occur on a voluntary basis (Abrahamsson, 1977; Asplund, 1972; Harrison, 1976; Rumball, 1976).

The human factors are defined by Walker (1981) as the

"workers' propensity to participate and managements' acceptance of workers' participation" (p. 447). These are the actions that interact with one another within the organizational system. Although an organization's participation potential and its human factors are seperate, they interact with one another to various degrees. The interaction between these two factors results in the effectiveness of worker participation (Loveridge, 1979).

A worker's propensity to participate is affected by attitude, ability and the power that they perceive themselves to have. The attitude that is adopted is affected by many variables; some are personal such as age, sex, education, skill and others are external.

Another issue related to propensity to participate is length of service. There are conflicting reports on the relationship that the length of a worker's service has with his propensity to participate. Marchington (1980) and Horwitz (1981) both report a positive relationship between a worker's propensity to participate and his length of service. In Horwitz's (1981) study it was reported as a lessening of criticism about present structures.

Furthermore an individual's skill level has been found to correlate positively with propensity to participate. It was found that, as the skill level increased, so did the worker's propensity to participate (Horwitz, 1981; Marchington, 1980; Wall and Lischeron, 1977).

The Bophuthatswana population is growing younger and is

achieving a higher level of education. The employees therefore also tend to be more educated. These employees could use participative structures to channel their discontent and conflict with management. Horwitz (1981) found that the more educated workers felt that trade unions could contribute to improving their conditions of employment.

Workers' propensity to participate is affected by both their own abilities and those of the worker representatives. Walker (1981) postulates that the abilities of the representatives are more important than those of workers. If workers believe that they have the power then there is a greater chance that they will participate.

Le Roux (1984) puts this into context in his description of how people use perceptual ordering to gain understanding of their social and physical worlds. He contends that a person acquires through cognitive and a perceptial interaction with the environment, a perceptual schema which acts as a frame of reference against which he judges events. This has an effect on his behaviour.

Douwes Dekker (1984), comments that the operation to make democracy in industry work is diminished if the workers have a low propensity to participate.

Management's acceptance of participation is affected by the same things, i.e. their attitudes, abilities and perceptions of power.

This element is equally important to the workers' propensity

to participate as it will contribute to the tone of the relationship between the two parties, i.e. it could be participational or lead to confrontation and conflict (Lotz, 1983). "Both parties must be sincere and be prepared to show that sincerity by giving worker participation some teeth. That means a whole new style of management" (Rumball, 1976, p.431).

Orpen's (1980) comparison study on British and RSA managers found that the managers in the RSA had less experience in different forms of industrial democracy, especially the harder forms. They preferred to participate with workers in ways that did not affect their positions of power. The structures and forms that RSA managers preferred were employee meetings and job enrichment. Their British counterparts were far more willing and experienced in dealing with situations that affected their power positions. The RSA managers were not in favour of increasing power-sharing and enhancing worker interests. These attitudes were attributed to the difference in culture and political beliefs between the two countries. The RSA managers' attitudes were manifested in a strong authoritarian management style, a black-white conflict due to the political situation and the stronger position the RSA managers had in bargaining compared to their British counterparts.

This is supported by Lotz (1983), Lynas and O'Neill (1987), McAllister (1982) and Slabbert (1984). All found similar trends in RSA management styles, activities and attitudes. Le Roux (1984) believes that managers in the RSA have been left behind,

compared to more recent developments in the rest of the first world because they have traditionally had too much power and therefore been able to dominate their workforce. This has hindered them in the development of a different type of relationship. The problems in the society as a whole in the RSA also reinforced the managerial status quo, especially because the managers were white.

The use of extractive power by management will prevent worker participation from working as it is seen as a means of getting workers to do what management wants them to do (Douwes Dekker, 1987).

Management's reaction towards worker participation

Managers in the first and third world have reacted to worker participation in various ways. These are to a large extent dependent on the ideologies and values of the particular society. The reactions to worker participation are grouped by Guest and Knight (1979) as follows:

- It is seen as an unjustifiable erosion of management's prerogatives.
- It is a practical method to improve communications, increase effiency and reduce conflict. The focus here is towards the shop floor.
- It is a means of power sharing at the higher levels of the organization.

These viewpoints are supported by Adams (1980) and Jain (1980).

The BIM (1975) stresses the major concern as the slowing

down of the decision making process and the implementation of decisions. Many fear that participation would lead to the traditional loss of management prerogatives and to a laissez-faire style of management (Chaney and Teel, 1974). Some managers contend that worker participation is inconsistant with the free enterprise system and that it will lead to its downfall (Jain, 1980).

Gordon-Brown (1972), finds this concern not to have a valid base as management decisions have to be implemented by workers and therefore they are implicitly operating with the consent of their workers. This is indirectly supported by Davis (1967) who contends that the participative manager shares his problem with the work force but he still retains the responsibility of taking the decisions. The attitude of the worker towards participation is a critical factor in its operation (Walker, 1981).

Management also expresses concern with regards to the possible lack of technical knowledge and expertise of worker representatives (Jain, 1980). This could result in lower efficiency and poor quality and this is a possible reason why those managers that accept worker participation focus on shopfloor and production issues. For them it primarily is a means of improving the organization's efficiency and secondly a concern for the workers.

The right to high level representation by workers is a very contentious issue. Those that believe in it do so because they believe that through participation the whole organization will be

a better and more productive place to work. Many managers that disagree with representation at this level contend that because of legislation they are ultimately responsible for the firm. Therefore it would not be legal if they shared this responsibility with others (Adams, 1980; Jain, 1980). This argument only holds for those countries that do not have legislation that requires participation e.g., Britain, United States of America and Canada.

All managers, including those that do not support worker participation, believe that if there is to be representation it is the right of all workers and not just for union members (Guest and Knight, 1979; Jain, 1980). This viewpoint is not supported by shop stewards.

Indirect participation in industry in works councils

This study will not attempt to review all forms of worker participation. It will concentrate on one form of indirect participation, viz. works councils.

There is not an exhaustive list of indirect participation forms but the most common are: different types of works councils, collective bargaining (usually with a trade union), forms of co-determination, worker directors and forms of worker management and/or worker control (Cordova, 1982; Harrison, 1976; McAllister, 1982; Orpen, 1980; Shutt, 1975).

Works councils, in different forms, are one of the oldest forms of participation (Cordova, 1982). The influence that workers express through them, ranges from low key consultation

or joint consultation to some of the works councils in West Germany that are perceived to have real power in influencing decisions. In some countries they came into being because there was no other form of worker representation. In others they were used by trade unions as a means to extend workers' representation into the more non-contractual areas.

Many trade unions were against workers councils as they believed that they would be used by management to weaken the trade union's links with its members and thereby weaken its bargaining position (BIM, 1975). The trend today is for the workers councils to become part of the trade union.

It is important to take note that works councils cannot arbitrarily be imposed on an organization by management as they then do not function as intended (BIM, 1975). Hovels and Nas (1980) found that the works councils in the Netherlands, which were brought into being by law, also had problems functioning. Historically these councils began as channels of communication in which the worker representatives had no power. The only person who had power was the chairman, i.e. management's representative.

In 1971 the power of the worker representative and the works councils in the Netherlands was increased by the introduction of new legislation. They now did not only have a consultative role, but also acted as a representative force of the workers' wishes. These roles now had to be taken into account by management. The worker representatives had been granted, by the new legislation, an independent power base to

work from. They had all been given the procedural rights so that they could fulfill their functions in representing the work force. Some of the powers they now had were the right to veto, the right to advise on a number of specific managerial decisions and the right to information.

In their study on works councils in the Netherlands (Hovels and Nas, 1980) looked at the structure of the works councils and the manner in which they functioned. As a result of their research they proposed that there were four types of works councils, each functioning in a different way. The types of councils are as follows:

- Councils that lead a marginal existence. These councils were considered to be non-active as they did not meet the legal requirements of the legislation under which they fell, e.g., the councils did not meet six times in a year. This was the stipulated minimum amount of times per year they had to meet according to Dutch law. The worker representatives showed little solidarity and did not consult before meetings. There was almost no relationship between the worker representatives and the management representatives. Interaction with the chairman was on an individual basis and not as a group.

In councils with a marginal existance contact between the worker representatives and the workers was limited and they had therefore scant knowledge of the workers real needs. Management's reaction was to ignore their input. The works council was at best a channel of communication because in a

marginal council neither party saw the need to exert themselves.

Because the worker representatives did form a party, management was able to ignore them to a large degree and only had superficial consultation in the form of pseudo participation. As the chairman ignored the works council, worker representatives were not motivated to act as a group. Furthermore because they were given limited opportunity to act by the chairman, they did not develop goals or objectives.

- Councils that are organs of management. These councils also have a poor joint consultation process. When matters are placed on the agenda, it is done individually i.e., there is no group caucus beforehand. Contact with the workers tends to be poorly developed. The chairman plays a dominant role and controls the scope of the issues on the agenda. The council acts as a downward communication channel and when upward comment is offered it reflects the individual's own opinion and not the group's. Worker representatives listen to what the chairman has to say and then go about their normal tasks. They seldom give feedback to the workers. As there is no co-ordinated action on the part of the workers, management defines the problems that are to be discussed and decides under what terms the discussions should take place.

- Councils that are organs of the employee representatives. Here the representatives are more organized and co-ordinated. They caucus and draw up their own agenda before the meeting and submit it. Management does not put its items on the agenda

before the meeting. The chairman, in the meeting, puts his items on the agenda, some of which are not open for discussion but are only there for informational purposes. He at times does not allow full discussion on the worker representatives' items.

The relationship between the two parties is one of opposition where management's strategy is to ignore and try to avoid the worker representatives' items. Management often actively withholds information.

As the worker representatives are not respected as a group they achieve limited success in the council. This has a negative effect on their relationship with the workforce.

- Councils that are organs of consultation. Worker representatives caucus about agenda items before the time and have discussions with management about them before the meeting. The worker representatives act as a separate entity to the chairperson, both in the councils and out of them. They are far more co-ordinated and have definite objectives. This attitude is the factor that makes the chairman take them seriously. He now interacts with them instead of dominating them, ignoring them and avoiding their issues. They now have a relationship based on joint consultation.

Both the behaviour of the chairman and worker representative groups' activities are critical factors in determining the success of the works councils. This was also found by Mansell (1980) in a Canadian enterprise.

The relationship between worker representative and the

workers is very important as the stronger it is the more attention management has to pay to the representatives. Workers' commitment to the representatives gives them credibility with management.

Although works councils in the RSA are both management and/or worker initiated rather than because of legislation, much of Hovels and Nas' (1980) findings with regard to the above are supported by McAllister (1982) and McCullum (1982) for South Africa.

McCullum (1982) believes that the role of the chairman is crucial. His attitude and ability to a large extent sets the pattern a council's way of operating. Management also uses tactics like not placing items on the agenda, not responding to worker representatives' requests and suggestions. Management at times uses the works councils to communicate unpopular decisions. Even though many works councils are initiated by management and have constitutions which govern their actions, management is often guilty of working outside of this because it is to their benefit.

An issue that complicates the direct comparison between the Dutch system's way of operating and one in the RSA, is the different languages that workers and managers speak in the RSA. This is compounded by the lower skill levels that workers in the RSA have. These two facts make it more difficult for works councils to operate effectively and are at times exploited by management especially if they were management initiated.

Worker participation in Africa

Many third world countries are making use of different forms of worker participation. These were initially initiated by legislation (Cordova, 1982; Kalombo, Hambulo and Nanyangwe, 1986; Mihyo, Makusi and Mapolu, 1986; Poole, 1982). Many countries included in their national constitutions the principle of worker participation as it was a base for socialism. African countries like Algeria, Zambia, Tanzania, Zimbabwe and Congo created specific laws and regulations so as to ensure that participation should and could take place.

Today there is a movement away from legislated workers' participation as the sole means of participating. Collective bargaining is being used on a more regular basis and there is a movement towards voluntary participation. In Zambia there is resistance towards this from some trade unions (Kalombo et al., 1986). This is not unique to Zambia as the same happens in the first world countries too. In Ghana a system based on traditional meetings is being used (Cordova, 1982).

Management, in Africa, has traditionally been based on an African "arbitrary paternalistic management style, which is authoritarian but people centered" (Poole, 1982, p.39). This has been incorporated into modern management practices and in Zambia, where for example a humanistic management approach has been taken it is preventing/frustrating its implementation (Kalombo et al., 1986).

Political and economic forces are considered to be the most

important factors in the African continent (Blunt, 1983). The various ethnic groups present, each with their own particular norms and values, have a definite effect on local political situations. Therefore most forms of participation in Africa have been indirect forms of participation although there is now an interest in trying to introduce direct participative forms too (Blunt, 1983).

In his discussion of various African experiments with worker participation, Blunt (1983) highlights a fundamental difference between third world workers' approach to worker participation and those in the western world. Firstly, it is related to the value a worker attaches to his job. This conforms to an instrumental attitude as described by Glueck (1982), i.e. that work is a means to an end and that end is money; workers do not work for intrinsic satisfaction from their work, but for what the money that they earn, can buy.

Blunt (1983) describes the Algerian experience to demonstrate the effect of instrumental attitudes, especially when there is an underlying basic need. Basic needs first have to be satisfied before the higher order needs can be addressed. This is a real problem in Africa as most workers suffer from economic deprivation. He concludes : "Perhaps most important of all in the African context, however, are the questions of basic need satisfaction and the modification of wages and incentive schemes" (Blunt, 1983, p. 175).

Two other related factors have also been identified. These

are that worker representatives need training and that workers and the worker representatives needed some form of industrial education (McAllister, 1982). This is supported by Mihyo et al. (1986), in the discussion of the educational problems that had to be dealt with in Tanzania before the participating structures could be functional. Once the above three factors were satisfied to a greater degree more success could be achieved in the use of worker participation.

Worker participation in South Africa

Worker participation in the RSA has traditionally taken the form of indirect participation. This is also reflected in the early systems based on tradition. An example of this is the induna system. In this system black tribesmen communicated through an induna to the chief (Masipa, 1978).

With the arrival of other races in the RSA, many of them bringing with them the foundations of modern trade unionism from Europe, a basis was formed which led to the development of current industrial relations practices in the RSA (Nel and van Rooyen, 1985).

Industrial relations development in the RSA was characterized by racial discrimination and dualism. This started with the relatively modern era in the 1920's and was reinforced in the 1950's by new legislation. As a direct result of this and other socio-political factors an era of open confrontation between black workers and employers began in the 1970's. This was based on de facto power as black trade unions were not

recognized by law (Finnemore and van der Merwe, 1986). It ultimately became an open political issue with the growth of de facto power of the black workers in industry and in their communities and culminated in the 1976 Soweto riots.

With the growth of strong unregistered trade unions who were prepared to use their de facto power in the form of strike action the RSA started down the road of industrial relations reform and granted black workers full rights in 1981. All black workers now had the same industrial relations rights as white workers, who had been given them in 1924.

Current situation

Although there are now multi-racial unions with de jure and de facto power the racial heritage is still prevalent. Conflict and confrontation between employer and black employees is still very much an issue. The basis of much of this conflict lies in socio-political issues. These issues are being taken up by unified federations of unions, such as the Congress of South African Trade Unions (COSATU).

Most of the worker participation that takes place is in the form of collective bargaining, both at plant level and industrial level. Its focus is on the redistribution of power between employers and workers, minimum wages and job security. The generation of wealth for each other's mutual benefit has not become the most important issue yet (Douwes Dekker, 1987). Most of the issues are dealt with via distributive negotiation and not integrative negotiation.

According to Douwes Dekker (1987) the unions concentrate firstly on power issues, secondly, the need for a living wage and thirdly, the protection of its members against all forms of victimization. This has caused worker participation in its broadest sense to be neglegted. He concludes, that the participation potential of a company is strongly correlated with the propensity of both trade unions and management to participate.

Worker participation in its non conflictual sense is therefore very unlikely in the RSA at this moment in time due to the very polarised and conflictual nature of South African society as a whole. For worker participation to succeed a supportive socio-political climate is required (Lynas and O'Neill, 1987). Further to this, the misperceptions between worker representatives and management need to be reduced and the faulty images that they have about one another corrected to improve the chances that labour management interaction will be fruitful (Le Roux, 1984).

Trust is a fundamental element of worker participation and its formation in the management/worker relationship is being severely hampered by the misuse of extractive power by management. This leads to polarization and confrontation between management and worker and limits the scope for growth in developmental power in the workers. This growth of developmental power is essential if there is to be true democracy (Douwes Dekker, 1987).

CHAPTER 3

THE RESEARCH ENVIORNMENT

Organizational structure

The company is a wholy owned subsidiary of an international group, based in the RSA. It is situated in the Mankwe province in the National State of Bophuthatswana approximately 60 km north of Rustenburg. It was started in 1981 and became operational in 1982. Its geographic location puts it close to its major customers in the platinum mining industry.

The site management is made up of white expatriates from the RSA. The organizational structure is typical of a labour intensive industry in Africa (Blunt, 1983).

The white collar workers, both blacks and whites, only constitute 11,5 percent of the total workforce. The blue collar work force, 99 percent Tswanas, is heavily skewed towards labourers and semi-skilled workers.

The company has its own internal job appraisal system, that is also used by other sister companies in the RSA, with which it appraises blue collar jobs. It has eleven levels of blue collared jobs; these range from grade A, which is the lowest, to grade K which is the highest. Journeymen are not appraised on the system and are treated as a separate category of blue collar workers.

Grade A level accommodates unskilled labourer type positions. From grade B to grade K, the positions are of a semi- skilled nature. Journeymen are in the skilled category.

The factory is labour intensive and more than 50 percent of its blue collar workers fall into the grade A category and 80 percent fall into the grades A, B and C. As there are no positions higher than grade G, except the journeymen, the other 20 percent is distributed at a declining rate upwards. The total workforce in the factory consists of about 1 500 people.

More than 98 percent of the blue collar workforce is comprised of males. The workers travel to work, via public transport, from a radius of +– 80 km around the factory.

Jones and Whittaker's (1975) three categories of skills are used to describe the different kinds of jobs. The skills categories are language/cognitive skills, perceptual skills and psychomotor skills. All these skills are usually required to perform a work task. The extent to which each skill contributes to a task is important, with the main emphasis on the one that contributes the most. The job is categorised in terms of the most prominent skill.

A Grade Workers

This level of work mainly utilizes psychomotor skills. Workers in the Capped Fuse plant use manipulative psychomotor skills in a repetitive, monotonous process that is to a large extent machine paced. Workers work in teams of 5 or 6 people on small assembly lines.

Workers in the Safety Fuse plant use manipulative psychomotor skills as in the Capped Fuse plant. The only difference is that workers work on their own as part of an

extended production line.

Work in the Anfex plant is the same as at the Safety Fuse plant except that in some of the jobs workers require gross psychomotor skills. The work is machine paced.

All the jobs in the Materials section require gross psychomotor skills and workers work in teams of up to eight people. Although they work in teams they are not reliant on each other to complete their work. This work is human paced.

Quality Control work requires both gross and manipulative psychomotor skills in the jobs and is human paced.

B Grade Workers

All the jobs require manipulative psychomotor skills. They also require the use of simple cognitive skills to perform the tasks.

C Grade Workers

In all the jobs the emphasis is on cognitive skills, albeit towards the lower end of the hierarchy. Perceptual skills are also important.

It is known that the vast majority of workers in this organization are under-utilized because their educational levels are too high for the type of work in which they are employed.

The company's policy is to pay above the minimum living level, as annually determined by the Bureau for Market Research of the University of South Africa. Its remuneration policy and practices are of the best in the geographical area.

Current participative structures

Current structures originated in 1983, because management believed that it required a forum in which it could discuss matters of mutual interest with the workers. The concept was based on personal experiences of different members of management with the company's liaison and works committee systems in RSA.

The committee system has two levels. The Factory Consultative Committee (FCC), which deals with matters pertaining to the factory as a whole and the Departmental Consultative Committees (DCCs) which deal with matters that affect only particular departments. All matters that cannot be resolved at DCC level are referred to the FCC.

Worker representatives are elected to the DCCs for a two year period. These elections are run on a "free and fair" basis. Workers nominate candidates and then vote for them via a secret ballot. Worker representatives are elected for each department and sections, e.g. the operations department has three sections and therefore each has its own representatives. Each shift also has its own representatives as the factory runs on a 24 hour basis.

Worker representatives for the FCC are elected by each DCCs representatives from their own ranks. Management drew up a constitution for the FCC. The FCC is chaired by the head of the factory and the DCCs are chaired by the respective heads of department. The FCC comprises of the chairman, management representatives, who are the heads of departments, a personnel

industrial relations specialist, an interpreter, a secretary and the worker representatives from the various DCCs. In the constitution the committee members were granted no powers. The chairman would decide what the outcome of a discussion would be, i.e. there would be no voting, only consultation on matters brought before the committee.

All worker representatives undergo training in both general industrial relations practices and meeting procedures. This is done annually for all worker representatives in the factory to ensure that they have a knowledge and skill basis to work from.

The FCC meets every second month and the DCCs meet monthly. The FCC constitution contains a clause which states explicitly that the FCC should in no way be seen as a replacement for a trade union nor shall it be used to prevent one from forming.

Current functioning of the participative structures

McAllister's (1982) review of the functioning of works councils and committees is used to compare the operating procedures of the present structures.

Worker representatives have limited opportunity to meet workers before meetings about matters that have to be discussed with management. This has to take place in the "workers' own time" i.e., worker representatives and workers do not have a set time to meet before meetings with management. This limited opportunity for contact could be the reason that matters raised at meetings are not totally representative of the workers' needs. This can lead to the loss of the representatives' credibility in

the eyes of both the workers and management which limits the potential effectiveness of the worker representatives.

Time is allowed for report back to the workforce after meetings. The length of this period is stipulated and if more time is required it must take place in the workers' own time, e.g. during a meal break. In reality this report back period can be shortened if there are production pressures. It may even not occur if the representative is not at work the day it is supposed to occur.

The ratio of worker to representative is within the range of 50 to 60:1 as suggested and the workers elect their representatives from within their department, specific sections and shifts.

The representative is constrained by the tasks of his job when trying to fulfill his duties as a worker representative. It has to be done in between his normal work related tasks. The exception is when he acts in an official capacity at a formal disciplinary enquiry or grievance hearing. McAllister (1982) notes that this can restrict his effectiveness as a worker representative.

Although formal access time to the workers is denied to the worker representatives generally, it is allowed when the worker representative is doing something for a worker that has been sanctioned by management.

As there is a turnover of workers and the main elections are only held every two years, many workers do not have enough

relevant information about the worker representatives, their duties and the role the committees play. "A basic requirement for effective representation is that representatives be familiar with the objectives, functions and terms of reference of the committees on which they sit" (McAllister, 1982, p.8).

An effort is made to provide this information by giving in-house training. This is a potential problem area for the representatives as the representatives could be seen as stooges, because management values could be imparted during the training (McAllister, 1982).

In practice, it is usually only the representatives that submit items for the agenda after they have had the opportunity to caucus during company time. Management seldom puts items on the agenda before meetings even though it has sight of the worker representatives' items and prepare itself for a discussion on them. This has ramifications as discussed by Hovels and Nas (1980), in that at the meetings the two parties oppose each other and management has the upper-hand because it can slip in new items at its discretion.

Current industrial relations climate in Bophuthatswana

Bophuthatswana promulgated its own Industrial Conciliations Act in 1984. This act does not allow unregistered trade unions to operate in Bophuthatswana and trade unions that are registered in terms of this act must have their offices in Bophuthatswana.

It clearly states that companies may not negotiate with any trade union, labour organization or internal committee structure

that is not registered in terms of the act. This means that the FCC can only act as a consultative body even though it may want to move towards a negotiative mode of operating.

At present there are no trade unions registered in terms of the act in Bophuthatswana. To fill this vacuum the Minister of Manpower has appointed several Industrial Boards which in terms of the act set minimum conditions of employment once a year. Industrial Boards are not able to deal with daily procedural types of disputes in the way trade unions do.

The current industrial relations climate in Bophuthatswana is affected by its fragmented state. Those areas that are adjacent to the RSA's industrial complexes are affected by what occurs in that part of the RSA. The areas further away tend to be more isolated from the main stream of industrial relations activity in the RSA. This has not prevented strike activity in these more remote areas, but it has only occurred on a sporadic basis.

Conclusion

The functioning of the current participatory structures can be used to classify it as a mixture between an organ of management and an organ of the employee representatives (Hovels and Nas, 1980). This is of concern as it places a lot of pressure on the worker representatives. In the eyes of the workforce, no matter how hard they try, they could be viewed as failures because they are not able to achieve much through the consultative committees. This could cause the workers to loose

faith in the worker representatives and withdraw their support. The consultative committees would then be viewed in a negative light as they would be seen to hold no benefit for the workers.

CHAPTER 4

METHODOLOGY

This study has three sections. These are, firstly the development of the questionnaire through a review of previous research and holding group discussions with workers from a similar population. Secondly, the conducting of a pilot study to ensure that the items were understood, were relevant and that translation was in the appropriate local dialect and lastly the main study was conducted by trained outside field workers. The questionnaire was administered to a sample of 302 workers of which two were spoiled during administration.

The problem

In the preceding chapters a literature survey of worker participation was conducted. In order to achieve the aims of the study the following relationships will be investigated.

- The propensity of workers to participate with regard to levels of education, grade, tenure and age.
- The perception of the effectiveness of the current participative structures with respect to the perceived effectiveness of the worker representatives.
- The perceptions of the effectiveness of the current participative structures with respect to workers in the different plants.
- The perception by workers, of management's willingness to participate and the perception that participatory structures are organs for management's use only.

- The perception of worker influence as related to the perception of management's willingness to participate.

The objective of this study is to explore the nature of worker attitudes towards worker participation and consultative structures. It is proposed that the attitudes of workers are multi-dimensional in nature and that the attitudes of workers are expected to differ for different lengths of tenure, level of grade and level of education. The relationship between these variables and worker participation and consultative structures will be explored.

Instrumentation

In order to do this research, it was necessary to develop an instrument. The development of the instrument or questionnaire for this study proceeded in three phases. Firstly items were developed, secondly, a procedure for administering the questionnaire was selected and lastly, a pilot study was done.

Item development.

In the development of the items, two methods were employed by the researcher. These were:

- a review of previous research
- discussions with groups of employees drawn from a similar population to that which this study was going to cover were held in conjunction with industrial relations personnel.

Previous research. The purpose of reviewing previous research was to assist in generating scales and items for the questionnaire that were related to worker participation.

A questionnaire designed for an earlier study by Horwitz (1981), was taken as a point of departure and many of the constructs in his items were utilized to form the core of the present study.

Further to this, the work done by Marchington (1980), Slabbert (1984), Terblanche (1983), Terblanche (1986) and Wall and Lischeron (1977) were also incorporated.

Initially the following six areas which were to be covered in the questionnaire were formulated:

- Propensity to participate.
- Current participative structures.
- Worker representatives.
- Management's commitment to participation.
- Worker influence.
- Knowledge of external participative structures.

Based on the combined information gathered from the discussions with the line managers, supervisors and the worker representatives, on the one hand, and the information gathered from the FCC minutes and meetings, it was decided to expand the six scales to improve the clarity of the information gathered and include areas that had not been covered previously. The following areas were covered:

- Area 1. The propensity of workers to participate in decision making.
- Area 2. The workers' perceptions of the effectiveness of the current participative structures.

- Area 3. The perception of worker influence.
- Area 4. The extent to which workers perceived the participative structures as management organs.
- Area 5. The workers' perception of the effectiveness of worker representatives' communication skills (as separate from structures). Thus perceived skill and ability of the worker representatives were to be investigated.
- Area 6. The workers' perception of the ability of worker representatives to influence management.
- Area 7. Workers' understanding and attitudes towards trade unions and if they are in favour of having a trade union. (None were registered in Bophuthatswana at the time.)
- Area 8. The workers' perception of management's willingness to participate.
- Area 9. The acceptance of the consultative system by the workers.
- Area 10. Access to information by the workers.

On the basis of the above ten areas 62 tentative items were formulated (Appendix A). These items were to be the basis for semi-structured discussions that were held with groups of employees.

Group discussions. Discussions took place with three groups of employees of ten or fewer which included workers from the population to be sampled. The educational range was Std 5 to Std 10. Participants came from grades A, B and C. A group

was selected from each of the three shifts, viz. one from morning shift, one from afternoon shift and one from night shift. This was done to ensure that the population to be sampled was reflected in the groups.

Further discussions were also held with four employees from the industrial relations department. This was done to check if the information the researcher was using and dealing with was valid for the industrial relations climate and activities at the time.

All semi-structured discussions were attended by the researcher, a Tswana industrial relations training officer who acted as an interpreter, and a personnel specialist who acted as a facilitator. As each group was only seen once, it was not possible to share the new information generated with all of them excepting the group representing the night shift. They were seen when they resumed the afternoon shift a week later.

The process was started by informing the group members as to the reason for the study, what their role would be and what the process was that was to be followed. They were then given the choice to participate or not. All participated.

The aim of the process was to see whether the areas that the researcher had identified were understood by the workers and were seen as relevant by them with regard to the participative structures. An effort was made to ensure that a concept, after being translated from English into Setswana would have the same meaning in terms of behaviour. During the discussions the

process was reversed. It was found for example in Terblanche's (1986) work that the term respect, had different behavioral connotations in English and Setswana.

Each area (later to be scales) was discussed in depth with the workers, to ensure understanding. They then assisted in formulating items. New items were then checked against the items generated by the researcher. New ones were added into the item list. In the case where items in appendix A were not covered they were put to the group to check their relevance. Those that were relevant were retained. Comments on some of the items in appendix A and new items were taken up in the draft form of the questionnaire that was used in the pilot study, (appendix B). This had 60 items.

Group comments. In the section dealing with the propensity of workers to participate in decision making the groups made the following comments. Item 1 was partly generated by the groups. They felt that they did not want the part "to be or not to be a representative" to be included, as it was not relevant to them if an individual wanted to be a "front runner". It was his choice.

It is important to note that even at this early stage the workers indicated that they preferred to deal through or in conjunction with a spokesman, i.e., a representative.

There was a lengthy discussion about item 2 with regards to the meaning of the word "matters". It was finally resolved to have three meanings. It related to workers wishes, to workers suggestions and to feelings of discontent. Wishes were seen to

be of a more personal nature than suggestions. Both of these were viewed as requests, and when put to management were done without applying pressure. Therefore wishes and suggestions could be accepted or rejected by management.

At an early stage individuals in the groups made it clear that they did not like the use of the first person,"I", but would rather use the third person or just the term workers. The same preferance was expressed in the study done by Terblanche (1986). The individuals seem to take it personally if the term "I" was used and found it threatening. The term "worker" therefore replaced "I".

A similar point was again raised in the discussion of the section dealing with the workers' perceptions of the effectiveness of the current participative structures. In item 3 the words "my point" had to be changed to read the "employee's point" or "worker's point".

During the discussion of item 5, the point was made that the system rather than the person or the representative was important.

There was an in-depth discussion around the terms consultation and negotiation. The word in Setswana for them is "rerisana" and only by the change in tone and inflection can a person distinguish whether it was negotiation or consultation that had been discussed. It was decided by the groups that both these terms should be left out of the questionnaire.

The groups noted that effective structures should be seen to

be able to take workers' problems to heart and workers should be able to see this occur. The structures must have achieved what the workers wanted to be perceived as effective.

A concern was expressed that there could be failure of the structures because of the interpretation through the representatives. It was felt that management should consider having meetings directly with the workers to prevent this. This could take the form of direct participation.

When discussing items dealing with the perception of influence, the concept of formal and informal power was covered. It became clear that informal power for the groups was the most important as it was power that stemmed from group cohesion. The group's ability to stand together was seen as more important and powerful than the traditional western concepts of formal power. To many individuals this was seen as formal power.

The extent to which the workers perceived the participative structures as management organs was seen to be important and it elicited a lot of debate about the rights and wrongs of the consultative committee system. The debate cut across most sections. It finally crystallized out that some of the items could be supported. The opinion that management possibly used the committees as a shield or scapegoat was voiced very strongly.

The effectiveness of representatives was perceived by the workers to fall into two distinctively different categories.

The first one, the workers' perception of the effectiveness of worker representatives (as separate from structures), dealt more with the personal attributes of the representatives, his own behaviour at work, his ability to communicate with both management and workers, and his ability to be patient and tolerant with everybody.

The second category, the workers' perception of the ability of worker representatives to influence management, dealt with the results attained and the representatives ability to stand up to management. This was viewed as a form of personal power.

In discussing the workers' perception of management's willingness to participate, the groups felt that it was important to stick to only one name for management and not use the word supervisor. To them they both represented the same group and were therefore the same.

They also did not want the word subordinate to be used but preferred employees or workers. Although not expressed explicitly it was indicated that when translated, it gave them the feeling that it was an inferior position.

Most of the items relating to the acceptance of the consultative system by the workers were generated by the group once they understood the difference between it and the workers' perceptions of the effectiveness of the current participative structures. They generated items relating to the broad functioning of the system as a whole.

In discussing access to information by the workers, the

groups understanding of information was made concrete by themselves in referring to being informed about available opportunities (for them). Once this was done they went back to previous items in the section and re-affirmed their agreement with them.

As the items for the questionnaire, appendices B and C, were generated by the groups, it is concluded that they reflect the real situation in the factory and not artificial ones and that they reflect matters that are relevant to the workers and congruent to the situation being studied.

During the discussions with the groups the items for appendix B were formulated and tested to see if they had the same meaning. Where there were slight differences between the groups in interpretation personnel from the industrial relations section and training section were asked to assist.

Selection of method for administration

Still utilizing the group discussions, the choice of technique for administering the questionnaire, as well as the type of scale to be used, was negotiated.

The hypothetical conversation interviewing technique used by Schlemmer (1976) and modified by Horwitz (1981) to a forced choice questionnaire with a dichotomous scale was proposed to the groups.

The hypothetical conversation takes place between two imaginary people, in this case Peter and Joseph, and the respondent is asked to indicate with which speaker he agrees

the most. Schlemmer (1976) found that in an interview situation most respondents replied in the first person. They reverted to the third person when dealing with answers which were perceived by them to be too dangerous or controversial. The respondents then took the safer option of responding in the third person.

Although it will not be investigated in this study, it is important to note that the workers asked, as discussed above, that the questions be written in the third person. The same was found in Terblanche's (1986) study done on a similar population.

Scaling

When considering what scaling to use, the researcher was guided by van der Reis and Morris's (1980) conclusion that illiterate and semi-literate people had difficulty in identifying the midpoint of Likert type scales. As some of the workers in the sample could fall into one of these categories it was decided to use a dichotomous scale. This was confirmed by previous work done by the researcher in Terblanche's (1986) study.

During the group discussions, workers were asked about the layout of the questionnaire and they indicated that they preferred the dichotomous scale. Some were familiar with it because of a previous questionnaire (Terblanche, 1986).

This form of scaling was also considered to be better when dealing with groups of 20 people, as it made it possible for the field workers to immediately check during administration if there were any items that had not been responded to.

The response of a worker to an item was scored as a 0 or 1; 0 is a positive response and 1 is a negative one. Some of the items within a scale had to be reversed so that they would score in the same direction as other items belonging to the same dimensional scale. The numbers of these items are circled in the questionnaire in Appendix C.

Pilot Study

Before the pilot study was done with the questions shown in Appendix B, the draft questionnaire was translated into Setswana by two Tswana industrial relations staff members. An effort was made to use the "local dialect" as much as possible.

The translators were given all the notes that had been made during the group discussions pertaining to how the words and phrases were understood by the groups. These were used extensively in translating the items into Setswana.

The English version had been written from the notes made in the group discussion. It was endeavored to keep it close to the original so as to facilitate the translation and make it easier and more accurate.

The Tswana version was translated back into English to ensure that the meaning of the items had not changed. This was done by two Tswana staff members. Areas of difference were resolved by the use of an ex court interpreter, who was a Tswana, from the training department.

The pilot study was administered to a group of 21 workers by two trained personnel from the training and industrial relations

departments. The subjects were drawn from a similar population on which the study was going to be done, i.e. it reflected all the departments, grades and levels of tenure. The education level of the sample for the pilot study was skewed to the lower levels to ensure that when the questionnaire was administered it would not be unfairly biased towards uneducated workers and those with low levels of education. The age range was from 20 years to 59 years with a mean of 31.6 years. This reflected the composition of the workforce.

The purpose of the pilot study was to ensure that the items were clearly understood, they were relevant and to ensure that the translation had been correct for the specific population. It was also necessary to measure the time taken to administer the questionnaire.

Participation was voluntary. After an explanation as to what the study was about and what their role was, all participants agreed to participate. The questionnaire in Appendix B was used.

Some items were changed after the pilot study. These changes dealt with ambiguous items, content and the way the items were worded (due to the translation). These changes were made immediately after the administration of the questionnaire with the assistance of the employees in the pilot group. The changes are taken up in the questionnaire in Appendix C. The administration of the questionnaire took 75 minutes.

From the qualitative feedback received from the respondents

it was concluded that after all changes had been made, the content of the questionnaire was clearly understood and was relevant.

Comments made by the subjects about the questionnaire were noted for the training of the field workers. For example, all knew the abbreviations DCC and FCC but no one knew the full meaning, i.e., they knew what they stood for but not what the full title was. The field workers were instructed to cover this in their preamble to the administration of the questionnaire.

The final questionnaire was now developed by randomizing the items and reversing some of them to minimize the probability of response sets. The coding that was to be used for Peter and Joseph's conversations was also removed as it might have led to a response set in terms of the number 1 being more important than number 2, or that number 2 is higher than number 1. The final English and Tswana questionnaires are shown in Appendices C and D respectively.

Main Study

Five outside field workers were engaged to assist with the study. To ensure that they had credibility with the workforce only qualified teachers and professional nursing staff were used as these professions have standing in the community. All were thoroughly trained in administering the questionnaire. The training covered administration of the questionnaire and the actual completion of the questionnaire. They were also given an overview of the FCC and DCC structures in the factory and

trained to use an overhead projector.

The administration technique used, required one person to display the questionnaire on an overhead projector and read out the items aloud, while pointing to them simultaneously, showing the subjects where to draw their cross after selection of the person with whom they agreed the most.

A second field worker circulated amongst the group to ensure that everybody understood and was following the procedure correctly.

The sample

Participation was strictly on a voluntary basis. In the selection of the sample the researcher was guided by the intention of the study, namely to compare various tenure groups and grades. The target population was stratified according to three tenure groups which identified the years of service an employee had e.g., Group 1 denoted the years 1981 to 1983, Group 2 the years 1984 to 1985 and Group 3 the years 1986 to 1988. The three grades included, were grades A, B and C.

All in all, this gave a 3 X 3 = 9 strata. Although it was endeavored to select 30 workers randomly from each stratum, due to the composition of the workforce, it was not always possible to randomly select workers to fill all cells as tenure seems to be correlated to grade. There were simply just not enough grade B and C workers amongst the tenure group: 1986 - 1988.

The cause of this could well be related to the structure of the secondary labour market in the geographical area. The

company has had to develop its own manpower to fulfill its own needs as there were and still are a very limited number of semi-skilled and skilled Tswana workers available in the labour market.

The sample was made up of 300 male Tswana industrial workers with an age range of 20 years to 57 years and a mean of 30.40 years. Their educational range was from no schooling to standard ten plus further studies. Of the sample 75 percent had standard six and above. All the workers were citizens of Bophuthatswana.

The questionnaire was administered to 302 subjects during a 48 hour period. This was done continuously to minimize contamination as the factory works 24 hours a day and workers could therefore have influenced each other at their place of work before they filled in the questionnaire. Only two questionnaires were spoiled.

Conclusion

As this is an exploratory study using a newly developed instrument workers were involved throughout the developmental process. An effort was made to achieve face and content validity through the group discussions.

CHAPTER 5

RESULTS

Introduction

The main part of the analyses will revolve around the ten areas around which 60 items were generated (see Chapter 4, as well as Section B of Appendix C). Factor analyses and item analyses will be performed on the 60 items to investigate the factorial validity and reliability of the questionnaire.

Once the dimensions underlying the questionnaire are resolved, the interrelationships between these dimensions, as well as their relationship with the tenure, grade and qualification of the worker will be established.

This is an exploratory study and is correlational by nature in that no experimental treatments are applied by the researcher. Various psychological constructs are being measured and the statistical analyses will predominantly be directed at establishing correlational relationships between variables.

All statistical tests are performed at the .05 level of significance. It is realised that when several statistical tests are performed on the same data that the Type I error rate accumulates. With respect to the compounding of Type I error one method often used to counteract this compounding effect is to make a Bonferroni adjustment to the chosen level of significance. This Bonferroni adjustment boils down to dividing the chosen level of significance by the number of separate tests to be

performed in order to obtain the level of significance for the individual statistical test (Kirk, 1969).

In the present study an overall significance level of .05 per statistical test was considered reasonable but if a significant result should be followed by post hoc tests, use was made of the Bonferroni approach for protection against a compounded Type I error.

In the final instance: significance levels are a matter of arbitrary choice and the choice therefore rests with the judgement of the researcher. An approach to statistics is that statistics are a tool and should not be used in a way that can hinder the researcher's judgement.

A descriptive profile of the sample. The final composition of the sample is reported in the following tables:

- Table 1 reports the breakdown of the sample by tenure and grade.
- Table 2 reports the breakdown of the sample by qualification and grade.
- Table 3 reports the age distribution of the sample.

The mean age of the sample of workers was 30.40 years with a standard deviation of 6.33. The workers as shown in Table 3 are concentrated between the ages of 25 to 34, especially at the 25 to 29 age range.

Statistical analysis of the questionnaire

Firstly a factor analysis was performed on the 60 items of Section B of the questionaire. This was done to explore the

Table 1

Breakdown of Sample by Tenure and Grade (N=300)

Grade	Tenure						Total
	1981 - 1983		1984 - 1985		1986 - 1988		
A	52	(32%)	55	(35%)	54	(33%)	161
B	34	(47%)	26	(35%)	13	(18%)	73
C	47	(71%)	18	(27%)	1	(2%)	66
TOTAL	133		99		68		300

Table 2

Breakdown of Sample by Qualification and Grade (N=300)

Qualification	Grade			Total
	A	B	C	
No schooling	9 (64.3%)[1]	4 (28.6%)	1 (7.1%)	14 (4.7%)[2]
Std 5 or lower	38 (52.3%)	13 (21.3%)	10 (16.4%)	61 (20.3%)
Std 6 or Std 7	51 (58.6%)	23 (26.4%)	13 (15.0%)	87 (29.0%)
Std 8 or Std 9	31 (44.9%)	16 (23.2%)	22 (31.9%)	69 (23.0%)
Std 8 or Std 9+ Further non-school studies.	12 (41.4%)	9 (31.0%)	8 (27.6%)	29 (9.7%)
Std 10	15 (45.5%)	8 (24.2%)	10 (30.3%)	33 (11.0%)
Std 10 plus further studies.	5 (71.4%)	0 (0.00%)	2 (28.6%)	7 (2.3%)
TOTAL	161(53.66%)	73 (24.34%)	66 (22.0%)	300

[1] Percentage of row total (e.g., $\frac{9}{14} \times 100 = 64,3\%$)

[2] Percentage of grand total (e.g., $\frac{14}{300} \times 100 = 4,7\%$)

Table 3

Age Distribution in the Sample (N=300)

Years	Percent	Cumulative percent
20 - 24	8.7	8.7
25 - 29	48.3	57.0
30 - 34	23.0	80.0
35 - 39	11.3	91.3
40 - 57	8.7	100.0

possible multi-dimensional attitudinal nature of the questionnaire. Following the factor analysis results, item analyses were then performed on the scales that were proposed on the basis of the factor analysis results.

Factor analysis

It was hoped that the questionnaire would provide adequate measurement of the ten areas mentioned in the development of the questionnaire (Chapter 4). The 60 items were subjected to a factor analysis as this technique was designed to uncover dimensions underlying variables that interrelate. Kerlinger (1986) puts it as follows, "Factor analysis serves the cause of scientific parsimony. It reduces the multiplicity of tests or measures that belong together - which ones virtually measure the same thing, in other words and how much they do so. It thus reduces the number of variables with which the scientist must cope. It also helps the scientist locate and identify unities or fundamental properties underlying tests and measures" (p. 569).

The factor analysis program, PROC FACTOR, of the statistical software package Statistical Analyses System (SAS) (SAS, 1985) was used to perform a principle axis (factor) analysis (Cattell, 1978) on a tetrachoric correlation matrix. Tetrachoric correlation was necessary since each item was scored as a dichotomy. When two variables are considered dichotomies but the underlying scale is continuous (we thus have forced dichotomies), the tetrachoric correlation coefficient is the

appropriate measure of association (Guilford and Fruchter, 1978; Kaplan, 1987). The correlation matrix is given in Appendix E.

Initially ten factors were extracted since the items had been written with ten areas in mind and it was hoped that each factor would correspond with a particular area. The ten factor solution was rotated by the program according to the varimax criterion in order to obtain an interpretable ten factor solution (Mulaik, 1972). With respect to the varimax criterion, Rummel (1970, p. 392) says the following: "Varimax is now generally accepted as the best analytic orthogonal rotation technique .... Almost all published factor analysis studies doing analytic orthogonal simple structure rotation now employ varimax and the criterion is the basis of all the orthogonal rotation computer programs ....." This rotated solution is given in Table 4.

It was decided to consider all factor loadings with an absolute value = or > 0.35 as significant as this cut-off value works well to ascribe items to factors (Cattell, 1978). Where items load significantly on more than one factor an item is considered to contribute to the definition of that factor on which it loads the highest.

From Table 4 it is clear that the ten factors do not correspond to the ten areas which formed the basis for the 60 items generated (see Chapter 4) (the number bracketed after loading in Table 4 refers to the area for which it was written.) The only possible exceptions are factors two and five which to

Table 4

Varimax Rotated 10 Factor Solution: Factors 1 to 5 (N=300)

Item	Factor					Communalities
no.	1	2	3	4	5	
	1					
55	.79457(2)	.08637	.04038	.04374	.03772	0.702348
54	.73182(6)	-.00940	.02003	-.01643	-.06652	0.575496
60	.66747(2)	-.09803	.40730(2)	-.12376	-.10240	0.670577
31	.63880(10)	-.00480	.05638	-.10982	.00589	0.491178
49	.63423(4)	.11933	.44736(4)	-.05984	-.15736	0.750544
8	.62493(5)	.21518	-.08850	-.02229	-.04478	0.474898
52	.59941(8)	.28344	.08379	.02919	-.08599	0.541507
29	.59424(8)	.13872	-.00708	.20326	-.05464	0.670006
58	.59005(8)	-.04176	.08310	.15318	-.14649	0.442824
57	.57741(4)	.09622	.04954	-.12173	-.22344	0.598554
16	.56850(8)	.05137	.00375	-.10009	.11315	0.483403
44	.56731(6)	.11187	.25073	.21031	-.16116	0.540440
27	.56137(8)	.23161	.09949	-.22532	-.04876	0.581224
47	.54067(9)	-.09555	.02587	.22919	-.09579	0.515623
28	.53735(2)	.34059	-.06538	-.14545	.13911	0.483241
18	.52037(2)	.14707	.35432(2)	.26551	-.09135	0.537892
41	.50225(6)	.26170	.10532	.11017	.07274	0.418132
42	.49312(4)	.24759	.39875(4)	.33631	-.03094	0.810220

(table continues)

Item no.	Factor 1	2	3	4	5	Communalities
32	.42622(2)	.20382	.10364	.11458	-.17778	0.437161
11	.41945(2)	.16020	.27002	.10354	-.00416	0.503479
9	.36900(8)	.29228	.32254	.06750	.02085	0.512778
24	.29623	-.02313	.14591	-.20917	-.01680	0.263137
46	.28600	.21079	.20390	.01639	.08258	0.205240
13	-.43938(6)	-.02483	.07708	-.27761	.07911	0.489784
5	-.58698(10)	-.05511	-.11208	.04266	-.03588	0.451244
33	.26882	.76207(5)	.03936	.21672	-.02957	0.780745
35	.30861	.68690(5)	.02890	-.04360	.03450	0.616236
20	.32732	.48764(5)	.09387	-.29121	-.03727	0.484863
6	.32347	.45836(5)	.10272	.07970	.11974	0.534315
4	.07399	-.21743	-.02699	-.17330	.01990	0.125611
53	.26566	-.43343(1)	-.25562	-.00995	-.12465	0.523018
39	.15087	.06757	.59143(1)	.26916	-.00586	0.468529
15	.06965	.27988	.47277(9)	.13514	.07055	0.409981
3	-.01142	-.00005	.40103(3)	.06025	.02694	0.195587
38	-.16309	-.21944	-.38901(4)	-.06120	-.01793	0.408021
56	-.17367	.04374	-.46890(9)	.12254	-.02797	0.303417
21	.02826	-.01213	.02548	.88471(1)	.23801	1.117396
23	.20398	.15252	.22751	.43756(4)	-.00665	0.375587

(table continues)

Item no.	Factor 1	2	3	4	5	Communalities
34	.07466	-.15646	-.28351	-.37321(9)	.00250	0.371496
25	.12824	.02359	.07969	-.05129	.02005	0.310163
50	-.02579	.09674	-.09417	.07156	.81546(7)	0.740834
59	-.25529	-.07935	.06450	.06388	.74604(7)	0.746204
10	-.07995	.09195	-.07650	-.07670	.65726(7)	0.480612
36	.02574	.02322	.10673	-.06529	.61885(7)	0.490235
2	-.19909	-.10056	.18308	.15215	.54804(7)	0.472650
40	.21171	-.08402	.01361	.14304	.10073	0.867827
37	-.07800	.09520	.33617	-.00964	.11078	0.940886
26	.08961	.02328	.07684	-.09100	.00611	0.437292
30	.24567	-.08818	-.06143	-.14427	-.04035	0.395081
19	-.41054(6)	-.13745	-.11894	-.28248	-.00471	0.765335
51	.32955	.00805	.99168(3)	-.04467	.18430	0.716558
43	.26048	.04701	.05863	.21372	-.04410	0.540440
14	.10492	-.18119	.31273	-.20388	.23585	0.601512
12	.10973	.04783	.12713	.01191	.09674	0.287362
7	-.05493	.24624	.02613	-.09395	.04309	0.411048
1	.19095	.09288	.21175	.19520	.04573	0.356259
45	.32669	-.09432	.11635	.36146(9)	-.05057	0.543549
22	.11074	.12103	.11222	-.23575	.05695	0.473358

(table continues)

Item no.	Factor					Communalities
	1	2	3	4	5	
48	.08645	-.05955	-.06596	-.04551	-.12872	0.587573
17	.19259	.33021	.13656	.26344	.08733	0.512818

1 The area to which an item belongs is given in brackets after significant loadings.

(table continues)

Varimax Rotated 10 Factor Solution : Factors 6 to 10 (N=300)

Item no.	Factor					Communalities
	6	7	8	9	10	
55	.03946	-.04313	.03829	-.19333	-.12774	0.702348
54	.04161	.12310	.06785	-.08812	.07413	0.575496
60	.03629	.01488	.06447	-.04701	.12591	0.670577
31	.11823	.15955	-.11716	-.09424	.07595	0.491178
49	-.02007	.30970	-.00534	.09399	-.01997	0.750544
8	-.06326	.04043	.04727	.08978	.10858	0.474898
52	-.02021	.04632	.17543	.06147	-.22249	0.541507
29	.00733	.32182	.15662	.21556	-.28049	0.670006
58	.08265	.02948	-.02121	.02601	-.17963	0.442824
57	.15210	.07320	.26899	.02169	-.29559	0.598554
16	-.03705	.28447	.21628	.03215	.07117	0.483403
44	- 01116	-.01589	.06537	-.13317	.24550	0.540440
27	.06194	.31641	.01163	.02970	-.21078	0.581224
47	-.08864	-.23834	.00336	.13104	-.03232	0.515623
28	-.05573	.10787	-.03008	.05694	.12177	0.483241
18	-.04440	.19064	.04212	-.02504	.01951	0.537892
41	-.20341	-.05544	.04028	.08280	.12624	0.418132
42	-.37296(4)	.16980	.08269	-.20319	.12657	0.810220
32	.06242	.23513	.26190	-.00140	-.17522	0.437161

(table continues)

Item no.	Factor					Communalities
	6	7	8	9	10	
11	.17903	.18280	.35057(2)	.13434	.10699	0.503479
9	.27924	.10633	.10490	.24661	-.14514	0.512778
24	-.14914	-.19400	-.09737	.18862	-.06772	0.263137
46	-.05583	-.03280	-.01914	.09434	-.12996	0.205240
13	-.24711	-.29855	-.21133	.00350	-.10942	0.489784
5	-.05183	-.03384	.22678	-.10111	-.15003	0.451244
33	-.15723	.05837	.14278	.01174	-.17233	0.780745
35	.04251	-.03746	-.17544	-.00511	-.10592	0.616236
20	-.00513	.04159	-.00765	.11946	.16984	0.484863
6	.04617	.01298	.09106	.41681(5)	-.06345	0.534315
4	-.00177	-.03792	-.16059	-.04572	-.10480	0.125611
53	-.16474	.30754	-.10009	-.22762	-.00739	0.523018
39	-.01922	-.08811	-.09079	-.00509	-.04026	0.468529
15	.09983	.17841	-.11671	.13449	.08088	0.409981
3	.08558	.09258	.05051	.04674	-.09818	0.195587
38	.17289	.14626	.17721	.29218	-.09910	0.408021
56	-.07136	.10021	-.12065	-.07464	.02049	0.303417
21	.03996	-.16408	-.44183(1)	-.03967	-.22467	1.117396
23	.11168	.07672	.12261	.15218	.10441	0.375587
34	-.21932	.23417	.01306	.04599	.12867	0.371496

(table continues)

Item no.	Factor					Communalities
	6	7	8	9	10	
25	.06976	.06525	-.14019	-.07962	-.00090	0.310163
50	.04085	-.10676	-.14394	-.11919	-.06210	0.740834
59	-.13651	-.09971	.23865	.09614	-.12304	0.746204
10	.09708	.10834	-.10466	-.01066	.05345	0.480612
36	.28193	.03321	.07601	.06323	.00687	0.490235
2	-.23777	.02887	.01163	.12938	-.16442	0.472650
40	.84856(1)	.16102	-.07396	-.05062	.17138	0.867827
37	.83626(1)	-.09880	.08377	.16962	-.16087	0.940886
26	.00899	.60580(7)	-.08396	-.16698	-.11177	0.437292
30	.03602	.51269(1)	-.05037	.06744	.17163	0.395081
19	.15398	-.56755(6)	-.21936	-.17883	-.24086	0.765335
51	.07535	.06443	.73516(3)	.02421	.08201	0.716558
43	-.39745(2)	-.07973	.50124(2)	-.04281	-.04386	0.540440
14	-.00921	.21772	-.38195(10)	.16223	-.37814(10)	0.601512
12	.00552	.11925	-.39690(1)	.26386	.07724	0.287362
7	.00433	-.07408	-.10594	.56407(5)	.03356	0.411048
1	.13001	.09186	.01737	.44692(9)	-.02758	0.356259
45	.29210	-.13218	.10136	.40947(9)	.02096	0.543549
22	.15633	.30381	.20245	-.44644(3)	.13415	0.473358
48	.06237	.13317	.05673	.01944	.72687(3)	0.587573
17	.17471	.14651	.16015	.18349	-.39963(8)	0.512818

some extent correspond to Areas 5 and 7. An inspection of the actual items that load on each factor also does not allow for meaningful interpretations except factor one which can be considered to be a "General Attitudinal" factor.

Eigenvalues associated with each factor that can be extracted provide useful clues as to the number of factors that should be extracted. This is so since an eigenvalue of a factor is an index of the amount of variability in the original data that is accounted for by the factor (Mulaik, 1972). These eigenvalues are provided in Table 5 and are also plotted against the possible factors that can be extracted in Figure 1.

One criterion that is often used is the Kaiser-Guttmann criterion according to which all factors with eigenvalues equal to and greater than 1.0 should be extracted. In the present study an inspection of the eigenvalues in Table 5 would indicate far too many factors (as much as 20 factors).

Cattell (1978) suggested that a person should extract factors that account for the majority of the variability in the original data. An inspection of the eigenvalues usually reveals that the initial drop in the eigenvalues of two consecutive factors (factors one and two for instance) is large but grows less and less as more factors are considered. When the drop in eigenvalue appears to have become insignificant one should note the number of the factor where this happens. This then gives a clue as to the number of factors to be extracted.

In Figure 1, the eigenvalues appear to level off after

Table 5

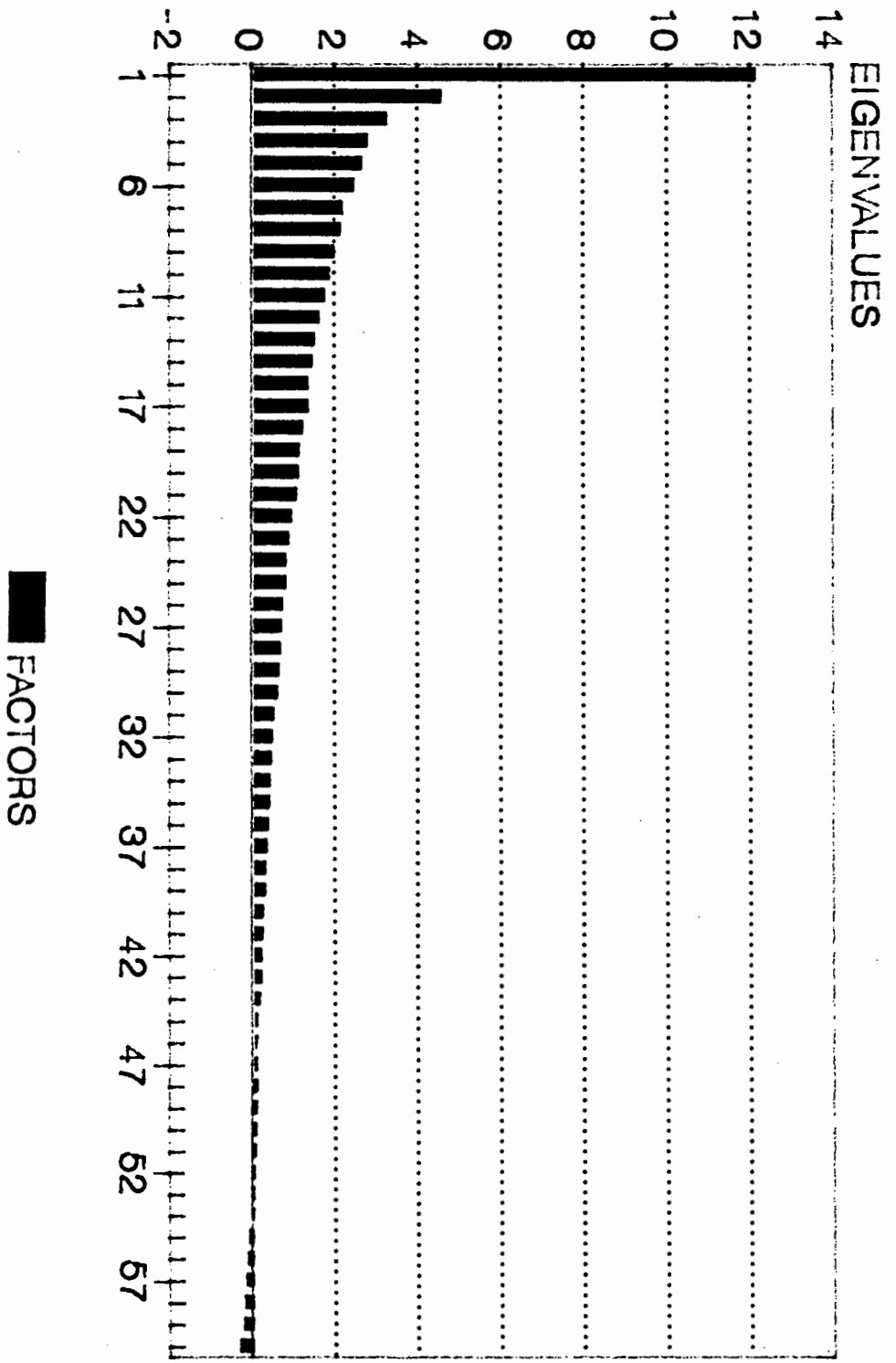
Eigenvalues for the 60 Factors

Factor no.	Eigenvalue	Factor no.	Eigenvalue
1	12.12	22	0.92
2	4.55	23	0.87
3	3.24	24	0.81
4	2.76	25	0.79
5	2.63	26	0.71
6	2.44	27	0.68
7	2.16	28	0.66
8	2.12	29	0.62
9	1.96	30	0.59
10	1.84	31	0.49
11	1.73	32	0.46
12	1.60	33	0.42
13	1.48	34	0.40
14	1.43	35	0.38
15	1.33	36	0.36
16	1.31	37	0.33
17	1.20	38	0.28
18	1.11	39	0.27
19	1.09	40	0.23
20	1.04	41	0.21
21	0.96	42	0.20

(table continues)

Factor no.	Eigenvalue	Factor no.	Eigenvalue
43	0.20	52	-0.06
44	0.14	53	-0.07
45	0.10	54	-0.07
46	0.07	55	-0.14
47	0.06	56	-0.17
48	0.03	57	-0.21
49	0.01	58	-0.25
50	-0.01	59	-0.27
51	-0.04	60	-0.36

FIGURE 1: Scree Plot of Eigenvalues



Factor 6 - suggesting a possible six-factor solution. Such a six factor solution was indeed obtained but provided no greater clarity. The varimax rotated six-factor solution is reported in Table 6.

A careful analysis of the items that load significantly on the factors in Table 6 again reveals some justification for the the existence of dimensions corresponding to Areas 5 and 7 (see Chapter 4 for areas) but none of the other factors or dimensions anticipated.

As in the case of the ten factor solution, one might conclude Areas 5 and 7 are dimensions underlying the items in the questionnaire. There does appear to be a major common factor associated with the first factor in both the ten and six factor solutions. This factor has an eigenvalue of 12.12 which is large compared to the eigenvalues associated with the other factors.

There appears to be some justification for accepting at this point that Section B of the questionnaire is mainly unidimensional because of the relatively large eigenvalue for factor one. The approach in this study will therefore be to perform an item analysis on the entire questionnaire as if the questionnaire is basically unidimensional. This does not say that factor one from the six or ten factor solutions will be used but that a single factor version of questionnaire will be sought because the factor analysis suggests a unidimensional structure.

Item analyses will however also be performed on the items associated with (generated for) Areas 5 and 7 as there appears to

Table 6.

Varimax Rotated 6 Factor Solution (N=300)

Item no.	Factor						Communalities
	1	2	3	4	5	6	
49	.73758(4)[1]	.17519	.19297	.01774	-.13924	-.17711	.663029
54	.71511(6)	.05858	-.05359	-.08819	-.10368	-.07475	.541802
55	.68647(2)	.00952	.07850	-.03107	-.09428	-.10831	.499083
42	.68396(4)	-.19204	.13308	.34205	.00751	.15086	.662213
19	.65623(6)	.03288	-.02346	-.00638	.09651	.25780	.508088
29	.65402(8)	.15447	.13832	.05611	.01712	.11427	.487243
60	.65252(2)	.16757	.01335	-.00614	-.17352	-.18352	.517862
18	.64310(2)	.12083	.08856	.25642	-.05916	.03501	.506496
16	.63660(8)	.02572	.02133	-.24877	.11894	.05706	.485659
44	.60973(6)	.06463	.00826	.18519	-.19503	.06023	.451973
52	.59729(8)	.08387	.32347	.02943	-.08345	.08124	.482846

(table continues)

Item no.	Factor						Communalities
	1	2	3	4	5	6	
31	.59681(10)	.15483	.01933	-.10953	-.03520	-.27705	.470521
27	.59673(8)	.10331	.26749	-.22427	-.02312	-.17244	.518873
8	.58935(5)	-.03042	.18570	-.07229	-.08607	-.00098	.395377
58	.54261(8)	.16056	-.00772	.16853	-.14959	-.09976	.380996
57	.53878(4)	.20436	.17018	-.14900	-.21776	.05744	.433927
13	.52661(6)	.26762	-.18989	-.04744	-.03500	.23600	.444171
11	.52619(2)	.35640(2)	.12453	-.05691	.00316	.25171	.486011
28	.52570(2)	-.05973	.29497	-.17540	.10510	-.09038	.416915
5	.52466(10)	.10544	.08198	.03545	-.02494	-.31383	.393468
32	.52255(2)	.15194	.14732	-.01660	-.11873	.20842	.375663
41	.51466(6)	-.09465	.25993	.15123	-.10374	.06215	.378891
47	.45737(9)	.10913	.05596	.37645(9)	-.15595	-.05522	.393320
30	.35728(1)	.02064	-.17539	-.31634	.01236	-.12713	.275222

(table continues)

Item no.	Factor						Communalities
	1	2	3	4	5	6	
26	.26997	-.02414	-.09272	-.20351	.10789	-.12247	.150118
37	-.18714	.89986(1)	.16821	.00193	.05619	-.05336	.879068
40	.16453	.70142(1)	-.28620	-.11976	.07409	-.11154	.633244
45	.25542	.48052(9)	-.02049	.28353	-.07673	.11534	.396141
9	.40201(8)	.46914(8)	.35399(8)	.06403	.03177	.01842	.512461
1	.22089	.35236(9)	.18086	.17888	.06454	.03088	.242779
15	.20286	.26691	.25328	.19501	.10478	-.07415	.231049
56	.17462	.23608	.13978	.05101	-.02034	-.07545	.114472
3	.06073	.21744	.10466	.04003	.04362	-.06670	.069875
33	.37596(5)	-.07685	.60989(5)	.16303	.03425	.30512	.640067
35	.28553	.02175	.58709(5)	.03938	.02632	-.09245	.437469
6	.32979	.23154	.51824(5)	.07345	.11784	.11308	.463014

(table continues)

Item no.	Factor						Communalities
	1	2	3	4	5	6	
53	-.29287	.28022	.51791(1)	.12498	.08278	.15634	.479442
20	.33210	.01869	.49130(5)	-.23568	-.07987	-.08151	.420589
7	-.09805	.14693	.38413(5)	.00964	.02903	-.06713	.184197
17	.25955	.31773	.32148	.18168	.16520	.18691	.366902
46	.28291	.05947	.30313	.13502	.07410	-.07102	.204228
21	.00826	.10267	-.16459	.90752(1)	.29644	-.05744	.952458
39	.21572	.19643	.14663	.46051(1)	-.00564	-.07583	.324470
34	-.08201	.30739	.12171	.43315(9)	-.00022	.11315	.316452
23	.30672	.28666	.04857	.31133	.03141	.24765	.337858
38	.19751	-.12543	.18467	.26548	-.01825	-.13854	.178855
48	.14578	.00355	-.22532	-.23406	-.16285	.07150	.158447
22	.23798	.02097	-.06388	-.36472	.06143	.04775	.200226

(table continues)

Item no.	Factor						Communalities
	1	2	3	4	5	6	
50	-.09139	-.02288	.05692	.08031	.75470(7)	-.11811	.602088
59	-.23713	-.01655	.04842	.06699	.71528(7)	.18150	.607792
10	-.07714	.04213	.04003	-.14147	.64454(7)	-.12195	.459644
36	.01039	.31787	.04630	-.12532	.59410(7)	-.05519	.475004
2	-.16225	.01102	.02525	.24275	.56862(7)	.01260	.409485
43	.34591	-.24407	.07558	.14678	-.03245	.48389(2)	.439745
51	.40587(3)	.20444	.03129	-.25919	.14568	.47263(3)	.519285
4	.01409	.04682	.10870	.05847	.01485	.27991	.096192
24	.18290	-.03584	.21320	.03835	-.08986	-.24237	.148476
12	.10002	.08666	.10489	.12634	.09389	-.34432	.171848
25	.07221	-.00719	.13008	-.35788(8)	-.03405	-.37258(8)	.290244
14	.08619	.11079	.07669	.06284	.24548	-.52303(10)	.363352

1 The area to which an item belongs is given in brackets after a significant loading.

be some evidence that these areas function as dimensions. It must be stressed at this point that the approach is not to use the factors from the factor analyses mechanically but to infer from the overall gist of the factor analysis results further strategies for the development of the questionnaire.

The comments by Mulaik (1972) concerning the interpretation of exploratory factor analysis results appears to be appropriate:

> Exploratory factor analysis has been especially misused when treated as a method for automatically generating theory about the relationships among variables in a domain. In a humorous article titled "Derivation of theory by means of factor analysis, or Tom Swift and his electric factor analysis machine," Armstrong ... takes to task those researchers who, in the name of pure empiricism, eschew all theoretical considerations while using factor analysis in a way purported to "let the data speak for itself". Armstrong argues that when exploratory factor analysis is applied in an area already well developed theoretically, such as in the physical sciences, factor analysis does very poorly in recovering the already known theory. (p. 363)

Seeking a single dimension to the questionnaire on the one hand but also accommodating two areas (5 and 7) as possible sub-dimensions underlying some of the items in the questionnaire, does not mean that three factors are being "plucked out" so to say from the six or ten factor solution. Instead, the researcher simply accommodates two possible approaches as the

basis for further analyses. It is therefore quite possible that items found to constitute a single dimension of the questionnaire might also figure in the other two dimensions (Areas 5 and 7).

Reliability of the questionnaire as a unidimensional scale

To assist the researcher in his evaluation of the questionnaire as a unidimensional scale, a factor analysis was again performed but this time a single factor varimax-rotated solution was obtained. From the solution given in Table 7 it appears that some of the items are incorrectly scaled and it was decided to rescale these items before performing an item analysis on them. Items loading in absolute value lower than .10 were also considered insignificant and ignored in the item analysis. This cut-off value of .10 was purposely chosen to be lower than .35 since the item analysis in itself represents a technique for selecting items. Also, items loading negatively were reversed in the scale.

The Kuder Richardson coefficient (KR-20) (Guilford and Fruchter, 1978) provides a measure of the internal consistency of a group of items constituting a scale. A program was compiled to compute this coefficient and to provide the correlation between individual items and scale scores (i.e., the total score over all the items).

With any particular application of this item analysis program it is possible to ascertain which items would increase the internal consistency if omitted. If necessary the program can be run repeatedly - each time omitting a particular item and then

Table 7

Varimax Rotated Single Factor Solution (N=300).

Item no.	Factor	Item no.	Factor
49	.78749	5	.52652
29	.68784	13	.49960
52	.67553	33	.49732
18	.66986	47	.49568
55	.66437	6	.49111
54	.66189	20	.43125
60	.65671	35	.41974
42	.63802	51	.40495
27	.63180	17	.39788
44	.61143	23	.38172
57	.60652	45	.36342
11	.60505	46	.35809
19	.60275	1	.33967
8	.59460	15	.31752
31	.58047	39	.30614
32	.57644	43	.30240
9	.57420	30	.26175
16	.57353	56	.25846
58	.55862	24	.22265
41	.54488	38	.21592
28	.52825	40	.21142

(table continues)

Item no.	Factor	Item no.	Factor
26	.19334	34	.05581
22	.18066	7	.04420
3	.13242	36	.03273
12	.12980	21	.00966
14	.09188	53	-.05857
48	.07651	10	-.11657
25	.07193	50	-.13528
37	.07077	2	-.13316
4	.06308	59	-.25561

studying the effect on the internal consistency of the scale. The final item analysis results are reported in Table 8 for the questionnaire as a whole, i.e., assuming a single underlying dimension for Section B of the questionnaire's (Appendix C) remaining items.

It was decided that the internal consistency as reflected by KR-20 = .868 in Table 8, justifies the use of this scale as a general scale for the measurement of workers' attitude towards worker participation. It will be refered to as the "General Attitude" scale.

Since the factor analyses performed above do to some extent suggest that the Areas 5 and 7 (see Chapter 4 for areas) may have some factorial validity (see Tables 4 and 6), it was decided to subject the items generated to measure these areas to item analyses and to subsequently refer to these two areas as scales. The item analysis results for Area 5 are reported in Table 9. Although the internal consistency for Scale 5, KR-20 = .61, in Table 9 appears to be low, it is satisfactory when the small number of items constituting this scale is taken into account. It was decided to use this scale in subsequent analyses.

The items generated to measure Scale 7 were also subjected to item analyses and the results are summarised in Table 10. As for Scale 5, the internal consistency of Scale 7, KR-20 = .65 in Table 10 is satisfactory when the small number of items constituting the scale is taken into account. Scale 7 will

Table 8

Item Analysis Results for the entire Section B of the Questionnaire (N=300).

Item no.	(1) Item-test correlation	(2) KR-20
1	.26	.87
2	.13	.87
3	.11	.87
5	.37	.86
6	.37	.86
8	.42	.86
9	.43	.86
10	.10	.87
11	.42	.86
12	.09	.87
13	.34	.86
15	.23	.87
16	.40	.86
17	.28	.86
18	.50	.86
19	.42	.86

(table continues)

Item no.	(1) Item-test correlation	(2) KR-20
20	.32	.86
22	.11	.87
23	.28	.86
24	.16	.87
26	.11	.87
27	.43	.86
28	.38	.86
29	.47	.86
30	.17	.87
31	.40	.86
32	.42	.86
33	.37	.86
35	.33	.86
38	.17	.87
39	.23	.87
40	.11	.87
41	.41	.86
42	.48	.86
43	.20	.87
44	.46	.86
45	.26	.87
46	.25	.87

(table continues)

Item no.	(1) Item-test correlation	(2) KR-20
47	.37	.86
49	.58	.86
50	.10	.87
51	.25	.87
52	.47	.86
54	.46	.86
55	.46	.86
56	.17	.87
57	.44	.86
58	.39	.86
59	.21	.87
60	.50	.86

KR-20 = .868 (for the entire 50 items)

(1) Correlation of item with the sum of the remaining items in the scale.

(2) Kuder Richardson 20 if particular item should be left out.

Table 9

Item Analysis Results for Scale 5: "Workers' perceptions of the effectiveness of the worker representatives' communication skills".

Item no.	(1) Item-test correlation	(2) KR-20
6	.41	.54
7	.14	.64
8	.27	.60
20	.33	.57
33	.46	.52
35	.45	.52

KR-20 = .61 (for the complete scale).

(1) Correlation of item with the sum of the remaining items in the scale.

(2) Kuder Richardson 20 if particular item should be left out.

Table 10

Item Analysis Results for Scale 7: "Workers' perceptions of what a trade union is and if they are in favour of having a trade union."

Item no.	(1) Item-test correlation	(2) KR-20
2	.38	.61
10	.40	.60
36	.38	.61
50	.43	.59
59	.44	.58

KR-20 = .65 (for the complete scale).

(1) Correlation of item with the sum of the other remaining items in the scale.

(2) Kuder Richardson 20 if particular item should be left out.

therefore also be retained in subsequent analyses.

When interpreting coefficients of internal consistency it must be borne in mind that coefficients are to some extent functions of the number of items in a scale (Guilford and Fruchter, 1978). It is therefore not reasonable to expect a scale consisting of e.g., only five items to have a coefficient as high as a scale consisting of 50 items.

It was decided to calculate a score for each respondent on the General Attitude dimension as well as scores on Scales 5 and 7. A scale score is obtained by averaging over the items that constitute that scale. Since each item scores either a zero or a one, the mean score on any particular scale for any particular subgroup of respondents must range from zero to one. The means and standard deviations for the total sample on these scales have been calculated and are provided in Table 11.

As far as these means of the scales in Table 11 are concerned, it must be realized that the scales are interval measures and that there exists no norm of reference to judge whether a mean is abnormally high or low. It is true however that under random scoring the expected mean of a scale would be 0.500.

Any z value > 2.32 or <-2.32 is significant at the p=.01 level for a two tailed test. Clearly a z value of 11.07 indicates that the mean of 0.607 for "General Attitude" is not a chance result. This would indicate that the general attitude of workers is negative. Similarly, the mean of Scale 7, namely

Table 11

Means and Standard Deviations of the Scales of Section B of the Questionnaire (N=300).

Scale	Mean	Standard deviation	z scores
General Attitude	0.607	0.167	11.07
Scale 5	0.483	0.278	- 1.53
Scale 7	0.723	0.283	-13.64

NOTE: A mean score less than 0.5 indicates a positive attitude and a mean score greater than 0.5 indicates a negative attitude as far as "General Attitude" and Scale 5 are concerned. Scale 7 measured "perceived purpose of trade unions" and a mean above 0.5 indicates a positive perception of the purpose of trade unions. The items of "General Attitude" and "Scale 5" are thus scaled to provide scales with high scores indicating negative attitudes. However in the case of Scale 7, items are scaled so that a high score will reflect a positive and not a negative perception.

0.723 is significantly higher than 0.5 which appears to indicate a positive perception about trade unions (see note below Table 11).

Relating attitudinal dimensions/scales to biographical variables

It was decided to consider the measurements of subjects' tenure, age and qualifications as interval scales. The linear relationships with the attitudinal dimensions of Section B of the questionnaire (Appendix C) can thus be estimated by means of Pearson product moment correlations. It is possible however to convert the biographical variables "department" (see Section A. Question 2) and "grade" (see Section A. Question 3) which are categorical in nature, to so-called "dummy" variables.

According to this procedure the categorical variable "department" becomes five dummy variables. e.g.:

Dummy variable 1;

code = 1 stands for "department 1" (Materials)

code = 0 stands for "department other than department 1"

Dummy variable 2;

code = 1 stands for "department 2" (Anfex)

code = 0 stands for "department other than department 2".

Dummy variable 3;

code = 1 stands for "department 3" (Capped Fuse)

code = 0 stands for "department other than department 3".

Dummy variable 4;

code = 1 stands for "department 4" (Safety Fuse)

code = 0 stands for "department other than department 4".

Dummy variable 5;

code = 1 stands for "department 5" (Quality Control)

code = 0 stands for "department other than department 5".

The variable "grade" was converted to "dummy" variables in a similar way. It is now possible to explore the relationships between the biographical variables in Section A and the attitudinal dimension, (scales) of Section B by means of Pearson product moment correlations. These correlations are reported in Table 12.

Since the biographical variables correlate among themselves it is not easy to establish whether relationships with the attitudinal dimensions are unique. So, for instance, can the correlation between tenure and Scale 5 be solely due to both these variables correlating with age? It was, therefore, decided to perform a stepwise regression analysis (Draper and Smith, 1981) using PROC STEPWISE of the statistical software package SAS (SAS, 1985).

Table 13 summarises the final equations selected with all the biographical variables as possible predictors and the attitudinal dimensions as dependent variables.

Table 12

Pearson Product Moment Correlations between the Biographical Variables and Attitudinal Dimensions (N=300)

Biographical variables	Scales/Dimensions		
	Scale 5	Scale 7	General Attitude
Tenure	.16 (.005) (1)	-.05 (.386)	.08 (.129)
Materials vs. non-Materials	-.07 (.219)	-.08 (.181)	-.05 (.369)
Anfex vs. non-Anfex	.18 (.001)	.000 (.996)	-.02 (.712)
Capped Fuse vs. non-Capped Fuse	.073 (.204)	-.07 (.200)	.07 (.173)
Safety Fuse vs. non-Safety Fuse	-.14 (.015)	.09 (.104)	-.01 (.741)
Quality Control vs. non-Quality Control	-.06 (.306)	.08 (.148)	-.02 (.683)
Grade A vs. non-Grade A	.07 (.197)	-.16 (.006)	-.03 (.520)
Grade B vs. non-Grade B	.00 (.970)	.07 (.256)	.05 (.336)
Grade C vs. non-Grade C	-.08 (.129)	.12 (.036)	-.01 (.825)

(table continues)

Biographical variables	Scales/Dimensions		
	Scale 5	Scale 7	General Attitude
Age	.12 (.030)	-.06 (.281)	-.07 (.222)
Qualification	-.11 (.054)	.07 (.201)	-.01 (.733)

(1) Two-tailed probability under the null hypothesis (p-value).

Table 13

Summary of Stepwise Regression Analyses Results: Biographical Variables as Independent Variables and Attitudinal Scales as Dependent Variables. (N=300)

Dependent variable	Predictors	b-value (regression co-efficients)	F	p-value
General Attitude	Intercept	0.6356	---	-----
	Tenure	0.0111	3.71	0.055
	Age	-0.0027	2.89	0.090
Scale 5	Intercept	0.1842	---	-----
	Tenure	0.0348	12.05	0.001
	Dept 2 (Anfex)	0.1933	13.65	0.000
	Dept 3 (C/F)	0.0588	2.95	0.087
	Grade 1 (A)	0.1105	6.60	0.011
	Grade 2 (B)	0.0854	3.36	0.068
Scale 7	Intercept	0.8778	---	-----
	Tenure	-0.0194	3.85	0.051
	Grade 1 (A)	-0.1127	10.69	0.001

CHAPTER 6

DISCUSSIONS AND CONCLUSIONS

Introduction

The discussion of the study will include a brief statement on the response of workers to the questionnaire and a discussion of the factorial structure of the questionnaire. An attempt will be made to infer the reasons for the different relationships found.

Qualitative feedback on the questionnaire

Feedback given to the field workers during the administration of the final questionnaire by the subjects was:

- Everybody should be interviewed as the questions were close to their hearts (the workers).
- That they, the workers, would now like to see improvements because of the questions addressed in the questionnaire. (No specifics were given.)

The qualitative feedback received leads the researcher to conclude that the questionnaire has both, face validity and content validity.

Dimensional structure of the questionnaire

In Chapter 5, factor analyses were performed on the 60 items of Section B of the questionnaire. A ten factor as well as a six factor solution was obtained. An interpretation of these solutions revealed that the originally expected ten dimensions on the basis of the ten areas for which the items were generated did not correspond with the factors found. The only possible

exceptions being Area 5: "Workers' perceptions of the effectiveness of the worker representatives communication skills" and Area 7: "Workers' perceptions of what a trade union is". The factor analyses showed a first factor with a relatively high eigenvalue of 12.12. This suggested a possible unidimensional structure to the questionnaire.

It was therefore decided to follow a two-prong approach for subsequent analyses. Firstly a one factor solution was obtained for the 60 items as a first step towards an item analysis to derive a unidimensional scale.

An item analysis was then performed on 50 selected items and a KR-20 = .868 was found. This factor appears to be a "general attitudinal" dimension. Secondly it was decided to further investigate the reliabilities of Areas 5 and 7 as some correspondence had been ascertained for these areas with two of the factors in the factor solutions. The KR-20 for these scales (Areas 5 and 7) were respectively .61 and .65. In conclusion, it would appear that there is some evidence of a multi-dimensional structure underlying the "attitudinal" items of Section B of the questionnaire, although not the 10 scales originally anticipated.

An analysis of the respondents' mean score on these dimensions, General Attitude, Scales 5 and 7, revealed that responses were, in general, more negative as far as General Attitude is concerned, but more or less neutral with regards to Scale 5: "Workers' perceptions of the effectiveness of the

worker representatives' communication skills". This does not mean that some sub-groups in the sample may in fact be more or less positive. As for Scale 7: "Workers' perceptions of what a trade union is", it was found that the worker corps in general was pro-union. These results should be viewed with caution as these scales need to be further validated by future research.

Relationships between attitudinal and biographic variables

Pearson product moment correlations were performed (see Table 12) and the following relationships were found:

Scale 5 and Tenure. It was found that tenure and Scale 5 are positively correlated. From this it is inferred that the longer a worker's length of service the less positive and more negative his perceptions are with regards to the worker representatives communication skills.

From this it is inferred that even though discontented workers tend to leave a company before satisfied workers, those who have stayed are still dissatisfied with the worker representatives' communication skills. The reason for them staying could well be related to the high rates of pay compared to other enterprises in the area. The more negative attitude by workers with a longer tenure could well be the result of them being subjected to the ineffective skills and abilities of the worker representatives for a longer period of time.

Scale 5 and Anfex department . Scale 5 is positively correlated with the variable "Anfex versus non-Anfex". This indicates that

this department compared to others is more negative about the communication skills of the worker representatives. This can possibly be ascribed to the situational factors relating to the production process that can have an effect on communication. These are:

- The process is machine paced and this reduces the opportunity for representatives to talk to the people.
- The production line is over 300 meters long with separate work stations. Many of these work stations have working conditions which are not conducive to effective interpersonal and/or group communication.

Scale 5 and Safety Fuse department . Scale 5 is negatively correlated with the variable "Safety Fuse versus non-Safety Fuse", which means that the workers in the Safety Fuse department are more positive than the other departments about representatives' communication skills.

This response might be attributed to the fact that the production process is divided into four distinct different areas which are to various degrees machine paced but do not run continuously. This allows time for communication. It is believed that the smaller numbers in the workforce of the plant, which is relatively small and is further broken down into smaller areas, contributes significantly to the communication process.

Scale 5 and Age. There is a positive relationship between these two variables which means that the older worker is less positive and/or more negative with regards to the representatives

communication skills. As age and tenure are positively correlated it is possible that these two variables are influencing one another and the reason for the more negative attitude is the same as for Tenure.

Scale 5 and Qualification. There is a negative correlation between these two variables. This, in effect means, that the higher the educational level of workers is the more positive is their attitude with regards to representatives' communication skills. This is partially supported in the literature as it has been reported that the higher the level of education the more willing a person is to participate.

Scale 7 and Grade A. The variable "Grade A versus non-Grade A" is negatively correlated with Scale 7. This means that Grade A workers are less pro-union than other workers. The reason for this can possibly be found in the negative correlation between this variable and tenure. The Grade A, workers who have a shorter tenure, have had less exposure to and experience of the consultative structures and have not acquired a negative attitude.

Scale 7 and Grade C. The variable "Grade C versus non-Grade C" is positively correlated with Scale 7. The workers in this grade are more pro-union than the other grades. As this variable is positively correlated with tenure, it is concluded that the longer tenure has contributed towards the negative attitude towards the consultative committees. It can therefore also be expected that the longer a workers' service is, the more

pro-union he will be. At this point, it should be re-iterated that these results should be viewed with caution as these scales need to be further validated by future research.

Regression analyses

From the regression analyses results shown in Table 13 (Chapter 5), it is noteworthy that tenure contributes significantly to the explanation of all three attitudinal scales. The positive correlations with General Attitude and Scale 5 and the negative correlation with Scale 7, in effect, means that the higher the tenure the more negative General Attitude ($p=.055$) and Scale 5 "perceptions of worker representatives' communication skills" ($p=.001$) and the more pro-union, Scale 7 ($p=.051$).

It also appears that the scale General Attitude relates significantly to fewer biographical variables than do Scales 5 and 7. This may indicate a need to pursue the avenue of exploring the multi-dimensional nature of worker attitudes. The results also indicate that "tenure" and not "age of respondent" relates to all the attitudinal dimensions.

Differences exist between certain departments, as well as between certain grade groups, with respect to Scale 5 and Scale 7; these differences cannot be attributed to these departments and grade groups being different in tenure, age and education. It is interesting to note that the level of qualification (education) does not enter any of the equations in Table 13 (Chapter 5).

Future research

Although the present study attempted to uncover specific underlying attitudinal dimensions (Scales 5 and 7) more research should be done to uncover "basic" attitudinal dimensions. It might also be worthwhile to address both the human and the situational factors.

Conclusion

The objective of this study was to explore the multi-dimensional nature of workers' attitudes towards worker participation in a rural industrial environment. It attempted to uncover the validity of specific attitudinal dimensions that were proposed on the basis of prior research and group discussion.

Statistical treatment of the data gathered, suggested the existence of a unidimensional scale, General Attitude. Some factoral validity for two of the proposed dimensions was found.

Using a scale for "general attitude" and two scales for the areas "workers' perceptions of the effectiveness of the worker representatives' communication skills" and "workers' perceptions of what a trade union is and if they are in favour of having a trade union" the relationships between them and tenure, department, grade and qualifications were explored. Tenure was found to be the most significant biographical variable that influenced attitudes in the present study.

It is also perhaps noteworthy that "qualification" does not relate significantly to attitudinal factors when the effect of

tenure is included in a regression equation. It was also noted that situational factors affected attitudes and perceptions in different departments. Finally, it was continually stressed that results should be treated with caution as much research on the reliability and validity of the attitudinal questionnaire still needs to be done.

REFERENCES

Abrahamsson, B. (1977). Bureaucracy or participation. London: Sage Publications.

Adams, R. (1980). Training for participation. London: Associated Business Press.

Asplund, C. (1972). Some aspects of workers' participation. Brussels: International Confederation of Free Trade Unions.

Barra, R.J. (1987). Participation taps creative potential of employees. Human Resources Management, April, 16 - 17.

Blunt, P. (1983). Organizational theory and behaviour. An African perspective. London : Longman.

Boyd, A.D., Gross, A.C., and Wertheim, E.G. (1977). Worker participation and the quality of life : A behavioural analysis. The Labour Gazette, February, 71 - 74.

British Institute of Management. (1975). Employee participation. A management view. London: BIM.

Butteriss, M. (1971). Job enrichment and employee participation - a study. London: Institute of Personnel Management.

Cattel, R.B. (1978). The scientific use of factor analysis in behavioral and life sciences. New York : Plenum Press.

Chaney, F.B., and Teel, K.S. (1974). Participative management - a practical experience. In K. Anundsen (Ed.), Participative decision making (pp. 6 - 17). AMACOM.

Cordova, E. (1982). Workers' participation in decisions within enterprises : Recent trends and problems. International Labour Review, 121, 125 - 140.

Davis, K. (1967). The case for participative management. In S. G. Huweryager and I.L. Heckmann, Human relations in management (pp. 617 - 621). Cincinatti, Ohio: South Western Publishing Company.

Draper, N. R., and Smith, H. (1981). Applied regression analysis. New York: John Wiley and Sons.

Douwes Dekker, L.C.G. (1984). Human resourcing or resourceful humans - can the needs of managers and workers be met in the work place? (Research paper No. 2). Johannesburg: University of the Witwatersrand.

Douwes Dekker, L.C.G. (1986). Industrial relations : Interests, values and trade-offs. Industrial Relations Journal of South

Africa 6, 40 - 53.

Douwes Dekker, L.C.G. (1987). Workers' participation in South Africa : Some suggestions. Industrial Relations Journal of South Africa, 7, 1 - 22.

Finnemore, M., and van der Merwe, R. (1986). Introduction to Industrial Relations in South Africa. Johannesburg : McGraw-Hill.

Galin, A. (1981). Political and economic determinants of industrial conflict. South African Journal of Labour Relations, 5, 5 - 9.

Gilbert, A. (1980). Intergroup conflict in the work situation in South Africa: A Review of the underlying factors and change strategies (Special report Pers 307). Johannesburg : National Institute for Personnel Research.

Glueck, W.F. (1982). Personnel. A diagnostic approach. Plano : Business Publications, Inc.

Gordon - Brown, I. (1972). Participation in industry. An introductory guide. London : Industrial Co-partnership Association.

Guest, D., and Knight, K. (Eds.). (1979). Putting participation into practice. Westmead: Gower Press.

Guilford, J.P., and Fruchter, B. (1978). Fundamental statistics in psychology and education (6th ed.). Tokyo: McGraw-Hill.

Harrison, R. (1976). Workers' participation in Western Europe 1976. London: Institute of Personnel Management.

Horwitz, F.M. (1981). Worker participation in management decision making with reference to perceptions of the effectiveness of worker representation, and propensity to participate. Unpublished master's thesis. University of the Witwatersrand, Johannesburg.

Hovels, B., and Nas, P. (1980). Effectiveness of works councils in the Netherlands. In H.C. Jain (Ed.), Worker participation. Success and problems (pp. 158 - 172). New York : Praeger.

Jain, H. C. (Ed.) (1980). Worker participation. Success and problems. New York: Praeger.

Jones, A., and Whittaker, P. (1975). Testing industrial skills. Epping, Essex: Gower Press.

Kalombo, J.R., Hambulo, R., and Nanyangwe, P. (1986). Zambia. R.O.P. (1975) Limited, Ndola. In A. Vahcic and V. Smole - Grobovsek (Ed.), Worker's self-management and participation in practice (pp. 367 - 401). Ljubljana, Yugoslavia: International Center for Public Enterprises in Developing Countries.

Kaplan, R.M. (1987). Basic statistics for the behavioral sciences. Boston: Allyn and Bacon.

Kerlinger, F.N. (1986). Foundations of behavioral research (3rd Ed.). New York: Holt, Rinehart and Winston.

Kirk, R.E. (1968). Experimental design: Procedures for the behavioral sciences. Belmont : Brooks/Cole.

Koch, H.L., and Fox, C.L. (1978). Industrial relations setting, organizational forces, and the form and content of worker participation. Academy of Management Review, 3, 572 - 583.

Landers, M. G. (1976). More hardhats in Europe's boardrooms. Industry Week, 189, 40 - 42.

Leopold, J.W., and Beaumont, P.B. (1982). Joint health and safety committees in the United Kingdom: Participation and

effectiveness - a conflict? Economic and Industrial Democracy, 3, 263 - 284.

Le Roux, R.G. (1984). Management misperceptions: Implications for worker representative/management interaction in South Africa. Industrial Relations Journal of South Africa, 4, 56 - 59.

Lombard, B.U. (1981). Labour market discrimination and human resources management in South Africa. Pretoria : HAUM.

Lotz, J. W. (1983). Management's handling of stikes (Report MM-99). Pretoria: Human Sciences Research Council.

Loveridge, R. (1979). What is "participation"? - A review of the literature and some methodogical problems (Working paper series report No. 151). University of Aston Management Centre.

Lynas, M.G., and O'Neill, D. (1987). The context of participation: Constraints and possibilities. Industrial Relations Journal of South Africa, 7, 48 - 57.

Mansell, J. (1980). Labor - management committees: The Canadian experience. In H.C. Jain (Ed.), Worker participation. Success and problems (pp. 127 - 139). New

York : Praeger.

Marchington, M. (1980). Responses to participation at work. A study of the attitudes and behaviours of employees, shop stewards and managers in a manufacturing industry. Westmead: Gower Pub. Comp.

Masipa, M.M. (1978). Attitudes of some black employees towards their liaison committee. Unpublished master's thesis. University of South Africa, Pretoria.

McAllister, P.A. (1982). Some requirements of worker representatives and works councils and committees. Industrial Relations Journal of South Africa, 2, 1 - 13.

McCullum, P.A. (1987). Management - Initiated worker participation. Industrial Relations Journal of South Africa, 7, 44 - 49.

Mihyo, P., Makusi, G. J., and Mapolu, H. (1986). Tanzania. The National Bank of Commerce and Urafiki (friendship) Textile Mill Limited. In A. Vahcic and V. Smole-Grobovsek (Eds.), Workers' self management and participation in practice (pp. 293 - 361). Ljubljana, Yugoslavia: International Center for Public Enterprises in Developing Countries.

Mulaik, S.A. (1972). The foundations of factor analysis. New York: McGraw - Hill.

Nel, P.S. (1984). A Critical overview of the concepts democracy, industrial democracy, participation and representation. South African Journal of Labour Relations, 8, 4 - 23.

Nel, P.S., and van Rooyen, P.H. (1985). Worker representation in practice in South Africa. Pretoria : Academica.

Orpen, C. (1980). Management attitudes to industrial democracy: An international assessment. Management International Review, 20, 111 - 125.

Pateman, C. (1983). Participation and democractic theory. In P. Blunt, Organizational theory and behaviour. An African perspective (pp. 159 - 160). London: Longman.

Poole, M.J.F. (1982). Personnel management in third world countries. Personnel Review, 11, 37 - 43.

Robson, M.P. (1981). Worker participation in the United Kingdom. Bradford: MCB Publications.

Rosenstein, E., Ofek, A., and Harel, G. (1987). Organizational

democracy and management in Israel. International Studies of Management and Organization, 17, 52 - 68.

Rumball, D. (1976). Worker participation in Canada. Labour Gazette, 76, 429 - 131.

Rummel, R. J. (1970). Applied factor analysis. Evanston: North Western University Press.

SAS User's Guide. (1985). Statistics, version 5. Cary, NC: SAS Institute.

Schlemmer, L. (1976). Political adaptation and reaction among urban Africans in South Africa. Social Dynamics, 2, 3 - 18.

Shutt, H. (Ed.). (1975). Worker participation in West Germany, Sweden, Yugoslavia and the United Kingdom. London : Economist Intelligence Unit.

Slabbert, J.A. (1984). Black workers' perception of problem solving (Report MM - 104). Pretoria: Human Sciences Research Council.

Terblanche, S.S. (1983). Black workers' perception of the role and function of labour unions. (Report MM - 98). Pretoria :

Human Sciences Research Council.

Terblanche, S.S. (1986). Industrial relations survey at the Mankwe factory of AECI. Confidential Report.

Van der Reis, P., and Morris, A. (1980). An investigation of the transferability of rating scale techniques to transport research in a developing country. National Institute for Transport and Road Research. (Report: RJ/21/80). Pretoria : Council for Scientific and Industrial Research.

Walker, K.F. (1981). Workers' participation in management: concepts and reality. In B. Barrett, E. Rhodes and J. Beishon (Eds.), Industrial relations and the wider society (pp. 434 - 455). London: Collier MacMillan.

Wall, T.D., and Lischeron, J.A. (1977). Worker participation. A critique of the literature and some fresh evidence. London: McGraw-Hill.

Walton, R.E., and McKensie, R.B. (1965). A behavioral theory of labor negotiations. New York : McGraw-Hill.

APPENDIX A.

ORIGINAL ITEMS FOR GROUP DISCUSSIONS

The propensity of workers to participate in decision making

1 I do not want to be a worker representative myself, but I do support my section's worker representative.

2 I believe that matters that effect workers must be brought to management's attention.

3 I would like to stand as a worker representative.

4 I care about who is elected as a worker representative.

5 I do not like to use the consultative committees and would like some other way of having my views taken to management.

6 I do not like to use the consultative committees and even if there was another way to take my views to management I would not use it.

7 I believe that workers of the factory should come together and form a new organization that will look after their interests.

8 I would like to be a worker representative, because I want to represent the views of other workers.

9 Most black workers will give management their support, if they are asked for their opinions on matters which affect them.

The workers' perceptions of the effectiveness of current participative structures

1 Management should consult with the workers through the worker representatives.

2 Worker representatives have enough say in decisions made about workers.

3 My section's representative sees that my point of view is heard by management.

4 The consultative committee has no power with management.

5 The worker representatives are the best way to bring matters which affect workers to management's attention.

6 Management consults with the worker representatives because it believes it is the right way to work.

7 The consultative committees should have more say in matters than they have now.

8 Workers should be present when worker representatives talk to management to see that they are not saying the wrong things.

9 I think that the consultative committees are successful in resolving the problems which I and other workers have.

10 I think that most workers feel that the committees do not give workers a chance to influence management decisions.

11 I would like to be a worker representative because most people believe that our consultative committees do help to improve things for the workers.

12 I believe that most workers accept the decisions made by the committees if the worker representative tells them the results of discussions with management.

13 I think that the consultative committees are successful in resolving the problems which I and other workers have.

14 I think that most workers feel that the committees do not give workers a chance to influence management deicisions.

15 I would like to be a worker representive because most people believe that our consultative committees do help to improve things for the workers.

16 I beleive that most workers accept the decisions made by the committees if the worker representative tells them the results of discussions with management.

The perception of influence

1 The purpose of the consultative committee is to provide employees with an opportunity to influence decisions that are being made.

2 Management consults with with the worker representatives because it believes it is the right way to work.

3 The consultative committee should have more say in matters than they have now.

4 Most of our workers think that we have sufficient say in matters which affect us.

The extent to which workers perceive the participative structures as organs of management

1 Workers should be present when worker representatives talk to management to see that they are not saying the wrong

things.

2 The consultative committee only helps management and not the workers.

3 The consultative committee tells management what the needs of the workers are.

4 The purpose of the consultative committee is to provide employees with an opportunity to influence decisions that are being made.

The workers' perception of the effectiveness of worker representatives

1 My section's representative consults with the workers before he agrees to any important matter with management.

2 The departmental consultative committee representatives of our department never tells us what has been said after they have had a meeting with management.

3 My section's representative sees that my point of view is heard by management.

4 I know who my worker representative is.

5 The worker representative talks often enough to the workers to find out if they have any grievances.

6 The worker representative does not inform the workers often enough of the decisions made in meetings with management.

The workers' perception of the ability of worker representatives to influence management

1 The representatives get us better conditions of employment with management.

2 My section's representative is helpful to employees at disciplinary enquiries.

3 I know that most worker representatives are not afraid to question and challenge management decisions.

4 I feel that worker representatives are not afraid of being victimized if they refuse to accept management's decisions or instructions.

5 I think that we should have worker representatives who are more willing to challenge management's decisions.

6 Our worker representatives are often successful as they get wage increases and better conditions of employment for us,

with which we are satisfied.

Workers' understanding and attitudes towards trade unions

1 Most of our workers do know what the purpose of a trade union is.

2 I think that most black workers agree that things would improve if an independent organisation such as a trade union could discuss matters affecting workers with management.

The workers' perception of managements willingness to participate

1 We think the management of this factory also thinks about the situation of the workers.

2 We do not trust management to tell the truth.

3 I believe that most workers would agree that management does not want to ask workers for their opinions.

4 I think that management is keen to allow worker representatives to discuss with management the problems which workers have.

5 I think that our worker representatives are not given

enough information from management for them to be good representatives.

6 My supervisor encourages people to speak up when they disagree with a decision.

7 My supervisor encourages subordinates to participate in important decisions.

8 Decisions are usually made without consulting the people who have to live with them.

The acceptance of the consultative system by the workers

1 Most workers accept what the worker representative says, because he is the elected leader of the workers.

2 Most of our workers do know what the purposes of the consultative committees are.

Access to information by the workers

1 I would like management to give us more information regarding the factory.

2 I would like management to tell us what the future of this factory is.

3 I am usually not told about important things that are happening in this factory (by management).

4 Meetings are frequently held with management to discuss work problems with my co-workers and me.

APPENDIX B

QUESTIONNAIRE USED FOR THE PILOT STUDY

SECTION B.

Peter and Joseph, two workers at this factory are talking about matters that affect them at work. Some things they like, others they do not. Like other people they do not always like the same things. I shall read what each says and then you must decide with which one of the two YOU AGREE WITH MOST. Make a cross beneath what either Peter or Joseph has said, to show with whom you agree. The statements deal with those things that are important in any factory such as having a say in decisions, talking to management, the worker representatives, the DCCs and FCCs etc.

Remember that nobody, not management, not your supervisor, not your worker representative will know what you have indicated. So please give your true feelings.

	A man Peter says:	A man Joseph says:
1.	Workers in my section support their worker representatives.	Workers in my section do not support their worker representatives.
	1	2
2.	I believe that workers' wishes should be brought to managements attention.	I do not believe that workers' wishes should be brought to managements attention.
	1	2
3	I believe that workers' suggestions should be brought to managements attention.	I do not believe that workers' suggestions should be brought to managements attention.
	1	2

A man Peter says:	A man Joseph says:
4. I believe that things workers are unhappy about should be brought to managements attention.	I do not believe that things workers are unhappy about should be brought to managements attention.
1	2
5. I would like to stand as a worker representative.	I would not like to stand as a worker representative.
1	2
6. Workers care about who is elected as a worker representative.	Workers do not care about who is elected as a worker representative.
1	2
7. Workers do not like to use the DCC and FCC and would like some other way of having their views taken to management.	Workers do not like to use the DCC and FCC and even if there was another way to take their views to management they would not support it.
1	2
8. Worker representatives have enough say in decisions made about workers.	Worker representatives do not have enough say in decisions made about workers.
1	2

A man Peter says:	A man Joseph says:
9. Our Worker representatives see that the workers' views are heard by management.	Our worker representatives do not see that the workers' views are heard by management.
1	2
10. The DCC and FCC have power with management.	The DCC and FCC have no power with Management.
1	2
11. The DCC and FCC are the best way to bring matters to management's attention.	The DCC and FCC are not the best way to bring matters to management's attention.
1	2
12. Workers in this factory should come together and form a new organization that will look after their interests.	The workers believe that the DCC and FCC are looking after their interests well enough.
1	2
13. Workers prefer to speak for themselves about matters that affect them.	Workers prefer a worker representative to speak about matters that affect them.
1	2

A man Peter says:	A man Joseph says:
14. The DCC and FCC should have more say in matters than they have now.	The DCC and FCC have enough say in matters that concern the workers.
1	2
15. The workers believe that the DCC and FCC are successful in resolving their problems.	The workers do not believe that the DCC and FCC are successful in resolving their problems.
1	2
16. Most workers accept the the decisions made on their behalf by the DCC and FCC.	Most workers do not accept the decisions made on their behalf by the DCC and FCC.
1	2
17. Workers have power because they can force a worker representative to resign.	Workers have no power because they can not force a worker representative to resign.
1	2

A man Peter says:	**A man Joseph says:**
18. Workers have influence because they can accept and/or reject the DCC and FCC's decisions made with management.	Workers have no influence because they have to accept the DCC and FCC's decisions made with management.
1	2
19. Workers have influence because they believe that they can go on strike if they want to.	Workers have no influence because they believe that that they cannot go on strike even if they want to.
1	2
20. Workers have influence because when they decide something as a group, management listens to them.	Workers have no influence because even when they decide something as a group management does not listen to them.
1	2
21. The DCC and FCC helps management and not the workers.	The DCC and FCC helps the workers a lot.
1	2

A man Peter says:	A man Joseph says:
22. The FCC and DCC tells management what the needs of the workers are.	The DCC and FCC tells management what they think management wants to hear.
1	2
23. The purpose of the DCC and FCC is to provide workers with an opportunity to influence decisions that are being made.	The purpose of the DCC and FCC is to provide management with a means to control workers.
1	2
24. The DCC and FCC helps both workers and management.	The DCC and FCC only helps management and not the workers.
1	2
25. Management hides behind the DCC and FCC when dealing with worker problems.	Management co-operates with the FCC and DCC when dealing with worker problems.
1	2
26. My sections worker representative consults with the workers before he meets with management.	My sections worker representative does not consult with the workers before he meets with management.
1	2

A man Peter says:	**A man Joseph says:**
27. The worker representative of our department does not tell us what has been said after they have had a meeting with management.	The worker representative of our department tells us what has been said after they have had a meeting with management.
1	2
28. I know who my worker representative is.	I do not know who my worker representative is.
1	2
29. The worker representative talks often enough to the workers to find out if they have any grievances.	The worker representative does not talk often enough to the workers to find out if they have any grievances.
1	2
30. Our worker representative is effective because he has patience and tolerance when dealing with workers and management.	Our worker representative is not effective as he does not have patience and tolerance when dealing with workers and management.
1	2

A man Peter says:	**A man Joseph says:**
31. Our worker representative is effective as he communicates well with both workers and management.	Our worker representative is not effective as he does not communicate well with both workers and management.
1	2
32. Our worker representative takes workers views to management and brings back honest answers to the workers.	Our worker representative takes workers views to management and does not bring back honest answers to the workers.
1	2
33. The worker representative gets us better Conditions of Employment with management.	The worker representative does not get us better Conditions of Employment with management.
1	2
34. The worker representatives are helpful to employees at disciplinary enquiries.	The worker representatives are not helpful to employees at disciplinary enquiries.
1	2

	A man Peter says:	**A man Joseph says:**
35.	I know that most worker representatives are not afraid to question and challenge managements' decisions.	I know that most worker representatives are afraid to question and challenge managements' decisions.
	1	2
36.	I feel that worker representatives are not afraid of being victimized if they refuse to accept managements' decisions.	I feel that worker representatives are afriad of being victimized if they refuse to accept managements' decisions.
	1	2
37.	Most of our workers do know what the purpose of a Trade Union is.	Most of our workers do not know what the purpose of a Trade Union is.
	1	2
38.	Most black workers agree that things would improve if an independent organization such as a Trade Union could discuss matters affecting workers with management.	Most black workers do not agree that things would improve if an independent organization such as a Trade Union could discuss matters affecting workers with management.
	1	2

A man Peter says:	**A man Joseph says:**
39. Most workers beleive that they can form a Trade Union.	Most workers do not believe that they can form a Trade Union.
1	2
40. Most workers believe that they can join a Trade Union.	Most workers believe that they cannot join a Trade Union.
1	2
41. Most workers would like to belong to a Trade Union.	Most workers would not like to belong to a Trade Union.
1	2
42. Trade Unions are allowed in Bophuthatswana.	Trade Unions are not allowed in Bophuthatswana.
1	2
43. We think the management of this factory thinks about the situation of the workers.	We think that the management of this factory does not think about the situation of the workers.
1	2

A man Peter says:	A man Joseph says:
44. We do not trust management to tell the truth about matters that effect workers.	We do trust management to tell the truth about matters that effect workers.
1	2
45. Most workers would agree that management does not ask workers for their opinions.	Most workers would agree that management asks workers for their opinions.
1	2
46. The workers believe that management wants worker representatives to discuss the problems which the workers have.	The workers believe that management does not want the worker representatives to discuss the problems which workers have.
1	2
47. The workers think that the worker representatives are not given enough information by management for them to be good representatives.	The workers think that the worker representatives are given enough information by management for them to be good representatives.
1	2

A man Peter says:	**A man Joseph says:**
48. Management encourages people to speak up when they disagree with a decision.	Management discourages people to speak up when they disagree with a decision.
1 ____	2 ____
49. Workers are not consulted by management about decisions that affect them.	Workers are consulted by management about decisions that effect them.
1 ____	2 ____
50. Management consults with the FCC and DCC because it believes it is the right way to work.	Management consults with the FCC and DCC because it is paternalistic towards its workers.
1 ____	2 ____
51. Most workers accept what the worker representatives says, because he is the elected leader of the workers.	Most workers do not accept what the worker representative says, even though he is the elected leader of the workers.
1 ____	2 ____
52. Most workers know what the purposes of the DCC and FCC are.	Most workers do not know what the purposes of the DCC and FCC are.
1 ____	2 ____

	A man Peter says:	A man Joseph says:
53.	Most employees accept the present DCC and FCC system.	Most employees do not accept the present FCC and DCC system.
	1	2
54.	A worker can ask for the assistance of a worker representative during a disciplinary enquiry.	A worker cannot ask for the assistance of a worker representative during a disciplinary enquiry.
	1	2
55.	A worker can present his views to management without the assistance of a worker representative.	A worker cannot present his views to management without the assistance of a worker representative.
	1	2
56.	Workers must go through the worker representatives to bring their problems to managements' attention.	Workers can bring their problems to management themselves if they want to.
	1	2
57.	Workers are satisfied with the amount of information that management gives them about the factory.	Workers are not satisfied with the amount of the information that management gives them about the factory.
	1	2

	A man Peter says:	**A man Joseph says:**
58.	Workers would like management to tell them what the future of this factory is.	Workers do not require management to tell them what the future of this factory is.
	1	2
59.	Workers are usually not told about important things that are happening in this factory by management.	Workers are usually told about things that are happening in this factory by management.
	1	2
60.	Workers are informed about available opportunities from time to time.	Workers are not informed about available opportunities from time to time.
	1	2

APPENDIX C
QUESTIONNAIRE

WORKER REPRESENTATION STRUCTURES : AN ATTITUDE SURVEY

OFFICE USE

SECTION A.

BIOGRAPHICAL DATA.

1. When did you start working in this factory?

		p(1)	
1988	1	4.00	
1987	2	8.00	
1986	3	10.00	
1985	4	18.3	
1984	5	14.7	
1983	6	23.0	
1982	7	32.1	
1981	8	00.00	7

2. In which Department/Section do you work?

Materials	1	13.0	
Operations : Anfex	2	11.3	
Operations : Capped Fuse	3	46.3	
Operations : Safety Fuse	4	16.3	
Quality Control	5	13.0	8

(1) p = Percentage

3. What is your grade?

		p	
GRADE A	1	53.7	
GRADE B	2	24.3	
GRADE C	3	22.0	9

4. How old are you ?

		10	11

5. What is your highest qualification?

No school	1	4.7	
Std 5 or lower	2	20.3	
Std 6/Form 1 or Std 7/Form 2	3	29.0	
Std 8/Form 3 or Std 9/Form 4	4	23.0	
Std 8/Form 3 or Std 9 or Form 4 plus further non-school studies.	5	9.7	
Std 10/Form 5	6	11.0	
Std 10/Form 5 plus further non school studies.	7	2.3	12

SECTION B.

Peter and Joseph, two workers at this factory are talking about matters that affect them at work. Some things they like, others they do not. Like other people they do not always like the same things. I shall read what each says and then you must decide with which one of the two YOU AGREE WITH MOST. Make a cross beneath what either Peter or Joseph has said, to show with whom you agree. The statements deal with those things that are important in any factory such as having a say in decisions, talking to management, the worker representatives, the DCCs and FCC etc.

Remember that nobody, not management, not your supervisor, not your worker representative will know what you have indicated. So please give your true feelings.

A man Peter says:		**A man Joseph says:**	
	p		p
1. Most workers know what the purposes of the DCC and FCC are.	31.0	Most workers do not know what the purposes of the DCC and FCC are.	69.0
2. Most workers believe that they can join a trade union.	75.7	Most workers believe that they cannot join a trade union.	24.3
3. Workers have power because they can force a DCC representative to resign.	48.7	Workers have no power because they cannot force a DCC representative to resign.	51.3
4.(2) The DCC and FCC representatives should have more influence in matters affecting workers.	53.3	The DCC and FCC representatives have enough influence in matters affecting workers.	46.7
5. Workers are usually not told about important things that are happening in this factory by management.	65.7	Workers are usually told about important things that are happening in this factory by management.	34.3

(2) = Items that were reversed.

	A man Peter says:	A man Joesph says:
6.	The DCC representative talks often enough to the workers to find out if they have any grievances.	The DCC representative does not talk often enough to the workers to find out if they have any grievances.
	52	48
7.	I know who my DCC representative is.	I do not know who my DCC representative is.
	80.7	19.3
8.	Our DCC representative is not effective as he does not communicate well with both workers and management.	Our DCC representative is effective as he does communicate well with both workers and management.
	67.0	33.0
9.	The workers believe that management wants DCC representatives to discuss the problems which the workers have.	The workers believe that management does not want the DCC representatives to discuss the problems which workers have.
	53.0	47.0
10.	Most of our workers do not know what the purpose of a trade union is.	Most of our workers do know what the purpose of a trade union is.
	44.3	55.7

	A man Peter says:	**A man Joseph says:**
11.	The workers believe that the DCC and FCC are successful in resolving their problems.	The workers do not believe that the DCC and FCC are successful in resolving their problems.
	23.0	77.0
12.	Workers in my section do not support their DCC representatives.	Workers in my section do support their DCC representatives.
	36.3	63.7
13.	I feel that DCC representatives are not afraid of being victimized if they refuse to accept management's decisions.	I feel that DCC representatives are afraid of being victimized if they refuse to accept management's decisions.
	27.7	72.3
14.	Workers do not require management to tell them what the future of this factory is.	Workers would like management tell them what the future of this factory is.
	21.0	79.0
15.	A worker can ask for the assistance of a DCC representative during a disciplinary enquiry.	A worker cannot ask for the assistance of a DCC representative during a disciplinary enquiry.
	69.7	30.3

	A man Peter says:	**A man Joseph says:**
16.	Management discourages people to speak up when they disagree with a decision.	Management encourages people to speak up when they disagree with a decision.
	70.7	29.3
17.	Management consults with the FCC and DCC because it believes it is the right way to work.	Management consults with the FCC and DCC because it is paternalistic towards its workers.
	64.0	36.0
18.	Workers prefer a DCC representative to speak about matters that affect them.	Workers prefer to speak for themselves about matters that affect them.
	36.0	64.0
19.	I know that most DCC representatives are not afraid to question and challenge managements' decisions.	I know that most DCC representatives are afraid to question and challenge managements' decisions.
	21.7	78.3
20.	Our DCC representative takes workers views to management and does not bring back answers as discussed with management.	Our DCC representative takes workers views to management and brings back answers as discussed with management.
	61.0	39.0

	A man Peter says :	**A man Joesph says:**
21.	I believe that workers' suggestions should be brought to managements attention.	I do not believe that workers' suggestions should be brought to managements attention.
	92.3	7.7
22.	Workers have no influence because they have to accept the DCC and FCCs decisions made with management.	Workers have influence because they can accept and/or reject the DCC and FCC's decisions made with management.
	71.7	28.3
23.	The FCC and DCC tells management what the needs of the workers are.	The DCC and FCC tells management what they think management wants to hear.
	63.7	36.3
24.	Most workers do not accept the decisions made on their behalf by the DCC and FCC.	Most workers do accept the decisions made on their behalf by the DCC and FCC.
	47.7	52.3
25.	Most workers would agree that management does not ask workers for their opinions.	Most workers would agree that management asks workers for their opinions.
	63.0	37.0
26.	Trade unions are not allowed in Bophuthatswana.	Trade unions are allowed in Bophuthatswana.
	77.0	23.0

	A man Peter says:	A man Joseph says:
27.	Workers are not consulted by management about decisions that affect them before they are taken.	Workers are consulted by management about decisions that effect them before they are taken.
	79.3	20.7
28.	Our DCC representatives do not see that the workers' views are heard by management.	Our DCC representatives do see that the workers' views are heard by management.
	68.0	32.0
29.	We think the management of this factory thinks about the situation of the workers.	We think that the management of this factory does not think about the situation of the workers.
	22.0	78.0
30	I would not like to stand as a DCC representative.	I would like to stand as a DCC representative.
	76.3	23.7
31.	Workers are not satisfied with the amount of information that management gives them about the factory.	Workers are satisfied with the amount of the information that management gives them about the factory.
	77.3	22.3
32.	DCC representatives have enough say in decisions made about workers.	DCC representatives do not have enough say in decisions made about workers.
	28.0	72.0

	A man Peter says:	**A man Joseph says:**
33.	My sections DCC representative consults with the workers before he meets with management.	My sections DCC representative does not consult with the workers before he meets with management.
	52.3	47.7
34.	A worker cannot present his views to management without the assistance of a DCC representative.	A worker can present his views to management without the assistance of a DCC representative.
	18.3	81.7
35.	The DCC representatives do not tell us what has been said after they have had a meeting with management.	The DCC representatives tell us what has been said after they have had a meeting with management.
	46.7	53.3
36.	Most workers do not agree that things would improve if an independent organization such as a trade union could discuss matters affecting workers with management.	Most workers agree that things would improve if an independent organization such as a trade union could discuss matters affecting workers with management.
	23.0	77.0
37.	I believe that workers' wishes should be brought to managements attention.	I do not believe that workers' wishes should be brought to managements attention.
	81.7	18.3

	A man Peter says:	A man Joseph says:
38.	The purpose of the DCC and FCC is to provide management with a means to control workers.	The purpose of the DCC and FCC is to provide workers with an opportunity to influence decisions that are being made.
	50.3	49.7
39.	Workers care about who is elected as a DCC representative.	Workers do not care about who is elected as a DCC representative.
	75.3	24.7
40.	I do not believe that things workers are unhappy about should be brought to managements attention.	I do believe that things workers are unhappy about should be brought to managements attention.
	12.7	87.3
41.	Our DCC representative is not effective as he does not have patience and tolerance when dealing with workers and management.	Our DCC representative is effective because he has patience and tolerance when dealing with workers and management.
	49.3	50.7
42.	The DCC and FCC helps both workers and management.	The DCC and FCC only helps management and not the workers.
	43.0	57.0

A man Peter says:	A man Joseph says:
43. The DCC and FCC have power with management.	The DCC and FCC have no power with management.
23.7	76.33
44. The DCC representatives are not helpful to employees at disciplinary enquiries.	The DCC representatives are helpful to employees at disciplinary enquiries.
62.3	37.7
45. Most workers accept what the DCC representatives says, because he is the elected leader of the workers.	Most workers do not accept what the DCC representative says, even though he is the elected leader of the workers.
52.7	47.3
46. Workers are not informed about available opportunities from time to time.	Workers are informed about available opportunities from time to time.
61.7	38.3
47. Most employees accept the present DCC and FCC system.	Most employees do not accept the present DCC and FCC system.
44.0	56.0

	A man Peter says:	**A man Joseph says:**
48.	Workers have no influence because they believe that they cannot go on strike even if they want to.	Workers have influence because they believe that they can go on strike if they want to.
	84.3	15.7
49.	The DCC and FCC helps management and not the workers.	The DCC and FCC helps the workers a lot.
	73.0	27.0
50.	Most workers would not like to belong to a trade union.	Most workers would like to belong to a trade union.
	18.0	82.0
51.	Workers have influence because when they decide something as a group, management listens to them.	Workers have no influence because even when they decide something as a group management does not listen to them.
	18.0	82.0
52.	We do trust management to tell the truth about matters that effect workers.	We do not trust management to tell the truth about matters that effect workers.
	26.0	74.0

	A man Peter says:	**A man Joseph says:**
53.	Workers do not like to use the DCC and FCC and would like some other way of having their views taken to management.	Workers do not like to use the DCC and FCC and even if there was another way to take their views to management they would not support it.
	79.0	21.0
54.	The DCC representative does not get us better Conditions of Employment with management.	The DCC representative gets us better Conditions of Employment with management.
	76.7	23.3
55.	Workers in this factory should come together and form a new organization that will look after their interests.	The workers believe that the DCC and FCC are looking after their interests well enough.
	76.7	23.3
56.	Workers can bring their problems to management themselves if they want to.	Workers must go through the worker representatives to bring their problems to managements' attention.
	25.7	74.3
57.	Management hides behind the DCC and FCC when dealing with worker problems.	Management co-operates with the DCC and FCC when dealing with worker problems.
	67.3	32.7

	A man Peter says:	A man Joseph says:
58.	The workers think that the DCC representatives are given enough information.	The workers think that the DCC representatives are not given enough information.
	30.0	70.0
59.	Most workers beleive that they can form a trade union.	Most workers do not believe that they can form a trade union.
	71.3	28.7
60.	The DCC and FCC are not the best way to bring matters to management's attention.	The DCC and FCC are the best way to bring matters to management's attention.
	58.7	41.3

APPENDIX D

QUESTIONNAIRE

WORKER REPRESENTATION STRUCTURES : AN ATTITUDE SURVEY

OFFICE USE

KAROLO A. ____ ____ ____ ____

BIOGRAPHICAL DATA.

1. O Simolotse leng go dira mo femeng e?

1988	1		
1987	2		
1986	3		
1985	4		
1984	5		
1983	6		
1982	7		
1981	8		7

2. O dira ka fa lefapheng lefe?

Materials :	1		
Operations : Anfex	2		
Operations : Capped Fuse	3		
Operations : Safety Fuse	4		
Quality Control	5		8

3. Grade ya gago ke eng?

GRADE A	1		
GRADE B	2		
GRADE C	3		9

4. O na le dingwaga tse kae?

Dingwaga			10	11

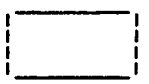
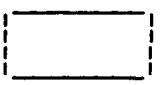
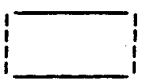
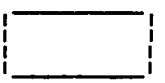
5. Boemo jwa gago jwa thuto jo bo kwa godimodimo ke bo bo feng?

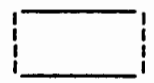
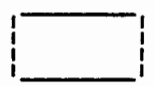
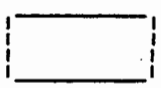
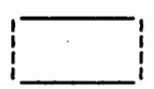
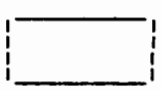
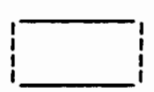
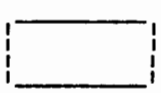
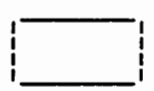
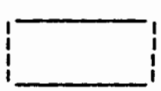
Ga ka tsena sekolo	1		
Std 5 kgotsa kwa tlase	2		
Std 6/Form 1 kgotsa Std 7/Form 2	3		
Std 8/Form 3 kgotsa Std 9/Form 4	4		
Std 8/Form 3 kgotsa Std 9 or Form 4 Dithuto tse dingwe kwa ntle ga sekolo	5		
Std 10/Form 5	6		
Std 10/Form 5 dithuto tse dingwe kwa ntle ga sekolo.	7		12

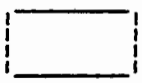
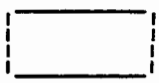
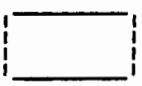
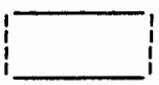
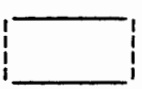
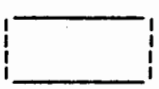
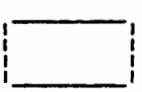
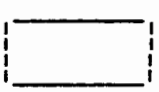
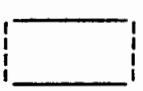
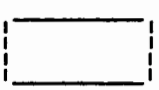
KAROLO B

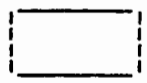
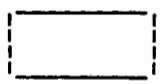
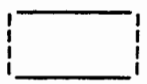
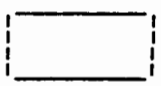
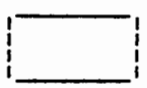
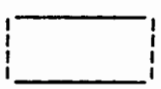
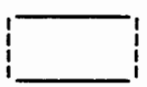
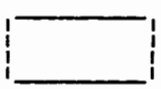
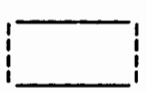
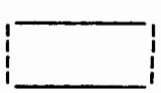
Peter le Joesph ke badiri mmogo mo faboriking e, mme ba buisana ka dilo tse di ba amang mo tirong. Dilo dingwe ba a di rata tse dingwe ga ba di rate. Batho ba bangwe le bone ga ba na go rata dilo go tshwana. Ke tla go buisetsa gore mongwe le mongwe wa bona a reng mme wena o tla tlhopha o o dumellanang le ene thata. Thala Sefapano ka fa tlase go yo o utlwanang le ene thata. Dipolelo di mabapi le dilo tse di bothlhokwa mo faboriking jaaka, mo go direng tshwetso, go buisana le management, baemedi ba DCC, di DCC le di FCC j.j.

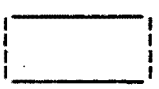
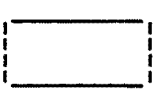
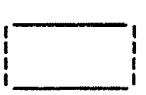
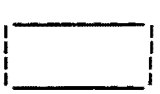
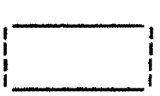
Gopola gore ga go na ope, e ka nna motsamaisi, kgotsa supervisor, Kgotsa moemedi wa DCC, yo o tla itsing gore wena o bontshitse jang. Ka go rialo naya maikutlo a gago a nnete.

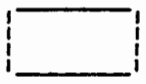
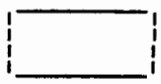
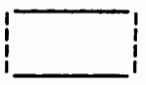
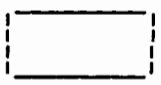
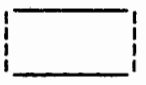
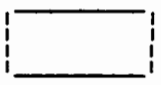
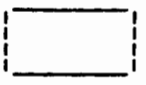
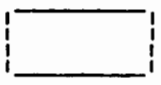
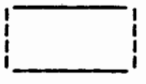
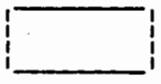
	Peter a re:	Joseph a re:
1.	Bontsi jwa badiri bo itse mosola wa DCC le FCC.	Bontsi jwa badiri ga bo itse mosola wa DCC le FCC.
2.	Bontsi jwa badiri bo akanya gore e nne maloko a Trade Union.	Bontsi jwa badiri bo akanya gore ga go kgonege gore e nne maloko a Trade Union.
3.	Badiri ba na le maatla ka gonne ba ka dira gore moemedi wa DCC a role tiro.	Badiri ga ka na maatla ape ka gonne ga ba kgone go dira gore moemedi wa DCC a role tiro.
		
4.	Baemedi ba DCC le FCC ba tshwanetse go nna le maatla a a segolwane mo mabakeng a a amang badiri.	Baemedi ba DCC le FCC ba na le maatla a a lekanetseng mo mabakeng a a amang badiri.
5.	Badiri go le gantsi ga ba bolelwe ka dilo tsa botlhokwa tse di diragalang mo faborikeng ke management.	Badiri go le gantsi ba bolelelwa ka dilo tsa botlhokwa tse di diragaleng mo faborikeng ke management.
		

	Peter a re:	**Joseph a re:**
6.	Baemedi ba DCC ba buisana le badiri gangwe le gape go utlwelela fa go na le dilelo.	Baemedi ba DCC ga ba buisane le badiri gangwe le gape go utlwelela fa go na le dilelo.
		
7.	Ke itse gore meomedi wa me wa DCC ke mang.	Ga ke itse gore ke mang meomedi wa me wa DCC.
		
8.	Moemedi wa rona wa DCC ga a na bokgoni ka ge a se kgone go buisana ka botlalo le badiri le management.	Moemedi wa rona wa DCC o nale bokgoni gonne o kgona go buisana ka botlalo le badiri le management.
		
9.	Badiri ba dumela gore management o batla baemedi ba DCC go buisana le ona ka mathatha a badiri.	Badiri ba dumela gore management ga o batle baemedi ba DCC ba buisana le ona ka mathata a badiri.
		
10.	Bontsi jwa badiri ba rona ga bo itse mosola wa Trade Union.	Bontsi jwa badiri ba re ba itse mosola wa Trade Union.
		

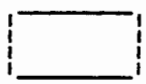
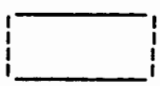
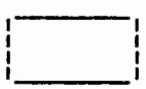
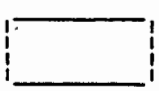
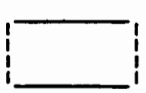
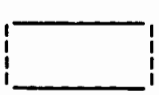
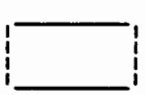
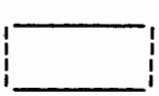
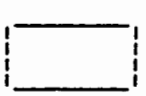
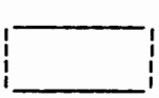
	Peter a re:	**Joseph a re:**
11.	Badiri ba na le tumelo ya gore baemedi ba DCC le FCC ba na le katlego mo go rarabololeng mathata a bone.	Badiri ga ba na tumelo ya gore baemedi ba DCC le FCC ba na le katlego mo go rarabololeng mathata a bone.
		
12.	Badiri mo sectioning ya me ga ba eme nokeng baemedi ba bona ba DCC.	Badiri mo sectioning ya me ba ema nokeng baemedi ba DCC, ba bona.
		
13.	Ke dumela gore baemedi ba DCC ga ba tshabe victimization fa ba gana go amogela ditshwetso tsa management.	Ke dumela gore baemedi ba DCC ba tshaba victimization fa ba gana go amogela ditshwetso tsa management.
		
14.	Badiri ga ba kgatlhegele go itsisiwe ke management ka bokamoso jwa factory.	Badiri ba kgatlhegela go itsisiwe ke management ka bokamoso jwa factory.
		
15.	Modiri a ka kopa thuso go moemedi wa DCC fa a le mo tshekong.	Modiri ga a kgone go kopa thuso go moemedi wa DCC fa a le mo tshekong.
		

	Peter a re:	**Joseph a re:**
16.	Management ga o rotloetse batho go ntsha maikutla a bona fa ba gana tshwetso e e dirilweng.	Management o rotloetsa batho go ntsha maikutlo a bona fa ba sa dumellane le tshwetso e e dirilweng.
		
17.	Management o rerisana le DCC le FCC ka gonne ba dumela e le tsela e e siameng ya go dira mmogo.	Management ga o rerisane le DCC le FCC ka gonne ga ba dumele e le tsela e e siameng ya go dira mmogo.
		
18.	Badiri ba bona go le botoka go buelelwa be moemedi wa DCC mo mabakeng a a ba, amang.	Badiri ba bona go le botoka go ipuelela mo mabakeng a a ba amang.
		
19.	Ke itse gore bontsi jwa baemedi ba DCC ga ba tshabe go botsolotsa ditshwetso tsa management.	Ke itse gore bontsi jwa baemedi ba tshaba go botsolotsa ditshwetso tsa management.
		
20.	Baemedi ba DCC ba isa maikutlo a badiri kwa go management le fa ba dira jalo ga ba nnele badiri dikarabo tsa nnete go tswa kwa go management.	Baemedi ba DCC ba isa maikutlo a badiri kwa go management mme ba boe ka dikarabo tsa nnete go tswa kwa go management.
		

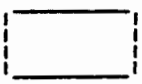
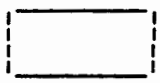
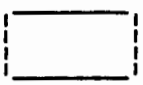
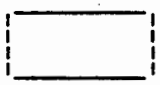
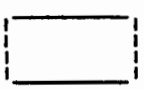
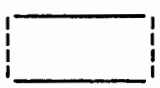
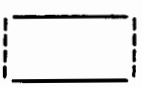
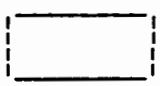
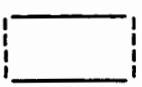
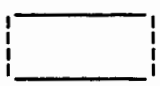
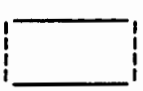
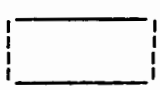
	Peter a re:	Joseph a re:
21.	Ditshitshinyo tsa badiri go ya ka nna ditshwanetse di tlhagisiwe fa pele ga management.	Go ya ka nna ditshitshinyo tsa badiri ga di a tshwanela go tlhagisiwa fa pele ga management.
22.	Badiri ga ba na maatla ka gonne ba tshwanetse go amogela ditshwetso tsa DCC le FCC tse tserweng ke management.	Badiri ba na le maatla ka gonne ba ka amogela kgotsa ba ka gana ditshwetso tse di tserweng ke DCC le FCC le management.
		
23.	Baemedi ba DCC le ba FCC ba itsise management ka ditlhokego tsa badiri.	Baemedi ba DCC le FCC ba bolelela management se ba naganong go re management a batla go se utlwa.
		
24.	Bontsi jwa Badiri ga bo amogele ditshwetso tse di tsewang ke baemedi ba DCC le FCC mo boemong jwa bona.	Bontsi jwa badiri bo amogele ditshwetso tse di tsewang ke baemedi ba DCC le FCC mo boemong jwa bona.
		
25.	Badiri ka bontsi ba ka dumela gore management o botsa dikakanyo tsa badiri.	Bontsi jwa badiri bo dumela gore management o botsa dikakanyo tsa ga o badiri.
		

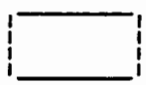
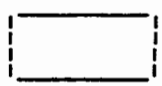
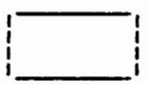
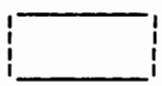
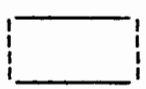
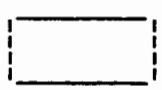
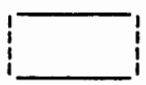
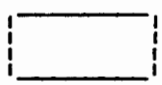
	Peter a re:	**Joseph a re:**
26.	Di Trade Union ga di letlelesege mo Bophuthatswana.	Di Trade Union di letlelesega mo Bophuthatswana.
		
27.	Management ga o nke o rerisana le badiri pele ba dira ditshwetso tse di amang badiri.	Management o rerisana le badiri pele o dira ditshwetso tse di ba amang.
		
28.	Baemedi ba rona DCC ga ba netefatse gore management o utlwa dikakanyo tsa badiri.	Baemedi ba DCC ba netefatsa gore management o utlwa dikakanyo tsa badiri.
		
29.	Re akanya gore management wa factory e, o akanya ka maemo a badiri ba leng mo go ona.	Re akanya gore management wa factory e, ga o nagane ka maemo a badiri ba leng mo go ona.
		
30.	Ga ke eletsa go nna moemedi wa DCC.	Ke eletsa go ka tlhophiwa go nna moemedi wa DCC.
		

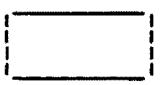
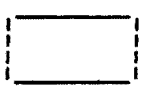
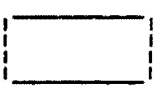
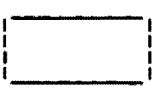
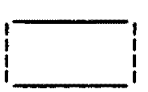
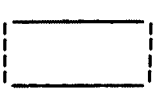
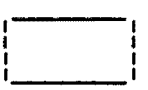
	Peter a re:	**Joseph a re:**
31.	Badiri ga ba kgotsofalela tshedimosetso e ba e fiwang ke management ka faboriki.	Badiri ba kgotsofalela tshedimosetso e ba e fiwang ke management ka faboriki.
	☐	☐
32.	Baemedi ba DCC ba na le seabe se se lekaneng mo ditshwetsong tse di amang badiri.	Baemedi ba DCC ga ba na seabe se se lekaneng mo ditshwetsong tse di tsewang mabapi le badiri.
	☐	☐
33.	Moemedi wa DCC kwa Sectioneng ya me o buisana le badiri pele a ka kopana le management.	Moemedi wa DCC kwa Sectioning ya me ga a ke a buisana le badiri pele a ka kopana le management.
	☐	☐
34.	Modiri ga a kgone go tlhagisa maikutlo a gagwe go management kwa ntle ga thuso ya moemedi wa DCC.	Modiri a ka tlhagisa maikutlo a gagwe mo management kwa ntle ga thuso ya moemedi wa DCC.
	☐	☐
35.	Baemedi ba DCC ga ba re bolelele dikgang morago ga kopano ya bona le management.	Baemedi ba DCC ba re bolelela dikgang morago ga kopana ya bona le management.
	☐	☐

	Peter a re:	**Joseph a re:**
36.	Badiri ka bontsi ga ba dumele gore dilo di ka tokafala fa Trade Union e rerisana le management ka dilo tse di ba amang.	Badiri ka bontsi ba dumela gore dilo di ka tokafala fa Trade Union e rerisana le management ka dilo tse di ba amang.
		
37.	Dikeletso tsa badiri go ya ka nna di tshwanetse go tlhagisiwa pele ga management.	Go ya ka nna dikeletso tsa badiri ga di a tshwanela go tlhagisiwa fa pele ga management.
		
38.	Tiro ya DCC le FCC ke go thusa management go laola badiri.	Tiro ya DCC le FCC ke go neela badiri tshono go ka nna le seabe mo ditshwetsong tse di diriwang.
		
39.	Badiri ba kgatlhegela go itse gore ke bomang ba ba tlhophilweng go nna baemedi ba DCC.	Badiri ga ba na keletso ya go itse gore ke bomang ba ba tlhophilweng go nna baemedi ba DCC.
		
40.	Go ya ka nna dilo tse badiri ba sa di kgotsofaleleng ga di a tshwanelela go tlhagisiwa fa pele ga management.	Go ya ka nna dilo tse badiri ba sa di kgotsofaleleng di tshwanela tsa tlhagisiwa fa pele ga management.
		

	Peter a re:	**Joseph a re:**
41.	Moemedi wa DCC ga ana bokgoni ka gonne ga a pelo telele fa a kopane le badiri le management.	Moemedi wa DCC o na le bokgoni ka gonne o pelo telele fa a kopane le badiri le management.
	☐	☐
42.	DCC le FCC di thusa badiri mmogo le management.	DCC le FCC di thusa management fela e seng badiri.
	☐	☐
43.	Di DCC le FCC di na le maatla mo go management.	Di DCC le FCC ga di na maatla mo management.
	☐	☐
44.	Baemedi ba DCC ga ba na mosola mo go thuseng badiri mo ditshekong.	Baemedi ba DCC ba mosola thata mo go thuseng badiri mo ditshekong.
	☐	☐
45.	Bontsi jwa badiri ba amogela se moemedi wa DCC a se buang, ka gonne motho yo a tlhophilwe ke bona.	Bontsi jwa badiri ga ba amogele se moemedi wa DCC a se buang, le fa a ntse a tlhopilwe ke badiri jaaka moeteledi pele.
	☐	☐

	Peter a re:	**Joseph a re:**
46.	Badiri ga ba bolelelwe ka tlhagiso ya diphatlhatiro gangwe le gape.	Badiri ba bolelewa ka tlhagiso ya diphatlhatiro gangwe le gape.
		
47.	Badiri ka bontsi ba amogela tiriso ya DCC le FCC.	Badiri ka bontsi ga ba amogele tiriso ya DCC le FCC.
		
48.	Badiri ga ba na maatla ka gonne ga ba dumelelwe gore ba ka nna strikeng le fa ba batla.	Badiri ba na le maatla ka gonne ba dumela gore ba ka nna mo strikeng fa ba batla.
		
49.	Di DCC le FCC di thusa management eseng Badiri.	Di DCC le FCC di thusa badiri thata.
		
50.	Bontsi jwa badiri ga bo eletse go nna maloko a Trade Union.	Bontsi jwa badiri bo eletsa go nna moloko a Trade Union.
		
51.	Badiri ba na le maatla ka gonne fa ba tsaya tshwetso, ba le setlhopha management wa ba reetsa.	Badiri ga ba na maatla ka gonne fa ba tsaya tshwetso le fa ba le setlhopha management go o ba reetsa.
		

	Peter a re:	**Joseph a re:**
52.	Re tshepa management gore o ka bua nnete ka dilo tse di amang badiri.	Ga re tshepe gore management o ka bua nnete ka dilo tse di amang badiri.
		
53.	Badiri ga ba rate go dirisa mokgwa wa DCC le FCC mme ba eletsa gore go nne le mokgwa mongwe yo dikakanyo tsa bona ka merero mengwe di ka tlhagisiwang fa pele ga management ka teng.	Badiri ga ba rate go dirisa mokgwa wa DCC le FCC, ga ba eletse mokgwa ope o sele yo dikakanyo tsa bona ka merero mengwe di ka tlhagisiwang fa pele ga management.
		
54.	Baemedi ba DCC ga ba tokafatse Conditions tsa Employment ka gope mo ditherisanong tsa bona le management.	Baemedi ba DCC ba tokafatsa Contidions tsa Employment mo ditherisanong tsa bona le management.
		
55.	Badiri ba faboriki ba tshwanetse go kopana go simolola lekgotla le le ntsha le le tla lebelelang dikgatlego tsa badiri.	Badiri ba faboriki ba dumela gore di DCC le FCC di lebelela dikgatlego tsa badiri sentle.
		

	Peter a re:	**Joseph a re:**
56.	Badiri ba ka tlhagisa mathata a bone ka bobona kwa management fa ba eletsa jalo.	Badiri ba tshwanetse go tlhagisa mathata a bone mo baemeding ba DCC pele ba a tlhagisiwa mo go management.
		
57.	Management o fitlha maikemisetso a ona ka DCC le FCC fa ba mekamekana le mathata a badiri.	Management ga a fitlhe maikemisetso a ona ka DCC le FCC fa ba mekamekana le mathata a badiri.
		
58.	Badiri ba akanya go re Baemedi ba DCC ba fiwa information e e feletseng.	Badiri ba akanya go re Baemedi ba DCC ga ba fiwe information e e feletseng.
		
59.	Bontsi ba badiri bo dumela gore ba ka tlhama Trade Union.	Bontsi ba badiri ga bo dumele gore ba ka tlhama Trade Union.
		
60.	Tsela ya DCC le FCC ga se e botoka go tlhagisa dilo tse di amang badiri mo go management.	DCC le FCC e botoka go tlhagisa dilo tse di amang badiri mo go management.
		

Correlation Matrix

	ITEM1	ITEM2	ITEM3	ITEM4	ITEM5	ITEM6	ITEM7	ITEM8	ITEM9
ITEM1	1.00000	-0.01114	0.20564	0.00951	0.12836	0.43383	0.25431	0.28347	0.34642
ITEM2	-0.01114	1.00000	0.09416	-0.02858	-0.19475	-0.00107	0.14441	-0.22378	-0.08870
ITEM3	0.20564	0.09416	1.00000	0.04485	-0.02561	0.14803	0.06793	-0.16534	0.28246
ITEM4	0.00951	-0.02858	0.04485	1.00000	-0.08944	0.12172	0.23982	-0.01851	0.02529
ITEM5	0.12836	-0.19475	-0.02561	-0.08944	1.00000	0.21383	0.16716	0.44498	0.39050
ITEM6	0.43383	-0.00107	0.14803	0.12172	0.21383	1.00000	0.39539	0.33165	0.48913
ITEM7	0.25431	0.14441	0.06793	0.23982	0.16716	0.39539	1.00000	0.00470	0.17414
ITEM8	0.28347	-0.22378	-0.16534	-0.01851	0.44498	0.33165	0.00470	1.00000	0.31062
ITEM9	0.34642	-0.08870	0.28246	0.02529	0.39050	0.48913	0.17414	0.31062	1.00000
ITEM10	-0.13706	0.38175	-0.02695	-0.02265	-0.00773	-0.06014	0.07005	-0.00256	0.01040
ITEM11	0.33686	-0.17445	0.23022	0.08855	0.26573	0.41479	-0.06508	0.23904	0.48024
ITEM12	0.19876	0.01349	0.06785	-0.06407	0.08309	0.19211	0.21666	0.17267	0.10617
ITEM13	0.17216	-0.14800	-0.00983	0.06856	0.17206	0.24530	-0.06968	0.35281	0.25037
ITEM14	0.15310	0.19794	0.13528	-0.21633	0.24971	0.07996	-0.00761	0.02534	0.21289
ITEM15	0.25620	0.20092	0.15019	0.13211	0.03236	0.26766	0.18049	0.10735	0.24236
ITEM16	0.20535	-0.19583	-0.04438	0.07480	0.32130	0.24799	0.10920	0.42215	0.29968
ITEM17	0.24329	0.02043	0.16841	-0.09862	0.12396	0.37429	0.09977	-0.00885	0.39653
ITEM18	0.28105	-0.02043	0.12121	0.09862	0.36850	0.21894	0.06166	0.44694	0.39091
ITEM19	0.21118	-0.00664	0.01044	0.15291	0.25645	0.29093	-0.05820	0.31160	0.24500
ITEM20	0.06688	-0.15088	-0.02048	0.01311	0.25010	0.26279	0.18186	0.26627	0.25984
ITEM21	0.22512	0.28631	-0.10487	0.07353	0.12416	0.11371	-0.13325	-0.08783	0.06907
ITEM22	-0.09470	-0.16161	0.04031	-0.05769	0.10090	-0.05430	-0.28577	0.18403	0.09787
ITEM23	0.12169	0.06962	0.09008	0.09211	0.22993	0.21391	-0.00238	0.19763	-0.30200
ITEM24	0.10274	0.03213	-0.07145	-0.14134	0.20630	0.23630	-0.01974	0.18884	0.05866
ITEM25	-0.08587	-0.08343	0.08798	-0.07094	0.09270	0.02836	0.04731	0.10557	0.00377
ITEM26	0.08001	-0.04195	0.09399	-0.07710	0.00924	0.00331	-0.10303	0.06685	0.01187
ITEM27	0.15322	-0.17424	0.14091	-0.08975	0.45596	0.28651	-0.04250	0.42866	0.44679
ITEM28	0.05876	-0.07755	-0.06359	-0.02812	0.27036	0.30340	0.12407	0.28046	0.19001
ITEM29	0.25837	-0.03348	0.05303	-0.00566	0.21660	0.30180	0.11794	0.38111	0.39772
ITEM30	0.14865	-0.12447	-0.04211	0.08533	0.13308	0.00217	-0.08718	0.10470	0.03724
ITEM31	0.09005	-0.08479	0.08057	-0.11823	0.53135	0.24012	0.13270	0.48512	0.24999
ITEM32	0.21567	-0.01764	0.10210	0.22915	0.21330	0.37695	-0.16479	0.26957	0.38254
ITEM33	0.10274	0.00543	-0.07145	0.23487	0.18380	0.48942	0.16251	0.34692	0.36539
ITEM34	0.14912	0.13886	-0.03882	0.13610	-0.10440	0.05037	0.01668	0.00521	0.13036
ITEM35	0.24658	-0.10910	0.06585	0.05620	0.22873	0.44255	0.02850	0.34847	0.27444
ITEM36	0.20632	0.46616	0.12614	0.04962	0.14289	0.05174	0.02620	-0.09634	0.20700
ITEM37	0.18763	0.06355	0.24513	0.07349	-0.00398	0.17563	0.22536	-0.13006	0.40727
ITEM38	-0.09914	0.00685	0.25869	0.03222	0.08721	0.11551	-0.09721	0.01915	0.04263
ITEM39	0.34677	0.06618	0.26451	0.11815	0.12874	0.01272	-0.05110	-0.13085	0.29339
ITEM40	0.18160	-0.12097	0.01986	0.01076	0.13741	0.11085	-0.08212	0.06945	0.28566
ITEM41	0.27895	-0.10704	0.02152	0.06162	0.24385	0.30861	0.16375	0.40300	0.21753
ITEM42	0.14330	-0.04350	0.06847	0.15329	0.39372	0.27217	-0.09397	0.35051	0.28739
ITEM43	-0.00031	0.08012	0.01210	0.08533	-0.04068	0.13789	-0.12410	0.32517	0.09170
ITEM44	0.07343	-0.17829	0.06613	-0.00589	0.34890	0.26732	-0.03673	0.40765	0.32924
ITEM45	0.37590	0.09189	0.00224	0.05754	0.24364	0.28668	0.10790	0.18144	0.25508
ITEM46	0.13088	0.05560	0.28150	0.10246	0.19876	0.28624	0.10430	0.21390	0.34710
ITEM47	0.30596	0.00324	0.03729	-0.13553	0.24160	0.19741	-0.01478	0.28435	0.25345
ITEM48	0.01686	-0.22810	0.03922	0.06775	0.21214	-0.08488	-0.09311	0.09356	-0.03174
ITEM49	0.21727	-0.10354	0.09036	-0.03040	0.45972	0.27432	0.06203	0.46596	0.50183
ITEM50	-0.04491	0.41921	0.00892	-0.00639	0.05372	0.16125	0.02568	-0.10911	-0.07619
ITEM51	0.18167	0.04694	0.05475	0.03840	0.04997	0.22151	-0.11343	0.23966	0.20499
ITEM52	0.13718	-0.15879	0.07824	0.16575	0.32407	0.39487	0.07970	0.37814	0.37716
ITEM53	0.15310	0.06063	-0.06780	0.07543	-0.10415	0.19502	0.19031	0.02534	0.21289

	ITEM1	ITEM2	ITEM3	ITEM4	ITEM5	ITEM6	ITEM7	ITEM8	ITEM9
ITEM54	0.15875	-0.28873	-0.00182	0.07318	0.41106	0.23508	-0.13206	0.41322	0.24417
ITEM55	0.09999	-0.19711	-0.05647	-0.06377	0.36025	0.18053	-0.16822	0.51065	0.24419
ITEM56	0.08530	0.13642	0.09014	0.00173	0.18517	0.13037	0.11372	-0.04512	0.09875
ITEM57	0.11926	-0.20384	0.12765	0.04032	0.13266	0.23183	-0.03525	0.37803	0.36870
ITEM58	0.08328	-0.09324	0.12466	0.02413	0.32584	0.07702	-0.02087	0.26256	0.29508
ITEM59	0.10297	0.47628	0.07008	0.09492	-0.24379	0.11562	0.01328	-0.12285	0.01427
ITEM60	0.06186	-0.20966	0.20564	-0.06736	0.51135	0.18222	-0.12410	0.40887	0.28270

	ITEM10	ITEM11	ITEM12	ITEM13	ITEM14	ITEM15	ITEM16	ITEM17	ITEM18
ITEM1	-0.13706	0.33686	0.19876	0.17216	0.15310	0.25620	0.20535	0.24329	0.28105
ITEM2	0.38175	-0.17445	0.01349	-0.14800	0.19794	0.20092	-0.19583	0.02043	-0.02043
ITEM3	-0.02695	0.23022	0.06785	-0.00983	0.13528	0.15019	-0.04438	0.16841	0.12121
ITEM4	-0.02265	0.00855	-0.06407	0.06856	-0.21633	0.13211	0.07480	-0.09862	0.07862
ITEM5	-0.00773	0.26573	0.08309	0.17206	0.24971	0.03236	0.32130	0.12396	0.36850
ITEM6	-0.06014	0.41479	0.19211	0.24530	0.07996	0.26766	0.24799	0.37429	0.21894
ITEM7	0.07005	-0.06508	0.21666	-0.06968	-0.00761	0.18049	0.10920	0.09977	0.04166
ITEM8	-0.00256	0.23904	0.17267	0.35281	0.02534	0.10735	0.42215	-0.00885	0.14684
ITEM9	0.01040	0.40024	0.10617	0.25037	0.21289	0.24236	0.29968	0.39653	0.33091
ITEM10	1.00000	0.10025	0.21499	-0.05542	0.17566	0.06399	0.02488	-0.04245	-0.18148
ITEM11	0.10025	1.00000	-0.05604	0.43801	-0.05656	0.22717	0.42613	0.23685	0.31181
ITEM12	0.21499	-0.05604	1.00000	-0.07484	0.40593	0.22142	-0.00069	-0.00570	0.00570
ITEM13	-0.05542	0.43801	-0.07484	1.00000	-0.11985	0.09178	0.31752	0.13157	0.33305
ITEM14	0.17566	-0.05656	0.40593	-0.11985	1.00000	0.06176	0.12007	0.13094	0.08394
ITEM15	0.06399	0.22717	0.22142	0.09178	0.06176	1.00000	0.07542	0.27685	0.33232
ITEM16	0.02488	0.42613	-0.00069	0.31752	0.12007	0.07542	1.00000	0.25553	0.23441
ITEM17	-0.04245	0.23685	-0.00570	0.13157	0.13094	0.27685	0.25553	1.00000	0.26141
ITEM18	-0.18148	0.31181	0.00570	0.33305	0.08394	0.33232	0.23441	0.26141	1.00000
ITEM19	-0.00527	0.53614	0.14235	0.50401	-0.05233	0.33668	0.38008	0.36351	0.41281
ITEM20	0.10718	0.30514	-0.01134	0.06786	0.01722	0.13758	0.21445	0.14276	0.26936
ITEM21	0.10482	-0.05269	0.15748	-0.09856	0.08944	0.18812	-0.14392	0.33118	0.21676
ITEM22	0.01705	0.10926	-0.00105	0.15680	-0.03894	0.10824	0.34982	-0.01052	0.23289
ITEM23	-0.05230	0.30541	0.00938	0.35927	0.00339	0.33876	0.18258	0.31580	0.24908
ITEM24	-0.07195	0.21776	0.15626	0.03912	0.11483	0.06275	0.04737	-0.05549	0.10019
ITEM25	0.04945	0.01364	0.00777	0.00764	0.26328	-0.05855	0.06222	-0.16393	0.07137
ITEM26	0.15641	0.10980	0.12083	0.21571	0.22416	0.22717	0.17704	0.02473	0.11620
ITEM27	0.04406	0.45608	0.04782	0.28695	0.17274	0.16634	0.39461	0.30392	0.25778
ITEM28	0.06052	0.17596	0.19811	0.25236	-0.05885	0.19386	0.44582	0.09923	0.18184
ITEM29	-0.04946	0.44652	0.02951	0.44213	0.11583	0.09922	0.48297	0.43928	0.41643
ITEM30	0.09552	0.15922	0.20026	0.16670	0.15317	-0.01429	0.35348	-0.01269	0.12601
ITEM31	-0.07359	0.31185	0.17191	0.22551	0.17347	0.11747	0.35732	0.13485	0.40154
ITEM32	-0.19223	0.29476	0.04026	0.35139	-0.01233	0.10005	0.12290	0.33281	0.52594
ITEM33	-0.02960	0.27276	-0.02134	0.13918	-0.05902	0.20684	0.14661	0.49291	0.42595
ITEM34	0.11412	0.25594	0.09935	0.12487	-0.04929	0.11602	-0.31092	-0.06102	0.06102
ITEM35	0.04103	0.17175	0.18036	0.14384	0.01745	0.22619	0.14794	0.36761	0.12033
ITEM36	0.41313	-0.00469	-0.00205	-0.02966	0.05654	0.09469	0.11903	0.20399	-0.00469
ITEM37	0.17641	0.15948	0.06677	0.12487	0.14281	0.27954	-0.06701	0.35130	0.02697
ITEM38	-0.04111	0.07507	0.06979	-0.05550	0.06639	0.19517	0.10409	-0.00804	0.14140
ITEM39	-0.18324	0.34413	0.19501	0.01499	0.15653	0.27370	0.08433	0.20206	0.29047
ITEM40	0.08690	0.21830	0.13306	0.36006	0.05537	0.06636	0.15430	0.11854	0.11796
ITEM41	-0.03413	0.27522	0.18218	0.19778	-0.11839	0.19557	0.32218	0.08293	0.41212
ITEM42	-0.08170	0.30795	0.04233	0.30401	-0.02676	0.24709	0.18395	0.16900	0.65698
ITEM43	-0.20302	0.15922	-0.09113	0.10591	-0.11215	-0.16366	0.32663	0.13189	0.23546
ITEM44	-0.13051	0.30259	0.02475	0.27237	-0.12796	0.15032	0.16150	0.18131	0.58556
ITEM45	-0.10490	0.29433	0.09808	0.33081	-0.02384	0.09385	0.04025	0.24015	0.31212
ITEM46	-0.02175	0.07272	-0.05142	0.03079	0.09651	0.14835	0.10719	0.24405	0.28625
ITEM47	-0.15915	0.20944	0.15683	0.16179	0.05053	0.17082	0.22444	0.16937	0.34041
ITEM48	-0.00574	0.17952	0.07794	0.19576	-0.34201	0.09191	0.08725	-0.25113	0.03791
ITEM49	-0.17898	0.40098	0.23123	0.35201	0.26216	0.38374	0.41013	0.22457	0.53778
ITEM50	0.49615	-0.14278	0.04636	-0.07659	0.15261	0.09318	-0.00590	0.11852	-0.01836
ITEM51	-0.00193	0.50914	-0.11234	0.31511	-0.19157	-0.02242	0.34324	0.22711	0.21477
ITEM52	-0.06277	0.39806	0.00932	0.35297	0.04985	0.14014	0.13785	0.37230	0.40968
ITEM53	0.14705	0.05774	0.12437	-0.27638	-0.00926	0.27678	-0.20836	0.24710	-0.10110

	ITEM10	ITEM11	ITEM12	ITEM13	ITEM14	ITEM15	ITEM16	ITEM17	ITEM18
ITEM54	-0.08142	0.46531	0.10086	0.42818	0.06549	0.00728	0.46642	0.03509	0.35214
ITEM55	-0.05407	0.35347	0.04181	0.32080	-0.01130	0.07052	0.41590	0.21511	0.35214
ITEM56	-0.10880	0.24267	-0.13920	-0.02145	0.19843	0.29754	0.17301	0.16981	0.21836
ITEM57	-0.15215	0.35414	-0.05864	0.28702	0.01866	0.18121	0.49616	0.25752	0.25724
ITEM58	-0.14689	0.19129	0.04359	0.24941	0.09849	0.11978	0.28150	0.32470	0.42351
ITEM59	0.51328	0.02528	-0.05894	-0.17592	0.19290	-0.05896	-0.05006	0.02714	-0.20518
ITEM60	-0.12999	0.31293	0.06977	0.31446	0.15153	0.31116	0.37342	-0.00823	0.46365

	ITEM19	ITEM20	ITEM21	ITEM22	ITEM23	ITEM24	ITEM25	ITEM26	ITEM27
ITEM1	0.21118	0.06688	0.22512	-0.09470	0.12169	0.10274	-0.08587	0.08001	0.15322
ITEM2	-0.00664	-0.15000	0.20631	-0.16161	0.06962	0.03213	-0.08343	-0.04195	-0.17424
ITEM3	0.01044	-0.02048	-0.10687	0.04031	0.09008	-0.07145	0.08798	0.03399	0.14091
ITEM4	0.15291	0.01311	0.07353	-0.05769	0.09211	-0.14134	-0.07094	-0.07710	-0.08975
ITEM5	0.25645	0.25010	0.12416	0.10090	0.22993	0.20630	0.09270	0.00924	0.45595
ITEM6	0.29093	0.26279	0.11371	-0.05430	0.21391	0.23630	0.02836	0.00331	0.28651
ITEM7	-0.05820	0.10106	-0.13325	-0.28577	-0.00238	-0.01974	0.04731	-0.10303	-0.04250
ITEM8	0.31160	0.26627	-0.00783	0.18403	0.19763	0.18884	0.10557	0.06685	0.42866
ITEM9	0.24500	0.25984	0.06907	0.09707	0.30200	0.05866	0.00177	0.01197	0.44679
ITEM10	-0.00527	0.10718	0.10482	0.01705	-0.05230	-0.07195	0.04945	0.15641	0.04406
ITEM11	0.53614	0.30514	-0.05269	0.10976	0.30541	0.21776	0.01364	0.10980	0.45608
ITEM12	0.14235	-0.01134	0.15748	-0.08105	0.00938	0.15626	0.00777	0.12083	0.04782
ITEM13	0.50401	0.06786	0.09856	0.15600	0.35923	0.03912	0.00764	0.21571	0.28695
ITEM14	-0.05233	0.01722	0.08944	-0.03894	0.00333	0.11489	0.26328	0.22416	0.11774
ITEM15	0.33868	0.13758	0.10812	0.10824	0.33876	0.06275	-0.05955	0.22717	0.16634
ITEM16	0.38908	0.21445	-0.14392	0.34982	0.18258	0.04737	0.06222	0.11704	0.39461
ITEM17	0.36351	0.14276	0.33118	-0.01052	0.31580	-0.05549	-0.16393	0.02473	0.30382
ITEM18	0.41283	0.26936	0.21676	0.23909	0.26908	0.10019	0.07139	0.17620	0.25978
ITEM19	1.00000	0.24816	-0.00131	0.11704	0.43687	0.05662	-0.18621	0.21262	0.30829
ITEM20	0.24816	1.00000	-0.34656	0.12304	0.15137	0.21202	0.28519	0.05942	0.39765
ITEM21	-0.00131	-0.34656	1.00000	-0.33312	0.32662	-0.11498	-0.31755	-0.18835	-0.16626
ITEM22	0.11704	0.12304	-0.33312	1.00000	-0.05521	-0.13498	0.26615	0.22948	0.14761
ITEM23	0.43687	0.15137	0.32662	-0.05521	1.00000	-0.06594	-0.39679	-0.05604	0.07949
ITEM24	0.05662	0.21202	-0.11498	-0.13498	-0.06594	1.00000	0.21959	-0.16744	0.19264
ITEM25	-0.18621	0.28519	-0.31755	0.26615	-0.39679	0.21959	1.00000	0.03960	0.15307
ITEM26	0.21262	0.05942	-0.18835	0.22948	-0.05604	-0.16744	0.03960	1.00000	0.39802
ITEM27	0.30829	0.39765	-0.16626	0.14761	0.07949	0.19264	0.15307	0.39802	1.00000
ITEM28	0.33231	0.40600	-0.22075	0.07627	0.22348	0.13474	0.10351	0.11702	0.44814
ITEM29	0.48179	0.29000	0.08714	0.04282	0.31147	0.04130	0.01725	0.20366	0.48148
ITEM30	0.43800	0.20110	-0.17635	0.20970	0.05206	0.07723	0.26811	0.25457	0.15617
ITEM31	0.31742	0.26458	-0.05866	0.26845	0.23387	0.17853	0.11093	0.11850	0.43591
ITEM32	0.33546	0.15856	-0.10102	0.14014	0.17468	0.10051	0.05010	0.17801	0.39560
ITEM33	0.37049	0.38002	0.11813	0.06226	0.28645	0.05957	-0.06940	0.05214	0.28086
ITEM34	-0.04562	-0.05041	0.45531	-0.05185	0.25702	0.05614	-0.08699	-0.13261	-0.07003
ITEM35	0.18165	0.49821	0.13139	0.01652	0.04761	0.23487	0.10657	0.08855	0.19240
ITEM36	0.11408	0.08395	0.05269	0.08416	0.05604	0.08552	0.01421	-0.07543	0.01003
ITEM37	-0.31002	0.01476	0.06558	0.05965	0.19501	-0.00683	0.07309	-0.01441	-0.02758
ITEM38	0.04886	0.08461	0.14128	0.06865	0.20225	0.10520	0.06147	-0.06246	0.03511
ITEM39	0.03757	0.10730	0.39246	-0.03204	0.22149	0.12490	-0.04509	0.10713	0.12612
ITEM40	0.06960	-0.04897	0.11098	0.24684	0.13306	-0.24327	0.00255	0.03585	0.10983
ITEM41	0.28570	0.31581	-0.02013	0.04772	0.13820	0.11499	0.01682	0.08366	0.22182
ITEM42	0.49492	0.27549	0.23901	0.20656	0.24559	0.05305	-0.06144	0.22842	0.32705
ITEM43	0.22820	-0.01947	-0.04093	0.09030	0.17023	0.05005	-0.24291	-0.04773	0.01232
ITEM44	0.30119	0.24523	0.10405	0.15265	0.23665	0.01301	-0.01805	0.05771	0.14962
ITEM45	0.19361	0.11730	0.29802	-0.28670	0.31545	0.17386	-0.16649	-0.09194	0.06895
ITEM46	0.23321	0.20520	0.11315	-0.09308	0.18203	0.08365	0.01040	-0.07038	0.10011
ITEM47	0.40191	0.09920	0.25164	-0.11022	0.26848	0.25061	-0.01491	-0.12205	0.14732
ITEM48	0.24999	0.19959	-0.27321	0.06774	0.11628	-0.15358	0.09452	-0.08553	-0.03522
ITEM49	0.51860	0.24074	-0.18154	0.17435	0.25921	0.26790	0.20493	0.28239	0.54360
ITEM50	-0.13611	-0.06371	0.34868	0.08834	-0.05532	-0.08759	-0.03414	-0.02407	-0.16101
ITEM51	0.38756	0.09613	-0.40703	0.30112	0.19635	0.02362	0.03414	0.02407	0.23800
ITEM52	0.32432	0.32375	-0.00143	0.14464	0.17671	0.10796	0.03092	0.00203	0.42437
ITEM53	-0.23244	0.20233	0.01355	-0.03894	0.15391	-0.14641	-0.02108	-0.32759	-0.11621

	ITEM19	ITEM20	ITEM21	ITEM22	ITEM23	ITEM24	ITEM25	ITEM26	ITEM27
ITEM54	0.33078	0.18610	-0.04678	0.03724	-0.01641	0.09218	0.14434	0.26335	0.47583
ITEM55	0.20406	0.29270	-0.02815	0.13033	0.13068	0.25626	0.06012	0.13485	0.44777
ITEM56	0.21173	0.13714	-0.23636	0.05609	0.18887	0.21368	-0.01395	-0.10914	0.10871
ITEM57	0.20506	0.20760	-0.21080	0.14006	0.18941	0.08619	0.06670	0.13266	0.46140
ITEM58	0.34720	0.12115	0.21122	-0.15929	0.17341	0.14199	0.11794	-0.05424	0.32405
ITEM59	-0.17216	-0.23550	0.21427	-0.13103	-0.08536	-0.07363	-0.03051	-0.07053	-0.17213
ITEM60	0.41998	0.29737	-0.14543	0.12189	0.18409	0.27864	0.11535	0.06948	0.46396

	ITEM28	ITEM29	ITEM30	ITEM31	ITEM32	ITEM33	ITEM34	ITEM35	ITEM36
ITEM1	0.05076	0.25837	0.14865	0.09005	0.21567	0.10274	0.14912	0.24658	0.20632
ITEM2	-0.07755	-0.03348	-0.12447	-0.08479	-0.01764	0.00543	0.13886	-0.10910	0.46616
ITEM3	-0.06359	0.05303	-0.04211	0.08057	0.10210	-0.07145	-0.03882	0.06585	0.12614
ITEM4	-0.02812	-0.00566	0.08533	-0.11823	0.22915	0.23487	0.13610	0.05620	0.04962
ITEM5	0.27036	0.21660	0.13308	0.53135	0.21330	0.18380	-0.10440	0.22873	0.14289
ITEM6	0.30340	0.30180	0.00217	0.24012	0.37695	0.48942	0.05037	0.44255	0.05174
ITEM7	0.12407	0.11794	-0.08718	0.13270	-0.16479	0.16251	0.01668	0.02850	0.02620
ITEM8	0.28046	0.38111	0.10470	0.48512	0.26957	0.34692	0.00521	0.34847	-0.03634
ITEM9	0.19001	0.39772	0.03724	0.24999	0.38254	0.36539	0.13036	0.27444	0.20700
ITEM10	0.06052	-0.04946	0.09552	-0.07959	-0.19223	-0.02960	0.11412	0.04103	0.41313
ITEM11	0.17596	0.44652	0.15922	0.31185	0.29476	0.27276	0.25594	0.17175	-0.00469
ITEM12	0.19811	0.02951	0.20026	0.17191	0.04026	-0.02134	0.09935	0.18036	-0.00205
ITEM13	0.25236	0.44213	0.16670	0.22551	0.35139	0.13918	0.12487	0.14384	-0.02966
ITEM14	-0.05885	0.11589	0.15337	0.17347	-0.01233	-0.05902	-0.06229	0.01745	0.05656
ITEM15	0.19386	0.09922	-0.01429	0.11747	0.10005	0.20484	0.11602	0.22619	0.09469
ITEM16	0.44582	0.48297	0.35348	0.35732	0.12290	0.14461	-0.33092	0.14794	0.13903
ITEM17	0.08929	0.43928	-0.01269	0.13485	0.33281	0.48291	-0.06102	0.36261	0.20389
ITEM18	0.18184	0.47643	0.12603	0.40154	0.52594	0.42595	0.06102	0.12099	-0.00469
ITEM19	0.33231	0.48179	0.43880	0.31742	0.33546	0.37049	-0.04562	0.18165	0.11408
ITEM20	0.40600	0.29000	0.20110	0.26458	0.15856	0.38002	-0.05041	0.49821	0.08395
ITEM21	-0.22075	0.08714	-0.17635	-0.05866	-0.10302	0.11813	0.45531	0.13139	0.05263
ITEM22	0.07627	0.04282	0.20990	0.26845	0.14814	0.06226	-0.05185	0.01552	0.08416
ITEM23	0.22348	0.31147	0.05206	0.23387	0.17468	0.28645	0.25702	0.04761	0.05604
ITEM24	0.13474	0.04130	0.07723	0.17853	0.10051	0.05957	0.05614	0.23487	0.08552
ITEM25	0.10951	0.01725	0.26811	0.11073	0.05010	-0.06840	-0.08699	0.10657	0.07421
ITEM26	0.11782	0.20346	0.25457	0.11850	0.17801	0.05214	-0.13261	0.08855	-0.07543
ITEM27	0.44814	0.48148	0.15639	0.43583	0.39560	0.28086	-0.07003	0.38240	0.01003
ITEM28	1.00000	0.34829	0.26674	0.40520	0.21732	0.36429	-0.14965	0.41155	0.22572
ITEM29	0.34829	1.00000	0.28212	0.48265	0.40802	0.35235	0.04744	0.16484	-0.10156
ITEM30	0.26674	0.28212	1.00000	0.26365	0.27511	-0.00425	-0.19078	0.03083	0.08480
ITEM31	0.40520	0.48265	0.26365	1.00000	0.18779	0.09500	-0.21467	0.13217	0.06090
ITEM32	0.21732	0.40802	0.27511	0.18779	1.00000	0.46605	0.13138	0.17951	0.11086
ITEM33	0.36429	0.35235	-0.00425	0.09500	0.46605	1.00000	0.18130	0.62770	0.00303
ITEM34	-0.14965	0.04744	-0.19078	-0.21467	0.13139	0.18130	1.00000	0.10484	0.09421
ITEM35	0.41155	0.16484	0.03083	0.13217	0.17951	0.62770	0.10484	1.00000	0.02207
ITEM36	0.22572	-0.10156	0.08480	0.06080	0.11086	0.00303	0.09421	0.02207	1.00000
ITEM37	-0.14965	-0.03768	-0.15431	-0.02207	0.01498	-0.00683	0.36437	0.16726	0.34435
ITEM38	0.07750	0.06262	-0.09835	0.14472	0.00695	0.22924	0.10442	0.34054	-0.07507
ITEM39	0.17229	0.12086	-0.05028	0.13715	0.05457	0.04575	0.36943	0.19662	0.06771
ITEM40	0.14779	0.20013	0.16737	0.35713	0.13172	-0.16689	0.16860	0.01076	0.23390
ITEM41	0.46284	0.35245	-0.05342	0.20902	0.37791	0.31857	-0.00420	0.26850	-0.13962
ITEM42	0.27229	0.42863	0.01292	0.24184	0.31578	0.48189	0.18319	0.21644	-0.03245
ITEM43	0.15520	0.21888	0.00688	-0.00335	0.27511	0.34778	0.00068	0.05807	-0.15922
ITEM44	0.32702	0.23371	0.11938	0.26384	0.30992	0.30218	0.02378	0.10449	-0.11430
ITEM45	0.05716	0.37496	-0.03778	0.20028	0.19299	0.09056	0.18697	0.03650	0.03692
ITEM46	0.26602	0.35608	-0.12078	0.22353	0.19805	0.14914	-0.03003	0.25453	0.07098
ITEM47	0.20440	0.41153	0.02080	0.32984	0.17479	0.10427	0.16737	0.07649	-0.10067
ITEM48	0.03697	-0.16777	0.28031	0.14621	-0.00662	-0.13410	-0.33355	-0.07199	-0.05337
ITEM49	0.37112	0.55763	0.32715	0.43729	0.41875	0.31774	0.03253	0.27374	-0.01225
ITEM50	0.15732	-0.12800	-0.20130	-0.03171	-0.27593	0.00829	0.00478	0.12082	0.50914
ITEM51	0.12853	0.27715	0.04943	0.22504	0.30809	0.15172	-0.05155	0.07048	0.19816
ITEM52	0.40047	0.62573	0.05070	0.48661	0.44548	0.36383	0.13289	0.34579	-0.10107
ITEM53	0.00518	-0.04393	-0.24718	-0.13707	-0.07957	0.25789	0.32701	0.16173	0.12867

	ITEM28	ITEM29	ITEM30	ITEM31	ITEM32	ITEM33	ITEM34	ITEM35	ITEM36
ITEM54	0.43405	0.46540	0.27617	0.30302	0.44615	0.17433	-0.08642	0.26558	0.00359
ITEM55	0.43405	0.43792	0.18270	0.52643	0.44615	0.28348	-0.00682	0.34768	0.00359
ITEM56	0.07725	-0.07070	0.00750	0.08607	0.07986	0.00771	0.14504	-0.02430	0.14118
ITEM57	0.38133	0.49001	0.14060	0.33877	0.39041	0.22457	-0.00116	0.20271	0.01648
ITEM58	0.21317	0.41728	0.17123	0.39589	0.41476	0.28493	0.01814	0.14479	0.02220
ITEM59	-0.14688	-0.06777	-0.20206	-0.28934	-0.19438	-0.07363	0.00859	-0.17581	0.36216
ITEM60	0.28733	0.24580	0.18147	0.45428	0.32656	0.15230	0.02370	0.12612	0.01467

	ITEM37	ITEM38	ITEM39	ITEM40	ITEM41	ITEM42	ITEM43	ITEM44	ITEM45
ITEM1	0.10763	-0.09914	0.34677	0.18160	0.27895	0.14330	-0.00031	0.07343	0.37570
ITEM2	0.06355	0.00685	0.06618	-0.12097	-0.10704	-0.04350	0.08012	-0.17829	0.09189
ITEM3	0.24513	0.25869	0.26451	0.01986	0.02152	0.06847	0.01210	0.06613	0.00224
ITEM4	0.07349	0.03222	0.11815	0.01076	0.06162	0.15329	0.08533	-0.00589	0.05754
ITEM5	-0.00398	0.08721	0.12874	0.13741	0.24385	0.39372	-0.04068	0.34890	0.24364
ITEM6	0.17563	0.11551	0.01272	0.11005	0.30861	0.27217	0.13789	0.26732	0.28668
ITEM7	0.22536	-0.09721	-0.05110	-0.00212	0.16375	-0.09337	-0.12410	-0.03673	0.10790
ITEM8	-0.13006	0.01915	-0.13085	0.06945	0.40300	0.35051	0.32517	0.40765	0.18144
ITEM9	0.40727	0.04263	0.29339	0.28566	0.21753	0.28739	0.09170	0.32924	0.25508
ITEM10	0.17641	-0.04111	-0.10324	0.08690	-0.03413	-0.08170	-0.20302	-0.13051	-0.10490
ITEM11	0.15948	0.07507	0.34413	0.21830	0.27522	0.30795	0.15922	0.38259	0.29433
ITEM12	0.06677	0.06979	0.19501	0.13306	0.18213	0.04233	-0.09113	0.02475	0.09808
ITEM13	0.12487	-0.05550	0.01499	0.36006	0.19778	0.30401	0.10591	0.21237	0.33081
ITEM14	0.14281	0.06639	0.15653	0.05537	-0.11830	-0.02674	-0.11215	-0.12786	-0.02384
ITEM15	0.27954	0.19517	0.27370	0.06636	0.14557	0.24709	-0.16366	0.15932	0.07195
ITEM16	-0.06701	0.10409	0.00439	0.15430	0.32213	0.38395	0.32669	0.36150	0.04025
ITEM17	0.35330	-0.00804	0.20206	0.13854	0.08299	0.16900	0.19389	0.18131	0.24075
ITEM18	0.02697	0.14160	0.28067	0.11786	0.41972	0.66692	0.23546	0.58550	0.31272
ITEM19	-0.31002	0.04886	0.03757	0.06960	0.28570	0.49492	0.22920	0.30119	0.12161
ITEM20	0.01476	0.08461	0.10730	-0.04897	0.31581	0.27549	-0.01947	0.24523	0.11730
ITEM21	0.06558	0.14128	0.39246	0.11098	-0.02013	0.23901	-0.04093	0.10405	0.29802
ITEM22	0.05965	0.06065	-0.03204	0.24684	0.04772	0.20856	0.09030	0.15265	-0.28670
ITEM23	0.19501	0.20225	0.22149	0.13306	0.13820	0.24559	0.17023	0.23665	0.31545
ITEM24	-0.00683	0.10520	0.12490	-0.24927	0.13499	0.05305	0.05005	0.01903	0.17186
ITEM25	0.07909	0.06347	-0.04509	0.00255	0.01682	-0.06144	-0.24291	-0.01885	-0.16449
ITEM26	-0.01441	-0.06246	0.10799	0.09585	0.08366	0.22842	-0.04793	0.05771	-0.09184
ITEM27	-0.02758	0.03531	0.12632	0.10983	0.22182	0.32705	0.01232	0.16962	0.06895
ITEM28	-0.14965	0.07750	0.17229	0.14779	0.46284	0.27229	0.15520	0.32707	0.05716
ITEM29	-0.03960	0.06262	0.12086	0.20013	0.35245	0.42863	0.21888	0.23371	0.37496
ITEM30	-0.15431	-0.00835	-0.05028	0.16737	-0.05342	0.01292	0.00688	0.11938	-0.03779
ITEM31	-0.02207	0.14472	0.13715	0.35713	0.20902	0.24184	-0.00335	0.26184	0.20028
ITEM32	0.01498	0.00695	0.05457	0.13172	0.37791	0.31578	0.27511	0.30992	0.17279
ITEM33	-0.00683	0.22924	0.04575	-0.16689	0.31857	0.48189	0.34778	0.30218	0.09056
ITEM34	0.36437	0.10442	0.36943	0.14060	-0.00420	0.10319	0.00060	0.02378	0.13697
ITEM35	0.16726	0.34064	0.19662	0.01076	0.26850	0.21644	0.05807	0.10449	0.03650
ITEM36	0.34435	-0.07507	0.06771	0.29380	-0.13862	-0.09245	-0.15922	-0.11430	0.03692
ITEM37	1.00000	-0.02151	0.16759	0.62057	-0.16169	-0.32133	-0.22641	-0.07471	0.14118
ITEM38	-0.02151	1.00000	0.38603	-0.04531	0.21832	0.37242	0.07407	0.25858	-0.19755
ITEM39	0.16759	0.38603	1.00000	0.03148	0.22366	0.37649	0.23666	0.19483	0.23569
ITEM40	0.62057	-0.04531	0.03148	1.00000	0.01019	-0.14745	-0.32134	0.28273	0.40119
ITEM41	-0.16169	0.21832	0.22366	0.01019	1.00000	0.52010	0.27045	0.48264	0.22777
ITEM42	-0.32133	0.37242	0.37649	-0.14745	0.52010	1.00000	0.35811	0.62271	0.15010
ITEM43	-0.22641	0.07407	0.23666	-0.32134	0.27045	0.35811	1.00000	0.30693	0.09806
ITEM44	-0.07471	0.25858	0.19483	0.28273	0.48264	0.62271	0.30693	1.00000	0.29444
ITEM45	0.34118	-0.19755	0.23569	0.40119	0.22777	0.15010	0.09806	0.29444	1.00000
ITEM46	0.13670	0.21473	0.17905	-0.01816	0.31769	0.20972	0.07809	0.17449	-0.01241
ITEM47	0.13491	0.26052	0.42056	-0.05184	0.43327	0.34113	0.28813	0.37285	0.26232
ITEM48	-0.07015	0.05767	-0.10212	0.14232	0.00650	0.06295	0.03892	0.15342	-0.02627
ITEM49	-0.00569	0.24518	0.30608	0.16837	0.29990	0.55539	0.18273	0.54552	0.24147
ITEM50	0.00478	0.02611	-0.01294	0.12401	-0.05225	-0.03925	-0.16470	-0.18423	-0.04986
ITEM51	0.20410	-0.02611	0.09632	0.12009	0.17972	0.27700	0.46459	0.12030	0.21051
ITEM52	-0.02689	-0.10950	0.24917	-0.05432	0.34372	0.38923	0.20729	0.22697	0.17880
ITEM53	0.36099	0.06639	0.18981	0.00111	-0.06032	-0.08514	0.03446	-0.06853	0.12024

	ITEM37	ITEM38	ITEM39	ITEM40	ITEM41	ITEM42	ITEM43	ITEM44	ITEM45
ITEM54	0.07717	0.19674	0.19074	0.10223	0.41950	0.37178	0.18270	0.49330	0.22290
ITEM55	-0.00642	0.22372	0.04420	0.16127	0.31310	0.29439	0.21443	0.49330	0.14071
ITEM56	0.14504	0.05017	0.15828	0.15296	0.10392	0.24213	-0.05876	0.27905	0.19476
ITEM57	0.14219	-0.06191	0.00508	0.06393	0.30569	0.22830	0.19703	0.35219	0.24019
ITEM58	0.13043	0.05525	0.06765	0.21792	0.24836	0.36110	0.20004	0.31819	0.15892
ITEM59	0.11581	-0.03157	-0.03793	-0.14309	-0.18177	-0.05021	0.14213	-0.24092	-0.06661
ITEM60	0.08889	0.22159	0.18066	0.15595	0.27921	0.43284	0.20812	0.49544	0.35259

	ITEM46	ITEM47	ITEM48	ITEM49	ITEM50	ITEM51	ITEM52	ITEM53	ITEM54
ITEM1	0.13088	0.30596	0.01686	0.21727	-0.04491	0.18167	0.13718	0.15310	0.15875
ITEM2	0.05560	0.00324	-0.22810	-0.10354	0.41921	0.04694	-0.15379	0.06063	-0.28873
ITEM3	0.28150	0.03729	0.03922	0.09036	0.00892	0.05475	0.07824	-0.06780	-0.00182
ITEM4	0.10246	-0.13553	0.04775	-0.03040	-0.00639	0.03840	0.16575	0.07543	0.07318
ITEM5	0.19876	0.24160	0.21214	0.45972	0.05372	0.04997	0.32401	-0.10415	0.41106
ITEM6	0.28624	0.19741	-0.08488	0.27432	0.16125	0.22151	0.39487	0.19502	0.23508
ITEM7	0.10430	-0.01478	-0.09311	0.06203	0.02560	-0.11343	0.07970	0.19031	-0.13206
ITEM8	0.21390	0.28435	0.09356	0.46596	-0.10911	0.23966	0.37814	0.02534	0.41322
ITEM9	0.34710	0.25345	-0.03174	0.50183	-0.07613	0.20499	0.37716	0.21283	0.24419
ITEM10	0.02175	-0.15915	-0.00574	-0.17098	0.49615	-0.00193	-0.06277	0.14705	-0.08142
ITEM11	0.07272	0.20944	0.17952	0.40098	-0.14278	0.50914	0.39806	0.05774	0.46531
ITEM12	-0.05142	0.15603	0.07794	0.23123	0.04636	-0.11234	0.00932	0.12437	0.10086
ITEM13	0.03079	0.16199	0.19576	0.35201	-0.07659	0.31511	0.35297	-0.27638	0.42818
ITEM14	0.09651	0.05059	-0.34201	0.26216	0.15261	-0.19157	0.04385	-0.00926	0.06540
ITEM15	0.14035	0.17082	0.09191	0.38374	0.09318	-0.02242	0.14014	0.27678	0.00728
ITEM16	0.10719	0.22444	0.08725	0.41013	-0.00590	0.34324	0.33785	-0.20896	0.46642
ITEM17	0.24406	0.16997	-0.25119	0.22457	0.11852	0.27711	0.37230	0.24730	0.03509
ITEM18	0.28625	0.34041	0.03981	0.59778	-0.01896	0.21477	0.40968	-0.10110	0.35214
ITEM19	0.23321	0.18191	0.24999	0.51860	-0.13611	0.38756	0.32432	-0.23244	0.33078
ITEM20	0.20520	0.09920	0.19959	0.24074	-0.06371	0.09613	0.32375	0.20233	0.18610
ITEM21	0.11315	0.25164	-0.27321	-0.18154	0.34868	-0.40703	-0.00143	0.01355	-0.04678
ITEM22	-0.09308	-0.11022	0.06774	0.17435	0.00834	0.30112	0.14464	-0.03094	0.03724
ITEM23	0.18203	0.26840	0.11628	0.25921	-0.05532	0.19635	0.17671	0.15391	-0.01641
ITEM24	0.00365	0.25061	-0.15958	0.26790	-0.00759	0.02362	0.10796	-0.14641	0.09218
ITEM25	0.01040	-0.01881	0.09452	0.20899	-0.03414	0.03414	0.03092	-0.02108	0.14434
ITEM26	-0.07090	-0.12205	-0.00553	0.20999	-0.02407	0.02407	0.00203	-0.32759	0.26335
ITEM27	0.30013	0.16732	-0.03522	0.54960	-0.16101	0.23800	0.49437	-0.11621	0.47583
ITEM28	0.26602	0.20440	0.03697	0.37112	0.15732	0.12853	0.40047	0.00518	0.43405
ITEM29	0.35608	0.41153	-0.16777	0.55763	-0.12800	0.27715	0.62573	-0.04393	0.46548
ITEM30	-0.12078	0.02080	0.20031	0.32715	-0.20130	0.04943	0.05070	-0.24718	0.27617
ITEM31	0.22353	0.32904	0.14621	0.43729	-0.03171	0.22504	0.48661	-0.13707	0.30302
ITEM32	0.19805	0.17479	-0.00662	0.41875	-0.27593	0.30809	0.44548	-0.07957	0.44615
ITEM33	0.14914	0.10427	-0.19410	0.31774	0.00829	0.15172	0.36383	0.25783	0.17433
ITEM34	-0.03003	0.16737	-0.33355	0.03258	0.00478	-0.05155	0.13289	0.32701	-0.08642
ITEM35	0.25453	0.07649	-0.07199	0.27374	0.12082	0.07048	0.34578	0.16178	0.26558
ITEM36	0.07098	-0.10067	-0.05337	-0.01225	0.50914	0.13836	-0.10107	0.12867	0.00359
ITEM37	0.13678	0.13491	-0.07015	-0.00569	0.00478	0.20410	-0.02689	0.36093	0.07717
ITEM38	0.21473	0.26052	0.05767	0.24518	0.02611	-0.02611	0.10958	0.06639	0.19674
ITEM39	0.17905	0.42056	-0.10232	0.30608	-0.01294	0.09632	0.24917	0.18981	0.19074
ITEM40	-0.01816	-0.05104	0.14232	0.16837	0.12401	0.12009	-0.05432	0.00111	0.10223
ITEM41	0.31769	0.43327	0.00650	0.29990	-0.05225	0.17972	0.34392	-0.06032	0.41250
ITEM42	0.20972	0.34113	0.06295	0.55539	-0.08925	0.27700	0.38723	-0.08514	0.37178
ITEM43	0.07809	0.20813	0.03092	0.18273	-0.16470	0.44459	0.20729	0.03446	0.18210
ITEM44	0.17449	0.37206	0.15342	0.54552	-0.10423	0.12030	0.22687	-0.06853	0.49330
ITEM45	-0.01243	0.26232	-0.02627	0.26147	-0.04986	0.21051	0.17880	0.12036	0.22270
ITEM46	1.00000	0.14081	-0.07420	0.30393	0.05701	0.07574	0.23813	0.00455	0.13946
ITEM47	0.14081	1.00000	0.08120	0.35594	-0.13522	0.26011	0.37022	-0.00821	0.40459
ITEM48	-0.07420	0.08120	1.00000	0.05413	-0.21801	0.12697	-0.05316	-0.05331	0.28775
ITEM49	0.30393	0.35594	0.05413	1.00000	-0.23109	0.26448	0.49411	0.03564	0.51894
ITEM50	0.05701	-0.13522	-0.21801	-0.23109	1.00000	0.03538	0.00157	0.11253	-0.05701
ITEM51	0.07574	0.26011	0.12697	0.26448	0.03539	1.00000	0.35094	0.06041	0.34715
ITEM52	0.23813	0.37022	-0.05316	0.49411	0.00157	0.35094	1.00000	0.01360	0.41546
ITEM53	0.00455	-0.00821	-0.05331	0.03564	0.11253	0.06041	0.01360	1.00000	-0.34293

	ITEM55	ITEM56	ITEM57	ITEM58	ITEM59	ITEM60
ITEM1	0.09999	0.08530	0.11926	0.08328	0.10297	0.06186
ITEM2	-0.19711	0.13642	-0.20304	-0.09324	0.47628	-0.20966
ITEM3	-0.05647	0.09014	0.12265	0.12466	0.07008	0.20564
ITEM4	-0.06377	0.00173	0.04032	0.02413	0.09492	-0.06736
ITEM5	0.36025	0.18517	0.13266	0.32584	-0.24379	0.51135
ITEM6	0.18053	0.13037	0.23183	0.07702	0.11562	0.18222
ITEM7	-0.16822	0.11372	-0.03525	-0.02087	0.01378	-0.12410
ITEM8	0.51065	-0.04512	0.37803	0.26256	-0.12285	0.40887
ITEM9	0.24419	0.09875	0.16870	0.29508	0.01427	0.28270
ITEM10	-0.05407	-0.10800	-0.15215	-0.14689	0.51328	-0.12999
ITEM11	0.35347	0.24267	0.35414	0.19129	0.02528	0.31293
ITEM12	0.04101	-0.13920	-0.05864	0.04359	-0.05094	0.06977
ITEM13	0.32080	-0.02145	0.20702	0.24941	-0.17592	0.31446
ITEM14	-0.01130	0.19843	0.01966	0.03849	0.19290	0.15153
ITEM15	0.07052	0.29754	0.18121	0.11978	-0.05896	0.31116
ITEM16	0.41590	0.17301	0.49616	0.28150	-0.05006	0.37342
ITEM17	0.21511	0.16981	0.25752	0.32470	0.02714	-0.00823
ITEM18	0.35214	0.21836	0.25724	0.42351	-0.20518	0.46365
ITEM19	0.20406	0.21173	0.20506	0.34720	-0.17216	0.41999
ITEM20	0.29270	0.13714	0.20760	0.12115	-0.23550	0.29737
ITEM21	0.02815	-0.23636	-0.21080	0.21122	0.21427	-0.14543
ITEM22	0.13033	0.05609	0.14006	-0.15929	-0.13103	0.12109
ITEM23	0.13068	0.10887	0.18941	0.17341	-0.00536	0.18409
ITEM24	0.25626	0.21368	0.08619	0.14199	-0.07363	0.27864
ITEM25	0.06012	-0.01395	0.06670	0.11794	-0.03051	0.11535
ITEM26	0.13485	-0.10914	0.13266	-0.05424	-0.07053	0.06948
ITEM27	0.44777	0.10871	0.46140	0.32405	-0.17213	0.46396
ITEM28	0.43405	0.07725	0.38133	0.21317	-0.14688	0.28733
ITEM29	0.43792	-0.07070	0.49001	0.41728	-0.06777	0.26580
ITEM30	0.10270	0.00750	0.14060	0.17123	-0.20206	0.18147
ITEM31	0.52643	0.08607	0.33877	0.39588	-0.28934	0.45428
ITEM32	0.44615	0.07986	0.39841	0.41476	-0.19438	0.32656
ITEM33	0.28348	0.00771	0.22457	0.28491	-0.07363	0.15230
ITEM34	-0.00682	0.14504	-0.00116	0.01814	0.00859	0.02370
ITEM35	0.34768	-0.02430	0.20271	0.14479	-0.17581	0.12612
ITEM36	0.00359	0.14118	0.01648	0.02220	0.36216	0.01467
ITEM37	-0.08642	0.14504	0.14219	0.13043	0.11581	0.09883
ITEM38	0.22372	0.05817	-0.06131	0.05525	-0.03157	0.22152
ITEM39	0.04420	0.15828	0.00508	0.08765	-0.03793	0.13066
ITEM40	0.16127	0.15296	0.06393	0.21792	-0.14309	0.15575
ITEM41	0.31310	0.10392	0.30569	0.24836	-0.10177	0.27921
ITEM42	0.29439	0.24213	0.22830	0.36110	-0.05021	0.43284
ITEM43	0.21443	-0.05876	0.19703	0.20004	0.14213	0.20812
ITEM44	0.49330	0.27905	0.35219	0.31819	-0.24092	0.43546
ITEM45	0.14071	0.19476	0.24017	0.15892	-0.06663	0.35259
ITEM46	0.25313	0.17927	0.15370	0.16073	0.02484	0.20940
ITEM47	0.40459	0.10219	0.29521	0.51427	-0.12717	0.32739
ITEM48	-0.04460	-0.23700	-0.17469	0.03562	-0.17581	0.12568
ITEM49	0.49435	0.25640	0.47329	0.46534	-0.24799	0.60471
ITEM50	-0.05701	0.00551	-0.21416	-0.06475	0.55714	-0.15024
ITEM51	0.24489	0.07501	0.27755	0.13441	0.21668	0.30524
ITEM52	0.49301	0.13177	0.56847	0.42205	-0.19305	0.44425
ITEM53	-0.22282	0.19843	-0.07652	-0.19445	0.25326	-0.20251

	ITEM55	ITEM56	ITEM57	ITEM58	ITEM59	ITEM60
ITEM54	0.62932	0.10275	0.44502	0.45182	-0.21184	0.47612
ITEM55	1.00000	0.17503	0.58563	0.42666	-0.18251	0.54758
ITEM56	0.17503	1.00000	0.27240	0.15570	-0.00223	0.50995
ITEM57	0.58563	0.27240	1.00000	0.49974	-0.35592	0.41908
ITEM58	0.42666	0.15570	0.49974	1.00000	-0.32412	0.41792
ITEM59	-0.18251	-0.00223	-0.35592	-0.32412	1.00000	-0.20874
ITEM60	0.54758	0.50995	0.41908	0.41792	-0.20874	1.00000