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EVALUATING IN-COMPANY INDUSTRIAL RELATIONS CLIMATE

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Dissertation submitted to the Faculty of Arts, University of Witwatersrand, in fulfillment of the requirements for the degree of Master of Arts.

Johannesburg 1985

I hereby declare that this thesis is my own work and that I have not submitted it for the degree of Masters of Arts to any other university.

C.H.M. DONALD

In memory of my father
H.A. DONALD.
Rest in peace.

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ABSTRACT

The aim of the study was to develop, validate and implement a measure of in-company industrial relations climate (IRC). A model of in-company industrial relations (IR) was formulated within the context of an open IR system. Key in-company IR dimensions of employee representation, grievance and disciplinary procedures, communications, supervision and peer group were identified. The effective functioning of these components was seen as necessary if an overall policy strategy to deal with in-company IR was to be operationalised. The use of IR climate (IRC) as a specific type of organisational climate was proposed as a suitable form of analysis of in-company IR. The need for a psychometrically reliable and valid instrument was indicated and an appropriate procedure for establishing a reliable and valid in-company IRC scale was formulated and implemented.

The validation procedure was implemented through the application of an initial form of the in-company IRC scale (IIRCS) to a sample of 16 subjects in a pilot study. The scale was revised and administered as part of a battery, which included scales establishing organisational commitment and job satisfaction, to a sample of subjects ($n = 393$) at a South African gold mine. A separate sample of 32 employees was drawn from the organisation to establish test-retest reliability.

The IIRCS was refined through the elimination of items which reduced the reliability of the sub-scales. The sub-scale of peer group was eliminated because of limitations of reliability and construct validity. Results for the revised sub-scales assessing the remaining in-company IRC dimensions indicated acceptable levels of internal-consistency and test-retest reliability coefficients. Correlations between IIRCS

sub-scales indicated a common underlying construct of in-company IRC. Sub-scales nevertheless displayed a discriminatory capacity in addressing the separate in-company IRC dimensions. Significant correlations were demonstrated between IIRCS sub-scales and the criterion variables of organisational commitment and job satisfaction. Intra-correlations of IIRCS sub-scales were in all cases greater than those between sub-scales and criterion variables, indicating the capacity of sub-scales to discriminate between the construct of IRC and criterion constructs. Results from the implementation of the IIRCS to examine the in-company IRC of the mine reflected expected differences within contrasted groups on the variables of race and skill level. Significant differences were also manifested across shafts, indicating the scale's capacity to differentiate and identify IRC within the organisational context.

Overall, the IIRCS demonstrated acceptable characteristics of reliability and validity and indicated that it could effectively be utilised to analyse the in-company IR of an organisation. The IIRCS also identified the dimensions of grievance procedure, disciplinary procedure, communications, employee representation and supervision as separate but integral parts of an IR policy approach. Consequently, the IIRCS is seen to provide a monitoring function which can indicate problem/conflict areas and facilitate the reformulation of policy to deal more effectively with organisational IR. Further research is necessary to establish a data base for comparative purposes, and to locate the importance of in-company IRC within the influence of other areas affecting organisational IR.

CONTENTS

	PAGE
ABSTRACT	iv
INTRODUCTION	1
In-company Industrial Relations	6
Industrial Relations Policy	17
The Implementation of IR Policy	33
The Operationalised IR Policy	43
Evaluation of In-company IR	48
Evaluation and the Concept of Climate	50
The Case for Industrial Relations Climate	53
A Psychometrically Sound IRC Instrument	57
The Application of the IIRCS to Investigate the In-company IRC of an Organisation	69
METHOD	76
Sample	77
Measuring Instruments	78
Procedure	84
Statistical Analysis	87
RESULTS	93
DISCUSSION	109
Discussion of Results	109
Implications	125
REFERENCES	139
APPENDICES	

LIST OF TABLES

TABLE		PAGE
1.	Distribution of Items According to Dimension	79
2.	Descriptive Statistics for the IIRCS Sub-scales	94
3.	Internal Consistency Reliability Coefficients for the Grievance Procedure Sub-scale of the IIRCS	95
4.	Internal Consistency Reliability Coefficients for the Disciplinary Procedure Sub-scale of the IIRCS	96
5.	Internal Consistency Reliability Coefficients for the Communications Sub-scale of the IIRCS	97
6.	Internal Consistency Reliability Coefficients for the Employee Representation Sub-scale of the IIRCS	98
7.	Internal Consistency Reliability Coefficients for the Supervision Sub-scale of the IIRCS	98
8.	Internal Consistency Reliability Coefficients for the Peer Group Sub-scale of the IIRCS	99
9.	Internal Consistency Reliability Coefficients for the Policy Sub-scale of the IIRCS	100
10.	Test-retest Reliability Coefficients for the IIRCS Sub-scales	101
11.	Pearson and Partial Correlations for IIRCS Sub-scales .	103
12.	Correlations of Sub-scales of the IIRCS with Organisational Commitment and Job Satisfaction	104
13.	Oneway ANOVAs between Categories of P[illegible] IIRCS Sub-scales	106
14.	Oneway ANOVAs between Skill Categories for the IIRCS Sub-scales	107
15.	Oneway ANOVAs between Shafts for the IIRCS Subscales ..	108

LIST OF FIGURES

FIGURE		PAGE
1.	The Context of In-Company IR in IR Systems	8
2.	The Operationalised In-company IR Policy	47

"Few concepts have been subject to such varied interpretation as the concept of industrial relations. The term has its own special connotations to each individual concerned with employer-employee relations" (Owen & Finstone, 1964, p. vii).

Industrial relations (IR) has developed through, and provides the meeting place for, a number of disciplines. Each of these disciplines contributes only a partial understanding of the phenomenon of IR (Barrett, Rhodes & Beishon, 1975; Henneman, 1969). The disciplines, which include economics, industrial psychology, industrial sociology, and law, have examined varying problems, variables and relationships in the work setting. The diverse subject content of disciplines and their contributions have led to differences in concepts, terminology and methodology within the field of IR (Henneman, 1969; Somers, 1969). The consequence of these differences has been a historical lack of clarity in the approaches used to locate theory and research within IR as a discipline (Barrett et al., 1975; Henneman, 1969; Wiehahn, 1981).

The systematization of IR subject material to create a broad conceptual framework within which the discipline could be approached was pioneered by Dunlop (1958) (Jackson, 1977a; Wood, Wagner, Armstrong, Goodman & Davies, 1975). Dunlop (1958) developed a framework detailing the concept of an IR system bound together by a common ideology. Within the IR system, the environmental forces of the market, technology and power relationships are related to the interactions of workers, management and government agencies (Dunlop, 1958). A major output of

the IR system is the establishment and administration of substantive and procedural rules which define the status of the actors of the system and govern their *conduct at the workplace and work community* (Dunlop, 1958, Jackson, 1977a). For Dunlop (1958), his approach presents a general theory of IR which seeks to provide the tools of analysis to interpret and to gain understanding of the widest range of IR facts and practices.

Dunlop's presentation of a general theory of IR provided the first significant and comprehensive framework for studying the subject in this way (Barrett, et al., 1975). However, Dunlop's (1958) approach has been criticised by a number of authors (Jackson, 1977a). Although varying criticisms have been made, Jackson (1977a) points out that similar defects are noted among these authors. Bain and Clegg (1974) and Somers (1969) argue that Dunlop's concept of a common ideology which binds the system might be taken to imply that an IR system is naturally stable and integrative, and necessarily strives to perpetuate itself. This is seen by Bain and Clegg (1974) as having conservative implications which are unacceptable in the light of the dynamic nature of IR. Hyman (1977) also centres much of his criticism on the conservative nature of Dunlop's theory. Hyman (1977) states that defining the subject on rules and regulations and not taking into account the sources as well as consequences of conflict implies that IR is all about the maintenance of stability and regularity in industry. Also, Dunlop (1958) has been criticised for under-emphasising the role of behavioural variables such as human motivation, perceptions and attitudes in his model (Bain & Clegg, 1974; Hyman, 1977; Somers, 1969; Wood et al., 1975). Although the

importance of behavioural variables will differ across situations, these behavioural factors are seen as essential in attempting a full explanation of IR behaviour and its determinants (Bain & Clegg, 1974; Chimmin & Singh, 1973; Wood et al., 1975).

The open systems approach represents a strategy to modify the systems theory proposed by Dunlop (1958) so as to take into account the criticisms levelled at Dunlop's approach (Jackson, 1977a). This is accomplished by broadening the scope of the system to include processes by which conflict is generated as well as those of resolution, by the inclusion of behavioural as well as structural variables and relationships, and by the provision of channels of feedback within the system which can allow for dynamic change (Bain & Clegg, 1974; Craig, 1975; Jackson, 1977a). The open systems approach sees the subject matter as a set of interrelated parts operating within the environment (Craig, 1975). The approach implies that the system, in addition to its own inputs, also receives inputs from the environment. These inputs are transformed into outputs which affect the system itself and surrounding environmental sub-systems. The system thus interacts continuously with itself and the environment at a number of levels (Craig, 1975; Katz & Kahn, 1978).

However, conceptualising IR within an open system framework still falls short of providing an integrated theory (Jackson, 1977a). Jackson (1977a) points out that different writers supporting open systems theory emphasise different viewpoints. Some approaches look only at the environment to obtain evidence of the way the system is functioning,

others look at the system from a number of viewpoints in order to understand the context of the system in the environment more fully (Jackson, 1977a). The first type of approach is seen by Jackson (1977a) to lead to a selective choice of which aspects to consider. This might lead to the ignoring of relevant material not directly related to IR. The second is seen to create problems in unification and integration because of the focus on individual differences. Either way, a unitary IR systems approach is being lost (Jackson, 1977a). Besides problems in approaches, the major problem is the need for development of IR open systems theory before it can be utilised effectively (Bain & Clegg, 1974; Barrett et al., 1975). This situation arises from the vast material which must be considered and the establishing of content and boundaries (Barrett et al., 1975; Somers, 1969). As Anthony (1977) points out, some parts of the "system" are entirely different from others and each of these is an enormously complex "system" open to an infinity of influences. The difficulties in the provision of an integrated theory are reflected by Henneman (1969) who states that although a general operational IR system exists, its size and complexity is such that it is known to no man.

Despite this failure to provide for a general integrated theory, the open systems approach has a great deal of use as a heuristic device or model within which the mass of facts relevant to the study of IR can be organised (Bain & Clegg, 1974). Used as a heuristic device, the concept of an open system not only gives IR an analytical focus, but also points to a range of factors which should be taken into account in trying to explain the behaviours of the actors in the IR system (Bain & Clegg, 1974). Consequently, it provides a comprehensive way of identifying,

analysing, synthesising and evaluating strategic variables of an industrial relations system (Barrett et al., 1975). Attempts at theorizing can be instituted as contributions to the formulation of large scale operational theories and partial systems based on this theorizing can be tested empirically for their efficiency (Bain & Clegg, 1974; Barrett et al., 1975; Henneman, 1969).

Use of the IR open systems approach as a heuristic device has three major implications for the present study:

a) The approach provides a framework whereby one can become aware of the extent, nature, and contributions of variables influencing labour/management interactions. A need for limited theorizing and research within this framework is detailed. Consequently, the present study addresses itself to the specific area of in-company IR within a systems approach. The particular context of in-company IR is discussed, its functions are examined, and consideration of its operationalisation and the necessity and nature of its assessment is entered into.

b) The IR open systems approach acknowledges a range of psychological factors such as motivation, perceptions and attitudes which should be taken into account in explaining the behaviours of the participants in the IR system. These psychological factors have led to increasing interest and examination of IR by psychologists in recent years (Brotherton & Stephenson, 1975; Fullagar, 1984; Gordon & Nurick, 1981; Kelly & Nicholson, 1980; Kochan, 1980).

Research by the above authors has demonstrated the utility of psychological concepts and methodology to assess a number of IR dimensions. With this in mind the present study examines the application of psychological concepts and methodology in the assessment of in-company IR.

c) Barret et al. (1975) and Bain and Clegg (1974) emphasise that the importance which can be attached to any particular strategic factor of the IR system is a matter for empirical investigation. Thus, Bain and Clegg (1974) see the most effective way to proceed in IR research as the development of concepts and theories which are specific enough to be tested empirically but general enough to be used in explaining the widest possible range of phenomena. The present study therefore, will develop and implement a psychometric measure of in-company IR. This measure will be validated and implemented and the implications for in-company IR will be discussed.

These three implications provide a framework which the present study will follow. The initial discussion therefore, will address the area of in-company IR.

In-company Industrial Relations

IR occurs in social units with boundaries that are observable although varying in degree of permeability - the work group, the plant, the company, the industry, the region and the nation (Walker, 1979). Such

units form a system of interacting forces of differing nature, strength and functioning which will affect any area of IR being studied (Craig, 1975; Walker, 1979). This means that the behaviour of employees in a particular unit cannot be fully explained without reference to other elements of the situation. However, some measure of understanding and explanation of the characteristics or influences of a specific unit/situation can be obtained, provided the examination of the unit/situation is placed in the context of the overall system (Walker, 1979). For this reason examination of in-company IR must be placed in the context of the operating system in which it is located.

In the present study, in-company IR is placed in the context of three facets: the environment and its systems, the organisation, and organisational IR (Craig, 1975; Margerison 1969; in Coller, 1979; Walker, 1979) (see Figure 1). Environmental systems influencing in-company IR are seen to include the ecological, economic, political, legal and social systems (Craig, 1975; Walker, 1979). These systems are seen to have a significant effect on in-company IR by imposing conditions and the context in which the organisation, its members, and organisational IR must operate (Craig, 1975). Conditions which are regulated include the physical surroundings of the organisation and its members; the labour, money and product markets; legislative requirements that individuals and groups must adhere to, both within the social and work environments; and the belief and value systems of the actors (Craig, 1975; Walker, 1979). For the purpose of the model demonstrated in Figure 1, IR influences which fall outside the ambit of the organisation are also included in the area of environmental systems for

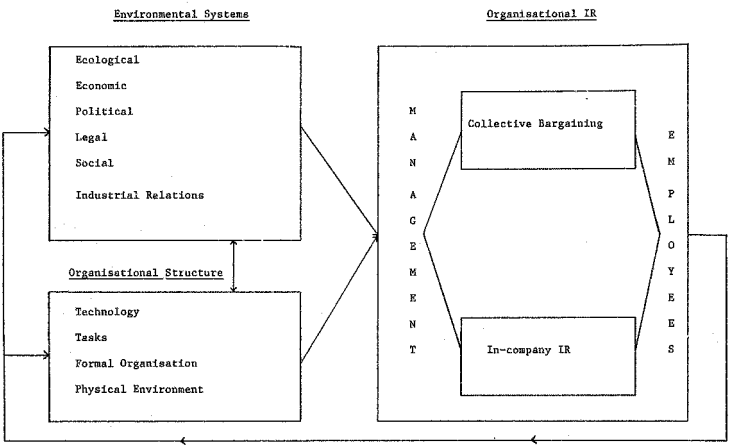

Figure 1 The Context of In-Company IR in IR Systems.

(Adapted from: Craig, 1975; Margerison, 1969; Van Coller, 1979; Walker, 1979)

analytical purposes. Such influences could involve industry wide agreements, IR legislation, and transnational bodies such as international union federations and the International Labour Organisation (Walker, 1979).

Although Craig (1975) and Walker (1979) identify the environmental context of IR, they fail to differentiate levels of the IR system itself. However, Margerison (1969) and Van Coller (1979) indicate that the organisational context has particular implications for IR. Although the organisation arises as a response to environmental demands, once established it becomes an interacting system in its own right (Katz & Kahn, 1978; Schein, 1980). The resultant organisational structure has implications for the nature of organisational procedures and processes, labour composition, working conditions and ultimately the way in which management/employee relations are orientated (Margerison, 1969; Van Coller, 1979). Consequently Van Coller (1979) sees the structural characteristics of the organisation as important in determining the potential for conflict within the organisation. Where the organisation's structural features make it a high conflict industry, this will move the underlying management and employee perceptions of how they feel towards an antagonistic relationship (Van Coller, 1979).

Organisational IR is seen to deal with two major areas to regulate management employee relationships. Collective bargaining involves the interaction of management and the union officials representing employees

in (a) the allocation of scarce resources within the organisation, and (b) in determining a framework within which relations between the parties can be organised and conducted (Douwes-Dekker, 1981; Piron, *1982a).* In-company IR deals with the issues arising from the shop floor pertaining to the interests of employees and how they are handled through labour/management interactions (Wiehahn, 1981). Both of these dimensions interact with each other and both are affected by influences from the structural nature of the organisation itself and the wider environment.

Mitchell and Corbett (1973) see IR within the organisation as the area of employment where certain *inevitable differences of interest* between employer and employee are brought into focus and discussed. Solutions may then be found to the various problems which arise both in the day-to-day running *of a factory* and the area of policy inspired change. Relationships at work between employers, individual employees, and groups of employees are seen as being of primary concern in such conduct *of IR within the organisation* (Mitchell & Corbett, 1973). In-company IR addresses these relationships in the context of a wide range of interactions which occur at the interface between management and employees within the company (Bluen, 1981; Wiehahn, 1981). Cuthbert (1973), Wiehahn (1981) and Van Coller (1979) see the importance in the regulation of this interface deriving from the fact that the vast majority of issues that can give rise to labour unrest (e.g., supervision, remuneration, conditions of service) can be avoided or reconciled at the in-house level. For Wiehahn *(1981):*

> "all developments indicate that the in-house situation will be one on the high temperature areas in the field of industrial relations and that grievances arising from poor relations between management and workers, fumbling or bad handling of issues at that level could give rise to unrest at industry or other high levels" (p. 146).

In-company IR therefore has a specific role to play in the study of management/employee relations. However, examination of the operation of in-company IR must be placed in perspective if its function is to be analysed. This examination therefore requires an understanding of the origins of conflict within the organisation, the necessity for its regulation, and the rationale for the development of the regulatory framework that constitutes in-company IR.

The Origins of Conflict, Co-operation and Regulation

The conflicts which characterise organisational IR are generated through the internal bargaining exchange relationships within the organisation (Somers, 1969). In the exchange of labour, one hopes to benefit from one's relationship with the other party. However, in order to gain the desired consequence, the person must also incur the cost of what others expect in turn (Somers, 1969; Walker, 1979). It is the price or valuation of labour as a reward for the employee's productive contribution in the economic process that becomes the central issue in the exchange relationship. This price of labour extends beyond the basic wage transaction to the conditions of employment and decisions

that directly affect employees (Flanders, 1975; Van Coller, 1979). For management, the price or labour must be minimised in order to allow for the maximum reinvestment of capital in pursuit of further gain, or it must be realised for the benefit of shareholders as owners of the company (Batstone, 1979). For employees on the other hand, the production of capital in the enterprise is seen to be a consequence of the labour they have expended in the productive process, and they expect maximum return possible for such labour in order to accommodate their own needs, aspirations and objectives (Batstone, 1979; Douwes-Dekker, 1982).

The fulfilment of needs, aspirations and objectives by both management and workers can only be realised through the continued existence of the organisation providing the source of capital (Batstone, 1979). As Batstone (1979) points out, this means that both parties are responsible for the long term maintenance of the organisation and as such both employees and management have to provide at least minimal co-operation if they are to achieve valued goals and rewards. The interaction allows the articulation of divergent objectives and interests, and explores the reconciliation of these (Coser, 1964). The reconciliation process is seen to lead to the formulation of regulatory rules or norms for the conduct of the parties, and the establishment of institutions to reinforce and interpret the rules or agreements. The framework is not seen to resolve conflict but rather to provide for a regulation of it. There is still an acknowledgement of the continuation of conflict and an ongoing need to deal with conflict.

To enhance this co-operative regulatory relationship a transformation of management power into management authority is instituted (Batstona, 1979; Douwes-Dekker, 1981; Fox, 1971). The importance of the transformation of power into authority lies in the fundamental differences between the two concepts. According to Fox (1971), in authority relationships the subordinates legitimise the order giving role of the superior and although sanctions are deemed necessary to deter or punish transgressions, these too are legitimized. In power relationships however, sanctions are used to impose upon others behaviour norms which they do not legitimise. Since behaviour is forced upon them without their "consent", subordinates are more likely to see themselves as experiencing pressure of coercion (Fox, 1971).

The practical significance of the distinction between power and authority is that since rights are correlative with obligations, a person who accepts the rightness of a supervisor's demand for obedience feels obliged to obey (Fox, 1971). The quality of this pattern of compliance is likely to be very different from that prevailing where compliance can only be secured by the exercise or threat of sanctions which the subject perceives as illegitimate. It is the difference between willing co-operation and a forced obedience under duress - obedience which is withdrawn whenever the coercive sanctions are not immediately in evidence. The regulated behaviour pattern means that through the establishment of authority relations, management control over the system of work relations moves from one of coercion to one of consent (Fox, 1971).

Dahrendorf (1959) states that if regulation is to be possible, three conditions must be fulfilled:

a) Both parties have to recognise the necessity and reality of the conflict situation. Wherever the attempt is made to dispute the case of the opponent by calling it "unrealistic", or to deny the opponent the opportunity to make a case at all, or to put too great an emphasis on alleged "common interests", effective regulation is not possible.

b) The second condition is that the parties must be organised as interest groups. So long as the conflicting parties are diffuse incoherent aggregates, regulation is virtually impossible.

c) These opposing parties have to agree on certain formal rules of the game in the interactive relationship.

The nature of the rules, decisions and agreements involved in the relationship of the parties will be a reflection of the relative strength of bargaining power of management and employees in the labour exchange relationship (Fox, 1971; Somers, 1969).

Anthony (1977) points out that in this regulatory relationship the situation exists where power and tactical skill in the form of coercion are used to bring grudging opponents to accept conclusions they would want to avoid. This part of the relationship must be seen against the necessary co-operative dimension - what Anthony (1977) sees as constitutional regulation. The constitutional regulation involves the

mutual agreement on the limits and manner in which power can be applied and is developed to protect the parties from inflicting an unacceptable degree of damage due to the conflict of interests. However, Anthony (1977) states:

> "the coercive and the constitutional level are never entirely *distinct and separate*. If the constitutional protection which the parties have agreed to provide for each other reflects a degree of coercive powers which one of the parties no longer enjoys, there is likely to be pressure to change the constitutional relationship, to change the rules by which the game is played" (p. 10).

Thus, in the event that the views of either party change regarding perception of the power balance and the relative protection which the rules afford, the commitment to respect the system also changes (Anthony, 1977). Decreased commitment leads to pressure on the system to change. Pressure may be exercised formally through agreements or it may take the form of "unofficial" action. In unofficial action the actual behaviour of the one side begins to show scant regard for procedural rules, although these rules might perhaps continue to be acknowledged formally (Anthony, 1977). The application of official or unofficial pressure is seen to lead to an improved system of interaction. The system adapts to meet changing circumstances and becomes more functional in order to maintain commitment to working within the system (Kelly & Nicholson, 1980).

The framework for regulation therefore, is operationalised on the basis of the acknowledgement of conflict, and a commitment by both parties to deal with it through participation in a mutually agreed system. This system contains rules, procedures and behaviours which co-ordinate the interaction between the two parties. On management's part, a power sharing relationship is entered into whereby management *must* give up some of its autonomy in the decision making process and there must be acknowledgement of employee involvement and influence in decision making (Fox, 1971). The participation of employees on the other hand, implies a certain acceptance of the legitimacy of management's position in the regulatory relationship (Batstone, 1979). In a radical critique of IR such legitimisation does not occur. The process of worker participation is rejected in favour of worker control and a conflictual relationship results (Thomson & Murray, 1976). Thus, if conflict is to be regulated effectively, each party has to recognise the legitimacy of the other's existence. This allows for the acceptance of a framework within which to conduct the relationship.

Although the nature of the relationship is changing continuously due to inputs from both the internal and external environments, there is generally normative agreement on behaviours within the system (Craig, 1975; Fox, 1971). There is a recognition by both sides that any immediate tactical advantage resulting from the violation of shared expectations would be outweighed by damage to the system within which they had hitherto accomplished satisfactory results (Fox 1971). The regulatory agreement consequently calls for a parameter of shared values, expectations and trust between the opposing parties (Anthony, 1977). Industrial relations policy represents an overt attempt to

prepare such a position or posture relative to the organisational situation (Cuthbert, 1973). The formulation of an IR policy acceptable to all parties is seen therefore as an essential prerequisite for the establishment of a regulatory relationship based on the legitimation of authority (Brandt, 1973; Douwes-Dekker, 1981).

Industrial Relations Policy

The IR policy constitutes a means of assisting management to establish and maintain an ordered and consistent framework for the conduct of IR within the organisation (Brewster, Gill & Richbell, 1981). Its purpose is to define the IR objectives of the organisation and to embody the program to achieve such objectives in a formal statement. Brewster et al. (1981) describe it as "a set of proposals and actions which establishes the organisation's approach to its employees and acts as a reference point for management" (p. 3).

The development of IR policy requires a comprehensive strategy. The policy cannot be articulated successfully without regard to the total policies, plans and objectives of the organisation (Cuthbert, 1973). The policy must reflect the interaction of IR with the policies in other areas of concern, such as production, finance or marketing. In this way it becomes a part of a total approach with which the organisation pursues its business objectives in a consistent manner (Anthony, 1977; Cuthbert, 1973; Douwes-Dekker, 1981). The response of the organisation to potential disruptions thus becomes foreseen and corrective mechanisms and procedures are prescribed and built into the system (Katz & Kahn, 1978).

Brandt (1973) states that IR policies have a cyclical nature which enables them to accommodate and reflect the changing circumstances of the strength of the parties involved in the regulatory relationship. This cyclical nature involves distinguishable periods and phases which operate on an ongoing basis. These phases are in broad terms:

a) the period of formulation of policy;
b) the expression and transmission of the policy to those who will use it and those who will be subject to it;
c) the interpretation, instruction in, and application of the policy;
d) the evaluation of the policy, where it is established which elements failed to work properly.

Reformulation occurs on the basis of evaluation and addresses two dimensions. These dimensions involve aspects included in the policy which were unworkable or irrelevant, and external changes or developments which can alter policy formulation or which were not considered at the time the policy was prepared. Reformulation takes the form of attempts to restructure and rewrite the policy so that it can focus better on designated objectives by providing more accurate guidelines. These apply to both structural characteristics and the relevant behavioural criteria (Brandt, 1973).

The IR policy goes beyond written documentation to a set of shared expectations and intentions of the actors regarding IR and related behaviour (Brewster et al., 1981). This unwritten approach is seen by

Brewster et al. (1981) as complimenting aspects of written policy and can give guidance on fundamental principles, yet encourage flexibility within the context of these principles. The unwritten approach can also exist in an organisation in which no written IR policy is formulated but where proposals and actions regarding guidelines in the conduct of IR exist at an unwritten level (Anthony, 1977; Brewster et al., 1981; Cuthbert, 1973).

Guidelines of policy and the laying down of governing laws of conduct and rules of action to which parties are subject should be drawn up by top management through discussion and with the acceptance of all parties (Bluen, 1981; Brewster et al., 1982). This provides all parties with a framework within which they can operate and enhances commitment to the adherence of policy statements (Bluen, 1981; Brandt, 1973; Cuthbert, 1973). The policy framework rests on the formulation of objectives and values, the balanced formality of procedures, and matching types of conflict with the means of resolution. The framework should represent an attractive medium for all parties to work for the resolution/regulation of conflict (Aram & Salipante, 1981). Ultimately the policy represents management's posture towards the reception, consideration, evaluation and resolution of employee requests, demands and needs (Batstone, 1979).

The reception, consideration, evaluation and resolution of employee requests, demands and needs can be accomplished through formal and informal or unwritten dimensions of an IR framework (Aram & Salipante, 1982; Kuhn, 1961). Although there seems to be no simple relationship

between the formality of the IR framework and effectiveness, it is generally accepted that formality is seen to lead to a regulation and ordering of conflict within the organisation (Aram & Salipante, 1981). The Donavan Commission Report (cited in Thomson & Murray, 1976) argues that the growth of localised unofficial industrial action in Britain reflects the lack of orderly procedures for grievance handling and bargaining at the plant level. Industries characterised by orderly procedures and the acceptance of these by the workforce have been identified by a number of authors as being in states of relative peace (Goodman, Armstrong, Davies & Wagner, 1977; Hyman, 1977; Kelly & Nicholson, 1980; Wiehahn, 1981).

However, dispute resolution does not depend only on formal mechanisms. Informal processes in the labour/management interactions also play a part in the resolution of conflict (Kuhn, 1961). Informal processes in IR are often seen to compliment or reinforce formalised procedures, allowing the formalised procedures to be more complete in IR dealings (Aram & Salipante, 1981; Thomson & Murray, 1976). Besides the role of supporting existing formal procedures, informal processes can arise as a response to the absence of formalised structure and the need to perform the function of that mechanism (Briggs, 1981). Corwin (1969), Botha (1977) and McKersie and Shropshire (1962) all indicate aspects of organisational IR where informal mechanisms have substituted for or dealt with issues before reaching the formalised components of the IR framework (e.g., settlement of grievances). Consequently the conduct of the IR policy must allow for the influence of both formal and informal processes in the regulatory relationship.

The achievement of effective regulation is only possible if the IR policy framework comprehensively addresses the relationship between management and employees. The means of regulation therefore, must be matched with the nature of conflict in the different areas addressed by policy (Aram & Salipante, 1981). Key components of the IR framework which must be addressed in policy include employee representation, grievance and disciplinary procedures, and communications. (Bluen, 1981; Cuthbert, 1973; Douwes-Dekker, 1981; Piron 1982a, 1982b; Van Coller, 1979). These dimensions are designed to perform specific functions in regulating in-company IR conflict and are discussed below.

Employee Representation

The employee representative structures embody the parameters within which the relationship between management and employees is acted out (Hyman, 1977). The establishment of this relationship allows for formalised discussion and decision making in areas of concern to both parties (Hyman, 1977; Piron, 1982a). For Jackson (1977) it is important to take as much care with an internal system of representation as it is with the need for adequate external machinery for collective bargaining. Consequently employee representation is essential for an in-company IR system (Van Coller, 1979; Wiehahn, 1981). Labour/management interaction has historically been conducted through committee systems in the South African context. These have not possessed the requisite negotiating strength or representativeness of employees (Douwes-Dekker, 1981). Consequently, the area of in-company representation is becoming increasingly regulated by the institution of plant based bargaining by unions (Bluen & van Zwam, 1983; Piron, 1982a). Management is facing

stronger, more effective and better organised representation of employees and needs to regulate the interactions (Douwes-Dekker, 1982; Piron, 1982a).

In entering into a regulatory agreement with employee representatives, *management must recognise* that there is a change in the decision making process and decisions can no longer be made unilaterally by management (Bluen, 1981; Douwes-Dekker 1981, 1982). The interaction between the parties should be based on co-operation if there is to be commitment by both sides to act within the developed framework (Van Coller, 1979). This allows for the orderly resolution of conflict deriving from all levels of the organisation and includes the requests, complaints and desires expressed in the day to day routine of the workplace. Problem solving discussions precede the initiation of coercive conflict behaviour such as work stoppages or strikes. Thus, conflict situations may be resolved before they become major issues which affect the welfare of the company (Botha, 1977; Brigge, 1981).

It is essential that the regulatory agreement arrived at by management and employee representatives *is seen* by employees as valid. No in-company system stands a chance of succeeding or operating effeciently without employee co-operation (Wiehahn, 1981). There must be a perceived *fairness* in both the substance of the regulatory agreement reached and the application of the procedures agreed on for regulatory purposes (Aram & Salipante, 1981). Employee representatives therefore are responsible for ensuring commitment to, participation in, and correct functioning of the in-company IR procedures by all parties.

Involvement of employee representatives in the implementation of the IR procedures should contribute to fairer and more equitable treatment of employees (Botha, 1977; Douwes-Dekker, 1982). Employee representatives are in a position to advise the employee of the credibility of the case involved and the possibility of favourable resolution (Magwaza, 1981). The individual concerned is also more likely to state the case under the relative protection of the representative acting as an agent of the collectivity (Magwaza, 1981; Van Coller, 1979). The existence and use of representatives facilitates the early identification and expression of discontent on the shopfloor which, if not expressed, may become disruptive (Van Coller, 1979). Ultimately, the representatives provide a medium whereby management and employees are given an opportunity to understand each other's views and objectives and provision is made for the resolution of conflict in a constructive manner (Piron, 1982a).

The Grievance Procedure

No clear definition exists of what constitutes a grievance (Magwaza, 1981). Magwaza (1981) utilises a broad definition of grievances that covers a wide range of situations and positions. The grievance can be any discontent or dissatisfaction (whether expressed or not, and whether valid or not) arising within the organisational context that an employee thinks or feels is unfair, unjust or inequitable. However, it is essential that the discontent be concerned with company practices. It is not the form, expression or validity of the grievance that is so important as the fact that it is the decision of the employee whether a grievance is held, and not the supervisor or any other member of management (Magwaza, 1981).

The grievance procedure represents the facility by which aggrieved employees are able to channel their grievance to the appropriate quarter in a structured and systematic fashion (Botha, 1977; Piron 1982a). The formulation of the grievance procedure is based on the assumption that management has the right of interpretation of the agreement between management and union (Douwes-Dekker, 1981). Because management exercises this priority right of interpretation by virtue of its authority to co-ordinate and assign work, the worker who disagrees with management's interpretation has to initiate the grievance procedure. However, the acceptance, and implementation of a grievance procedure negotiated by an organisation and a trade union indicates a willingness on the part of management to move from a position of conflict through coercive methods to a position where it is accepted that management/employee relations should be regulated by some form of consent (Douwes-Dekker, 1981, 1982). Thus, in the act of instituting a grievance, the worker appeals against arbitrary management action. Consequently, effective operation and usage of the grievance procedure by the parties legitimises the power of management by transforming it into authority (Douwes-Dekker, 1981).

The grievance procedure performs a major conflict management function (Beach, 1980; Briggs, 1981). Beach (1980) sees the procedure as serving as:

> "an outlet for employee frustrations, discontents and gripes. It operates like a pressure release valve on a steam boiler. Employees do not have to

> keep their frustrations bottled up until eventually seething discontent causes an explosion. They have a legitimate, officially approved way of appealing their grievances to a higher management" (p. 539).

Without the procedure, questions that arise between management and employees probably would be resolved through a test of collective strength in the form of strikes or shutdowns (Briggs, 1981). The procedure communicates employee problems and expectations to management. Through this form of communication, management can become sensitive to employee concerns regarding current practice and future planning. Consequently, action can be taken to remedy conflict areas (Beach, 1980; Briggs, 1981; Gordon & Miller, 1984).

The relative formality of a grievance procedure calls for rational contractual arguments and appropriate forms of evidence during the hearing (Briggs, 1981). The formality allows for a defusing of emotional situations and reduces emotionally based allegations and responses by all parties. Management and employee representatives are constrained to act within agreed boundaries in the seeking of fair solutions to individual problems (Gordon & Miller, 1984). Also, the availability of a procedure to facilitate the correction of unjustifiable action reduces discriminatory treatment of employees by supervisors (Briggs, 1981).

The provision of a grievance procedure as a processing mechanism for workplace problems provides for the alleviation of a wide range of

existing and potential conflict areas within the organisation. Gordon and Miller (1984) report that the grievance procedure decreases conflict behaviour such as work stoppages, sabotage and slow downs. The grievance procedure provides for a problem solving climate and has an important impact on the co-operation between union and management (Gordon & Miller, 1984; Thomson & Murray, 1976). Gandz and Whitehead (cited in Thomson & Murray, 1976) have shown managers perceptions of poorer IR in bargaining units were associated with high grievance rates. High grievance rates have also been inversely related to employee attitudes of organisational commitment and overall job satisfaction (Dalton & Todor, 1982).

An increase in grievance activity at a particular location or within a particular employee group can indicate the existence of a problem which may, if not rectified, lead to an explosive situation (Magwaza, 1981). However, the organisation which boasts of no grievances may in reality be suffering from the results of ineffective grievance procedures (Briggs, 1981). The grievance procedure therefore, must be operationalised in such a manner that it is perceived as useful and so perform its designated function. Consequently, the procedure should be monitored regularly to ensure effectiveness (Briggs, 1981; Douwes-Dekker, 1981; Magwaza, 1981). Because of the problems in using objective measures such as grievance rate, monitoring should be based on ensuring correct practice and the assessment of employee views. Ultimately the grievance procedure must operate in such a way that justice must not only be done, but in the eyes of the employees it must be seen to have been done (Magwaza, 1981).

The Disciplinary Code and Procedure

A written disciplinary code which is communicated to all employees is an essential prerequisite in moving away from the coercive mode of control by management (Douwes-Dekker, 1981). The operation of the disciplinary procedure indicates that both management and employees want principles of rationality and fairness to operate in their interaction and want to eliminate arbitrary action (Douwes-Dekker, 1981; 1982). In South Africa developing Black unions are taking a high degree of interest in the protection of their members through the institution of a disciplinary procedure to protect employees against unfair labour practices and particularly unfair dismissals (Levy, 1984; Piron, 1982a). Similarly, employers are realising that disciplinary procedures can be used to their advantage (Le Roux, 1983). There is an acknowledgement that a high proportion of strikes in South Africa arise as reactions against disciplinary issues. The National Manpower Commission (1983, 1984) reports that 15,2 percent of South African strikes arose from disciplinary issues in 1982 and 21,1 percent from such issues in 1983. The Institute for Industrial Relations (1984) details that dismissals alone were responsible for 13,2 percent of strikes in 1984. By giving an employee a right not to be unfairly dismissed, and by providing protection with effective remedies, the possibility of industrial unrest is reduced (Le Roux, 1983).

Piron (1982a) and Douwes-Dekker (1981) distinguish between the disciplinary code of the organisation and the actual steps involved in disciplining an employee (i.e., the disciplinary procedure). The

disciplinary code lists the undesirable activities for which management can take corrective action against employees and details commensurate disciplinary action which can be taken in the event of transgressions (Piron, 1982a). The embodiment of required behaviours in rules and standards provides guidelines for *acceptable employee behaviour* and *minimises disciplinary problems*. However, the rules and standards must be clearly known and generally accepted by employees (Botha, 1977).

The disciplinary procedure represents a prescribed formalised interaction following the guidelines within which management is entitled to act and through which action is carried out. The procedure is initiated by a management representative *who is concerned* with unsatisfactory *employee* performance or behaviour (Botha, 1977). With the elimination of arbitrary action the burden of proof is upon the employer to show that the employee is guilty of the alleged offence. Management therefore must provide the individual with a written statement of the charges being laid together with the reasons for any penalty decided upon at a hearing. The employee must have full opportunity to conduct a defence against the charge and to utilise a mode of *appeal if unhappy with* the conduct or consequences of the case (Beach, 1980). The appeal procedure is imperative to ensure the fairness and relevance of the discipline imposed and to provide for protection against victimisation. Involvement of the employee representative in the procedure is seen to enhance fairness and relevance of disciplinary action. Management is called on to justify its position and must be able to demonstrate the *fairness of its action* in accordance *with its obligations* in the regulatory relationship (Douwes-Dekker, 1981; Le Roux, 1983; Piron, 1982a).

Management's agreement to follow accepted guidelines and the adherence to reason of "just cause" before disciplinary measures can be effected is seen to assure employees of greater job security (Le Roux, 1983; Levy, 1984). Management also derives benefits from the disciplinary procedure. Such benefits include a heightened sense of responsibility borne by the people exercising disciplinary action and increased competency in such actions, as well as a reduction of employee distrust of every manager and disciplinary measure (Le Roux, 1983; Piron, 1982a). Ultimately the situation leads to an increased stability of the workforce and less turnover, as well as a reduction of conflict potential over disciplinary issues (Le Roux, 1983; Piron, 1982a). Although the incorrect imposition of discipline has been linked to strikes and workstoppages (Institute for Industrial Relations, 1984), employee dissatisfaction (Queripel, 1983), and a high grievance rate (Thomson & Murray, 1976), there is an absence of empirical support to indicate a causal connection between effective disciplinary procedures and a reduction in organisational conflict. However, the support of both trade unions and management for the implementaion of disciplinary procedures (Le Roux, 1983; Levy, 1984; Piron, 1982a) seems to indicate the utility of the disciplinary procedure in a role of reducing conflict within organisations.

Standardisation of the disciplinary procedure provides for equitable and consistent treatment across varying employee groups (Botha 1977). Standardisation reduces the potential for discriminatory treatment of employees and can help reduce conflict at the individual and group level (Le Roux, 1983). The fact that arbitrary management decision making is

reduced to some extent can also lead to a defusing of resentment when disciplinary action is instituted. It is difficult to argue against action taken on the basis of accepted and legitimate grounds (*Le Roux*, 1983; Piron, 1982a). By adhering to the requirements of having to show "just cause" for disciplinary action, management reduces the possibility of union action against the organisation and moves from an emotional behavioural situation to one which is legalistic and where the union too must act in accordance with the provisions of the regulatory framework agreed upon (*Dalton & Todor*, 1981; Piron, 1982a). Properly constructed, the disciplinary procedure can play a substantial part in reducing conflict and promoting morale on the shop-floor.

Communication Systems

Communication is the basis of organisational control and co-ordination by providing information essential to effective accomplishment of the organisational functions. The objective of organisational communication is to transmit organisational rules, norms, objectives and other information relevant to the workplace (Jackson, 1977b). Katz and Kahn (1978) see the transmission of information as a social process with implications for leadership, the exertion of influence, and co-operation. With acceptance of the process of communication, employees are acknowledging management status and influence, and ultimately authority is being acknowledged and legitimized (Jackson, 1977b).

The effect of any particular communication depends on the pre-existing expectations and motives of the communicating parties. Further, the effect also depends on the feelings and attitudes that the parties concerned have toward each other (Jackson, 1977b). Van Coller (1979) suggests that interactions between management and employees are likely to be more successful when both parties are operating within the same information parameters. Equal access to information by both management and employees limits the unilateral nature of management decision making and promotes co-operation. Common awareness of circumstances surrounding issues facilitates a more equal power relationship and enhances the legitimisation of authority (Ansoff, 1968; Jackson, 1977b).

The functions of communication go beyond recognition of legitimate management authority. Van Coller (1979) sees the provision of information as enhancing the trust of employees because it demonstrates management's willingness to co-operate. Further, effective communication leads to several other benefits (Baddeley, 1977; Baqwa, 1983; Jackson, 1977b; Van Coller, 1979). These include:

a) A reduction of misunderstanding resulting from different perspectives and attitudes because of access to similar information on which decisions can be based.

b) An increase in commitment and co-operation through the provision of feedback on performance and reasons for organisational change. Feedback provides reinforcement and direction, and notification of reasons for change reduces anxiety and increases the probability of co-operation.

c) A reduction in possible damage through the conveyance of wrong information by distorted "grapevine" communication processes due to clarity and knowledge by all employees.

d) The strengthening of the leadership role of supervisors through their dissemination of important information to subordinates.

Thus, a well structured and utilised communication system is essential to in-company IR (Wiehahn, 1981). There is strong evidence to suggest that employees react positively to such a system and this is conducive to sound IR (Van Coller, 1979). Van Coller (1979) points to the Black-White interface as a problematical area which can lead to difficulties if communications are not properly established. Hall (1982) and Queripel (1983) have demonstrated employee dissatisfaction arising from communication deficiencies in cases in the mining industry. McKay (1983) however, has specified how a communications system involving direct communication with employees led to better IR and productivity in an industrial company.

Although the IR policy dimensions of employee representation and grievance and disciplinary procedures have been described as communication methods (Baddeley, 1977; Van Coller, 1979), a specified role for communications has been demonstrated in the regulation of the conflict relationship. Part of this role involves communicating the particulars of the other IR dimensions to the workforce (Piron, 1982a; Van Coller, 1979). However, while the role, structure and procedure of the IR dimensions can be communicated, the dimensions need to be implemented effectively and operationalised if they are to achieve their objectives of regulation.

The Implementation of IR Policy

"Structure is transferred via psychological mediation into action" (Kelly & Nicholson, 1980, p.879). It is in this context that Brewster et al. (1981) draw a distinction between "espoused" and "operational" policy. The espoused policy is a summation of the proposals, objectives and standards that top level management establish, and/or state they hold, for regulating the management-employee relationship. The espoused policy can be established either unilaterally by management, or through joint negotiation, depending on the extent of employee organisation and representation. When policies are formulated, it is the espoused policy which management commits to paper. The operational IR policy, in contrast, consists of the way management is seen to order IR priorities vis-à-vis those of other policies. This involves the actual implementation and direction of policy within the work process (Brewster et al., 1981).

The espoused and operational policies inevitably will differ. By their nature, espoused policies cannot cover every eventuality. They will either be specific to particular circumstances, or they will be general statements of intent, to be interpreted or ignored by line management in accordance with the operational policy (Brewster et al., 1981). A crucial element in the distinction between espoused and operational policies is that where these are different in an organisation, line management will attempt, on the basis of personalities, history and work group pressure among others, to follow the operational policy. Consequently, it is the operational policy which employees experience

and their response to it that will determine the nature of IR in the organisation, not the espoused policy (Brewster, et al., 1981).

If the functions of a formally established policy detailed by Bluen (1981), Cuthbert (1973) and Douwes-Dekker (1981) are to be accomplished within the framework established through mutual agreement between management and employees, the operational policy should resemble the mutually established espoused policy as closely as possible. The operationalisation of this policy is dependent on the people involved in the enactment of the policy (Kelly & Nicholson, 1980). This calls for an examination of the IR roles of the groups of management and supervisors on one side, and employees and their representatives on the other, to understand the operationalisation process.

Management

The formulation of the espoused policy is mainly the responsibility of the top management/executives (Brewster et al., 1981). The development of policy by top management requires a comprehensive approach. IR policy cannot be articulated successfully without reference to the overall organisational policies, plans and objectives. Dovetailing of policies ensures that the implementation of IR policy does not interfere with the ongoing functioning of the organisation. Adherence to set procedures and standards is possible therefore (Brewster et al., 1981). Consideration must also be taken of mutually acceptable terms regarding the nature of organisational IR arrived at through negotiations with employee representatives (Bluen, 1981; Douwes-Dekker, 1981; Piron, 1982a).

The role of formulation of policy is no less important for the operational policy than for the espoused policy. At the different levels of management, the various pressures that impinge on managers influence the way in which the espoused policy is interpreted and applied. These pressures reflect perceived expectations in the minds of secondary managers about what is expected of them and derive from perceptions of IR directives established by the top echelon of management (Brewster et al., 1981). Lack of clarity about industrial roles and responsibilities at different levels and functions of management is often a major impediment to good IR (Brewster et al., 1981). It is important therefore, that top management have a clear commitment to the ideals and implementation of the espoused policy, and that this is communicated to line management and becomes reflected in the operationalisation of policy (Brewster et al., 1981; Cuthbert; 1973).

Although the formulation of IR policy is an essential prerequisite for the change in the employment relationship from one of coersion to co-operation, it is the effective operation of policy content in reconciling conflict which ultimately provides evidence of a co-operative approach (Douwes-Dekker, 1981). It is the managers who must give proper attention to this task and it is they who have the final responsibility to ensure functioning of IR policy within the organisation (Brewster et al., 1981).

Supervisors

Supervisors are seen as representing the lower and primarily operational levels of the management hierarchy (Malherbe, 1983). Acting in this capacity, no single individual in the organisation is more important to good IR than the supervisor (Baer, 1970). The supervisor is the first organisational representative dealing with employees and their representatives on behalf of management. In most industrial situations the supervisor is the one person who most often administers the contractual provisions of the regulatory agreement (Baer, 1970). Because of this strategic position, to most employees, the supervisor is "the management". It is the supervisor's words, opinions, ethics and deeds which are interpreted as company policy (Baer, 1970; Piron, Human & Rajah, 1983).

The implementation of IR is dependent on the extent to which the supervisor perceives IR processes as being part of the job role and required performance in this regard. For Brewster et al. (1981), without training or awareness of the importance of IR, supervisors rarely conceive of themselves as taking such decisions and the job is seen as being largely devoid of IR overtones. In any implementation of policy the supervisor must be made aware of the direct influence of IR in the work group under supervision, as well as work-related issues which may not appear to concern IR, but have such overtones (Piron, et al., 1983).

Operating within a formal framework for the conduct of IR, the supervisor plays a major part in the way in which prescribed structures and procedures are implemented. Although structures are designed with specific roles, these can be "employed with varying degrees of frequency, and with degrees of appropriateness in differing situations" (Katz & Kahn, 1978, p. 537). The differing use of available organisational means by the supervisor will have consequences for the behaviour and attitudes of employees. The ways in which organisational means are utilised in organisational functioning thus constitute acts of leadership (Katz & Kahn, 1978). The manner in which this leadership is exercised in the performance of the supervisor is crucial to the fulfilment of the aims and objectives of the IR policy. Inefficient supervision can prevent initial facilitation of the IR procedures and generate conflict (Botha, 1977). Thus the supervisor must be equipped with the skills and the awareness to handle the problems of everyday IR. In this respect appropriate supervisory training has been identified as an important requirement of effective in-company IR (Bluen, Godsell & Malherbe, 1981; Van Coller, 1979).

The competent supervisor provides for the effective implementation of the conflict resolving procedures in the IR programme. As the management representative closest to the source of grievances, the supervisor has the important role of solving problems if possible. If these problems cannot be solved, the supervisor should facilitate the expression of grievances to higher levels where due consideration can be taken of problems (Botha, 1977). In the event of the supervisor being incapable of performing these requirements effectively, implementation of the grievance procedure will not be accomplished. The key role of

the supervisor in this procedure is paralleled in the dimension of communications. The utilisation of communication systems such as briefing groups is dependent of the capacity and inclination of the supervisor to convey appropriate information from management to employees (Baddeley, 1977; Bluen, 1981). Selective or inappropriate information conveyed by the supervisor can obscure the meaning the information was intended to transmit and defeat the objectives of the process (Brewster et al., 1981). Similarly, conveyance of disciplinary information is essential if employees are expected to use and abide by the system. The supervisor has both the role of communicating organisational standards as well as that of imposing discipline in the event of a contravention of organisational rules or regulations (Piron, 1982a). Failure to perform effectively in the IR processes thus prevents resolution of conflict areas and may heighten the level of conflict.

Besides knowledge of procedures and skills in dealing with IR issues, consideration has been identified as an important supervisory quality in dealing with conflict resolution (Fleishman, 1953; Fleishman & Harris, 1962; House, 1981). Consideration includes behaviour indicating mutual trust, respect and a certain degree of warmth and rapport between supervisor and work group. A deeper concern for group members' needs is emphasised and includes such behaviour as allowing subordinates more participation in decision making and encouraging more two-way communication. Fleishman and Harris (1962) have demonstrated that high grievance and turnover rates reflected dissatisfaction with those supervisors exhibiting low consideration. Supervisors with high

consideration reflected significantly low grievance and turnover rates. Supervisors who established climates of high consideration were also able to solve problems within their work groups more easily (Fleishman & Harris, 1962). Further, supervisors who display adequate consideration for their employees are able to alleviate certain conflict situations before they get expressed at a formal level (Corwin, 1969; Fleishman & Harris, 1962; House, 1981). Where problems are serious enough to be lodged formally, consideration is likely to lead to quicker problem solving (Fleishman & Harris; 1962). Consequently, both consideration and appropriate IR skills should be seen as essential to the supervisor's role in IR.

In the work role therefore, supervisors receive policy requirements and conditions established by management. They must discuss, handle and process issues of IR in accordance with such policy. As the implementors and facilitators of formal mechanisms of IR, supervisors have a crucial role in ensuring the appropriate and correct functioning of these mechanisms. Not only must they perform certain IR roles, but they must perform them in such a way as to maximise their utility of resolution or regulation in conflict situations (Piron, et al., 1983). Supervisors therefore have a critical responsibility in effective operationalisation of IR policy.

Employee Representatives

Consultation and negotiation between management and employee representatives over the content of policy is essential if this content is to be acceptable to all parties (Wiehahn, 1981). Employee

representation must be of such a nature that the IR policy established *is seen as* viable and fair, reflecting an adequate power balance between the parties (Fox, 1971). If employee representation is not representative of the workforce, it is unlikely that issues agreed upon during negotiation will be acknowledged by employees (Douwes-Dekker, 1981). Further, representatives must be "in touch" with employee views (Fox, 1971). For Fox (1971), many instances of employees dishonouring agreements can be explained by their never having "honoured" them in the first place. This is a result of leaders failing to understand, or choosing to ignore the process of winning *consent*. "In behavioural terms, men are only commited to what they perceive themselves as committed to. Subsequent discovery that they have been deceived, misled, or denied the full facts at once threatens consent" (Fox, 1971, p. 151).

Once the adequacy of the regulatory framework is established and is acceptable to all parties, employee representatives must possess sufficient power to ensure adherence by both management and employees to agreed policy conditions. Adherence is accomplished through active involvement in the IR processes in both a supportive and a monitoring capacity (Botha, 1977; Douwes-Dekker, 1981). The involvement should ensure that both management and employees are aware of their responsibilities and conduct themselves accordingly. Such involvement is essential if correct and effective *functioning of* the regulatory mechanisms is to be ensured (Botha, 1977; Van Coller, 1979).

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Because employee representatives, and particularly shop stewards, play a crucial part in effective IR processes, there is a need for training in this regard to equip them with the knowledge and skills to deal with their role (Thomson & Murray, 1976). Perceptions of the function of the grievance procedure and subsequent participation by employee representatives in the procedure itself can influence the handling of grievances in a number of ways (Dalton & Todor, 1982; Thomson & Murray, 1976). The procedure therefore, is not only related to the individual grievance, but can be affected by the nature of representation (Dalton & Todor, 1982). Similarly, participation by an effective representative in the disciplinary procedure is seen as necessary to provide for fair and equitable treatment of the employee (Botha, 1977; Piron, 1982a).

The role of employee representatives in establishing and facilitating the nature of policy content necessitates that they be consulted and informed of any changes in policy. Thomson and Murray (1976) state that the failure of a number of organisations to introduce procedures successfully was attributed to the lack of communication of the content of these procedures to shop stewards. Employee representatives must agree to and communicate new or changed conditions of employement (Van Coller, 1979; Wiehahn, 1981). Commitment by employee representatives to the promotion and operationalisation of procedures is clearly essential in achieving the objectives of increased co-operation and the reduction of conflict in organisational IR.

Involvement of the Workforce

No in-house system stands a chance to succeed or operate efficiently if the co-operation of the workers is lacking (Wiehahn, 1981). Both Bluen (1981) and Piron (1982a) have emphasised the importance of the employees within the system in this regard. The IR policy dimensions are addressed in the labour/management relationship and, as such, employees' participation is a necessary element if IR processes are to be operationalised. The employee will only initiate the IR processes if there is a belief in the functional nature of IR mechanisms and their utility as modes of problem resolution (Aram & Salipante, 1981; Briggs, 1981).

The nature of peer support and group cohesiveness existing within an employee group influences the way in which group members participate within the processes set up to regulate labour/management interactions (Hyman, 1977). The employee who is not a member of a group, and who has had previous experiences of frustration and failure in dealings with management, feels there is little chance of being successful in subsequent attempts at solving problems. Consequently, the employee may be unwilling to initiate procedural action. Conversely, the development of a group cohesiveness and support can serve to clarify issues and help institute a strategy to meet the needs of the individual (Thomson & Murray, 1976). The realisation that others feel the same way can lead to a sense of justification and a conviction by the employee of the views that are held, and can help motivate the channelling and expression of these (Thomson & Murray, 1976). Besides the support which can be provided to the individual regarding the expression of concerns to management, a supportive workgroup provides a problem solving network

which can deal with many of the employee's problems (Taylor & Bowers, 1967). Peer support is likely to lead to the reduction of conflict in the individual context. An inverse relationship between peer support and the IR related variables of turnover and absenteeism, and a relationship between peer group and organisational climate (Taylor & Bowers, 1967) would seem to indicate such conflict reduction.

Approaches to management by groups of employees to enter into any sort of balanced relationship must be based on employee support and mutual identity (Hyman, 1977). Thomson and Murray (1976) detail situations where unofficial bargaining between management and employees did not take place until the workgroup felt itself to be seriously aggrieved and in possession of strong collective power. *Group existence as a group* then becomes a prerequisite and the main basis for power. Employees with no feeling of solidarity or common interest would be unlikely to undertake a strike (Hyman, 1977). The effectiveness of employees participation in the formulation and operationalisation of policy is mediated therefore, according to the nature of the collective support between employees.

The Operationalised IR Policy

If the in-company IR policy is to obtain employee commitment to *participation*, it must possess a number of essential characteristics. Employees must perceive that a situation can be corrected because the organisation has both the capability and the willingness to change (Thomson & Murray, 1976). There must be advantages in utilising the system rather than adopting other methods of expressing discontent

(e.g., industrial action, absenteeism or turnover). Employees should perceive that the situation has a reasonable chance of being corrected through fair internal settlement. If employees feel that change or redress is unattainable, the system will not be attractive and will not be utilised or adhered to (Aram & Salipante, 1981; Thomson & Murray, 1976).

Positive characteristics should exist to increase the likelihood of use and effectiveness of the system (Aram & Salipante, 1981; Briggs, 1981). Ease of utilisation minimises the time and effort required to initiate and process causes of conflict (Briggs, 1981; Piron 1982a). Timely resolution of problems must be ensured to reduce uncertainty and possible loss of benefits stemming from the processing of issues. Also, there must be protection from recrimination so that current circumstances and future benefits of participants are not threatened (Bluen, 1981; Piron, 1982a; Van Coller, 1979). The absence of the factors of fairness in settlements, ease of utilisation, timeliness of settlement and protection from loss of benefits is seen to lead to negative perceptions of the system (Aram & Salipante, 1981). Further negative perceptions arise as a response to unilateral imposition of the IR programme by management, a lack of management adherence to agreed on policies and procedures, insufficient or non-existent facilitation and guidance from the supervisor who implements the procedure, or unfair settlement of issues (Brewster et al., 1981; Briggs, 1981; Piron, 1982a). Effective operationalisation leads to increasing use of procedures and minimises negative perceptions of both the system and the management responsible for its implementation (Thomson & Murray, 1976).

Operationalisation of an overall IR policy occurs on the basis of:

a) the specific yet complimentary role of each IR dimension;

b) the way in which dimensions interact and provide support for one another.

Thus, the specific role of the disciplinary procedure is seen in many ways to be the converse of the grievance procedure (Botha, 1977; Piron, 1982a). In a grievance procedure action is initiated by an employee dissatisfied with something within employer's power to alter. However, disciplinary action is initiated by management because of concern for employee conduct (Botha, 1977). The specific purposes of dimensions are also demonstrated in the respective roles of the grievance procedure and employee representation. Whereas the grievance procedure is aimed at bringing individually orientated issues to management's attention, employee representation deals with group related issues (Botha, 1977; Douwes-Dekker, 1981). With respect to communication, both the grievance procedure and employee representation are seen as methods of upward communication, whereas the communication system and disciplinary procedure are seen as downward communication (Baddeley, 1977; Institute for Industrial Relations, 1980).

Despite their diverse roles, a high degree of interaction exists between the IR dimensions. Employee representatives have important roles in both the formation and enactment of grievance and disciplinary procedures and communications in general (Bluen, 1981; Botha, 1977;

Piron, 1982a). Employees cannot be expected to abide by a disciplinary system they are not familiar with and knowledge of the disciplinary code and procedure must be communicated to employees (Piron, 1982a). Similarly, employees must be aware of how the grievance procedure can be instituted and such information is conveyed through the communication processes. (Botha, 1977). Unions can utilise grievances to build pressure on certain issues so as to call management's attention to these and enhance the union position (Briggs, 1981). Similarly, the need for an effective disciplinary procedure to protect employee interests will cause a union to focus on employee requirements at the shopfloor level (Magwaza, 1981). Management's approach to operationalisation of policy should therefore manifest itself in the conduct of all IR dimensions and facilitate the participation of all parties if their authority is to be legitimized. The integrated nature of an operational IR Policy is reflected in the model postulated in Figure 2.

Figure 2 identifies the in-company relationship between the major parties of management and employees, although this relationship must also be considered in the context of the overall IR system (see Figure 1). The two parties interact through the agencies of employee representatives and supervisors. This interaction is mediated by the peer support and collectivity of workers on one hand, and the espoused policy management hold on the other (Brewster et al., 1981; Hyman, 1977; Thomson & Murray, 1976). The interactions of both parties and their agencies facilitate the processes through which regulation can occur (Batstone, 1979; Van Coller, 1979). These processes of employee

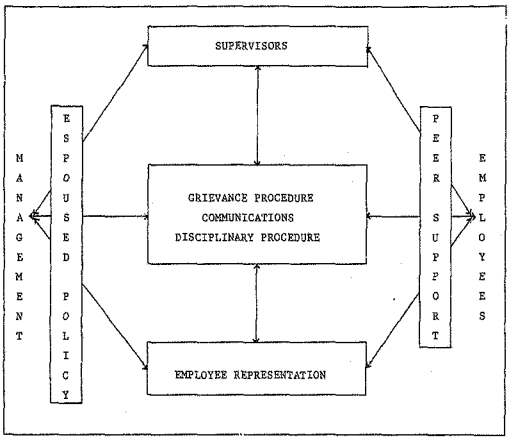

Figure 2. The Operationalised In-company IR Policy.

representation, grievance and disciplinary procedures, and communications are designed to reach accommodation between the divergent interests of the management and employee parties on a controlled and acceptable basis (Bluen, 1981; Cuthbert, 1973; Douwes-Dekker, 1981). Regulation of the relationship is achieved through joint participation and operationalisation of the in-company processes (Brewster et al., 1981; Van Coller, 1979; Wiehahn, 1981). Because of the joint

participation and the way in which the various procedures interact with one another (indicated by the two-way connecting lines in Figure 2), a general pattern of operationalisation should occur across the dimensions of operationalised policy.

If the approach management adopts to the regulatory relationship is not acceptable to employees, they will withdraw their participation from the procedural system and it will not be effectively operationalised (Thomson & Murray, 1976; Wiehahn, 1981). The labour/management relationship then becomes one of power relations rather than a legitimized authority relationship. Consequently, the potential and even existing conflict within the organisation will escalate (Douwes-Dekker, 1981; Fox, 1971). Management IR objectives and the strategies by which regulation is pursued therefore, should be the subject of regular critical examination by management (Anthony, 1977; Cuthbert, 1973). The evaluation is essential to indicate reformulation of policy if necessary (Brandt, 1973). Evaluation thus facilitates the promotion of co-operation and reduction of conflict by providing an improved framework for the operationalisation of policy governing the regulatory relationship.

Evaluation of In-company IR

Evaluation of IR has occurred traditionally through indices of industrial conflict (Dobson, 1982; Hyman, 1977). These are seen to refer to instances of organised conflict (e.g., strikes, work stoppages,

lockouts) and unorganised conflict (e.g., labour turnover, absenteeism, sabotage, wastage) (Cuthbert, 1973; Hyman 1977; Knowles, 1975). However, the use of these indices for purposes of evaluation is limited because of their diverse nature, their susceptibility to intervention by a wide range of variables both within and outside the workplace, and the lack of specific reference to the criteria they are designed to evaluate (Brewster et al., 1981; Dobson, 1982; Jackson, 1977a).

The regulatory mechanisms of policy are directed towards the realisation of designated goals of promoting co-operation and minimising conflict. This indicates the need for evaluating the approach and conduct of in-company IR in a way which could serve as a basis for reformulation of policy (Brandt, 1973; Cuthbert, 1973). For Cuthbert (1973), the evaluation process should detail the areas of policy which are not functioning effectively, determine if the elements in the process are unworkable, or determine if the organisational members involved are not instituting the policy in the correct manner. Such monitoring of performance in IR policy is essential if feedback is to be provided to enable the situation of conflict to be rectified (Anthony, 1977). Kochan (1980) suggests that relatively little systematic thought or effort has been given to evaluating the conduct of IR in the past. However, increasing interest in the area of IR by researchers with psychological backgrounds has led to the implementation of psychometric assessment techniques in a variety of settings (e.g., Bluen & Barling, 1984; Brotherton & Stephenson, 1975; Gordon & Nurick, 1981; Kelly & Nicholson, 1980). De Villers (1982) states in this regard that

Assessment of conflict situations should take place through examination of behavioural, perceptual and attitudinal factors and not through the traditional statistical indices of conflict. Using psychological techniques, behavioural and perceptual criteria can be related to the social context in which individuals are located (Kelly & Nicholson, 1980).

Evaluation and the Concept of Climate

Employees' ideas and beliefs are directly related to their willingness to engage in specific forms of conflict activity (Fox, 1971; Hyman, 1977; Kelly & Nicholson, 1980). The ideas and beliefs arise due to the orientation which employees have to employment and the manner in which they define their work situation (Goldthorpe, Lockwood, Bechhofer & Platt, 1968). The employee's orientation mediates between the objective features of the work situation and the nature of the worker's response (Goldthorpe et al., 1968; Hyman, 1977).

The orientation derives from a cognitive based description of the work situation. This cognitive description is used by the individual to postulate what is essential, assume what is valuable, predict outcomes of interactions, and gauge the appropriateness of behaviour (Campbell, Dunnette, Lawler & Weick, 1970; Jones & James, 1979; Schneider & Snyder, 1975). From such meanings, the individual decides what behaviour to initiate. This behaviour is motivated by the likelihood of the action satisfying the individual's needs or aspirations (Fox, 1971; Schneider & Reichers, 1983).

In deriving an understanding of the environment, the individual acts as an information processor in the perceptual process. Inputs on specific events, conditions and experiences are obtained from the organisation while features of the perceiver also influence input (Schneider & Hall, 1972). The perceiver's own characteristics contribute to perceptual filtering (the absorbtion of only selected stimuli), interpretation of stimuli, and the description and structuring of these stimuli (Campbell & Beatty, 1971). Because of this personal input and its role in structuring situational stimuli, climate perceptions are linked more to processes than to remote structural characteristics of the organisation. This is due to processes being more immediate to the individual's experience (Jones & James, 1979). Experience is transformed by the individual through perceptions of qualities of the working environment into a meaningful psychological description of this environment. The psychological description represents the phenomenon of psychological climate (James & Jones, 1979; Schneider & Hall, 1972).

While psychological climates are the meanings an individual attaches to the work content, organisational climates are the shared and summarised meanings that people attach to the setting (Schneider & Reichers, 1983; Zohar, 1980). Through organisational climate, a set of attributes specific to a particular organisation may be induced from the way the organisation deals with its members and environment (Campbell et al., 1970). The basis for this lies in the proposal that organisational climate is a concrete phenomenon reflecting a social-psychological reality shared by people within the organisation. As such, it contributes to a multi-dimensional perception of the essential attributes or character of the organisational system (Taylor & Bowers, 1967).

"To speak of organisational climate per se, without attaching a referent is meaningless" (Schneider & Reichers, 1983, p. 21). While the climate construct is intuitively appealing to uninitiated researchers who want a measure of "it", climate is not an "it" but a series of "its", each with a particular reference (Schneider & Reichers, 1983). The proposal for specific climates lies in the concept that people attach meaning to, or make sense of, clusters of psychologically related events. People in organisations encounter events, practices and procedures, and they perceive these events in related sets (Schneider & Reichers, 1983). Work settings have numerous climates and these address specific dimensions of the organisation. Consequently, non-specific measures of climate are useless for anything but the most gross description of the range of variance in organisations. The more global the measure is in attempting to assess the organisation, the less useful it will be in aiding understanding of specific issues (Schneider & Reichers, 1983).

Examination of organisational climates calls for researchers to be very clear conceptually about the particular climate under consideration. The development of measures must correlate with the criteria of interest under examination (Schneider & Reichers, 1983). While the area of specific climates has not been addressed by many researchers (Schneider & Reichers, 1983), the utility of specific climate measures for the prediction and understanding of various forms of organisational behaviour has been suggested (Jones & James, 1979; Powell & Butterfield, 1978; Schneider & Hall, 1975). Tagiuri (1968), for instance, has examined the concept of executive climate which addresses the interpretation of the executive environment characteristics. The executive environment is perceived to possess a certain quality to which

executives are sensitive and which in turn affects their attitudes and motivations. The application of the specific climate measurement has also been applied successfully by Zohar (1980) in examining safety climate where items descriptive of organisational events, practices and procedures revealed differentiation between low and high accident factories.

Therefore, there seems to be justification in utilising a specific type of organisational climate measure in the assessment of dimensions of organisational operation. The use of the climate approach "rests on employee perceptions that are descriptive of organisational or subsystem events, practices and procedures that, in the aggregate, are useful in characterising organisations or subsystems" (Schneider & Reichers, 1983, p. 25). The approach makes the assumption that understanding of the specific climate requires perceptions of sets or clusters of such events, practices and procedures. In the approach, the conceptualisation of the area being examined must be sound. This means that the clusters of events assessed must sample the relevant domain of issues and the survey must be relatively descriptive in focus (Powell & Butterfield, 1978; Schneider & Reichers, 1983; Zohar, 1980).

The Case for Industrial Relations Climate

The existence of an industrial relations climate (IRC) has been identified by a number of authors (Dastmalchian, Blyton & Ardollahyan, 1982; Kelly & Nicholson 1980; Nicholson, 1979). IRC is seen as a specific type of climate based on characteristics of organisational

climate. In this form, it is also seen as a contributor to the wider based social-psychological phenomenon of organisational climate (Kelly & Nicholson, 1980; Nicholson, 1979). Research utilising IRC has linked the concept with IR behaviour outcomes such as performance, conflict between organisational parties, turnover, absenteeism and communications (Dastmalchian et al., 1982; Nicholson, 1979; Rosen, Greenhalgh & Anderson, 1981).

Thompson and Borglum (1973) indicate two approaches which can be taken to gain understanding of the dynamics of organisational labour unrest. The first examines labour unrest within the context of union/management activity, while the second looks for explanation outside the context of union conflict in terms of unrest as a manifestation of employee dissatisfaction. Both areas operate in the context of the organisation and are influenced by organisational properties and processes. A number of studies have examined the management/union interaction in terms of climate involving the parties' perceptions of aspects of the interaction (Dastmalchian et al., 1982; Nicholson, 1979; Rosen et al., 1981). However, the pervasive influence of a union may act to mask differences among individuals or small groups within an organisation (Thompson & Borglum, 1973). Thus, incidents of wildcat strikes not sanctioned by unions, spontaneous protests against management decisions, and incidents of unorganised conflict may arise from employees rather than the union (Hyman, 1977; Thompson & Borglum, 1973; Thomson & Murray, 1976). Further, in many cases a number of unions can exist in one plant and often there are a number of non-unionised employees (Thomson & Murray, 1976; Wiehahn, 1981). Examination of in-company IRC therefore becomes an area of concern if an adequate reflection of the organisations IR is

to be obtained. In-company IR allows for analysis of individual and group dissatisfaction arising from shop floor issues and utilises the summation of individual climates as a reflection of the internal regulatory interaction between management and employees.

Key aspects of IRC identified by Dastmalchian et al. (1982) and Nicholson (1979) involve issue-centered and interpersonal IRC. Both relate to the regulatory nature of in-company IR and can encompass both formal and informal aspects of its operationalisation. Issue climate involves the procedures and mechanisms dealing with the processing of IR problems. IRC in this regard would reflect the satisfaction of employees and/or management regarding the way in which different problems are handled and whether they are resolved in an acceptable manner. Interpersonal climate comprises the pattern of labour management interactions at the level of interpersonal dealings in IR, and the consequent level of satisfaction with these relations (Dastmalchian et al., 1982; Nicholson, 1979). Although Nicholson (1979) has found that issue climate seems to have more significant relationships with satisfaction and peacemaking atmospheres than interpersonal climate, the interactive nature between issue and interpersonal climate in the operationalisation of in-company IR indicates that both should be included in in-company IRC assessment.

The procedures and mechanisms of employee representation, grievance and disciplinary procedures, and communication discussed previously, are seen to constitute dimensions of in-company issue climate. The dimensions of supervision and peer group interaction are seen to be

aspects of interpersonal climate. Combined, these dimensions of IR policy are seen as being responsible for the nature of the regulatory agreement between management and employees. Brandt (1973), Brewster et al. (1981), Cuthbert (1973) and Thompson and Borglum (1973) have indicated that employees are subjected to the experience of policy and this places them in a position where they are capable of making a valid assessment of operationalisation of policy. It is postulated that employees, in being subject to the implementation of policy and its components, will organise their perceptions of these into a coherent cognitive description. The summated perceptual descriptions making up in-company IRC constitute the employees' own definitions of the situation in which they are engaged. Employees react in accordance with such perceptions and it is these perceptions that will determine their behaviour and not the "real situation" as it is perceived by management (Beynon & Blackburn, 1972; Brotherton & Stephenson, 1975; Schneider & Reichers, 1983). From in-company IRC, the qualities and limitations of the various dimensions of IR policy can be established.

The in-company IRC assessment indicates the likelihood of behaviour outcomes with regard to utilisation of and involvement in policy by employees. In considering the behavioural outcome and contingencies of participation, employees are only likely to participate in the procedures of regulation if there is a likelihood of certain behaviours leading to some form of benefit (Aram & Salipante, 1981). A negative in-company IRC is likely to indicate a reluctance to participate in the system. In-company IRC therefore demonstrates the effectiveness of the relationship adopted by management in attempting to promote co-operation

and reduce conflict within the organisation. It also provides descriptive feedback for the reformulation of policy to make it more acceptable to the parties involved. Ultimately then, IRC provides for an evaluation of the state of in-company IR within the organisation and gives an indication of the potential for conflict.

Previous research into IRC (Dastmalchian et al., 1982; Nicholson, 1979) indicates a lack of psychometric consideration. The technique of semi-structured interviews utilised by Nicholson (1979) has no report of reliability or validity criteria. In the study undertaken by Dastmalchian et al. (1982), scales used were meant to represent different organisational norms and attitudes in relation to specific IR issues. Although Dastmalchian et al. (1982) report that reliability of the scales was tested, no indication of validity criteria was given. However, climate research has generally indicated the need for satisfying the requirements of reliability and validity if psychometric instruments are utilised (Payne & Pheysey, 1971; Rosen et al., 1981; Schneider & Bartlett, 1968; Taylor & Bowers, 1967). The use of the phenomenon of climate in examining in-company IR in the present study therefore, was seen to necessitate the development of a psychometrically sound instrument with which to assess IR.

A Psychometrically Sound IRC Instrument

The tenets of psychological theory require that any new measurement technique be shown to be both reliable and valid (Anastasi, 1982). This requires the institution of a validation exercise involving the

investigative processes of gathering and evaluating data (Cascio, 1982). Two issues are of primary concern in this validation process. First, what the instrument measures, and second, how well it measures (Cascio 1982). The establishment of various types of reliability and validity is essential in addressing these issues (Anastasi, 1982; Cascio, 1982; Cook, Hepworth, Wall & Warr, 1981).

The concept of reliability refers to the consistency of scores obtained by subjects when examined by the same test on different occasions, with different sets of equivalent items, or under variable examining conditions. For Anastasi (1982) this concept of reliability underlines the computation of the error measurement of a score whereby the range of fluctuation likely to occur as a result of chance or irrelevant factors can be predicted. Reliability can be defined as the proportion of the true variance in a set of scores from a measurement procedure (Cascio, 1982). The measurement of reliability results in a measure of temporal stability and the consistency of response of items. The reliability coefficient thus demonstrates whether the test designer was correct in expecting a certain collection of items to yield dependable and interpretable statements on individual differences (Cronbach, 1951).

The validity of a test concerns what the test measures and how well it does so (Anastasi, 1982). Reliability is thus a prerequisite for validity as it determines the [illegible] variance which is accounted for by the test and represents [illegible] e of the error of measurement (Anastasi, 1982; Cronbach, 19[illegible] eral other methods besides reliability exist for establishing the validity of an instrument. These estimates of validity are described in terms of face, content, and construct validity (Anastasi, 1982, Cook et al., 1981).

Face validity reflects the degree to which an instrument "appears" to measure the variable being examined and is deemed acceptable by respondents, the administrative personnel who decide on its use, and other technically untrained observers (Anastasi, 1982; Cook et al., 1981). The content validity of a measuring instrument is concerned with whether it contains a fair sample of the situation it is supposed to represent (Cascio, 1982). For Cascio (1982) three assumptions underlie the use of content validity:

a) the area of concern to the user must be conceived as a meaningful, definable universe of responses;

b) the sample can be drawn from the universe in some purposeful, meaningful fashion;

c) the sample and the sampling process can be defined with sufficient precision to enable the user to judge how adequately the sample of performance typifies response on the universe.

Content validity is built into a measure from the outset through the choice of items (Anastasi, 1982). Evaluation of the content validity is made in terms of the adequacy of the sampling (Anastasi, 1982; Cascio, 1982). The evaluation is based on subjective interpretation and should occur on the basis of expert judgements on item appropriateness (Cascio, 1982; Cook et al., 1981). Statistical analysis should also be implemented to evaluate whether scale items are homogeneous. Establishing consistency through reliability coefficients can establish an indication of homogeneity (Cascio, 1982; Cook et al., 1981).

Examination of individual item's discriminatory capacity should also be instituted (Anastasi, 1982; Bluen & Barling, 1984). A frequency analysis examining the distribution of responses on items can be utilised in this regard which also provides details of mean scores and standard deviations (Bluen & Barling, 1984). The mean and standard deviation allow assessment of overall levels of a study's score levels, and provide a basis for comparisons between groups and studies. Both statistics are necessary for adequate interpretation of both cross-sectional correlations and investigations of change (Cook et al., 1981).

The construct validity of a test is the extent [illegible] the test may be said to measure a theoretical construct or trait (Anastasi, 1982). Construct validity is seen as particularly important where the construct operationalised by a scale has no corresponding simple or single external criterion against which the measure may be evaluated (Cook et al., 1981). Information on construct validity may be gathered from a wide range of sources including analyses of the internal consistency of the measuring instrument, expert judgement that the content or behavioural domain being sampled by the procedure pertains to the construct in question, the presence or absence of group differences, intercorrelations between variables, a known factor structure, and changes in scores with respect to known manipulations (Cascio, 1982; Cook et al., 1981). Thus Anastasi (1982) indicates that construct validity represents a broad accumulation from a variety of sources to provide for a theoretical framework to organise and explain data obtained with developed instruments.

As Dragsgow and Miller (1982) indicate, the validity of a measurement procedure in psychological research is an issue of considerable concern and importance. It is essential that the measuring instrument be established as a technique capable of yielding an observed variable that corresponds closely with the underlying theoretical construct being studied. Therefore consideration of the suitable procedures for establishing reliability and validity of the in-company IRC scale (IIRCS) within the required standards of a psychometrically sound instrument is entered into.

Reliability

Internal Consistency Reliability

A number of alternative methods exist for computing internal consistency and these are noted by Specht (1979) as being particularly well suited for evaluating multiple item additive scales similar to the one utilised in the present study. The measure of reliability is derived from the single administration of the scale and is obtained through splitting the test statistically and examining the equivalance of items or sets of items (Cascio, 1982).

The Kuder-Richardson technique examines the consistency of responses to all items in the test through an examination of performance on each item and ultimately establishes the mean of all possible half-splits of the test. This is seen as providing a measure of instrument equivalence and homogeneity necessary in psychometric validation to permit a more unambiguous interpretation of results (Anastasi, 1982).

Unfortunately, there is no fixed value below which reliability is unacceptable and above which it is satisfactory (Cascio, 1982). Estimates of reliability can vary across situations and depend on the similarity of items, item scores, the length of the test and the range of individual and group differences of the sample (Anastasi, 1982; Cook et al., 1981; Lemke & Wiersma, 1982). Acknowledgement of the difficulties in interpretation of reliability leads Brown (1976) to state that reliability is not the be-all and end-all of psychological measurement.

Reliability places limits on validity, and the crucial question becomes whether a test's reliability is high enough to allow satisfactory validity (Brown, 1976). If one wishes to use a measurement technique to determine whether the means of two groups are significantly different, then a reliability coefficient as low as 0,65 may be satisfactory (Aiken, 1979). If, on the other hand, the procedure is to be used for comparing one individual to another, a coefficient of at least 0,85 is necessary (Aiken, 1979). Interpretation of the acceptability of reliability values depends therefore on what one plans to do with the scores (Cascio, 1982). Because IRC is examining group perceptions and differences between group perceptions, a reliability coefficient of 0,65 was taken as a guideline in the present study.

Test-retest reliability

The simplest and one of the most obvious methods for finding the reliability of test scores is by repeating the identical test on a

second occasion with an identical group of examinees (Anastasi, 1982; Cascio, 1982). Scores from both occassions are correlated and yield a correlation coefficient of stability. Test-retest reliability shows the extent to which scores on a test can be generalised over different occasions. The higher the reliability, the less susceptible the scores are to the random daily changes in the condition of the subject or of the testing environment (Anastasi, 1982). Test-retest reliability is considered necessary to establish the stability of the IIRCS over time.

A number of intervening variables exist which can influence test performance and because these can become increasingly manifested over an extended time, the magnitude of correlations of performance tends to show a uniform decrement over time. It is necessary therefore, to specify the time interval between test applications (Cascio, 1982). For Anastasi (1982) the interval between retests should not be immediate and only rarely should it exceed six months. Cascio (1982) sees the interval as being appropriate if the time between administrations is long enough to offset the effects of practice. Test-ratest periods of six to seven weeks have been utilised by a number of authors in similar studies to the present one (eg., Bluen & Barling, 1984; Cook et al., 1981). Consequently, a six week period was adopted in the present study.

Because time leads to differential effects of intervening variables, different stability coefficients will be obtained according to different time spans between testing (Anastasi, 1982; Cascio, 1982). Theoretically therefore, there is an infinite number of stability

coefficients for any measurement procedure. This makes it difficult to identify a suitable or satisfactory test-retest coefficient. Correlations reported over a six week period include 0,94 for Overall Job Satisfaction (Cook et al., 1981), 0,81 for the Job Descriptive Index (Smith, Kendall & Hulin, 1969) and 0,64 and 0,63 for the Life Experiences Survey (Sarason, Johnson & Siegel, 1978). Assessment of the test-retest coefficient for the IIRCS was based therefore on comparative values of similar instrument types.

Construct Validity

The measurement of a theoretical construct by a particular test can be defined only in the light of data gathered in the process of validating that test (Anastasi, 1982). Areas of examination relevant to the data are correlations of the instrument dimensions, variables with which the test correlated significantly, and groups that differ significantly in the data scores (Anastasi, 1982; Cascio, 1982; Thorndike, 1982). This approach has been utilised in the development of a number of research instruments (Bluen & Barling, 1984; Mowday, Steers & Porter, 1979; Sarason et al., 1978; Taylor & Bowers, 1967). In the present study these areas are examined in terms of:

a) Comparative correlational analysis of the IIRCS involving intra and intercorrelations, and

b) Contrasted group analysis which will occur in the context of examination of the in-company IRC of the organisation.

Comparative Correlational Analysis of the IIRCS

The correlational analysis is conducted in two areas, intra-correlation of the IIRCS and inter-correlational analysis of the IIRCS with measures of criterion variables. In the validation exercise the correlations between sub-scales within the instrument are seen to provide an indication of the instrument's underlying capacity to measure a specified construct (Taylor & Bowers, 1967; Thorndike, 1982). This capacity is demonstrated through the indication of homogeneity which helps to characterise the construct measured by the test (Anastasi, 1982; Taylor & Bowers, 1967). The correlations between sub-scales of the in-company IRC scale (IIRCS) should display fairly substantial values due to the underlying construct of in-company IRC. Values reported in similar research include an average of 0,5 (Taylor & Bowers, 1967) and 0,28 to 0,47 (Cook et al., 1981; Hackman & Oldham, 1975).

Sub-scales measuring a particular construct should correlate with organisational variables addressing the same construct (Anastasi, 1982; Bluen & Barling, 1984). In the absence of established parallel criteria against which aspects of the developed instrument can be assessed, Cambell and Fiske (1959) and Mowday et al. (1979) propose that such validity be established through a comparison of instrument scores with measures associated with the affective responses under consideration. Organisational commitment and job satisfaction are two measures associated with IR which will be correlated with the IIRCS as a means of establishing construct validity. Organisational commitment reflects the relative strength of an individual's identification with an organisation (Marsh & Mannari, 1977; Mowday et al., 1979; Steers, 1977). Job

satisfaction is conceptualised as a personal evaluation of conditions existing on the job (e.g., work supervision) or outcomes that arise as a result of having a job (e.g., pay, security) (Schneider & Snyder, 1975). La Follette and Sims (1975) describe job satisfaction as feelings or affective responses to facets of the work situation.

Organisational commitment has been related to a number of IR outcomes (Mowday et al., 1979; Steers, 1977), as well as climate variables (Welsh & La Van, 1981). Welsh and La Van (1981) found that organisational commitment develops as the goals of the individual and those inherent in the organisation become integrated or congruent. Such converging and mutually favourable perceptions between management and employees have been associated with a decline in [illegible] reduction of conflict, and a favourable climate of IR (Kelly & Nicholson, 1980). Further, the structuring of normative power relations and similarity in views between management and employees characterises aspects of a legitimized labour/management relationship described by Douwes-Dekker (1981, 1982). Azim and Boseman (1975) have found that high commitment is in fact generated by normative power or legitimate authority, while alienative involvement is generated by coercive power.

Significant relationships have also been demonstrated between organisational commitment and a number of specific IR variables. Organisational commitment has explained nearly 50 percent of variance in grievance activism among shop stewards of a company, including an inverse relationship with the number of grievances filed (Dalton & Todor, 1982). Communications climate has also been shown to be

significantly related to commitment scores, suggesting that the informed employee becomes part of the action and in this way has needs of recognition satisfied (Welsch & La Van, 1981). Employee turnover and absenteeism or work attendance have been significantly and inversely related to organisational commitment (Clegg, 1983; Steers, 1977). The significant relationships identified between organisational commitment and variables of climate and IR (e.g., turnover, absenteeism, grievances and communication) indicate that organisational commitment can be associated with the affective responses being examined by IRC. Organisational commitment therefore, presents a suitable comparative criterion for establishing the construct validity of the IIRCS.

Job satisfaction has also been associated with a number of climate measures and IR variables within the organisation. Thus, job satisfaction is significantly related to an organisational climate where management is approachable and considerate of employees (Friedlander & Margulies, 1969). Similarly, organisational climates addressing consideration of employees as people (support), and morale, correlate with job satisfaction (La Follette & Sims, 1975). Dastmalchian et al. (1982) and Knowles (1977) have also associated low job satisfaction with behaviour and attitudes involving labour unrest. Traditional measures of IR such as absenteeism, turnover, accidents and grievances have been linked to job satisfaction (Clegg, 1983; Knowles, 1975; Muchinsky, 1977; Schneider & Snyder, 1975). Job satisfaction therefore, can be seen to measure an associated affective response to IRC. This is indicated both in regard to climate and IR outcomes. Consequently, job satisfaction is seen as a suitable criterion in establishing the construct validity of the IIRCS.

The sub-scales of the IIRCS are addressing a common underlying construct, that in-company IRC. Organisational Commitment and Job Satisfaction however, are addressing particular psychological constructs different to IRC. Therefore, it is suggested that intercorrelations between the sub-scales of the IIRCS will yield greater correlation coefficients than correlations between the sub-scales and the variables of organisational commitment and job satisfaction (Taylor & Bowers, 1967).

The examination of correlations between IR outcome variables (e.g., turnover and absenteeism) and the variables of organisational commitment and job satisfaction in a large number of studies does not consider biographical and situational factors which could possibly contribute to a spurious effect (Clegg, 1983). This practice can lead to results that are not indicative of the real relationships between the variables. The systematic control of biographical and situational factors is therefore necessary (Clegg, 1983). Clegg (1983) states that a suitable method in this respect is to obtain zero-order correlations, following which partial correlation techniques are instituted. The indices from both correlational techniques which are obtained can be examined for significance, and can be compared to examine their relative nature. This approach was seen as relevant in the present study.

Comparative analysis within the IIRCS and between the IIRCS and the measures of organisational commitment and job satisfaction is seen therefore to result in the following hypothesis for validation purposes:

a) Comparison of the IIRCS sub-scales will yield significant intercorrelations.

b) The IIRCS will yield significant correlations with the measures of organisational commitment and job satisfaction respectively.

c) Correlations yielded in a and b are a reflection of a true relationship rather than the influence of biographical and situational variables.

d) Intra-scale correlations of the IIRCS will be greater than those correlations demonstrated between the IIRCS and measures of organisational commitment and job satisfaction respectively.

The Application of the IIRCS to investigate the in-company IRC of an organisation

Having established the reliability of the IIRCS, relationships between IIRCS sub-scales, and correlations of the sub-scales with criterion variables, the instrument will be used to assess the in-company IRC of the organisation. Nicholson (1979) has indicated that IRC has a useful role in examining group differences within the organisation and their impact at different locations and levels of the system in order to obtain a reflection of IR dealings. The potential for conflict is increased if groups within the organisation have divergent views of the nature of the IR processes within the organisation (Kelly & Nicholson, 1980). Consequently, examination of the organisation's in-company IRC

will address both group differences as well as the nature of group perceptions of in-company IRC.

Differences in contrasted groups also provide another method of establishing the construct validity of the developed instrument (Anastasi, 1982; Cook et al., 1981; Thorndike, 1982). The contrasted groups are distinct groups characterised by the way in which their context mediates the multiple demands of daily living (Anastasi, 1982). Where the measure behaves as predicted according to the criteria of the contrasted groups, the construct validity is enhanced (Cook et al., 1982; Thorndike, 1982). The method has been used successfully to assess whether a developed psychometric instrument can distinguish between conceptually different groups (Bluen & Barling, 1984). Differences in the present study were predicted in sub-groups on the basis of race, skill and plant.

Race

Differential work related attitudes on the basis of racial group have been shown in the overseas context by Milutinovich (1977). However, in the South African situation, Black labour has been in a disadvantaged position due to a historical dominance of White employees and union organisation (Douwes-Dekker, 1981; Van Goller, 1979). Evidence supports contentions that workplace discrimination against Blacks still exists (Rosholt, 1982). Also, Black employee dissatisfaction with company policies and supervision has been recorded over a range of industries (Backer, 1982). The emerging Black union movement is seen by some

parties as a reaction to the disadvantaged position of Black employees. The influence and extent of the movement has generated increasing concern in, cognizance of the need for, and establishment of IR policy, regulations and procedures (Bluen, 1981; Piron, 1982b; Wiehahn, 1981). The establishment of such policy, regulations and procedures for Black employees is therefore a recent development. Consequently, differentiation is likely to exist in the way the regulatory agreement has been instituted, and in the applicable policy content for White as opposed to Black employees (Douwes-Dekker, 1981). Thus, although the organisation involved in the study has instituted an IR policy containing relevant structures and procedures, it is hypothesised that Black's perceptions of in-company IRC would be less positive in view of the more recent institution of the regulatory framework.

This hypothesis is seen as further justified in terms of the differential representation existing within the industry for White and Black employees and the consequent relationship which is established with such differential representation. Whites belong to long established unions with a history of significant power in establishing and protecting member's rights (Davies, 1978; Sitas, 1979). Black employees within the organisation participate in management devised in-company systems and despite more recent attempts at large scale union recruitment, no union presence had been established within the organisation whereby employees could enter into negotiations with management. Douwes-Dekker (1981) has indicated that representation in the form of a union body, as opposed to management initiated systems, is seen by employees as being more effective in expressing employee views and causing management consideration and implementation of such views.

Consequently better operationalisation of policy for Whites due to more equal relations between White employees and management is hypothesised.

The institutionalised relationship between Blacks and Whites at the supervisory interface has been acknowledged as being problematical in the South African context (Piron et al., 1983). Prejudicial and discriminatory practices (Gilbert, 1980; Sitas, 1979) and the antagonistic position of White workers in regard to Blacks because of the perceived threat to the priviledged position of Whites in the working class is seen to hamper effective supervision (Cooper, 1979; Davies, 1978; Du Toit, 1982). These problems are likely to contribute to Black/White differences in operationalised policy, particularly in the dimension of supervision. Consequently, it is hypothesised that Whites would obtain more positive scores of in-company IRC than scores yielded for Blacks.

Skill Level

"Historically the most fundamental grouping in organisations has been based on position level" (Schnider & Snyder, 1975, p. 332). Some authors would question position being attributed a more fundamental status than race in the South African situation, particularly in the mining industry (Davies, 1978; Johnstone, 1976). The identification of White labour with skills and priviledged wage scales is a historical legacy in the mining industry and a legacy which White mining unions continue to pursue in the defence of the colour bar (Queripel, 1983; Sitas, 1979). The existence of the racial characterisation of job levels has resulted in a high relationship between hierarchy and racial group. However, as

Schneider and Snyder (1975) state, hierarchy is a basic characteristic of organisations and as such *assumes relevance in any study of* organisational behaviour. Hierarchy has been demonstrated repeatedly to have profound psychological implications for organisational members (*Schneider & Snyder, 1975*). The hierarchical positions are seen to be subject to different experiences and these positional differences have a substantial influence in the development of an individual's climatic perceptual-cognitive map (Schneider & Reichers, 1983).

Employees in higher hierarchical positions possess more positive attitudes and satisfaction as a consequence of the nature of work undertaken and the status and power associated with such work (Beynon & Blackburn, 1972; Knowles, 1977; *Will, 1982*). *This hierarchical pattern* and consequent influence of status, power and control is seen by Goldthorpe et al., (1968) and Hyman (1977) to extend to the *participation in, and conduct of* IR. Similar differences have been demonstrated in an earlier pilot study on IRC (Donald, 1983). Consequently, it is hypothesised that IRC scores would vary according to hierarchical level with more positive scores being associated with higher hierarchical levels while scores would become less positive as the skill level is reduced.

Plant

The generalised transmission through organisational structure of the nature in which policy should be conducted is seen as characteristic of organisational climate (*Taylor & Bowers, 1967*). IR policy is seen to

follow the same transmission process and results in a general in-company IRC in the concern (Brewster et al., 1981; Nicholson, 1979). The legitimacy and acceptance of formal rules established by management and union is seen to be dependent on the perceptions of such rules by employees at the plant level (Wood et al., 1975). Several studies support the existence of specific climates and IR practices at the plant or section level of organisations. Differential satisfaction with IR procedures on the basis of plant has been demonstrated by Thomson and Murray (1976).The attitudes of employees to both management and union also seems to be characteristic within enterprises (Rim & Manheim, 1964). Plant differences are reported for perceptions of organisational policy and peer relations, although a small sample size was seen to lead to a lack of significance regarding these differences (Thompson & Borglum, 1973). Knowles (1975) has identified sectional differences regarding industrial unrest and withdrawal behaviours within an organisation and has linked these to a need to streamline IR procedures. Also, differential grievance rates between plants have been demonstrated (Ronan, 1963).

Because the approach to IR within the plant is transmitted through the hierarchy from top management, this approach determines a characteristic response by management and labour to the operationalisation of the plant IR procedures (Brewster et al., 1981; Taylor & Bowers, 1967). Further, because of the interdependence of the procedures themselves, operationalisation will occur in a general manner across the plant. In the event of different operationalisation of IR, this would be indicated in in-company IRC. It is hypothesised therefore, that the IIRCS would be sensitive to differences between shafts.

The Strategy of the Present Study

The present study addresses itself to the development of a climate based instrument with which to examine in-company IR. Psychometric requirements of such an in-company IRC measure state that the instrument should be both reliable and valid. The development of psychometric instruments in the South African situation can be a particularly difficult task in view of the wide range of language groups comprising the workforce. This difficulty is seen to be particularly relevant in the case of in-company IRC where there is a need to obtain perceptions of a diverse heterogeneous range of employees if valid conclusions on climate are to be drawn. This indicates the need for a standardised instrument available in a number of languages which can be used for analytical purposes.

White (1982) has developed an approach to deal with the problem of obtaining a standardised multi-lingual instrument. This approach involves back to back translation of the original version into the various languages to obtain continuity of meaning. Items are retained on the basis of their impact on reliability across all language versions of the instrument. The version of the test which is finally selected is the version which has the highest mean reliability across all groups (White, 1982). If eliminating a particular item results in a modest increase for a particular language form, but a total reduction across the other forms, the item would have to be retained. The arithmetic mean loss or improvement is always used as standard because it is an objective criterion, and therefore cannot result in one ethnic group

being unduly favoured at the expense of others (White 1982). This developmental process is seen to result in a measure applicable to all language groups (White, 1982). Consequently, the instrument can be used in analysis and for hypothesis testing.

The validation process involved in the development of the IIRCS therefore involves the following:

a) The provision of content and face validity.

b) Demonstration of internal consistency of a standardised instrument.

c) Demonstration of test-retest reliability.

d) The satisfaction of the hypotheses involved in comparative analysis of sub-scales, and of sub-scales and measures of organisational commitment and job satisfaction.

e) The satisfaction of the hypothesis involved in contrasted group analysis of IIRCS scores.

Further, use will be made of the IIRCS to examine the nature of in-company IRC within the organisation in which the research is being conducted. Results for use in contrasted group analysis will be obtained through this examination.

METHOD

Sample

The study involved the implementation of the IRC instrument in a South African gold mining company employing some 11,000 people. An initial pilot study of the instrument at the mine involved a sample of 16 consisting of three skilled White subjects, six semi-skilled and seven unskilled Black subjects. In the main study, completed questionnaires were obtained from 404 subjects. However, 11 questionnaires were returned incomplete or spoilt and were not included in the analysis. Thus the final sample consisted of 393 subjects, an effective response rate of 97%. Of this group 68 were White and 325 were Black. Only three females as opposed to 390 males were involved, this being seen as a consequence of the male orientated mining industry with the employment of females being restricted by the Mines and Works Act (1956). No indices were collected on age or education because of the need to keep the instrument as simple as possible for less literate subjects. Subjects were drawn from three skill categories, with 184 unskilled, 142 semi-skilled and 67 skilled employees being involved. All skilled workers were White and unionised while no Black employees were members of a union recognised by the company. Language groups included Sotho (N = 117), Xhosa (N = 103), Fanakalo (N = 106), Afrikaans (N = 43), and English (N = 24). Five departments of the organisation were covered. These were Mining (N = 178), Engineering (N = 88), Metallurgy (N = 47), Services (N = 48) and Administration and Personnel (N = 32). Subjects were drawn from two separate shafts or divisions with 208 coming from Shaft A and 185 from Shaft B. Subjects were drawn in ratio according to the number of employees in hierarchical

levels. From this, the number of employees was specified in accordance with departmental ratios of the total workforce. Subjects were selected randomly from work gangs in accordance with the ratio requirements of department and hierarchical level.

Test-retest reliabilities necessitated a separate sample of 30 additional subjects drawn from the mine. Only subjects who were willing to participate in the study were included. Selection of this sample therefore, was not at random. Six of these subjects withdrew from mine service before the post-test was instituted and were not considered in analysis. The final sample ($N = 24$) involved seven skilled, eight semi-skilled and nine unskilled subjects. All skilled subjects were White and all semi- and unskilled subjects were Black. Languages utilised by the group were English ($N = 18$), Afrikaans ($N = 1$) Sotho ($N = 1$), Xhosa ($N = 1$) and Fanakalo ($N = 3$).

Measuring Instruments

Biographical data for the subjects were obtained through a face page of the IIRCS (see Appendix A). Biographical data addressed the variables of skill level, department, shaft, race and sex. An initial paragraph on the face page informed subjects of the intention to examine the in-company IRC of the organisation and emphasised the need for open and honest answering to ensure valid data.

The Initial In-company IRC Instrument

The instrument was designated as the In-company Industrial Relations Climate Scale (IIRCS). The scale consisted of the dimensions of grievance and disciplinary procedures, communications, employee representation, supervision, peer group support, and general IR policy. Items assessed perceptions of operationalisation of dimensions. The perceived manner of utilisation of procedures, the nature of employee and managerial involvement, and the fairness, equity and effectiveness of procedures were the criteria examined. The nature of items is indicated in Appendix B. Distributions of items according to dimension is detailed in Table 1.

Table 1

Distribution of Items According to Dimension

Dimension	Number of items
Grievance Procedure	9
Disciplinary Procedure	7
Communications	7
Employee Representation	7
IR Policy	8
Supervision	7
Peer Group	7

All items were assessed on the basis of a Likert type three point scale utilised by Taylor and Bowers (1967) in their analysis of organisational climate. Responses involved the terms "to a great extent" (1); "to some extent" (2); "to a little extent" (3) (Taylor & Bowers, 1967). Use of such a scale allows for integer data and facilitates parametric analysis for evaluation (Beattie, 1981).

Items for the IIRCS were generated on the basis of a preliminary study on IRC (Donald, 1983). The preliminary study utilised the techniques of a literature survey and interviews with IRC practitioners and specialists to obtain a data base from which to develop a measuring instrument. The developed instrument was implemented in a research setting of an industrial concern and involved 147 employees at all levels of the organisation. An item analysis was conducted on the developed instrument to assess the distribution of responses to each item. Items which did not discriminate sufficiently were eliminated. Further elimination and modification of items was instituted on the basis of reliability analysis and feedback from participants on the nature and suitability of items.

During the present study, a more extensive literature review was conducted and further interviews were held. Further items based on this research were included in the proposed instrument on the basis of shortcomings or limitations of the preliminary study. A pilot study was implemented with the revised instrument to examine suitability of content. Items displayed a satisfactory distribution of responses across interval scales and indicated a discriminatory capacity when examined through an item analysis. Subject feedback indicated minor changes to the wording of six items to ensure understanding. This revised instrument constituted the initial IIRCS.

The instrument was presented to several IR specialists and industrial psychologists for approval before its implementation in the preliminary and pilot studies, and in its initial form as the IIRCS. Approval addressed the suitability of item content, and the items' capacity to reflect the construct being assessed. Approval, together with the way

in which the instrument was refined, was seen to establish the content validity of the IIRCS. Face validity was obtained through interviews with subjects in the pilot study, administrative personnel, and members of the organisation's IR department.

The instrument was developed in English. It was translated into Afrikaans, Southern Sotho, Xhosa and Fanakalo for purposes of presentation. The Afrikaans translation was accomplished through the Department of Afrikaans and Nederlands at the University of the Witwatersrand. Translation into Southern Sotho and Xhosa was through the Department of African Languages at the above University. These translations were examined and retranslated by Afrikaans, Sotho and Xhosa IR personnel within the organisation. Where retranslation resulted in different wording, the items were discussed and altered to provide for consistency of meaning and understanding of instrument content (White, 1982). Because of the existence of subjects from a wide range of ethnic groups not covered by the existing languages, it was necessary to translate the instrument into a language medium applicable to such subjects. Fanakalo is seen as an appropriate vehicle for communication with employees in the mining industry when facilities for the venacular language do not exist (Queripel, 1983). Translation of the instrument into Fanakalo was therefore instituted by mine IR personnel highly conversant in the language and was retranslated and examined by others to ensure continuity of meaning.

Organisational Commitment

Organisational commitment was assessed through the Organisational

Commitment instrument (Cook & Wall, 1980). The scale consists of nine items, three of which are reverse scored (see Appendix C). The instrument was developed for application as a short robust scale to be completed by blue-collar respondents of modest educational achievement (Cook, et al., 1981). The simplicity of the instrument was seen as appropriate for application with the present study because of the poor literacy level of many subjects. Cook and Wall (1980) report means of 44,64 (SD = 11, 45) and 45,37 (SD = 9,55) with coefficients alpha of 0,87 and 0,80 respectively for two different sample groups (N = 390 ; 260). A test-retest correlation across six months of 0,50 (N = 63) was also observed.

Cook and Wall (1980) examined correlations between the Organisational Commitment instrument and 14 other variables. Scale correlations reported include 0,56 with Interpersonal Trust at Work; 0,62 with Overall Job Satisfaction; and 0,45 and 0,39 with Intrinsic Job Motivation and Work Involvement re spectively. Clegg and Wall (1981) report two studies utilising the Organisational Commitment scale, one of which utilised a shortened version. The scale is reported as having good reliability and demonstrating satisfactory construct validity (Clegg & Wall, 1981). Although the scale was allocated a seven point system, a three point scale was utilised in the present study to simplify it further for presentation to less literate subjects (Morris & Van der Reis, 1980). Matel and Jacoby (1971) have shown in this regard that the reliability of an instrument is independent of the number of scale points for Likert type items and the reliability was not seen to be compromised by this measure.

Job Satisfaction

Job satisfaction was assessed through an overall measure of the degree to which the employee is satisfied and happy with the job (Hackman & Oldham, 1975). The "General Job Satisfaction" scale was developed by Hackman & Oldham (1975). It consists of five items, two of which are reverse scored (see Appendix D). Hackman & Oldham (1975) report a mean of 4,62 (SD = 1,18) with a Spearman-Brown reliability coefficient of 0,76 in a study of 658 employees in various jobs in seven organisations. Wall, Clegg and Jackson (1978) report a coefficient alpha of 0,74 with a mean of 4,23 (SD = 1,31) for a sample of 47 in a replication of Hackman and Oldham's study. Significant correlations between the General Job Satisfaction scale, Perceived Job Characteristics and the specific job satisfactions of Pay, Job Security, Social, Supervisory and Growth are reported by Cook et al. (1981). Cook et al., (1981) detail a number of studies using the General Job Satisfaction measure. Although the scale items are scored on a seven point scale, this was reduced to three points to simplify presentation to less literate subjects (Morris & Van der Reis, 1980).

Independent Variables

Independent variables examined were job category, race, department, division, sex and language. Due to the male orientation in the mining industry the sample involved only three females and the variable of sex was not utilised in analysis. The variable of job category identified the skill level of employees. The variable distinguished between skilled, semi-skilled and unskilled categories. Selection of these categories was based on Paterson grading (Paterson, 1972). All

employees at the skilled level were White, a major factor of this being the Mines and Works Act legislation pertaining to the mining industry which precludes a Black from entering skilled employment designated by necessary requirements of a "scheduled person" (Cornell & Kooy, 1981). Informal constraints also operate to maintain this colour bar in areas not covered in legislation (Queripel, 1983). Racial distinctions in the study were on the basis of Black and White. These were seen as the major categories as the mine employed only one Indian and approximately 60 Coloureds in the total workforce.

Departments within the organisation were designated as Mining, Engineering, Metallurgy, Services, and Administration. The category of Services included service departments of Ventilation, Survey and First Aid. The category of Administration included personnel from the Personnel and IR functions. The variable of division involved the two shafts, both involving all departments and levels of employees in their operation equivalent to an industrial plant level. The shafts were seen as separate sub-sections of the organisation and operated almost independently of each other at the particular mine.

Procedure

The application of the IIRCS to all levels of employees presented particular problems in that it entailed administering the instrument to groups of up to 20 semi-literate or illiterate subjects. Similar problems were encountered by Donald (1983) where an approach was formulated to deal effectively with the situation. The approach to presentation involved the selection and training of four Black IR personnel employed on the mine as interviewers. These people had to be

capable of speaking clearly in the venacular to a sizeable group and monitoring responses of subjects to ensure that clarity and appropriate answering was maintained. Training involved explanation of the questionnaire, the need to follow set procedures and content for consistency of test administration, and role plays in presenting the instrument. Training also involved the use of blackboards and flip charts as aids in visual presentation.

The implementation of the pilot study addressed two areas:

a) the monitoring of interviewers, and

b) the monitoring of the pilot group responses to the interviewing and the conduct of interviews to assess any problem areas following the presentation.

The monitoring of interviewers allowed the assessment of further training needs and ways in which presentation could be simplified if necessary. Monitoring and interviewing of subjects allowed assessment of the effectiveness of presentation, particular needs of subjects in the presentation (e.g., guidance in answering technique), and examination of the IIRCS content. Examination of content addressed the subjects' understanding of the items of the instrument and whether any contradictions existed between the instrument forms. This resulted in minor changes to the wording of approximately six items where some ambiguity existed in the interpretation of items and the equivalence of item meaning was not maintained across language forms. Changes were affected through discussion with subjects to ensure that item content would be understood and the meaning of items standardised.

Data for the main research were generated through the administration of the IIRCS, Organisational Commitment and General Job Satisfaction instruments. These were administered to individuals or groups of up to 20 persons. Subjects were allocated to groups on the basis of language group (eg. Xhosa, Sotho, Fanakalo). Similar standards of literacy among group members were also taken into account in composing test groups. Biographical data were obtained through a face page of the IIRCS (See Appendix A). An initial paragraph on the face page informed subjects of the intention to examine the in-company IRC of the organisation and emphasised the need for open and honest answering to ensure valid data. Employees were assured of the confidential nature of the data collected and it was stated that no harassment or victimisation would result from the study. To ensure that employees would not feel threatened and to demonstrate confidentiality of answers, employees were requested not to place their name on the instrument.

The instrument was presented to subjects and the nature and format of the instrument was discussed. Subjects were instructed in the answering format and the procedure for answering. For illiterate and semi-literate subjects this was aided through the use of a visual aids presentation. Subjects were again assured of the confidentiality of their answers and were asked to complete the items of the instrument. Literate individuals and groups were allowed to procede at their own pace. Semi-literate and illiterate groups completed the items one by one under the guidance of the interviewer who presented each item in the venacular. All members of the group completed an item before a subsequent item was presented and answered. The visual/verbal presentation was seen to facilitate both ease of answering and understanding of item content.

Statistical Analysis

Internal Consistency Reliability

The assessment of internal consistency reliability has been widely established through use of the Kuder-Richardson technique (Anastasi, 1982). Cascio (1982) sees this technique as one of the most useful methods of ascertaining internal-consistency. The Kuder-Richardson reliability coefficient represents the mean of all split-half coefficients resulting from different splittings of a test (Cronbach, 1951). According to Anastasi (1982) the Kuder-Richardson formula is applicable to tests whose items are scored as right or wrong, or according to an all or nothing system.

Anastasi (1982) states that in cases where tests have multiple scored items, as in personality tests or the IRC instrument, a generalised formula has been derived from the Kuder-Richardson 20. This involves the substitution of the value of Σpq with $\Sigma \sigma^2_i$ which represents the sum of the variance of item scores. The procedure involved in the formula is to find the variance of all individuals' scores for each item and then to add these variances across all items. The complete formula for coefficient alpha is given as:

$$r_{tI} = \frac{n}{n-1} \cdot \frac{\sigma^2_t - \Sigma \sigma^2_i}{\sigma^2_t}$$

Where r_{tI} is the reliability coefficient of the whole test, n is the number of items in the test and σ^2_t is the variance of the total scores on the test.

The Kuder-Richardson method has been utilised in a number of studies for the evaluation of reliability in developing instruments using a single administration (Bluen & Barling, 1984; Mowday et al., 1979). The Kuder-Richardson generalised formula was implemented in the present study for each particular dimension as a sub-scale of IRC. Scales were refined through the elimination of items which compromised the reliability of the scale. Elimination was through an examination of the correlation coefficient of the scale if that item was deleted.

Anastasi (1982) states however, that the longer a test the more reliable it will be. It is reasonable to expect that, with a larger sample of behaviour, we can arrive at a more adequate and consistent measure. Many studies have made use of the procedure to estimate the reliability coefficient in terms of a lengthened test and many test manuals report reliability in this form (Anastasi, 1982; Hackman & Oldham, 1975; House & Rizzo, 1972). In view of the short nature of the specific sub-scales of the IRC instrument and the need to obtain a consistent reference of sub-scale coefficients for comparative purposes, the Spearman-Brown prophecy formula was instituted to establish reliability coefficients in terms of the scales consisting of ten items. The formula is reported by Anastasi (1982) as:

$$r_{1I} = \frac{nr'_{1I}}{1 + (n - 1)\, r'_{1I}}$$

in which r_{1I} is the estimated coefficient, r'_{1I} the obtained

coefficient, and n is the number of times the test is lengthened or shortened.

Test-Retest Reliability:

Test-retest reliability is established through the correlation between the scores obtained by the same person on two administrations of the test (Anastasi, 1982). The correlation coefficient is obtained through a Pearson product-moment correlation (Mowday et al., 1979; Sarason et al., 1978). This coefficient represents the extent to which individuals or events occupy the same relative position on two variables (Runyon & Haber, 1977). The coefficient is established through an examination of the linear relationship between the two variables. When there is a perfect fit or no error, the coefficient takes on the value of +1,0, or -1,0, where the sign can indicate an inverse relationship (Runyon & Haber, 1977). The computation formula for the Pearson product-moment correlation is reported by Runyon and Haber (1977) as:

$$r = \frac{\sum xy}{\sqrt{\sum x^2 . \sum y^2}}$$

Where $\sum xy$ represents the sum of the cross products, and $\sum x^2$ and y^2 represent the sum of squares of the paired scores.

Construct Validity

Construct validity analysis occured in terms of correlational analysis and the contrasted groups method. The use of correlational techniques

in examining the underlying construct of a scale and the relationship between variables is widespread. Pearson correlation techniques have been used in many of these studies (Bluen & Barling, 1984: Cook & Wall, 1980; Hackman & Oldham, 1975; Taylor & Bowers, 1967). As in test-retest computation, the Pearson correlation coefficient is a measure of association indicating the strength of the linear relationship between two variables. Pearson correlation coefficients were seen as a suitable means of examining the relationships between IIRCS sub-scales, and relationships between IIRCS sub-scales and the measures of organisational commitment and job satisfaction.

The control of the possible spurious intervening effects of situtaional and biographical variables was based on *proposals by Clegg* (1983). This involved the application of partial correlation techniques in addition to the Pearson technique described above. Partial correlation provides a correlation of association between two variables while removing the effect of an intervening variable (Willemsen, 1974). The process involves obtaining independant and dependent variable values which have had the effect of the intervening variable removed from them, and then correlating these adjusted independent and dependent values with each other. The resulting correlation is free from the influence of the intervening variable and is known as the partial correlation (Willemsen, 1974). The formula for calculation of the partial correlation coefficient is:

$$r_{ijk} = \frac{r_{ij} - (r_{ik})\,(r_{jk})}{\sqrt{1 - r_{ik}^{2}}\,\sqrt{1 - r_{jk}^{2}}}$$

Where k is the control variable and i and j are the independent and dependent variables (Nie, Hull, Jenkins, Steinbrenner & Brent, 1975).

Investigation of the In-company IRC of the Organisation

The contrasted group method was used to analyse in-company IRC. The method compares two conceptually different groups through statistically contrasted group analysis. Statistical analysis in this this regard was implemented with the consideration that the IRC instrument constitutes a multiple outcome criterion (Barling, 1978). Kaplan and Litrownik (1977) and Olson (1976) propose that in the evaluation of a number of dependent variables, such as the IIRCS sub-scales, multivariate analysis of variance (MANOVA) is the appropriate form of analysis if the dependent variables share common variance.

MANOVA is similar to the analysis of variance (ANOVA) technique. The ANOVA technique involves the analysis of variance by obtaining two independent estimates of variance, one based on variability between groups and the other, variability within groups. The significant difference in means due to experimental treatment is then established by the F - ratio (Runyon & Haber, 1977). If univariate comparisons are utilised to examine differences on a number of dependent measures, differences between groups are likely to be magnified since dependent variables are often intercorrelated (Kaplan & Litrownik, 1977). Consequently the MANOVA technique is instituted because it takes into consideration the multivariate nature of the behaviour involved and can account for common variance between the variables. In the MANOVA,

dependent variables are combined into a composite variable in such a way that experimental treatments account for as much of the variance as possible (Barling, 1978; Kaplan & Litrownik, 1977). The MANOVA technique thus provides for more conservative and precise estimates of treatment effects (Kaplan & Litrownik, 1977).

Barling (1978) indicates that because several alternative formulae exist for establishing the univariate F statistic of the MANOVA analysis, the test statistic utilised must be indicated in the study. Olson (1976) states in this regard that a review of statistical literature concerning the power and robustness of the test statistic in MANOVA leads to the recommendation of the Pillai-Bartlett trace statistic. The Pillai-Bartlett test is the most robust of such tests and is seen as sufficiently powerful to detect population differences in any non-centrality structure (Olson, 1976).

The second stage of the analysis of multivariate effects is to ascertain which of the dependent variables are accounting for the significant F values (Spector, 1977). This was accomplished through seperate univariate analyses of variance (ANOVAs) being computed for each dependent variable. This approach is recommended by Hummel and Sligo (1971) and has been utilised by Barling (1978) and Furman and McKinney (1978). The implementation of ANOVAs following the MANOVA is seen by Hummel and Sligo (1971) as resulting in an experimental error rate which is reasonably consistent, regardless of F and the proportion of variance in common. Hummel and Sligo (1971) recommend the approach for its consistency and because its conservatism is not extreme.

Several procedures of follow-up analyses, referred to as multiple comparisons, have been developed for establishing which groups differ significantly on variables after a significant F-ratio has been obtained through ANOVA (Huck, Cormier & Bounds, 1974). To locate the significant differences, these statistical procedures analyse each possible pair of means to determine if the two means are significantly different from one another (Huck et al., 1974). The Scheffe's test was selected in this regard because it can be used with unequal numbers of subjects and is highly conservative (Barling, 1978; Huck et al., 1974; Kerlinger, 1981).

RESULTS

An initial frequency distribution analysis of items was conducted. If more than 75 percent of the sample responded indentically to an item, it was adjudged unsuitable and eliminated on the basis that it was not discriminating adequately (Bluen & Barling, 1984). No items were eliminated in this manner and subsequent refinement of the scale was conducted on the basis of reliablity values for each scale. Where items compromised the homogeneity of the sub-scale they were eliminated. Elimination of items from scales was based on the procedure described by White (1982) to obtain an optimal standardised measure that could be applied across all language forms of the instrument. Seven items were eliminated in this manner (see Appendix L). A second frequency distribution analysis was conducted on finalised scales to obtain descriptive statistics (see Table 2).

Table 2

Descriptive Statistics for the IIRCS Sub-scales

Sub-Scale	Original Number of items	Final Number of Items	Mean	Standard Deviation	Number of cases
Grievance Procedure	9	7	13,57	3,33	376
Disciplinary Procedure	7	7	12,38	3,03	379
Communications	7	5	9,59	2,82	389
Representation	7	7	12,99	3,28	374
Policy	8	8	15,05	4,02	383
Supervision	7	5	8,97	2,79	385
Peer Group	7	6	9,72	2,50	388

With regard to the distribution qualities of the sub-scales, the mean levels of scores ranges from 8,97 to 15,05. All mean scores are typically slightly positive in relation to the midpoint on the 3-point Likert scale (the lower the score the more positive it is). Standard deviations appeared to show an acceptable distribution of responses within samples (Anastasi, 1982; Mowday et al., 1979).

Internal Consistency Reliability

Reliability indices were calculated for each IIRCS sub-scale. Tables on sub-scales detail the mean reliability according to White's (1982) procedure. Also included are reliability coefficients for the individual language groups and the total sample. Reliability coefficients are stated for the original form of the sub-scale, subsequent forms (if applicable) involved in refining the scale, and an optimal form which represents the standard instrument for analysis. A

projected form then details reliability coefficients corrected by the Spearman-Brown prophecy formula for 10 items. The same table format is used for all sub-scale reliability descriptions (see Tables 3 to 9). IIRCS reliability coefficients for the sub-scale of Grievance Procedure are detailed in Table 3.

Table 3

Internal Consistency Reliability Coefficients for the Grievance Procedure Sub-scale of the IIRCS

Instrument Form	Items	Test Groups						
		Mean Reliability	Sotho	Xhosa	Fanakalo	Afrikaans	English	All cases
Original	9	0,72	0,69	0,60	0,58	0,86	0,84	0,67
Form 1	8	0,71	0,68	0,62	0,60	0,84	0,80	0,66
Optimal	7	0,73	0,68	0,65	0,62	0,84	0,83	0,68
Projected	10	0,79	0,75	0,72	0,69	0,87	0,87	0,74

Both items eliminated were reflected as detracting from overall reliability constantly across all forms (see Appendix E). Further enhancement of individual scales could have been achieved through the elimination of one item for the Sotho form and a common item for the Xhosa and Afrikaans forms. This however, would have led to a reduction of reliability in other forms and the general mean and was not instituted.

Reliability indices for the sub-scale of Disciplinary Procedure are reported in Table 4.

Table 4

Internal Consistency Reliability Coefficients for the Disciplinary Procedure *Sub-Scale of the* IIRCS

Instrument Form	Items	Mean Reliability	Test Groups					
			Sotho	Xhosa	Fanakalo	Afrikaans	English	All cases
Original[a]	7	0,63	0,64	0,54	0,46	0,67	0,84	0,58
Projected	10	0,70	0,71	0,63	0,54	0,74	0,88	0,66

[a] In the case of the disciplinary procedure the original form was also the optimal form.

The original form was maintained as the optimal measure because *elimination of any item* would have led to a slight increase in some language forms but a decrease in others (see Appendix F). Where an item common to the Sotho, Fanakalo and Afrikaans versions was in fact examined for elimination, it lead to a reduction of the mean to 0,62 with little improvement on the Sotho and Fanakalo versions. Therefore, no elimination of items was instituted. In the projected form, the reliability of both the Xhosa and Fanakalo versions is low. However, the acceptable mean for the standardised form, and the utilisation of sub-scales displaying similar indices (Taylor & Bowers, 1967) was seen to allow the continued use of the scale in analysis. Some caution is advised however, in the interpretation of the disciplinary scale indices.

Reliablity indices for the sub-scale of Communication are detailed in Table 5.

Table 5

Internal Consistency Reliability Coefficients for the Communications Sub-scale of the IIRCS

Instrument Form	Items	Mean Reliability	Test Groups					
			Socho	Xhosa	Fanakalo	Afrikaans	English	All cases
Original	7	0,64	0,68	0,61	0,55	0,61	0,74	0,63
Form 1	6	0,70	0,72	0,64	0,65	0,72	0,78	0,69
Optimal	5	0,71	0,73	0,64	0,64	0,78	0,73	0,69
Projected	10	0,83	0,84	0,78	0,78	0,88	0,84	0,82

Elimination of items to obtain Form 1 of the communications sub-scale was indicated on a particular item on all scales. Subsequent elimination of an item to obtain the optimal form was indicated on all scales except the English version. No further possible refinement was indicated on any of the language versions with the optimal form (see Appendix G).

Reliability indices for the sub-scale of Representation are detailed in Table 6. The original form was maintained as the standard form. One item on the Xhosa, Fanakalo and Afrikaans versions was indicated as contributing minimally to increased reliability ($\pm$ 0,02) but this would have resulted in slightly lower coefficients for the remaining versions and the mean and consequently the item was not eliminated (see Appendix H).

Table 6

Internal Consistency Reliability Coefficients for the Employee Representation Sub-scale of the IIRCS

Instrument Form	Items	Mean Reliability	Test Groups: Sotho	Xhosa	Fanakalo	Afrikaans	English	All cases
Original[a]	7	[illegible]	0,71	0,57	0,59	0,85	0,75	0,67
Projected	10	0,76	0,78	0,66	0,67	0,89	0,81	0,74

[a] The original form of the scale was the optimal form.

Reliability indices for the sub-scale of Supervision are indicated in Table 7.

Table 7

Internal Consistency Reliability Coefficients for the Supervision Sub-scale of the IIRCS

Instrument Form	Items	Mean Relia-	Test Groups: Sotho	Xhosa	Fanakalo	Afrikaans	English	All cases
Original	7	0,65	0,62	0,50	0,54	0,79	0,80	0,62
Optimal[c]	5	0,76	0,68	0,74	0,71	0,80	0,85	0,74
Projected	10	0,86	0,81	0,85	0,83	0,89	0,92	0,85

[c] Elimination of an initial item necessitated elimination of an item dependent on it for meaning. Consequently the optimal form contains two items less than the original sub-scale form.

The English and Afrikaans versions of the *supervisory* sub-scale indicated no further items that could lead to greater reliability. Different items were indicated for each of the other language versions which could have led improvements in these versions (see Appendix I). Increases gained from the elimination of these items would have been minimal however, and would have lessened other reliability coefficients. Also, in view of the existing high coefficients and the shortness of the scale, further refinement would not have been desirable.

Peer group reliability indices are reported in Table 8.

Table 8

Internal Consistency Reliability Coefficients for the Peer Group Sub-scale of the YIRCS

Instrument Form	Items	Mean Reliability	Test Groups: Sotho	Xhosa	Fanakalo	Afrikaans	English	All cases
Original	7	0,58	0,59	0,44	0,49	0,74	0,66	0,54
Optimal	6	0,58	0,60	0,39	0,53	0,73	0,63	0,54
Projected	10	0,69	0,71	0,52	0,65	0,82	0,74	0,65

The coefficients for the Xhosa form of the peer group sub-scale are low (see Appendix J) and results derived from this sub-scale should be treated with caution.

The policy dimension sub-scale reliability indices are reported in Table 9.

Table 9

Internal Consistency Reliability Coefficients for the Policy Sub-scale of the IIRCS

Instrument Form	Items	Mean Reliability	Test Groups					
			Sotho	Xhosa	Fanakalo	Afrikaans	English	All cases
Original[a]	8	0,80	0,72	0,70	0,82	0,86	0,86	0,77
Projected	10	0,83	0,84	0,78	0,78	0,89	0,89	0,81

[a]The original instrument is maintained as the optimal instrument.

Policy reliability coefficients are all high. The refinement of the sub-scale was not indicated by any common item across all scales. No refinement was indicated for the Xhosa and Fanakalo versions, while minimal improvement for other particular scales was indicated by a single item (see Appendix K). This however, would have reduced overall mean reliability.

Refinement indices of sub-scales therefore appear adequate. The procedure is seen to provide for a single standardised measure with which to conduct analysis (White, 1982). The standardisation of content seems to have been supported by the elimination of common items which were detracting from reliability in a number of language versions of sub-scales. Further, the optimal standard forms of IIRCS sub-scales were in most cases, the optimal form of the different language versions.

Test-retest Reliability

Test-retest reliability was established through Pearson correlations of results obtained from the application and re-application of the instrument over a six week period to the sample of 24 subjects. These reliabilities are reported in Table 10 below.

Table 10

Test-retest Reliability Coefficients for the IIRCS Sub-scales (N = 24)

Sub-Scale	Time 1		Time 2		Correlation Coefficient
	Mean	SD	Mean	SD	
Grievance Procedure	13,80	3,45	13,62	4,22	0,76*
Disciplinary Procedure	13,30	3,58	13,63	4,26	0,83*
Communications	10,63	2,73	10,58	2,67	0,84*
Representation	12,54	3,33	12,78	3,59	0,76*
Supervision	8,67	2,84	9,58	2,99	0,70*
Peer Group	9,12	3,06	10,33	2,96	0,67*
Policy	16,83	3,94	17,04	4,23	0,87*

* $p < 0,001$

The sub-scale with the lowest test-retest reliability coefficients was the interpersonal IRC dimension of Peer Group with 0,67. The relatively low correlation coefficient for the Peer Group sub-scale indicates that some caution in considering the dimension in analysis is needed.

Comparative Correlational Analysis

Examination of relationships between sub-scales of the IIRCS through Pearson correlations resulted in the correlation coefficients reported in Table 11. Partial correlations for sub-scales are also reported in Table 11. Partial correlations controlled for the biographical variables of race, skill, shaft and department.

The Peer Group sub-scale correlations with other IIRCS sub-scales are generally lower than the intercorrelations between those sub-scales. The coefficient of the correlation between Grievance Procedure and Peer Group is particularly low, although significant ($p < 0,01$). Pearson correlation coefficients for all sub-scales except Peer Group range from 0,38 to 0,63 ($p < 0,001$). Partial correlation coefficients for all sub-scales except Peer Group range from 0,38 to 0,61 ($p < 0,001$). The sub-scale of Policy generally displays the highest correlations with other sub-scales.

The relationships between IRC sub-scales and the organisational commitment and job satisfaction scales were examined in two ways. First, zero order correlation techniques were instituted (Pearson correlation). Second, partial correlations were conducted to control for the variables of division, race, skill level and department (see Table 12).

The sizes of correlation effects between the IRC dimensions and organisational commitment and job satisfaction are moderate and significant ($p < 0,001$). Policy again emerges as the sub-scale with the strongest relationship with conceptually related variables.

Table 11

Pearson [a] and Partial [b] Correlations for IIRCS Sub-scales

	Grievance	Discipline	Communication	Policy	Representation	Supervision	Peers
Grievance Procedure		0,45 (364)	0,49 (372)	0,49 (371)	0,46 (360)	0,39 (369)	0,15 (372)
Disciplinary Procedure	0,42 (329)		0,57 (375)	0,56 (370)	0,38 (363)	0,41 (372)	0,30 (375)
Communications	0,49	0,55		0,63 (379)	0,50 (371)	0,46 (382)	0,22 (384)
Policy	0,47	0,54	0,61		0,52 (366)	0,54 (376)	0,29 (378)
Representation	0,44	0,34	0,48	0,48		0,50 (367)	0,43 (369)
Supervision	0,43	0,39	0,47	0,54	0,50		0,40 (380)
Peer Group	0,15*	0,28	0,21	0,28	0,43	0,38	

Note Figures in brackets represent n; n for all partial correlations is equal to 329.

[a] Pearson correlations are indicated above the diagonal.

[b] Partial correlations are indicated below the diagonal. Partial correlations control for race, skill, shaft and department.

* $p < 0.01$; all other correlations $p < 0.001$.

Table 11

Pearson [a] and Partial[b] Correlations for IIRGS Sub-scales

	Grievance	Discipline	Communication	Policy	Representation	Supervision	Peers
Grievance Procedure		0,45 (364)	0,49 (372)	0,49 (371)	0,46 (360)	0,39 (369)	0,15 (372)
Disciplinary Procedure	0,42 (329)		0,57 (375)	0,56 (370)	0,38 (363)	0,41 (372)	0,30 (375)
Communications	0,49	0,55		0,63 (379)	0,50 (371)	0,46 (382)	0,22 (384)
Policy	0,47	0;54	0,61		0,52 (366)	.54 (376)	0,29 (378)
Representation	0,44	0,34	0,48	0,48		0,50 (367)	0,43 (369)
Supervision	0,43	0,39	0,47	0,54	0,50		0,40 (380)
Peer Group	0,15*	0,28	0,21	0,28	0,43	0,38	

Note Figures in brackets represent n; n for all partial correlations is equal to 329.

[a] Pearson correlations are indicated above the diagonal.

[b] Partial correlations are indicated below the diagonal. Partial correlations control for race, skill, shaft and department.

* $p < 0.01$; all other correlations $p < 0.001$.

Table 12

Correlations of Sub-scales of the IPOS with Organisational Commitment and Job Satisfaction

	Pearson Correlation[a]		Partial Correlation[b]	
	Organisational Commitment	Job Satisfaction	Organisational Commitment	Job Satisfaction
Grievance Procedure	0,18 (n = 364)	0, (n -	0,18 (n = 358)	0,12* (n = 363)
Disciplinary Procedure	0,24 (n = 368)	0,19 (n = 372)	0,22 (n = 362)	0,16 (n = 366)
Communications	0,23 (n = 378)	0,26 (n = 382)	0,26 (n = 372)	0,24 (n = 376)
Policy	0,36 (n = 371)	0,26 (n = 375)	0,35 (n = 365)	0,23 (n = 369)
Representation	0,15* (n = 364)	0,20 (n = 368)	0,11* (n = 358)	0,18 (n = 362)
Supervision	0,30 (n = 374)	0,30 (n = 374)	0,23 (n = 368)	0,29 (n = 372)
Peer Group	0,20 (n = 377)	0,20 (n = 377)	0,18 (n = 371)	0,18 (n = 374)

[a] Zero Order correlation

[b] Partial correlation controlling for: job category, race, division, department

* $p < 0,01$: others $p < 0,001$

Results show no appreciable differences between zero order and partial correlation indices. This strengthens the indication of significant relationships between IRC dimensions and the variables under consideration.

The implementation of the IIRCS to examine the in-company IRC of the organisation in which the research was being conducted allowed examination of the scores of contrasted groups within the organisation. The examination of contrasted racial groups of the variable of race through the MANOVA technique resulted in a significant multivariate effect on the seven variables being demonstrated using the Pillai-Bartlett F approximation (F (7,327) = 5,62; $p < 0,001$.) Following the procedure proposed by Hummel and Sligo (1971), separate univariate ANOVAs were computed for all dimensions of the IRC instrument. These results are detailed in Table 13 below.

An analysis using ANOVAs indicated significant differences between Black and White employees' perceptions of supervision ($p < 0,001$), disciplinary procedure ($p < 0,01$), representation and policy ($p < 0,005$). Although significant differences were not found for the dimensions of grievance procedure, communications and peer group, differences in scores did exist and these followed a similar trend to the other in-company IRC dimensions.

Table 13

Oneway ANOVAs between Categories of Race for the IIRCS Sub-Scales

IIRCS Sub-Scales	F	df	Mean	
			White	Black
Grievance Procedure	0,99	1,333	12,67	14,67
Disciplinary Procedure	8,90**	1,333	11,82	13,02
Communication	0,002	1,333	9,07	10,18
Representation	5,39*	1,333	12,65	13,39
Policy	5,34*	1,333	14,29	15,95
Supervision	24,14***	1,333	8,77	9,20
Peers	3,37	1,333	9,56	9,90

* $p < 0,05$
** $p < 0,001$
*** $p < 0,001$

A MANOVA was performed to examine the contrasted groups for the variable of skill level and to assess the existence of common variance within the in-company IRC dimensions. The analysis yielded a significant multivariate effect on the seven dependent variables using the Pillai-Bartlett F approximation (F (14,654) = 2,92; $p < 0,001$). ANOVAs assessed the significance of contributions of separate sub-scales of the IIRCS. Follow up analysis with Scheffe tests indicated which groups differed significantly on the sub-scales and provided mean scores for the groups (see Table 14).

Table 14

Oneway ANOVAs between Skill Categories for the IIRCS Sub-scales

IIRCS Sub-scales	F	df	Mean		
			Skilled	Semi-Skilled	Unskilled
Grievance Procedure	0,80	2,332	13,10	13,44	13,75
Disciplinary Procedure	4,50*	2,332	11,12	12,43	12,56
Communications	0,47	2,332	9,57	9,36	9,69
Representation	3,02*	2,332	12,00	12,99	13,30
Policy	3,16*	2,332	13,80	14,99	15,47
Supervision	12,05**	2,332	7,24	9,36	9,30
Peers	2,14	2,332	9,04	9,59	9,87

NOTE. Values joined by underscore are significantly different.

* $p < 0,05$
** $p < 0,001$

Significant differences were obtained across skill categories on the dimensions of *supervision* ($p < 0,001$), disciplinary procedure, representation and policy ($p < 0,05$). The significant differences existed between the skilled group and both semi- and unskilled groups on the dimensions of supervision and disciplinary procedure. Differences in the dimensions of policy and representation manifested themselves across skilled and unskilled categories. Scores on all dimensions generally followed consistent trends of becoming more positive with *increasing* skill level. However, on the communications sub-scale

semi-skilled employees obtained more positive scores than skilled employees. Unskilled employees still scored more negatively than both other groups in this regard. Further, semi-skilled employees scored more negatively than other groups on the supervisory sub-scale.

The application of a MANOVA in the statistical analysis regarding differences between the shafts resulted in a significant multivariate effect being obtained (F (7,327) = 5,90; $p < 0,001$). The results of separate univariate ANOVAs are detailed in Table 15.

Table 15

Oneway ANOVAs between Shafts for the IIRCS Sub-scales

IIRCS Sub-scales	F	df	Mean	
			Shaft A	Shaft B
Grievance Procedure	34,96***	1,333	12,67	14,67
Disciplinary Procedure	11,77**	1,333	11,82	13,02
Communications	11,03**	1,333	9,07	10,18
Representation	4,58*	1,333	12,65	13,39
Policy	12,79***	1,333	14,29	15,95
Supervision	1,01	1,333	8,78	9,21
Peers	0,56	1,333	12,65	13,39

* $p < 0,05$

** $p < 0,005$

*** $p < 0,001$

Significant differences were indicated on all issue related IRC dimensions (i.e., grievance and disciplinary procedures, representation, communications, and policy). Both interpersonal dimensions (i.e., supervision and peer group) did not yield significant differences across shafts. All scores indicated a consistent trend however, with one shaft being more positive than the other.

DISCUSSION

The discussion section will be divided into two areas. First, the results of the study will be discussed. Second, the implications of the results on using the IIRCS to assess in-company IR will be discussed.

Discussion of Results

Reliability

Internal consistency reliability coefficients generally indicate an acceptable standard of reliability (Aiken, 1979; Barling, 1978; Cascio, 1982). However, a low reliability coefficient was found for the dimension of peer group in the Xhosa version of the instrument. Consequently some caution is needed in assessing the peer group dimension. Fairly low reliability was also recorded for the disciplinary dimension in the Fanakalo version ($r = 0,54$). However similar levels of reliability have been reported for dimensions of acceptable instruments currently in use (e.g., Hackman & Oldham, 1975; Taylor & Bowers, 1967).

Test-retest reliability coefficients (range: $\underline{r}$ = 0,87 - 0,67) compare favourably with reliability indices for other psychometric instruments assessed over a six week period (Cook et al., 1981; Dunham, Smith & Blackburn, 1977; Sarason et al., 1978). The reason or the low stability of the sub-scale of peer group ($\underline{r}$ = 0,67) could be due to the sub-scale being unsound and its content not adequately reflecting this dimension. Also, it could possibly be attributed to the interpersonal relations on which the dimension is based being more dynamic and susceptible to change than perceived qualities of organisational processes which are seen to be relatively enduring (Taylor & Bowers, 1967).

Construct Validity

Moderate zero-order intercorrelations (range: $\underline{r}$ = 0,63 - 0,38) between IIRCS sub-scales (excluding peer group) indicates a shared variance (Taylor & Bowers, 1967). Partial correlation techniques controlling for the variables of race, skill, shaft and department did not affect this variance to an appreciable extent (range: $\underline{r}$ = 0,61 - 0,39). The correlations therefore, reflect the common underlying construct of in-company IRC and are in accordance with the design of the scale itself. Similar correlations are reported for sub-scales of instruments measuring common constructs (Hackman & Oldham, 1975; Taylor & Bowers, 1967).

Despite the shared variance, sub-scales display a capacity to discriminate in measuring the particular dimensions they address. Although a degree of overlap exists between the various sub-scales, no particular sub-scale duplicates the area covered by the others to any

great extent (Taylor & Bowers, 1967). Also, while the dimension of policy demonstrates slightly larger correlations in general, it is impossible to single out any particular dimension besides peer group as being more dispensable than others (Taylor & Bowers, 1967).

Low correlations between peer group and the other sub-scales indicate a weak relationship with the other variables. Combined with problems in both internal-consistency and test-retest reliability, these results indicate that the peer group sub-scale should not be included in analysis. Problems could be attributable either to the sub-scale content not adequately reflecting the area being assessed, or to its *function of an informal support system* lying outside the direct conduct of IR processes (House, 1981). However, because of its limitations, peer group is not considered as appropriate in it's present form for inclusion in the IIRCS.

Intra-correlational analysis of IIRCS sub-scales supports the hypothesis that the sub-scales will yield significant intercorrelations. The nature and similarity of correlations reflects a common underlying construct of in-company IRC, with all dimensions exhibiting a capacity to discriminate for dimensions addressing aspects of that construct. Further, the nature of the correlations supports the inclusion of all dimensions except that of peer group within the measuring instrument.

Results of the zero order correlation analysis between IIRCS sub-scales and the variables of organisational commitment (range: $\underline{r}$ = 0,15 - 0,36) and job satisfaction (range: $\underline{r}$ = 0,16 - 0,3) are low but highly significant. Dunham et al. (1977), Mowday et al. (1979), and

Sarason et al. (1978) report similar indices in correlations between sub-scales of developed instruments and criterion variables used for validation purposes. Partial correlation techniques instituted to control for intervening influences from the variables of race, skill-level, department and division, did not have any appreciable effect on the strength of correlations. Biographical variables therefore were not seen as influencing the significant nature of relationships.

The magnitude of correlations between the sub-scales and criterion variables of organisational commitment and job satisfaction was similar to those expected. High correlations would have indicated the measurement of a similar psychological construct (Anastasi, 1982). However, the criterion variables are designed to measure affective responses linked to IR and not parallel measures. Consequently, correlations should not be too high (Mowday et al., 1979). The IRC dimensions are also specifically aimed at particular aspects of IR and this could possibly reduce the nature of relationships. In the case of the dimension of policy which is more of a general nature, the correlations with organisational commitment and job satisfaction are higher than for other sub-scales. This could be due to the policy dimension's general nature being more easily related to the perceived global nature of the criterion variables (Hackman & Oldham, 1975; Mowday et al., 1979). The nature of correlations between IRC sub-scales and the criteria of organisational commitment and job satisfaction are seen as providing for adequate theoretical justification of relationships and enhancement of the construct validity of the IIRCS (Clegg, 1983). Consequently, the hypothesis that the IIRCS would yield significant correlations with the measures of organisational commitment and job satisfaction is supported.

Correlations within the IIRCS sub-scales and between sub-scales and conceptually related variables support the construct validity of the IIRCS. Further, no relationship between the sub-scales of the IRC instrument and the organisational commitment and job satisfaction measures displayed greater correlation indices than those demonstrated for the relationships between the sub-scales themselves. The IIRCS consequently displays internal consistency while possessing the capacity to identify IR concepts and to discriminate relative to other measures assessing associated concepts.

The In-Company IRC of the Organisation

The nature of in-company IRC within the organisation is reflected in the scores obtained in contrasted group analysis. The discussion of the scores obtained will occur in terms of groups co asted on the variables of race, skill level, and shaft.

Race

Results demonstrate limited support for hypothesised differences between White and Black employee groups. Whites recorded significantly higher scores than Blacks for the dimension of supervision, disciplinary procedure, representation and policy. For the remaining dimensions of grievance procedure, communications, and peer group, Whites scored consistently (but not significantly) higher than Blacks. These results are seen to reflect differences resulting from discriminatory practices in South Africa (Bluen & Van Zwam, 1983; Rosholt, 1982) and the mining

industry in particular (Cooper, 1979; Sitas, 1979). However, particular circumstances are seen to contribute to the nature of the climate for the particular dimensions and these will be discussed in the context of those dimensions.

Differences between Blacks and Whites for the dimension of supervision are highly significant ($p < 0,001$). These differences reflect the particularly difficult marginal position of supervisors in South Africa (Piron et al., 1983). This difficult position is heightened in the case of the mining industry where White first line supervisors often feel threatened and tend to administer discipline in the wrong way because they work on a fear relationship (Piron, 1982c; 1983). Also, difficulties are experienced by Blacks because of a lack of supervisory consideration and approachability essential in the day-to-day supervisory relationships on the shop-floor (Malherbe, 1983). Further supervisory problems are seen in the area of communications. The racial and cultural situation leads to difficulties for the Black employees in communicating problems to the supervisor so that these can be remedied (Baqwa, 1983; Queripel, 1983). Black mineworker dissatisfaction with treatment and approaches by supervisors has been indicated in assessments of mineworker attitudes and perceptions (Anglo American Corporation, 1976; Queripel, 1983). Insults from supervisors have been identified by Black mineworkers as one of the ten aspects of work most disliked (Human Resources Laboratory, 1980) Further, of problems and grievances raised by Black employees in 149 cases in the mining industry, 75 percent arose due to line management and organisational control (McNamara, 1981). Consequently, the findings obtained in the present study reflect established Black and White employee differences in the industry.

Differences between White and Black employee group perceptions of representation are attributed to the nature of the differential representative structures for the races. Union representation existed for White employees whereas no Black employees were members of a recognised trade union on the mine. Blacks therefore had to rely on company devised representative structures. Douwes-Dekker (1981) and Wiehahn (1981) have stated that union representation is superior to company devised structures because of the stronger power base from which a union operates. Union representation provides for a more equitable relationship between management and representatives and employee rights and concerns are more fairly addressed (Douwes-Dekker, 1981). Similar differences in race group perceptions of union versus company devised structures have been obtained by Donald (1983). Also, Black employee dissatisfaction with company devised representative structures has been well documented in research (e.g., McNamara, 1982, 1983; Queripel, 1983). Management at the mine had acknowledged Black employee dissatisfaction with existing representative structures at the time the study was implemented and were considering alternative forms of representation. The IIRCS therefore, was seen to be sensitive to existing differences regarding representation on the mine.

The racial differences in perceptions of the disciplinary procedure reflect problems across industry in conducting such procedures, particularly for Black employees (Levy, 1984). There has been a historical differentiation in the implementation of disciplinary procedures between White and Black employees (Douwes-Dekker, 1981). Emerging Black unions have focused on the area of discipline as a factor

to aid mobilisation of support because of Black employee concern for disciplinary issues (Magwaza, 1981). The disciplinary procedure in the mining industry is seen as particularly problematic (Piron, 1982c). Disciplinary action was rated as the most important source of work dissatisfaction by Black employees on a gold mine (Queripel, 1983). Responses to reasons for such dissatisfaction included unfair hearings, harsh penalties for minor offences and employees' evidence not being considered (Queripel, 1983). Assessment of Black employee attitudes has indicated that bad supervisory practices have led to a belief among Black mineworkers that discipline is imposed unfairly, too harshly, and with little consideration (Anglo American Corporation, 1976; Queripel, 1983). White employees are in a more favourable position than Blacks because of their protected skill position, a more powerful system of representation to protect their interests, and not being subject to discriminatory practices (Cooper, 1979; Du Toit, 1982). The IIRCS therefore reflects expected differences between Black and White employees' perception of the disciplinary procedure.

Failure to find significant race group differences for the dimension of grievance procedure could be attributed to the way in which grievances are dealt with in the mining industry. The main procedure for dealing directly with Black employees' work related grievances is through the Personnel function (Craib, Hall & McNamara, 1983). Douwes-Dekker (1981) indicates that the role of the personnel department in IR conflict situations is to divert conflict from the immediate sources in order to maintain the status quo. In the case of the grievance procedure on the mine, the conflict prone Black/White interface is being avoided by Black

employees and more skilled management employees are responsible for resolving the grievance. Satisfaction with the way in which grievances are handled there has been indicated by Black mineworkers as one of the ten most favourable aspects of working conditions on a mine (Human Resources Laboratory, 1980).

Involvement of the Personnel function in the area of communications is similar to that of the grievance procedure (Craib et al., 1983). The communication of mine policy and procedures, and the updating of employees on information relevant to them is largely the responsibility of the Personnel department rather than line management (Craib et al., 1983). The industry has institutionalised a number of communications systems in this regard, including personnel assistants, the induna, and the isibonda system which are outside the immediate ambit of the supervisor (Anglo American Corporation, 1976; Craib et al., 1983; Queripel, 1983). Thus, the areas of grievance handling and communications are addressed in depth and structured so as to avoid racial conflict. This could possibly lead to more positive perceptions of the dimensions by Black employees. Failure to find inter-racial differences on these dimensions could mean that the mine was successful in the implementation of grievance and communications systems rather than reflecting an inability of the IIRCS to differentiate.

The peer group sub-scale has been shown to have limitations in reliability and construct validity. The absence of racial group differences could be attributed to the lack of validity. However, the dangerous nature of the mining environment generates a group identity

and belongingness (Anglo American Corporation, 1976; White, 1983) and such feelings experienced by employees would affect peer group scores without there being IR influences. Because of the factors of a possibly invalid sub-scale and particular conditions in the mining industry, the absence of differences in the peer group dimension does appear to detract from the discriminant capacity of the IIRCS.

Perceptions of the dimension of IR policy display significant differences as hypothesised, with Whites scoring more positively than Blacks. The structural components of the mining industry have been identified as leading to high conflict (Van Coller, 1979). Structural factors influencing conflict however, are to the detriment of Black rather than White employees (e.g., excessive reward differentiation on the basis of skill, migrancy, and class/race barriers) (Queripel, 1983; Sitas, 1979; Van Coller, 1979). Dissatisfaction among Black mineworkers has been demonstrated in regard to these structural factors (Queripel, 1983). Specifically, separation from family, discriminatory practices, lack of promotional opportunities and the nature of living conditions are issues which have been ranked as particularly important to Black mineworkers (Human Resources Laboratory, 1980; Queripel, 1983). Also, many of the grievances expressed by Black mineworkers have been directly linked to policies adopted by mining companies regarding structural factors (McNamara, 1982). Thus, perceptions by Black employees of the policy approach adopted by mine management are likely to be influenced by the nature of these structural factors in the labour/management relationship in the organisation.

The effectiveness of IR policy has been linked to the quality of supervision and representation (Baer, 1970; Brewster et al., 1981; Douwes-Dekker, 1981; Piron, 1982a). Problems have been shown to exist for Black employees in both these dimensions on the mine and these problems are reflected in Black employees' perceptions in the present study. Consequently, the difficulties in operationalising policy because of problems in these areas is seen to lead to more negative perceptions by Black employees of the policy approach generally. Conversely, the strength of White mining unions has provided effective representation for White employees and consideration of their views (Queripel, 1983; Sitas, 1979).

The lower magnitude of group differences for the dimension of policy, as opposed to the significant differences on other dimensions (e.g., supervision, disciplinary procedure, representation), could be attributed to the mediating influence of positively perceived dimensions of IR operating in the organisation (e.g., grievance procedure and communications). In perceiving aspects of labour/management dealings as positive, Black employee perceptions of management's general approach could be improved. However, no empirical information that addresses the role of individual policy dimensions in mediating perceptions of an overall policy approach appears to be available to support this view.

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Skill Level

Significant differences were yielded between skilled and unskilled groups in the dimensions of supervision, representation, disciplinary

procedure and policy. Also, significant differences were yielded for the dimensions of supervision and disciplinary procedure between skilled and semi-skilled groups. Skilled employees scored more positively than other groups in all dimensions except for communications where semi-skilled employees were more positive. Further, in all dimensions except supervision, semi-skilled employees scored more positively than unskilled employees. These results support the contention that employee work attitudes improve as a consequence of increasing skill and associated status and rewards (Beynon & Blackburn, 1972; Will, 1982). Similarly, workers in general have been shown to be significantly more alienated than their supervisors, and in turn first line supervisors tend to feel more alienated than higher ranking managers (Viteles, 1954). Further, surveys examining employee perceptions of company concern for their welfare have demonstrated that attitudes of factory workers are significantly more negative than those of foreman, with clerical staff placed betwen the two (Sheppard & Herrick, 1972).

Black employees are moving into more skilled jobs in the mining industry at an increasing rate (McNamara, 1982). Consequent with this Black advancement has been an increase in the importance of these employees in the productive process (Anglo American Corporation, 1976; Sitas, 1979). Advancement has resulted in the acknowledgement of the importance of such employees and an instilling in them of an adherence to company ideals and practices, and a recognition of the legitimacy of management (Anglo American Corporation, 1976; Sully, 1984). Thus, although the influence of race affects the individual's experience, the skill level of the employee will also influence attitudes and perceptions at work.

For the dimension of supervision, semi-skilled employees recorded more negative scores than those of unskilled employees. This is possibly due to the position of Black supervisors in semi-skilled positions being particularly difficult (Piron et al., 1983; Sully, 1984). At the same time White employees feel that their job security is being threatened by Black employees in these positions (Cooper, 1979; Hall, 1982). Consequently there is a lack of White supervisory support for these Black employees which is seen to lead to poor relationships (Sully, 1984).

Poor supervisory relationships could lead to the negative perceptions of disciplinary procedures by semi-skilled Black employees as opposed to the White skilled employees. The Black semi-skilled supervisor represents the interface between the White skilled employee and the Black employees within the section. In this role of responsibility for Black subordinates, the Black supervisory is liable for disciplinary action if contraventions are commited by those within the section (Anglo American Corporation, 1976). Yet at the same time there is a difference in the formal authority invested in the Black semi-skilled supervisor compared to the White supervisor (Sully, 1984). The Black supervisor is therefore placed in a particularly insecure position regarding the imposition of discipline by the supervisor and is likely to perceive this position accordingly.

It seems to have been demonstrated in the results that simple distinctions between employee groups cannot be made solely on the basis of race. Results according to hierarchical distinctions reflected in

the study indicate support for hypothesised differences on dimensions of in-company IRC according to skill level.

Shaft

The analysis of the different shafts resulted in significant differences being reported for all "issue" related dimensions of climate (grievance and disciplinary procedures; communications, and representation). All scores in these dimensions were consistently more positive for Shaft A. "Interpersonal" climate dimensions of supervision and peer group, while displaying similar directions in mean scores, did not approach acceptable levels of significance. Nicholson (1979) has stated that issue related dimensions of IRC have had more significant relationships with satisfactory and peacemaking IR atmospheres than aspects of interpersonal interaction. The greater importance of issue dimensions is supported in research findings by Dastmalchian et al. (1982), Nicholson (1979) and Stagner, Derber and Chalmers (1959). The significant difference in the dimension of policy which examines a more general perception of the conduct of IR within the organisation also seems to provide support for this contention. Differences between shafts seem to indicate that the IR approach adopted by management at Shaft A was directed more towards the reduction of conflict and the promotion of co-operation. Interviews with members of the organisation indicated that differing management styles characterised shaft senior management. Shaft A was seen as more considerate and participative whereas Shaft B was more authoritarian. However, no objective measure of management style or organisational climate was available to substantiate these claims.

Results provide support for the hypothesis that the IIRCS is sensitive to differences across shafts. Results also seem to confirm the existence of a plant based IRC, with this climate being manifested in a general way across policy dimensions.

Summary

The present study examined in-company IRC utilising a framework of validation based on the methodology of similar developmental research for a variety of psychometric instruments assessing specific constructs (e.g., Bluen & Barling, 1984; Hackman & Oldham 1975; Mowday et al., 1979, Sarason et al., 1978; Taylor & Bowers, 1967). The establishment of content validity of the instrument represented the initiation of the validation process. Ebel (1977) states that content validity is the only basic foundation for any kind of validity and the instrument was presented and approved by several experts in both the IR and industrial psychology disciplines. In addition, the face validity of the instrument was examined in the research setting and found acceptable.

An item analysis resulted in acceptable indices of discrimination and distribution (Anastasi, 1982). Internal consistency reliability of the finalised instrument was satisfactory with the exception of the dimension of peer group. Test-retest reliability of the instrument over an interval of six weeks was satisfactory. The IRC instrument thus demonstrated both internal and temporal consistency.

Evidence of construct validity was presented through a number of methods. On the basis of results obtained from these methods, the *dimension of peer group* was considered unacceptable for use in analysis. This was attributed to either a failure of the scale to represent the *dimension adequately*, or an inappropriateness of the dimension in evaluating in-company IRC. The hypothesised existence of an underlying *in-company* IRC construct for remaining dimensions was demonstrated by moderate correlations which were highly significant. The dimensions however, are seen to be conceptually distinct and the nature of correlation was seen to allow for such distinction (Taylor & Bowers, 1967). Theoretically specified relationships with the criterion variables of organisational commitment and job satisfaction were demonstrated with significant and appropriate correlations being yielded (Clegg, 1983). Intra-scale relationships indicated correlation coefficients that were in all instances higher than those obtained between IRC dimensions and external criterion variables. Such correlations indicate acceptable discrimination between constructs.

The IIRCS successfully differentiated in-company IRC between contrasted groups on the variables of race and skill level within a South African gold mine. Where significant differences did not exist, organisational IR conduct was seen as contributing to improved relationships between groups. The IIRCS also displayed a sensitivity to differences between organisational units (i.e., shaft). Overall, results indicate that the IIRCS possesses satisfactory psychometric characteristics of reliability and validity and can be utilised for organisational assessment.

Implications

Essential dimensions of in-company IR have been identified as grievance and disciplinary procedures, communications and employee representation (Bluen, 1981; Cuthbert, 1973; Douwes-Dekker, 1981). Also, the dimension of supervision is seen as essential to facilitate the functioning of IR processes (Baer, 1970; Brewst- et al., 1981; Piron et al., 1983). Correlations between the dimensions in the present study indicate that these components do indeed fall within the context of a common underlying construct of in-company IR (Taylor & Bowers, 1967). Further, the existence of differences across all IIRC issue dimensions between shafts at the mine, and a general trend of differences for contrasted groups of race and skill level would seem to indicate that in-company IRC is manifested across all dimensions of IRC in a consistent manner. These results provide support for the theoretical model of operationalised in-company IRC in which the particular dimensions fulfill particular functions and interact to produce a general approach to IR within the organisation.

Despite operating within a general policy approach, dimensions of in-company IR address different aspects of the labour/management relationship and this discriminant capacity is reflected in relationships between dimensions in the present study. (Taylor & Bowers, 1967). The absence of significant differences between race and skill groups on the dimensions of grievance procedure and communications indicates that the approach management adopts can vary in effectiveness across the dimensions. Further, the absence of these differences seems

to show that it is possible for management to institute IR procedures which can provide a reduction of conflict, even where variables which are determined outside the organisation (e.g., race) influence the nature of labour/management conflict. Similarly, Bluen and Van Zwam (1983) have found higher organisational commitment among Blacks than Whites in an organisation which has adopted constructive labour practices for all employees. Effective consideration by management of employee views therefore, is likely to enhance IR throughout the organisation.

The generation of data through a reliable and valid psychometric instrument assessing in-company IR allows an analysis and description of the state of in-company IR. Such an assessment of key areas in relationships at the workplace allows an evaluation of labour/management interaction in a number of ways (Nicholson, 1979). These involve:

1. Estimating the relative contribution to overall climate of different dimensions under consideration.

2. Revealing the principle areas of satisfaction and dissatisfaction in IR dealings.

3. Identifying the relative frequency of different types of problems in the conduct of in-company IR and their impact at different locations and levels of the system.

4. Measuring the extent of inter- and intra-group agreement and disagreement about the nature of their shared experience in local dealings.

Consequently, utilisation of the IIRCS in the monitoring process provides a method for the assessment and evaluation of IR within an organisation called for by a number of authors (Anthony, 1977; Brandt, 1974; Cuthbert; 1974). Such an IRC survey can act as an early warning system devised to detect the deterioration in employee views that presages many of the more damaging forms of labour unrest (Thompson & Borglum, 1973). Management of IR is facilitated through the management team being aware of the implications of IR processes within the organisation (Piron, 1982a). A reformulation of IR policy and procedures to regulate conflict within the organisation can be instituted through information gained during the IRC evaluation (Brandt, 1974). Management thus adopts a proactive stance and moves from crisis management to techniques of understanding and planning IR conditions and processes (Thompson & Borglum, 1973). Consequently, policy evaluation, reformulation and planning on the basis of the IIRCS allow for the development of more co-operative relationships between labour and management and can lead to the reduction of conflict within the organisation.

The present study demonstrates the need to examine employee perceptions of IR processes rather than those of management. Queripel (1983), in examining accuracy of perceptions of employee dissatifaction, has found that the further the perceiver is from the employees' work situation the less accurate are perceptions of the real grievance. Similarly,

management perceptions of IRC have been found to be significantly different from those of employee groups with management having an over optimistic view of employee perceptions (Donald, 1983). The need to obtain perceptions of employees themselves is made more salient when differences exist within the employee groups as demonstrated . If management are to be aware of the dynamics of in-company IR, a review of perceptions should cover all levels and address the needs of all groups within the organisation.

The need for training in IR has been emphasised repeatedly if operationalisation of procedures is to be effective (Bluen, 1981; Piron, 1982a; Van Coller, 1979). The need for supervisory IR training is indicated by poor perceptions of semi- and unskilled employees of the nature of supervison at the mine. These results are paralled in studies by Queripel (1983) and Sully (1984) and reflect the need to make supervisors aware of IR issues and processes relevant to effective job performance, particularly in disciplinary issues. Supportive skills and consideration of employees are demonstrated by a number of authors to be relevant to the alleviation of conflict situations in this regard (Fleishmann & Harris, 1952; House, 1981; Goldstein & Sorcher, 1974).

The pronounced Black/White differences in certain dimensions of the IIRCS is an indication that racial issues in IR need to be addressed. Attention has been given to the difficult situation of the Black supervisor (Piron et al., 1983). However, within any organisation merit based manning and equal opportunity policies need to be implemented across the entire organisation for all employees if a situation of

polarisation is to be avoided (Jackson, 1983). Organisations should actively review the procedures to see if racial discrimination is taking place. If employees identify procedures as racially biased, the success of such procedures is unlikely (Jackson, 1983).

Union representation has been stated as necessary if a balanced relationship embodied in the IR framework is to be ensured and legitimization of management authority is to be achieved (Douwes-Dekker, 1981; Fox, 1971). Bluen and Van Zwam (1983) have demonstrated positive relationships between union membership and commitment to the organisation. The balance of power in this regard is seen to lead to fair and equitable procedures being instituted and conducted, with consequent positive perceptions being associated with such organisational qualities (Douwes-Dekker, 1981; Van Coller, 1979; Wiehahn, 1981). Union representation seemed to be a positive contributor to positive perceptions of IR procedures in the present study. In view of the increasing unionisation taking place in South Africa and the increasing trend towards recognition at a company level (Institute for Industrial Relations, 1983; Piron, 1982a), effective and positive involvement of unions in IR policy and procedural formulation with management is likely to lead to an enhancement of the conduct of IR at the in-company level. Consequently, a reduction in the amount of shop-floor conflict presently experienced by organisations is seen to be facilitated.

Limitations of the Study

A major problem with any cross-cultural study is achieving the semantic

equivalence of the measure in translation (White, 1983). As White (1983) points out, when blind back to back translation is used to establish the meaning of the original measure, the translator invariably uses a different word. This is particularly so when equivalent words are not available in the other languages. Consequently, it must be decided whether the translated word has the same meaning as the original English word and whether the question is therefore the same. Discussions on the retranslated IIRCS versions were entered into with the translator to ensure that meanings were as similar as possible. This was seen as being particularly necessary for the case of Fanakalo where restrictions exist because of the basic nature of the language (Queripel, 1983). Two considerations promoted the use of Fanakalo. First, climate items are essentially descriptive and as such more amenable to Fanakalo translation than abstract concepts dealing with feelings. Second, approximately 30 percent of the workforce spoke neither Xhosa or Sotho, but rather a range of approximately eight other languages. Inclusion of these people in a sample to provide a meaningful climate measure was only possible through Fanakalo or a wide range of instrument forms requiring suitable translations and interviews and presenting enormous logistical problems. Consequently, the medium of Fanakalo was seen as necessary if a representative sample of the organisation was to be assessed.

Following the discussions with translators on the equivilance of item meaning, the IIRCS language forms were instituted in the pilot study. The pilot study allowed interviews with subjects to assess understanding of items and continuity of meaning across forms. Reliability

coefficients were then calculated on the basis of White's (1983) proposals in the main study. Because many items were indicated as being suitable for elimination on all language versions, and in many cases the optimal language versions coincided with the version achieved on the basis of the mean, support seems to have been provided for the equivalance of meaning. Nevertheless, it is still not possible to state that no inconguencies exist between the forms and this must be taken as a limitation of the study.

An alternative method to establish the equivalence of instrument forms is proposed by White (1983). The method involves giving bilingual subjects four different versions of the scale, one being in the original language, one in the translated language, and the other two versions having half the items in one language and half in the other. Differences between forms can then be assessed and reliabilities calculated. White (1983) states that although this method of establishing the equivalance of instrument forms is superior to the one used in the current study, it is not without its problems. Many of the Blacks in the mining industry are illiterate, not fluent in English, and could not be used in the exercise. Where Western-orientated Blacks with Western values and standards are used as subjects, there is no guarantee that items will have the same meaning for them as for the illiterate Black, and one may be transferring one source of error to another (White, 1983). Further, Holtzman (cited in White, 1983) comments on how difficult it is to find truly bilingual, bicultural subjects in the large numbers needed to establish reliabilities. However, consideration could be given to this method of determining equivalence in future IRC

studies, provided a large enough and suitable subject group is available.

The low literacy level of subjects could have limited the capacity of subjects to respond to the IIRCS in a valid manner. However, assessment of the perceptions of all employee groups is necessary if a meaningful measurement of IRC is to be obtained and management is to have an effective basis on which to reformulate policy content if necessary. The literacy problem indicates the important role of the interviewer in the administration of the IRC instrument if a valid reflection of employees' perceptions is to be achieved. In the present study, the training of interviewers in the administration of the IIRCS and the use of a presentation procedure which had effectively been utilised in preliminary studies of in-company IRC were seen to address the problem of literacy in a comprehensive manner. Also, the pilot study ensured that the language utilised in the instrument was understood by subjects, although the sample in this regard was small. Reliability and validity indices demonstrate acceptable characteristics and indicate that the approach adopted to problems of literacy was effective. Despite this, it is possible that the nature of responses could have been affected by the literacy level of subjects and this should be considered as a limitation in the present study.

Finalised reliability coefficients were all satisfactory with the possible exception of the coefficient for Fanakalo on the disciplinary scale. It has been indicated that reliabilities for affective scales are often low (Aiken, 1982) and similar indices to those obtained were identified for other instruments. Consequently, the scale form was

included in analysis. However, some caution is advised in the interpretation of the data for the disciplinary procedure and this can be seen as a limitation.

The small sample group involved in the test-retest analysis (n = 24) and the fact that the majority of subjects answered the English form of the instrument (n = 18) indicates a possible need for more extensive examination of the stability of the IIRCS. However, similar sample sizes have been reported in studies using a similar methodology (Bluen & Barling, 1984; Sarason et al., 1978) and to the extent that equivalent language form of the instrument was established, this does not seem to present a serious limitation within the confines of the present study. It does however, point to the need for research aimed specifically at establishing in-company IRC stability.

The present study places a heavy reliance on self report paper and pencil tests. However, Nicholson (1979), Dastmalchian et al. (1982) and Rosen et al. (1981) have all examined IRC in the context of a range of objective variables. These include labour turnover, absenteeism, disputes, unionisation, and economic performance. The need for behaviour variables with which to contrast instrument scores is clearly necessary (Anastasi, 1982; Dasmalchian et al., 1982). Two problems existed in this regard in the present study. First, to ensure confidentiality and to reduce fear of victimisation, employees were requested not to give their names. Consequently objective data could not be obtained from subject's personnal record cards. Second, Clegg (1983) and Muchinsky (1977) have indicated the difficulty in obtaining

indicies of objective data or behavioural criteria. This difficulty involves both the way in which indices can be calculated, and the collection of appropriate data. Problems were experienced in the present study in collecting a range of data across groups. Data were incomplete and not uniform in nature. Consequently when data were obtained (e.g., absenteeism indices), they were not suitable for purposes of analysis. The absence of objective behavioural criteria with which to compare results must be seen as a limitation to be overcome if possible in subsequent studies.

Maer (1978) states that consideration of practical significance levels must take place when *assessing indices obtained through analysis*. This is difficult in the present study due to the lack of reference material for comparative evaluation. The precise implication for differing group scores on dimensions is not known at this stage. However, a number of authors (e.g., Kelly & Nicholson, 1980) have stated that more positive IR relationships have been associated with similarities in perceptions. Where statistically significant results are indicative of differing perceptions of IRC, it would suggest that a degree of conflict or potential for such conflict exists. It also indicates a discrepancy in the functioning of IR structures perceived by one or more groups which should be addressed.

Areas of Future Research

In any scale there is a need for further replication to establish the equivalence of psychometric characteristics across different samples

(Anastasi, 1982). Future research should be conducted across a range of organisations and samples to determine the usefulness of the scale across industry and different samples. Such replication also contributes to enhancing the construct validity of the scale. Further, the establishment of a data bank with descriptive statistics such as means and standard deviations which can be utilised as standards for comparative purposes can only be accomplished through replication (Clegg & Wall, 1981).

There is a need to establish the relationship between in-company IRC and objective indices of IR (e.g., turnover, absenteeism, work stoppages, accidents) or other indicators of conflict/co-operation (e.g., attitudes). Further, the relationship between in-company IRC and organisational effectiveness should be established. Dastmalchian *et al.* (1982) have instituted such a study examining the relationship between management-union IRC and company performance. The benefits of in-company IRC could then be established for productivity as well as industrial relationships within concerns. There is also a need in this regard to examine the predictive nature of relationships between in-company IRC and measures of IR.

Organisational climate has been demonstrated to be a relatively enduring characteristic of organisations (Schneider & Reichers, 1983). The stability of in-company IRC could play a substantial role in its use as an assessment technique and possible predictor variable. The IIRCS provides an indication of climate which can be assessed in terms of a longitudinal study. This would involve repeated applications of the

instrument at intervals over an extended period. Assessment of the stability of the instrument over time could then be conducted. Alternatively, the measure should respond to a change strategy implemented by the organisation (e.g., the signing of a recognition agreement). The nature of change in in-company IRC as a consequence of a change in management strategy could therefore be assessed. Assessment of change indicates that in-company IRC could be usefully employed as an instrument in action research. The utility of the IIRCS as an indication of training success is another possible area of examination. Pre- and post-training evaluations could be conducted using the IIRCS on people who attend IR training programmes to assess whether it has had any impact in the work situation.

The IIRCS examines specified dimensions which have been detailed by a number of authors as constituting in-company IR. It is possible that consideration could be given to a number of other dimensions linked more with a Personnel function which are perhaps associated with IR (e.g., selection, induction, Black advancement, job evaluation, training and development) (Bluen et al., 1981). Further research could examine the possibility of extending the scale and developing items in accordance with new dimensions.

The link between IRC at the in-company level and IRC at the collective bargaining level needs to be established. Although a number of studies have examined climate between management and union officials (Dastmalchian et al., 1982; Nicholson, 1979; Rosen et al., 1981), very little emphasis has been placed on the assessment of employee

perceptions. Research assessing both forms of IRC could establish the congruency of the forms, and could also examine the extent to which collective bargaining can affect the conduct and perceptions of employees regarding in-company regulatory relationships. Further research is also needed to determine any other variables which can affect in-company IRC and to what extent these variables affect IRC generally. This would allow the placement of IRC within the framework of a system and allow for some interpretation of cause and effect relationships beyond climate.

Conclusion

> "There exists a "psychology of industrial relations", to which psychologists have contributed very little. The result is that the treatment of psychological factors in the scientific study of industrial relations consists mainly of ad hoc postulations almost at common sense level, rather than operationally measurable concepts articulated with the body of psychological theory. This is a missed opportunity, for adequate industrial relations theory requires some assumptions about the motivations of the parties, and the development of a scientific psychology of industrial relations could fill a significant gap" (Walker, 1979 p. 6).

The very nature of IR with its diverse content and complexity makes it a difficult area of research. However, the progressive influence of ongoing theory and research is likely to clarify the parameters of the "discipline" of IR and allow for greater understanding of conditions and processes influencing the interactions of the IR actors. An increasing

involvement of industrial psychologists is generating more extensive research into the variables affecting behaviour (Kelly & Nicholson, 1980; Stephenson & Brotherton, 1979). The present study of in-company IRC, like the research of Dastmalchian et al. (1982) and Nicholson (1979) represents an attempt to explore the realms of IR using industrial psychology concepts as tools for examination. Such research efforts do not provide a direct explanation of behaviour, but rather an understanding of the contribution of the research area to the ultimate nature of interactions within the organisation.

The present study therefore defined the context of in-company IR within an overall IR open system. The nature of in-company IR and its components were discussed and a psychometric measure developed for assessment and evaluative purposes. Utilisation of the IIRCS in identifying or predicting current or potential conflict is limited to the extent that such conflict is determined by a vast range of internal and external factors affecting the labour/management relationship. However, in providing an operationally measurable concept which can contribute to an understanding of the nature of IR interactions within organisations, the present study offers some contribution to a systematic theoretical framework with which to view IR.

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APPENDIX A

INDUSTRIAL RELATIONS AUDIT QUESTIONNAIRE

This questionnaire aims at finding out how you feel about aspects of industrial relations in this company. It gives you a chance to make your feelings known truthfully yet anonymously. All information will be strictly confidential.

The results of the questionnaires will be grouped together so we can know what people think of industrial relations generally. Please do not put your name on the questionnaire.

The questionnaire is not a test and there are no right or wrong answers. Please make sure that you answer all the questions. If you have any problems please ask the interviewers to help you.

Remember, we are trying to find out how you feel so please answer in an honest and open way.

Department:	Mining	☐
	Engineering	☐
	Metallurgy	☐
	Services	☐
	Administration	☐
Division:	North	☐
	South	☐
Race:	White	☐
	Black	☐
Sex:	Male	☐
	Female	☐

APPENDIX B

IN-COMPANY INDUSTRIAL RELATIONS CLIMATE SCALE

		To a great extent	To some extent	To a little extent
GRIEVANCE PROCEDURE				
1.	To what extent is it possible for workers to complain about their work problems in this company?	☐	☐	☐
2.	How thoroughly are grievances looked at?	☐	☐	☐
3.	To what extent are grievances handled fairly?	☐	☐	☐
4.	To what extent are grievances responded to in a satisfactory amount of time?	☐	☐	☐
5.	To what extent are grievances solved?	☐	☐	☐
6.	To what extent are reasons given for unresolved grievances?	☐	☐	☐
7.	How much does the grievance procedure help solve worker complaints?	☐	☐	☐
DISCIPLINARY PROCEDURE				
1.	To what extent are workers made aware of what disciplinary action can be taken against them if they commit an offence?	☐	☐	☐
2.	To what extent are worker offences properly investigated before disciplinary action is taken?	☐	☐	☐
3.	To what extent is evidence shown of what the worker has done wrong?	☐	☐	☐

	To a great extent	To some extent	To a little extent
4. To what extent are workers given the correct discipline for what they do wrong?	☐	☐	☐
5. To what extent can workers appeal against their discipline if they think it is unfair?	☐	☐	☐
6. To what extent is discipline applied in the same way to all workers?	☐	☐	☐
7. To what extent does the disciplinary procedure ensure fair disciplinary action?	☐	☐	☐
COMMUNICATIONS			
1. How up to date are workers kept on matters that affect their job (pensions, pay, promotions, etc.)?	☐	☐	☐
2. To what extent are the reasons for changes in the company explained to the workers?	☐	☐	☐
3. To what extent does the company inform workers of what they want to know?	☐	☐	☐
4. To what extent is it possible to obtain relevant information when you need it?	☐	☐	☐
5. To what extent is the information given by management to workers accurate?	☐	☐	☐
WORKER REPRESENTATION			
1. To what extent are worker's representatives appointed in a satisfactory manner?	☐	☐	☐
2. To what extent are representatives truly representative of the workforce?	☐	☐	☐
3. To what extent are workers able to approach their representatives?	☐	☐	☐

	To a great extent	To a some extent	To a little extent
4. How much do representatives help workers with *their problems*?	☐	☐	☐
5. To what extent do representatives take worker's problems to management?	☐	☐	☐
6. To what extent do representatives report back on what has been discussed with management?	☐	☐	☐
7. How acceptable are the outcomes of management/worker representative discussions to workers?	☐	☐	☐
SUPERVISION			
1. How easy to approach *is your supervisor*?	☐	☐	☐
2. To what extent is your supervisor willing to discuss problems?	☐	☐	☐
3. How much does your supervisor help you with your problems?	☐	☐	☐
4. To what extent is your supervisor capable of solving your problems?	☐	☐	☐
5. To what extent does your supervisor treat all workers fairly and equitably?	☐	☐	☐
PEER GROUP			
1. *How friendly and easy to approach are your* co-workers?	☐	☐	☐
2. To what extent do you discuss work-related matters with your co-workers?	☐	☐	☐
3. How much do your co-workers help you in solving your problems?	☐	☐	☐

	To a great extent	To some extent	To a little extent
4. To what extent are your co-workers concerned about what happens to each other?	☐	☐	☐
5. To what extent do you see yourself and your co-workers as members of a group?	☐	☐	☐
6. To what extent do your co-workers feel the same way as you about the company?	☐	☐	☐
COMPANY POLICY			
1. To what extent have workers been informed of company policy (the way management sees it's relationship with workers)?	☐	☐	☐
2. To what extent is the company policy acceptable to workers?	☐	☐	☐
3. To what extent does management live up to all its statements of how workers should be treated?	☐	☐	☐
4. To what extent are the views and opinions of workers considered when management decisions are made?	☐	☐	☐
5. To what extent has management succeeded in reducing hostility and conflict in this company?	☐	☐	☐
6. To what extent is this company a fair and just employer?	☐	☐	☐
7. To what extent is the company's approach to worker/management relations the right one?	☐	☐	☐
8. To what extent has the company succeeded in establishing a good relationship with its workers?	☐	☐	☐

APPENDIX C

ORGANISATIONAL COMMITMENT

		To a great extent	To some extent	To a little extent
1.	I am quite proud to be able to tell people who it is I work for.	☐	☐	☐
2.	I sometimes feel like leaving this employment for good.	☐	☐	☐
3.	I'm not willing to put myself out just to help the organisation.	☐	☐	☐
4.	Even if the firm were not doing too well financially, I would be reluctant to change to another employer.	☐	☐	☐
5.	I feel myself to be part of the organisation.	☐	☐	☐
6.	In my work I like to feel I am making some effort, not just for myself but for the organisation as well.	☐	☐	☐
7.	The offer of a bit more money with another employer would not seriously make me think of changing my job.	☐	☐	☐
8.	I would not recommend a close friend to join our staff.	☐	☐	☐
9.	To know that my own work had made a contribution to the good of the organisation would please me.	☐	☐	☐

APPENDIX D

GENERAL JOB SATISFACTION

ITEMS	To a great extent	To some extent	To a little extent
1. Generally speaking, I am satisfied with this job.	☐	☐	☐
2. I frequently think of quitting this job.	☐	☐	☐
3. I am generally satisfied with the kind of work I do in this job.	☐	☐	☐
4. Most people on this job are very satisfied with the job.	☐	☐	☐
5. People on this job often think of quitting.	☐	☐	☐

APPENDIX D

GENERAL JOB SATISFACTION

ITEMS	To a great extent	To some extent	To a little extent
1. Generally speaking, I am satisfied with this job.	☐	☐	☐
2. I frequently think of quitting this job.	☐	☐	☐
3. I am generally satisfied with the kind of work I do in this job.	☐	☐	☐
4. Most people on this job are very satisfied with the job.	☐	☐	☐
5. People on this job often think of quitting.	☐	☐	☐

APPENDIX E

GRIEVANCE PROCEDURE - ALPHA OF SCALE IF ITEMS DELETED

Form	Question	Language				
		Sotho	Xhosa	Fanakalo	Afrikaans	English
Original	1	0,69	0,64	0,52	0,87	0,78
	2	0,62	0,54	0,51	0,84	0,80
	3	0,65	0,54	0,51	0,85	0,79
	4	0,64	0,59	0,57	0 84	0,79
	5	0,66	0,57	0,53	0,84	0,81
	6	0,70	0,59	0,55	0,83	0,81
	7	0,67	0,59	0,58	0,83	0,82
	8	0,68	0,64	0,61	0,84	0,79
	9	0,70	0,63	0,59	0,87	0,86
Form 1	1	0,67	0,66	0,55	0,84	0,72
	2	0,59	0,56	0,53	0,80	0,74
	3	0,64	0,55	0,54	0,82	0,74
	4	0,62	0,61	0,60	0,81	0,74
	5	0,64	0,58	0,55	0,81	0,77
	6	0,70	0,61	0,59	0,79	0,76
	7	0,65	0,61	0,60	0,78	0,78
	9	0,68	0,66	0,61	0,84	0,82
Optimal	1	0,69	0,69	0,55	0,86	0,78
	2	0,59	0,58	0,53	0,80	0,79
	3	0,64	0,58	0,55	0,82	0,78
	4	0,61	0,63	0,62	0,82	0,78
	5	0,65	0,61	0,57	0,82	0,82
	6	0,71	0,63	0,60	0,80	0,82
	7	0,65	0,64	0,62	0,79	0,83

APPENDIX F

DISCIPLINARY PROCEDURE - ALPHA OF SCALE IF ITEMS DELETED

Form	Question	Language				
		Sotho	Xhosa	Fanakalo	Afrikaans	English
Original	1	0,65	0,46	0,46	0,71	0,81
	2	0,59	0,46	0,38	0,60	4
	3	0,56	0,47	0,34	0,60	.5
	4	0,59	0,50	0,50	0,61	0,83
	5	0,61	0,59	0,43	0,64	0,82
	6	0,63	0,55	0,45	0,60	0,79
	7	0,60	0,44	0,39	0,61	0,80

APPENDIX G

COMMUNICATIONS - ALPHA OF SCALE IF ITEMS DELETED

Form	Question	Language				
		Sotho	Xhosa	Fanakalo	Afrikaans	English
Original	1	0,63	0,56	0,45	0,51	0,68
	2	0,62	0,57	0,44	0,49	0,72
	3	0,63	0,54	0,59	0,45	0,68
	4	0,64	0,56	0,49	0,48	0,75
	5	0,72	0,64	0,65	0,72	0,78
	6	0,68	0,59	0,54	0,59	0,68
		0,58	0,57	0,54	0,50	0,75
Form 1		0,68	0,59	0,59	0,68	0,7
	2	0,65	0,60	0,56	0,67	0,74
	3	0,67	0,55	0,59	0,64	0,71
	4	0,69	0,61	0,61	0,66	0,79
	6	0,73	0,64	0,64	0,74	0,73
	7	0,64	0,60	0,63	0,70	0,78
Optimal	1	0,69	0,60	0,57	0,76	0,68
	2	0,67	0,59	0,55	0,74	0,67
	3	0,69	0,55	0,58	0,71	0,63
	4	0,71	0,61	0,61	0,73	0,70
	7	0,64	0,59	0,63	0,77	0,72

APPENDIX H

EMPLOYEE REPRESENTATION - ALPHA OF SCALE IF ITEMS DELETED

Form	Question	Language				
		Sotho	Xhosa	Fanakalo	Afrikaans	English
Optimal	1	0,68	0,55	0,52	0,84	0,73
	2	0,67	0,51	0,52	0,85	0,66
	3	0,69	0,60	0,58	0,85	0,69
	4	0,65	0,48	0,58	0,81	0,67
	5	0,70	0,53	0,56	0,83	0,66
	6	0,71	0,51	0,55	0,83	0,69
	7	0,67	0,55	0,55	0,83	0,77

APPENDIX I

SUPERVISION - ALPHA OF SCALE IF ITEMS DELETED

Form	Question	Language				
		Sotho	Xhosa	Fanakalo	Afrikaans	English
Original	1	0,55	0,41	0,49	0,67	0,74
	2	0,59	0,31	0,41	0,65	0,75
	3	0,54	0,37	0,43	0,64	0,73
	4	0,52	0,37	0,38	0,68	0,79
	5	0,69	0,72	0,73	0,82	0,87
	6	0,57	0,47	0,43	0,69	0,76
	7	0,53	0,38	0,38	0,66	0,77
Optimal	1	0,63	0,73	0,74	0,75	0,79
	2	0,69	0,65	0,65	0,76	0,81
	3	0,59	0,71	0,64	0,74	0,76
	4	0,60	0,71	0,66	0,75	0,85
	7	0,64	0,69	0,61	0,75	0,85

APPENDIX J

PEER GROUP - ALPHA OF SCALE IF ITEMS DELETED

Form	Question	Language				
		Sotho	Xhosa	Fanakalo	Afrikaans	English
Original	1	0,55	0,42	0,40	0,69	0,61
	2	0,50	0,40	0,42	0,76	0,66
	3	0,60	0,40	0,53	0,73	0,64
	4	0,54	0,34	0,37	0,70	0,65
	5	0,57	0,32	0,49	0,66	0,54
	6	0,56	0,35	0,39	0,68	0,61
	7	0,53	0,54	0,48	0,71	0,62
Optimal	1	0,56	0,39	0,47	0,69	0,62
	2	0,52	0,35	0,48	0,76	0,62
	4	0,56	0,28	0,43	0,69	0,60
	5	0,59	0,27	0,52	0,63	0,50
	6	0,58	0,26	0,46	0,67	0,59
	7	0,50	0,52	0,49	0,70	0,69

APPENDIX K

POLICY - ALPHA OF ITEMS DELETED

Form	Question	Language				
		Sotho	Xhosa	Fanakalo	Afrikaans	English
Optimal	1	0,68	0,65	0,80	0,87	0,87
	2	0,68	0,70	0,81	0,84	0,87
	3	0,70	0,69	0,79	0,83	0,85
	4	0,71	0,66	0,81	0,85	0,85
	5	0,74	0,68	0,80	0,82	0,85
	6	0,71	0,67	0,80	0,85	0,83
	7	0,67	0,66	0,79	0,84	0,82
	8	0,69	0,68	0,79	0,83	0,83

APPENDIX L

ITEMS ELIMINATED FROM THE IN-COMPANY INDUSTRIAL RELATIONS CLIMATE SCALE

Grievance Procedure

To what extent are unresolved grievances communicated to management?

To what extent are workers scared to report a grievance because they might be victimised?

Communications

How difficult is it to understand what management tells workers?

To what extent is it possible to discuss or question information that is told to workers?

Supervisors

To what extent does your supervisor treat people under him without considering how they feel?

How much trust and confidence does your supervisor have in his workers?

Peer Group

To what extent is there argument among co-workers?

Author Donald Craig Hugh Maxfield
Name of thesis Evaluating In-company Industrial Relations Climate. 1985

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