

FRATERNAL RELATIVE DEPRIVATION :  
THE COGNITIVE VS AFFECTIVE DISTINCTION  
AND PROTEST ORIENTATION AMONG  
INDIAN SOUTH AFRICANS

BY

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### ABSTRACT

The study examined the differential effect of cognitive and affective fraternal relative deprivation (RD) on protest orientation. The subjects were 120 Indian adults comprising 60 professionals and 60 non-professionals. Cantril's (1965) ladder was used to tap cognitive fraternal RD. A list of six emotions gauged affective fraternal RD and the Muller (1972) and Grofman and Muller (1973) measure of potential for collective violence assessed protest orientation. Results show that blacks are perceived to be worse-off, whites better-off and coloureds similar to the ingroup. Professionals experience a greater absence of cognitive fraternal RD than non-professionals when the target comparison groups are blacks and coloureds, and greater affective fraternal RD than non-professionals when the target comparison groups are blacks and whites. To examine the effect of cognitive fraternal RD, affective fraternal RD and occupational status on protest orientation, a stepwise multiple regression analysis was conducted. The model revealed that 35% of the variance was significantly accounted for ( $p < 0.05$ ). The affective component contributed the greater proportion of the variance. The results highlight the importance of differentiating the cognitive from the affective component of fraternal RD. The limitations of the study are considered and directions for future research are offered.

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## CHAPTER 1

### INTRODUCTION

The South African social context is often seen in terms of intergroup relations where disadvantaged groups interact with advantaged groups.

Within social psychology, relative deprivation (RD) is a theoretical concept that has been often used to analyze contexts of perceived injustices and unequal groups. The term RD generally implies that if an individual compares himself or herself with another individual, who is perceived to be in a better-off situation, then the individual will feel relatively deprived compared to the referent individual. An important aspect of RD is that it is not the absolute or objective level of deprivation that is used but rather it is the deprivation or achievement relevant to some standard employed by the individual.

The usefulness and popularity of the concept of RD as a tool for examining social contexts is evident in studies which have linked RD to ethnic or racial attitudes (Appelgryn and Nieuwoudt, 1988; Tripathi and Srivastava, 1981; Abeles, 1976), and to political and social protest actions (Walker and Mann, 1987; Crawford and Naditch, 1970; Caplan, 1970). South Africa represents an appropriate context in which to examine RD and protest activity, given the

nature of injustices along group lines. This study is an attempt to apply aspects of relative deprivation theory to Indian South Africans. Moreover, RD at the intergroup level may provide valuable insights into the manner in which, for example, Indian South Africans experience RD. In this regard, this study may provide some broader understanding of some of the mechanisms underlying intergroup conflict in South Africa.

The sections that follow, in the present chapter, constitute an evaluation of the conceptual history of relative deprivation theory (RDT).

### 1.1 Conceptual Outline

The term RD was initially coined by Stouffer, Suchman, DeVinney, Star and Williams (1949) as an explanatory term for equivocal findings in their research investigation of the American army. It was found, for example that soldiers' expressed feelings of dissatisfaction when the objective situation seemed unlikely to elicit such feelings. This in turn led to four major attempts by Davis (1959), Runciman (1966), Gurr (1970) and Crosby (1976) to incorporate RD into a more meaningful theoretical framework. These attempts constitute the major conceptual shifts that have occurred in the writings on RDT.

The next section commences with Stouffer's (1949) use of RD and is followed by a critique of the four major formulations and the present status of RD. Given the need for some brevity, this analysis will not entail an exhaustive perusal of the various conceptualizations of RD. Nevertheless, the following discussion represents an adequate account of the conceptual background of RDT necessary for the purposes of the present study. ✓

#### 1.1.1 STOUFFER'S USE OF RD

A large scale social psychological study of the American army was conducted by Stouffer and his colleagues (1949). These researchers investigated the attitudes of soldiers toward army life. In this regard the researchers focussed their attention on the relationships that existed between such variables as age, marital status, education and attitude towards promotion and being called up for military service. The findings of this study are documented in the four volumes of The American Soldier. These findings indicate the existence of disparate and anomalous relationships between the variables that were under consideration. Merton and Kitt (1950) quote nine examples from The American Soldier that illustrated situations where RD was used to explain these anomalous relationships, for example, Air Corps members expressed greater discontent about

chances of promotion, despite promotions being rapid and frequent in this sector of the army compared to members of the military police, where promotions were conspicuously the worst in the army. The military police were not as critical about promotion opportunities. Furthermore, soldiers who had attained high school or college qualifications were less optimistic about promotions in the army than their less educated counterparts. Soldiers from the south who were exposed to living under racial oppression were expected to hold more negative attitudes toward the army than soldiers from the north. However, the morale of these southern soldiers was as good as, and at times better than the morale of soldiers from the north.

In order to analyze the way Stouffer et al (1949) used RD, in the examples cited, Merton and Kitt (1950) suggested that the various categories of soldiers, whether married or single, from the north or south, in the Air Corps or Military Police, may be considered to be independent variables. Their attitude toward promotion and being called up for military service may be regarded as dependent variables. The examples extracted from The American Soldier, illustrates the anomalous relationship that existed between the independent variables and the dependent variable. The question that arises is how

can one account for these findings? It was at this point that the concept of RD was introduced. The main role it played was that of an "interpretative intervening variable" (Merton and Kitt, 1950, p. 43).

To illustrate, an example from The American Soldier, where it was found that married men held more negative attitudes than unmarried men toward being called up for military service, the analysis may be formulated as follows:

The married soldier (IV) frequently challenged being called up for military service (DV) because he evaluated the situation by comparing himself (interpretative variable) with other married men in civilian life who had escaped being called up for military service. The married soldier also experienced grievance when he compared his lot to that of single soldiers who did not have to make the same sacrifices that the married soldier had to make.

In a similar manner, it was suggested that in the Air Corps, the high rate of promotions, inspired greater expectations which when not fulfilled, led to feelings of dissatisfaction. In other words, members of the Air Corps, that did not obtain promotions compared their situation with those members that did, thereby evoking feelings of discontent. On

the other hand, members of the Military Police where promotions were infrequent did not feel so badly about not receiving promotions, as there were a large number of their colleagues that shared a similar fate. The better educated soldier had greater expectations to achieve some sort of position in the army than his less educated counterpart. His failure to attain a rank made him feel that he had lost esteem in his own eyes and in the eyes of his friends. Taylor and Moghaddam (1987) suggested that black soldiers in the south compared their situation with civilians living in the south who were treated shabbily. By comparison, the position of a soldier held some dignity and status. On the other hand, black soldiers from the north experienced discontent as they compared their situation with black civilians living in the north, who enjoyed having better paid jobs in war-related factories.

It may be observed that in all these example RD has been used as a post hoc explanatory term. One of the problems with Stouffer's use of RD is the inability to predict beforehand which comparison other will be chosen and the resultant feelings. It is equally plausible that black soldiers from the south may have compared their situation to black soldiers from the north, or members of the Military Police may have compared their situation with Air Corps mem-

bers. The predictive power of RD needs to be established, through exploring the mechanisms that underlie social comparisons (Taylor and Moghaddam, 1987). Moreover, Merton and Kitt (1950), point out that the nine examples of RD found in The American Soldier, lend themselves to reference group behaviour, a link which Stouffer et al (1949) have failed to draw.

It is this issue of social comparison that has plagued the writings of RD. This shortcoming was initially recognised by Merton and Kitt (1950) and more recently, Taylor and Moghaddam (1987) have taken up this issue. There are two related facets : multiple group affiliation and multiple reference groups. To elaborate, at any given time, an individual belongs to any number of membership groups, for example, religious, occupational, racial and at the same time, there are a number of potential reference groups with which to compare one's situation. The question that arises is, under what circumstances will any one of these membership groups become salient and with whom will the individual compare his or her situation? RD as it appeared in The American Soldier, cannot provide answers to these questions. In all instances where RD appeared it was used as an "interpretative intervening variable" (Merton and Kitt, 1950, p. 43). RD served only to provide ad hoc explanations for disparate empirical



findings. In order for RD to be more meaningful, it's predictive ability has to be asserted. This suggests that theory and research must be directed toward exploring the dynamics of reference group selection (Merton and Kitt, 1950).

Merton and Kitt (1950) and Runciman (1966) pointed out that nowhere in the writings of Stouffer et al (1949) does a formal definition of RD appear. However, Merton and Kitt (1950) conceded that the situations where RD was used to explain inconsistent findings, are clearly identifiable. Moreover, they pointed out that the researchers prudently restricted the interpretative and explanatory use of RD within the context of the American army.

Merton and Kitt (1950) suggested that the usefulness of the concept of RD may be extended and incorporated in social theory and research. However, Davis (1959) contended that the writings on RD as it appeared in The American Soldier and the subsequent critique by Merton and Kitt (1950) failed to provide a theoretical base for future research in this area.

#### 1.1.2 DAVIS' (1959) FORMAL INTERPRETATION OF THE THEORY OF RD

Davis (1959) formulated a theory that attempted to delineate the examples of RD which were initially extracted by Merton and Kitt (1950) from The Ameri-

can Soldier. Davis (1959) quoted eleven examples of RD, adding two more to the list of nine by Merton and Kitt (1950).

Davis (1959) based his theory on six assumptions. According to the first assumption any population may be divided into those that possess X (an entity desired by members of that population) who are the non-deprived and those that do not possess X, the deprived. The individual was referred to as ego and the comparison other, as alter. In order to facilitate understanding of his theory, Davis (1959) made use of a comparison matrix (Table 1) that illustrated the possibilities that exist when ego compared himself or herself with alter. In Table 1, cell a, represents the situation where a deprived individual (ego) compares his or her situation with a deprived alter (comparison other). Cell b, constitutes RD where a deprived ego compares his or her situation with a non-deprived alter. Cell c represents the situation where a non-deprived ego compared his or her situation with a deprived alter and cell d, where a non-deprived ego compared his or her situation with a non-deprived alter.

TABLE 1 : COMPARISON MATRIX WHEN EGO COMPARES  
HIS OR HER SITUATION WITH ALTER

		ALTER	
		DEPRIVED	NON-DEPRIVED
EGO	Deprived	a	b
	Non-deprived	c	d

(Davis, 1959, p. 281).

Assumption two of Davis' (1959) theory states that within a given population the comparisons that occur are random. He qualified this by pointing out that there existed inadequate empirical data to suggest how people made comparisons and unless a more complex suggestion is offered, assumption two would have to suffice.

The third assumption referred to ingroup comparisons. When a deprived individual compared himself or herself with a non-deprived individual, the result will be an experience of "relative deprivation." On the other hand when a non-deprived individual compared his or her situation with that of a deprived individual the result will be an experience of "relative gratification".

Fourthly, Davis (1959) suggested that the individual who experienced either RD or relative gratification was aware that there was differential treatment

within the ingroup. Davis (1959) called this "fairness".

Assumption five relates to outgroup comparisons. When a deprived individual compared himself or herself with a non-deprived out-group member, the result will be an experience of "relative subordination." When a non-deprived individual compared himself or herself with a deprived outgroup member, the result will be an experience of "relative superiority."

The final assumption stipulates that an individual experiencing either relative subordination or relative superiority will also experience a feeling that his or her situation is different from that of the outgroup. According to Davis (1959) this is called "social distance".

Generally, Davis (1959) only considered comparisons with a similar other.

Despite Merton and Kitt (1950) drawing attention to reference group behaviour which is inherent in the examples of RD found in The American Soldier, Davis (1959) completely ignored this distinction. For Davis (1959) what constitutes outgroup comparison is actually inter-individual comparison: Where an individual compares his or her situation with that of another individual who happens to belong to

another membership group. This shortcoming seriously undermines the potency of Davis' (1959) theory as a means of offering an explanation of RD at the intergroup level. In order to embrace intergroup comparisons an individual ought to compare the position or situation of his or her membership group with that of an outgroup.

Davis' (1959) theory succeeds in so far as it represents an attempt to codify the examples of RD found in The American Soldier. However, to be accepted as more useful a theory ought to predict, situations in which RD is likely to occur and not review in an ad hoc manner situations where RD had already occurred (Taylor and Moghaddam, 1987).

#### 1.1.3 RUNCIMAN'S (1966) FRATERNAL VS EGOISTIC RELATIVE DEPRIVATION

Runciman's (1966) study of attitudes towards social inequality, was a major step towards refining issues related to RD. Most importantly, this work attempted a definition of RD, reference group behaviour and a distinction between individual and group RD

Runciman (1966) acknowledged that a precise definition of RD is problematic. However, according to his theory, "A is relatively deprived of X when (i) he does not have X, (ii) he sees some other person or persons, which may include himself at some previous

or expected time, as having X (whether or not this is or will be in fact the case), (iii) he wants X, and (iv) he sees it as feasible that he should have X" (Runciman, 1966, p. 10). It may be observed that the element of social comparison is removed when the individual compared his or her situation with their own situation in the past or at some future time. Runciman (1966) does not hesitate to point out that his study was mainly concerned with groups which by definition lends itself to a study of reference group behaviour. However, of importance is what Runciman (1966) referred to as the "comparative reference group". This is the group whose situation or attributes a person contrasts with his or her own group. This may be acknowledged as the first attempt in RDT to delineate the comparative component of reference group behavior, moreover, it suggests intergroup comparison. The distinction between interindividual and intergroup comparisons may be depicted in the following table.

TABLE 2 : REPRESENTATION OF GROUP VS INDIVIDUAL  
COMPARISONS

	RD DUE TO ONE'S POSITION WITHIN A GROUP	
	SATISFACTION	DISSATISFACTION
RD due to group's position in society	A	B
	C	D

(Runciman, 1966, p. 33).

Referring to Table 2, RD of type B and C is the main concern of RDT, whereas type A represents the individual who is satisfied with his or her position within their membership group and with the position of their membership group within society. An individual experiencing type D is with their position within their membership group and dissatisfied with the position of their group within society. Runciman (1966) placed greater emphasis on RD of type B and C. Type B represents the individual who is satisfied with the position of his or her group in society but is dissatisfied with their personal position within the group when it is compared with that of another individual in a better-off position. According to Runciman (1966), the individual will be motivated to change his or her own personal status even if it means moving out of their membership group. Type C, is the form of RD that involves the individual who is satisfied with his or her personal position

within a group, but is dissatisfied with the position that his or her group occupies in the existing status quo. Runciman (1966) considers this type of RD to be more prevalent in the working class. To illustrate this, consider a factory worker who is conscious of belonging to the working class, and does not want to move out of this group, but when he or she considers the situation of a better rewarded group which should be no better than "people like us" (Runciman, 1966, p. 32). This represents group RD which may be contrasted to RD of type B, where the individual compares his or her situation with a better-off other who is no better than "people like me" (Runciman, 1966, p. 32), thereby representing deprivation at a personal level.

Runciman (1966) referred to these two types of RD as 'egoistic' RD (type B) and 'fraternal' RD (type C). In the latter situation the individual will strive to change the position that his or her group occupies in the existing status quo. Runciman (1966), states that fraternal forms of RD "play the largest part in the transformation of an existing structure of social inequalities" (Runciman, 1966, p. 34). In other words, the potential value of fraternal RD may be harnessed in attempts to evaluate the psychology of intergroup behavior. In this regard, fraternal RD may be considered to play a significant role in



explicating why groups attempt to change the structural intergroup position within a society that consists of unequal groups.

According to Walker and Pettigrew (1984), the move from Stouffer et al (1949) to Runciman (1966) has been a social one, culminating in the conceptual distinction between egoistic and fraternal RD, however, subsequent theorists, Gurr (1970) and Crosby (1976) consider only egoistic RD even when dealing with what potentially appears to be fraternal forms of RD.

#### 1.1.4 GURR'S THEORY OF REBELLION

Gurr (1970), a political theorist, suggested RD as a predisposing factor in political violence. His book, "Why Men Rebel", documents his research work and theoretical postulations. Furthermore, it illustrates the growth of the concept of RD into a more comprehensive theory.

Drawing upon the work of Dollard, Doob, Miller, Mowrer and Sears (1939), Gurr (1970) stipulated that the frustration-aggression relationship forms the psychological mechanism behind the intensity of RD and the potential for political violence. Gurr (1970) emphasized the subjective perception of deprivation which may not coincide with the individual's objective situation. Moreover, RD was defined

"as actors' perceptions of discrepancy between their value expectations and their value capabilities" (Gurr, 1970, p. 24). According to Gurr (1970), value expectations are those possessions and circumstances of life that individuals believe they deserve, while value capabilities are those possessions and circumstances individuals believe they can acquire and retain. Furthermore, RD was regarded as the tension that developed when there was a disparity "between the 'ought' and the 'is' of collective value satisfaction, and that disposes men to violence" (Gurr, 1970, p. 23). In this regard, Gurr (1970) outlined three patterns of RD that lead to political violence: (i) decremental deprivation, occurred when a group's value expectations remain relatively constant but their value capabilities were perceived to decline; (ii) aspirational deprivation occurred when value capabilities remained stable but expectations increase or intensified, and (iii) progressive deprivative occurred when there was substantial and simultaneous increase in expectations and a decrease in capabilities. According to Gurr (1970) an increase in RD increased the likelihood of conflict.

It has been found that only progressive RD or what has come to be known as the "J-curve, (Korpi, 1974; Davis, 1962, 1969), is most strongly related to the occurrence of conflict or political violence. Fur-

thermore, Korpi (1974) points out that an increase in aspirational RD will only contribute negligibly to the probability of conflict while decremental RD will be associated with a decrease in the probability of conflict. If all three patterns are considered together then the correlation between RD and conflict will be minimal. A point of criticism of Gurr's theory, is that it fails to take cognisance of the fact that all three patterns of RD are differentially related to political violence. This oversight by Gurr (1970) seriously questions the potency of his theory of conflict. Moreover, Gurney and Tierney (1984) find Gurr's type of formulation problematic. They claim that the nature of the relationship between the objective situation and perceptions is never clearly delineated. These critics point out that this is due to theorists making distinctions among patterns and types of RD without really stating explicitly what the distinctions mean and how they should be measured. This issue tends to confuse rather than clarify RD (Gurney and Tierney, 1984).

Gurr (1970) does not pay much attention to the issue of social comparison which is inherent in any formulation of RD. He claims that the definition of RD, as laid down by his theory, makes no assumptions about the sources of value expectations which may

include the individual's own past circumstance, an abstract ideal, standards which may have been established by a leader or a "reference group". The latter component is not addressed by Gurr (1970), and his theory did not advance the relationship between RD and comparison choice.

An issue of singular importance and a major point of criticism of Gurr's (1970) work, is his failure to distinguish between inter-individual behavior and inter-group behaviour. In referring to political violence, Gurr (1970) states that "In this study political violence refers to all collective attacks within a political community against the political regime, its actors-including competing political groups..." (Gurr, 1970, p. 3-4). This clearly depicts what could be called intergroup behavior. In many instances Gurr (1970) refers to "group" activities, even when explaining the patterns of RD. However, Gurr (1970) maintains that "... the basic unit of analysis is the individual..." (Gurr, 1970, p. 83). Walker and Pettigrew (1984) are harsh in their criticism of Gurr's (1970) inability to differentiate egoistic from fraternal RD. As they point out, Gurr (1970) fails to see that there is a qualitative difference between the "infidelity of a spouse" and "the decline of a group's status" (Gurr,

1970, p. 29 quoted in Walker and Pettigrew, 1984, p. 303).

When one considers political violence it usually concerns conflict between groups, this was even recognised by Gurr (1970). Therefore, it would seem appropriate that the group form of RD, fraternal RD, be considered as the appropriate means of studying collective action. Gurr's (1970) failure to take into consideration the conceptual difference between personal and group RD, seriously limits the potency of his theory in offering an explanation for collective violence, which may be deemed an intergroup phenomenon.

#### 1.1.5 CROSBY'S (1976) MODEL OF EGOISTIC RD

Like her predecessors, Stouffer et al (1949), Davis (1959), Runciman (1966) and Gurr (1970), Crosby (1976) states that "deprivation is relative, not absolute" (Crosby, 1976, p. 85). Furthermore, Crosby's (1976) work is an attempt to integrate the tenets of Davis' (1959), Runciman's (1966) and Gurr's (1970) theories into one model. In this regard she evaluates the postulations of these theorists. According to Crosby (1976), Davis (1949) suggests an experience of RD when the individual who lacks X (where X is any entity desired by the individual), (1) perceives that a similar other possess-

es X, (2) must have a desire to possess X and (3) feel entitled to the possession of X. If any one of these conditions are not met then RD is not experienced. For Runciman (1966), in addition to the above conditions, the individual must envisage that it is feasible to possess X. In contrast, Gurr (1970) proclaims that RD is experienced when the individual believes that it is not feasible to possess X while Davis (1959) considers feasibility to be inconsequent.

Crosby (1976) delineated five necessary preconditions which had to be met before RD was experienced. Furthermore, Crosby (1976) stipulated that her model referred only to the individual who did not possess a desired X, thereby restricting her model to personal RD. According to Crosby's (1976) model of egoistic RD, "The person who lacks X must :

1. see that someone else (other) possesses X,
2. want X,
3. feel entitled to X,
4. think it feasible to obtain X, and
5. lack a sense of personal responsibility for not having X." (Crosby, 1976, p. 90).

Crosby's empirical testing of these preconditions culminated in her study of working women (Crosby, 1982). The findings of this study led to the revision of the original model. Crosby (1982) then

suggested that only two preconditions for RD are necessary: (1) a disparity between actual outcomes and those outcomes that are desired and (2) a disparity between actual outcomes and those outcomes that are deserved.

According to Walker and Pettigrew (1984), Crosby (1976) succeeds at a theoretical level to "formalize the relationships between the antecedent conditions of relative deprivation, behavioral dependent variables and the mediating variables" (Walker and Pettigrew, 1984, p. 304). However, despite Crosby (1976) quoting Runciman's (1966) work on egoistic vs fraternal RD, Crosby like Gurr (1970), looks at what potentially is fraternal RD in individualistic terms, for example in reference to violence against society (Walker and Pettigrew, 1984).

To progress to studying social or intergroup behavioral phenomena, it is futile to use a theory that only specifies behavior at the individual level. Crosby (1976) mentions group membership and the subsequent socialization into believing that group membership is associated with certain privileges. The importance of intergroup comparison and RD is not pursued by Crosby (1976). As Walker and Pettigrew (1984) point out, explaining intergroup beha-

viour using theories that potentially deal with individual behavior lends itself to reductionism.

#### 1.1.6 THE ISSUE OF REDUCTIONISM IN SOCIAL PSYCHOLOGICAL THEORIES

Social psychology has been criticized for neglecting the "social" aspect from its field of study. Evidence of this may be obtained from the vast body of research and theory that considers individual behavioral processes as the unit of analysis for intergroup behavior. This may be illustrated by theories that have developed concepts at the individual level, employing the same tools to explain intergroup or social phenomena (Taylor and Brown, 1979). A parallel may be drawn with the development of RDT. Most conceptualizations of RD, with the exception of Runciman (1966), has been at the level of the individual. Yet, RDT claims to suggest why disadvantaged groups participate in collective action to bring about social change (de la Rey, 1991).<sup>x</sup> This points to reductionism in individualistic conceptualizations of RD, where findings, data and concepts from the individual level are extrapolated to explain intergroup phenomena. With regard to Gurr's theory of RD, such an extrapolation may be due to its direct descent from the frustration-aggression theory. This theory is basically individualistic in orientation, it only considers inner drives that



motivate an individual while neglecting the role played by the pervasive belief system in society or laws that govern its functioning (de la Rey, 1991). As Tajfel (1972) points out there is a qualitative difference between a frustrated individual and the discontent experienced by a group motivated to participate in collective action.

A more recent contribution toward RDT, has been offered by Crosby (1976, 1982), who only considers egoistical RD. Crosby refers to violence against society using the individual as the focus. A further depiction of an instance where micro or individual level of analysis is used to explain events at a macro or social level (Walker and Pettigrew, 1984).

It may be deemed feasible to suggest at this point that all individualistic conceptualizations of RD that attempt to explain intergroup behavior are limited in their capacity to offer a meaningful explanation. A prerequisite would be a change in the focus of theory and research. This is not to say that research and theory directed at the individual level is of no value, however, to deal with social phenomena the focus has to change to incorporate clearly defined intergroup behavioral processes.

#### 1.1.7 RD AND SOCIAL IDENTITY THEORY (SIT)

In response to the criticism of individualism, in social psychology, Tajfel and his colleagues (1978, 1981) formulated the SIT, which acted as a springboard to redirect focus on intergroup behavior. As de la Rey (1991) points out, the most significant contribution offered by SIT has been to consider inter-individual behavior as being qualitatively different from intergroup behavior at the psychological level.

A review of RDT by Walker and Pettigrew (1984), suggests that RD may offer a valuable contribution to SIT. The following discussion centres around a brief appraisal of the postulations that inform the theoretical link between RDT and SIT.

It may be acknowledged that individuals belong to clearly defined membership groups. This in and of itself is meaningless, group membership has a value which may only be ascertained through the process of social comparison. According to SIT individuals strive to acquire a positive social identity, i.e., that part of the self concept that is derived from belonging to a certain membership group. This membership group must possess positive characteristics, implying that the group must occupy a high position in the status hierarchy. If the outcome of social comparison suggests that one's membership group has

a low status this in turn leads to a negative social identity. The individual is subsequently motivated to either change the dimension of comparison or change his or her membership group.

By definition, RD involves the process of social comparison. When considering intergroup or social behavior, fraternal RD (where an individual compares the position of his or her membership group with that of an outgroup along some defined evaluative dimension) is most informative. The informative nature of fraternal RD is to be found in its focus on intergroup behavior. SIT's focus on intergroup behavior lends itself to this issue because it is through social comparison with an outgroup that an individual acquires either a negative or positive social identity. As Runciman (1966) pointed out, it was fraternal RD that led to collective action, i.e., when a group directed efforts to change the social structure to enable their membership group to occupy a better-off position. In terms of SIT an individual whose membership group leads to a negative social identity will strive to change the position of that group on the status hierarchy. However, the issue of social comparison remains problematic in RDT and SIT in that (among other things) how the comparison other is chosen is not clearly defined. Therefore, this area needs to be

researched and refined more clearly before SIT can formerly incorporate RD into its theoretical embrace.

Theorists have suggested that RD may provide valuable insights into understanding collective action, provided that one considers the conceptual distinction drawn by Runciman (1976) to differentiate personal (egoistic) RD from group (fraternal) RD. It is the group form of RD or fraternal RD that may prove most instructive when exploring intergroup behavior at both the level of theory and research. Fraternal RD may provide a useful vehicle for explaining why disadvantaged groups challenge the existing status quo and why the experience of fraternal RD is more likely to lead to participation in collective action.

## 1.2 Overview

Given the apparent advantages of the theoretical distinction between fraternal and egoistic RD, such a distinction will form the basis of the theoretical approach adopted in this study. Due to the present study's focus on perceptions and feelings at the intergroup level it will focus primarily on fraternal RD. In this regard the study tries to avoid the tendency towards reductionism. To ensure a focus at

the intergroup level of analysis, attempts will be made to render the individual's social identity salient.

A review of the research literature that has attempted to utilize RD will form the basis of Chapter 2. Particular emphasis will be placed on the shortcomings of the various studies, and the chapter concludes with a rationale for the present research investigation.

## CHAPTER 2

### MOTIVATION

#### 2.1 LITERATURE REVIEW

The development of RD at a theoretical level was paralleled by the accumulation of empirical finding. The following chapter elucidates the initial use of RD in the American Civil Rights Movement, which was to form the backdrop for issues that were to span the RD research arena during the 70's and 80's. The path traversed by RD research and theory during this time, to say the least, has been a thorny one. It is hoped that a more informed RDT can give new impetus for RD research during the 90's.

##### 2.1.1 DAVIS' AND GURR'S 'J-CURVE' OF CIVIL STRIFE

Davis (1962, 1969) and Gurr (1968, 1970), initially drew attention to the usefulness of RD as an explanatory concept for civil strife. Davis' (1962, 1969) research on revolutions consisted of a review of some major uprisings that occurred in history, for example, the French, Russian and Nazi revolutions, the American Civil War and the Egyptian Revolution of 1952. Gurr (1968, 1970) discusses the occurrence of rebellion in a cross national study comprising 114 countries. According to these researchers, it would appear that these uprisings were preceded by a period of prosperity or rising expectations which was suddenly reversed, leading to

frustration and the outcome being civil strife. This represents the 'J-curve' variant of RD and both these researchers suggest that a similar pattern can be detected preceding the American Civil Rights Movement. Support for this comes from the U.S. Census Bureau and the Kerner Commission, where the findings suggest that the economic and social conditions of the American Negro were steadily improving. Despite this marked improvement when comparing their position to white Americans there was a substantial discrepancy. Crawford and Naditch, (1970), Bowen, Bowen, Gawiser, and Masotti (1968), Davis (1962, 1969), Gurr, (1968, 1970) Pettigrew (1964), suggest that this discrepancy was a likely cause for the uprisings.

Although the 'J-curve' appears plausible, Gurney and Tierney (1982) point out that Davis (1962, 1969) did not give examples of revolutions that were not preceded by the 'J-Curve' nor instances where rising expectations were not followed by revolutions. It would appear that Davis had chosen selective examples from history to conceive his 'J-curve' formulation. This formulation has been the result of using ad hoc data, therefore its usefulness in being able to predict uprisings becomes questionable. Furthermore, one is unable to ascertain whether RD acted as

a cause or a consequence of the uprisings (Gurney and Tierney, 1982).

Another major flaw in the work of Davis and Gurr, could be called reductionism or the level of analysis issue. Contenders of this issue, Walker and Pettigrew, (1984); Gurney and Tierney (1982); Pettigrew (1978) and Miller, Bolce and Halligan (1977), have drawn attention to the problems associated with the types of indices that have been used to infer RD. Most theorists consider RD to be a psychological variable, yet both Davis and Gurr use aggregate level data to infer a state of RD, which by definition encompasses the individual's perception of relative differences. This confounds the psychological with structural variables and undermines the validity of research formulated along these lines.

An approach, similar to that used by Davis and Gurr, is adopted by Grindstaff (1968). Using aggregate data obtained from the U.S. Census Bureau, Grindstaff (1968) suggested that educational, occupational and income differences between Negroes and Whites in the urban South were indicative of RD, which led to the Negro riots.

On the other side of the Atlantic, Birrel (1972) attempted to use RD to explain the conflict situation in Ireland. Birrel reviews both Gurr's (1970)



and Runciman's (1966) models but opts for Gurr's formulation when discussing RD in relation to the two groups i.e., Protestants and Catholics. Birrel's work illustrates an example of an intergroup conflict situation that is viewed along individualistic lines. This reflects an inability to identify an intergroup situation where the use of fraternal RD may have proved more appropriate. Moreover, Birrel ascertained an individual level experience of RD by using aggregate indicators like statistics from regional comparisons of income, unemployment, housing and educational conditions.

At this stage, studies using individualistic conceptualizations of RD while obtaining data from aggregate structural indicators may be criticised for using an inappropriate measure of RD.

#### 2.1.2 RD AND THE AMERICAN CIVIL RIGHTS MOVEMENT

The research studies of Bowen et al (1968) and Crawford and Naditch (1970) were designed to investigate the relationship between RD and the uprisings in the Negro ghettos, which spanned the time from 1964 to around 1969.

The idea that stimulated the research study by Bowen et al (1968), was the belief that discontent among the urban poor in American ghettos led to protest behavior. For this purpose a sample was drawn from

one of Cleveland's poverty areas and the research was conducted nine months after a riot had occurred. The study was designed to investigate the relationship between felt deprivation, personal mobility and opinion/appraisal of various protest activities. RD was measured with the use of the Cantril (1965) Free Self - Anchoring Striving Scale (SASS). This entailed subjects viewing a ladder-like diagram, comprising of ten rungs. They then proceeded to define the highest rung as the best possible life they could have and in relation to this, they were asked to locate themselves at the present, five years in the past and five years in the future. According to the researchers, the difference between their ideal life and one of the three positions was an indication of felt deprivation. A number of questions were asked in order to ascertain participants' evaluation of various protest behaviors.

The researchers concluded that some forms of RD were associated with approval of protest activities, while others were not. The relationship between protest approval and RD was strongest for those who did not expect any change in their position on the ladder in the future, also those who did perceive a change either in an upward or downward direction were favourable towards protest.

Before proceeding with a critical appraisal of this study, a review of a study conducted by Crawford and Naditch (1970) will follow. Although similar in design, this study was constructed independently of the Bowen et al (1968) study. This study provided another test of the hypothesis "... that feelings of relative deprivation on the part of Northern Urban Negro Americans are associated with a propensity for racial militancy and violent protest" (Crawford and Naditch, 1970, p. 210). The sample for this study was drawn from the residents in a Detroit riot area. The raw data was obtained from 107, 18-45 year old male Detroit Negro residents. The interview schedule included a measure of RD using Cantril's (1965) SASS ladder, a measure of militancy was obtained by asking questions about the effectiveness of various protest actions.

The results revealed that RD as measured by the ladder technique was effective in showing a consistent relationship with several measures of attitudinal militancy, for example, those who did not experience RD on a ration of 2:1 said that riots hurt the Negro cause, while the relatively deprived individuals believed that riots help the Negro cause.

Although, the preceding two studies show a relationship between RD and civil strife, there are a few fundamental methodological issues that undermine the potency of their value. The critical appraisal that follows is directed at these studies in particular and RD research in general.

### 2.1.3 A CRITICAL EVALUATION

The sampling methods used by Bowen et al (1968) and Crawford and Naditch (1970) has come under the scrutiny of Gurney and Tierney (1982). It has been pointed out that the study by Bowen et al (1968) used random samples but failed to incorporate a control group. On the other hand, Crawford and Naditch (1970) used subjects from a riot prone area to assess level of RD but there is no data available to indicate RD levels of individuals from a non-riot area. Gurney and Tierney (1982) concluded that these examples of hypothesis testing studies that have inadequate sampling methods, have conclusions that are highly questionable.

An observation worthy of comment when considering the major proportion of studies relating to the American Civil Rights Movement, is that all data on RD has been obtained after a riot had occurred. This is a major failing of all RD studies conducted post hoc. There is no evidence to suggest that RD existed

prior to the onset of protest behavior. Most of these studies tend to assume the existence of RD prior to the civil protest (Gurney and Tierney, 1982).

The work of Birrel (1972), Grindstaff (1968), Gurr (1968) and Davis (1962, 1969) use macro indicators like economic, political and social conditions to infer the existence of RD, ignoring the individual's perception and experience of RD prior to the participation in protest action. The problem with this as pointed out by Portes (1971) and Unseem (1982) is that the casual relationship could work the other way around. They suggest that the onset of protest action contributing to the heightening of RD is equally probable. All studies that are conducted post hoc are limited in their inability to predict the occurrence of protest behavior. The only conclusion that may be attempted, using these studies, is that RD existed to some extent immediately after protest action.

With reference to the study by Crawford and Naditch (1970) a bias as far as sex is concerned is immediately apparent. It has been pointed out by some researchers that males tend to exhibit a greater propensity for militant attitudes and willingness to participate in protest action (Dibble, 1981).

A common denominator of most studies on RD is the use of Cantril's (1965) SASS, to measure RD, which Gurr (1970) posits is an appropriate measure of RD. However, critics like Walker and Pettigrew (1984), Dubé-Simard and Guimond (1983, 1986), Gurney and Tierney (1982) point out that Cantril's scale is an inappropriate measure of RD. Essentially, it is argued that this scale measures only a perception of standing on some dimension without assessing the evaluation that this standing has for the perceiver. The work of both Runciman (1966) and Gurr (1970) refer to an affective component of RD. However, subsequent research has failed to accommodate this component. Most studies use the perception of RD synonymously with feelings of RD. A good case in point is the study by Bowen et al (1968) who use Cantril's scale to measure RD. They conclude that "... feelings of deprivation are associated most strongly with approval of protest activities ..." (Bowen et al, 1968, p. 199). Similarly, Crawford and Naditch (1970) set out to test a hypothesis related to "feelings" of RD and use only Cantril's SASS as a measure of RD.

Most research studies that use Cantril's scale ignore or completely overlook this conceptual distinction. Is RD a feeling or a perception or both?

Some writers have pointed out that feelings associated with a perception of RD should be measured as a separate entity (Guimond and Dubé-Simard, 1983). A more detailed discussion of this issue appears in a subsequent section of this chapter.

RD was not to easily escape the firing squad of criticism. A review offered by McPhail (1971) advocated that RD be abandoned as a means of explaining civil strife. To substantiate this, McPhail (1971) quoted findings of 173 associations of DFA (deprivation, frustration, aggression) explanations and civil strife. Of these studies 32% were not significant, 61% were of a moderate magnitude and less than 1% were of a high magnitude. Of the 50 relationships of deprivation and riot participation, only 4% were of moderate magnitude while 39 studies of deprivation and frustration yielded 3% of high magnitude. Based on this evidence, McPhail (1971) concluded that "... there is considerable reason for rejecting the sociological and popular cliché that absolute or relative deprivation and the ensuing frustration or discontent or despair is the root cause of rebellion." (McPhail, 1971, p. 1064)

Before RD as McPhail (1971) suggests, is zealously thrown out the window, a careful reanalysis of his work is worthy of attention. McPhail (1971) commences his critique by stating that his review

entails a look at research studying "individual" participation in civil disorders during the 1960s (McPhail 1971, p. 1059). He later concludes that the DFA explanation is not necessarily supported when "personal attributes" are considered in relation to "individual" riot participation. The point is that McPhail (1971), unwittingly has overlooked the crucial conceptual distinction that was drawn by Runciman (1966), differentiating personal or egoistic RD from group or fraternal RD. By definition civil strife is a social behavior involving the participation of groups ; the Negro revolt illustrated this quite clearly. To enhance this oversight by McPhail (1971), he suggests that the category of independent variables that yielded the greatest amount of moderate and high correlations between RD and civil strife were "... respondents' opinions about (not their personal experiences of) police malpractices toward blacks" (McPhail, 1971, p. 1065). This is a clear indication of group or fraternal RD, where individuals do not feel dissatisfied due to their own personal situation but due to the situation of their group.

This has important implications for RD. As Dubé-Simard and Guimond (1986) point out, the inappropriate form of RD has been used to relate to civil strife. This does not justify the notion of RD being



discarded as a means of explaining civil protest. They suggest together with Walker and Pettigrew (1984), that there should be no expectation of a relationship between personal or egoistic RD and social behavior like riots, but to expect a relationship between fraternal or group RD and protest action is feasible.

In the research literature there exists these two trends, one that supports fraternal RD and the other that vouches for egoistic RD. A more detailed account of these two trends in the research literature follows in the subsequent section.

#### 2.1.4 FRATERNAL RD

The first attempt to operationalize the two concepts outlined by Runciman (1966), viz., egoistic and fraternal RD, was made by Vanneman and Pettigrew (1972). Their study examined the attitudes held by white Americans toward black candidates running for Mayor. Table 3 taken from Vanneman and Pettigrew (1972, p. 472) illustrates the manner in which these researchers operationalized egoistic and fraternal RD.

TABLE 3 : FOUR TYPES OF RELATIVE DEPRIVATION AND GRATIFICATION

PERSONAL ECONOMIC GAINS COMPARES TO THE INGROUP (WHITES)	PERSONAL ECONOMIC GAINS COMPARED TO THE OUT- GROUP BLACKS)	
	EQUAL OR GREATER THAN	LESS THAN
Equal or Greater than	A (doubly gratified)	B (fraternal RD)
Less Than	C (egoistic RD)	D (doubly deprived)

The respondents were asked how they viewed their own economic gains over the past five years in relation to the economic gains of whites (ingroup) and blacks (outgroup). The individuals categorized as Type B and C are of relevance to our discussion. Type B or those considered to be experiencing fraternal RD believed that they were doing as well as or even better than other whites (ingroup) but that they were doing worse than blacks (outgroup). Vanneman and Pettigrew (1972) regard this as fraternal RD, "... in that it is their group as a whole which is seen as losing ground in comparison with the out-group." (Vanneman and Pettigrew, 1972, p. 472). In contrast are the individuals categorised as Type C or egoistically deprived according to Runciman's (1966) definition. These individuals believe that their economic achievements have been less than that of other whites (ingroup) but on par or better than

blacks (outgroup).

The findings reveal that the greatest reluctance to vote for black mayoralty candidates and those who held the most negative images of these black politicians, were consistently found among the fraternally deprived (type B). The egoistically deprived tended to be more favourable towards these black candidates. Moreover, the fraternally deprived individuals were found to score high on "competitive racism." This was reflected in their support for statements that berated government poverty programmes designed to uplift blacks.

Despite this relationship that has been found to exist between fraternal RD and negative outgroup attitudes, a crucial oversight by the researchers in operationalizing Runciman's (1966) concepts, is immediately apparent. Consider the manner in which fraternal RD has been operationalized in Table 3. According to Vanneman and Pettigrew (1972), it is the "personal economic gains compared to the outgroup (blacks)" p. 472. According to Runciman's (1966) definition of fraternal RD, a more appropriate operationalization would be dissatisfaction arising due to the relative position of the ingroup (whites) compared to the outgroup (blacks). Take note that Vanneman and Pettigrew (1972) have inaccu-

rately inferred fraternal RD when they suggest that their respondent is experiencing fraternal RD when they use their personal economic gains as a point of reference for comparison. According to Runciman's (1966) definition, this would constitute a form of egoistic RD. A similar observation is drawn by Guimond and Dubé-Simard (1983).

Taylor and Moghaddam (1987) point out that Runciman (1966) did not clearly delineate fraternal RD and they caution that many important uncertainties remain. One suggestion that these researchers offer in order to distinguish egoistic RD from fraternal RD is to consider the target for comparison. Comparisons with members of the ingroup (similar other) would constitute egoistic RD and comparisons with members of a "better-off" out-group (dissimilar other) would constitute fraternal RD. However, such a distinction has proved problematic in research. A case in point is the attempt by Martin and Murray (1983) and Martin, Price, Bies and Powers (1979) to distinguish egoistic RD from fraternal RD. A business setting was used where secretaries (subjects) had to view other secretaries and executives in a similar insurance company. Subjects were asked whose pay they would be most curious about. Most of the respondents expressed interest in wanting to know the pay of the highest paid secretary and expressed

less concern about the pay-schemes of the executives. In view of this study when considering the suggestion offered by Taylor and Moghaddam (1987) to distinguish between egoistic and fraternal RD, it would appear that even the group (fraternal) comparison is individualistic. The question that arises is whether the secretary compares her personal position as a secretary to that of an executive (a better-off dissimilar outgroup member) or does she compare the group secretaries with that of the group executives? In the first instance, comparison occurs at the inter-individual level, thereby suggesting egoistic RD, whereas the latter situation constitutes fraternal RD where the relative position of groups are compared. It would appear that the relationship between egoistic RD and fraternal RD needs to be explicitly defined.

The work of Crosby (1976, 1982) focuses on egoistic RD. However, her study on working women, Crosby (1982), suggests the existence of fraternal RD. This study revealed that those women in better paid positions expressed greater personal job satisfaction but expressed dissatisfaction as far as the job situation of American women in general were concerned. This finding is indicative of fraternal RD and suggests that the relationship between personal satisfaction and satisfaction on behalf of one's

group may not be synchronous (Taylor and Moghaddam, 1987).

As the preceding discussion suggests, operationalization of fraternal and egoistic RD require careful attention in order to avoid misconstruing these concepts. Research by Walker and Mann (1984), Pettigrew (1978), Abeles (1976), Vannemen and Pettigrew (1972) point to the fact that egoistic RD and fraternal RD are differentially related to various social behaviors.

A more appropriate attempt to investigate fraternal RD was made by Abeles (1976). The aim of this study was to investigate the relationship between RD and rising expectations (RE) to black militancy in America during the 1960s. It is suggested that the improving conditions of blacks made white Americans a comparative reference group. This comparison led blacks to perceive their situation as being more deprived relative to Whites.

Abeles (1976) used secondary analyses of survey data collected in the late 1960s in Cleveland and Miami. In order to measure fraternal RD, use was made of a modified version of Cantril's (1965) ladder. The respondents were shown a picture of a ladder and were told that the highest rung represented the best possible rank in American society and the bottom

rung the worst possible rank. Respondents were asked to rate the perceived socio-economic gap between self, blacks and well educated blacks with each of the following target groups, whites, white collar workers, blue collar workers and professionals, respectively. RD were obtained by using Cantril's (1965) SASS, with anchor labels of past and future gains. Militancy was defined as a set of attitudes that rejected the traditional role of blacks in addition, it also involved an activist orientation that emphasized confrontation with the oppressor, in order to obtain black rights.

Findings revealed that "well educated blacks" constituted an important comparison group. The results indicated a positive correlation with militancy when subjects compared "well educated blacks" with each of the four target comparison groups. Furthermore, comparisons involving "well educated blacks" and "white collar workers" and "professionals" correlated most strongly, of all the ladder difference scores, with militancy. This is a significant indication that fraternal RD as opposed to egoistic RD i.e., when the comparison was "self" and the target comparison groups, is a more critical indicator of militancy.

Abeles (1976) suggests that the experience of fraternal RD will increase the probability of the individual blaming external factors for the deprived state of his or her membership group. This in turn will encourage the individual to perceive the problem as a group problem rather than an individual one. Moreover, it will predispose the individual towards taking group action as opposed to individual action, in order to attain a more equitable position for his or her membership group.

The study by Abeles (1976), although suggesting an important link between fraternal RD and militancy, does not give any indication of the feelings of individuals. RD as measured by Cantril's (1965) scale, indicates the perceived socio-economic gap between groups but says nothing about the way individuals feel about this gap. It has been pointed out by Guimond and Dubé-Simard (1983) and Runciman (1966) that an increase in the perceived difference between groups does not necessarily lead to an increase in dissatisfaction. The affective component has been considered by some researchers to be a more important aspect of RD (Martin, Brickman and Murray, 1984; Guimond and Dubé-Simard, 1983; Bernstein and Crosby, 1979; Cook et al, 1977; Crosby, 1976).



A further test to explore the differential relationship between egoistic and fraternal RD was conducted by Walker and Mann (1984). The primary aim of this study was a theoretical one to establish that fraternal RD and egoistic RD are differentially related to various personal and group behaviors. The central research aim was to investigate the relationship between RD and protest orientation. A group of unemployed people from Adelaide, Australia constituted the sample. Being unemployed constitutes an objectively deprived state anyway, so it would be of interest to investigate how these individuals perceived their situation.

There were four separate operationalizations of RD, two each of egoistic RD and fraternal RD. The researchers used Cantril's (1965) SASS to measure RD. Two separate ladder diagrams were used. The first ten-rung ladder that was presented to the respondent had the top rung labelled "the best possible life you could possibly achieve" with the bottom rung labelled "the worst possible life you might encounter." Respondents were asked to indicate where on the ladder they thought they stood at present. The second ladder had the top rung labelled "the best possible rank in Australian society" and the bottom rung "the worst possible rank in Australian society." This ladder required the respondents to

indicate where they stood at present, the group of all unemployed people of their age group, their own peer group and where the group of all employed people stood, on the ladder. These ladders provided two measures of egoistic RD and two measures of fraternal RD. The first egoistic RD measure (ERD1) was obtained from the first ladder. It represented the difference between the top of the ladder and the respondent's nominated position. The second egoistic measure (ERD2) was obtained from the second ladder which referred to the respondent's relative social rank. This was represented by the difference between the top of the ladder and the rung on which the respondent placed himself or herself.

The two measures of fraternal RD were obtained from the second ladder. The first fraternal measure (FRD1) was obtained by calculating the difference between the nominated position of the group of all unemployed people and the respondent's peer group. The difference between the nominated position of the group of all employed people and all unemployed people represented the second measure of fraternal RD (FRD2).

Using Crosby's (1976) model, the researchers predicted that individual stress symptoms would be related to egoistic RD. The respondents were presented with thirteen stress symptoms. The sum of the number of symptoms claimed constituted a score on the stress variable.

In order to measure protest orientation, a modified version of the Muller (1972) and Grofman and Muller (1973) measure of potential for protest violence was included.

Results were obtained with the use of the pearson product moment correlation matrix. This was formed by the four RD measures, stress and protest orientation. Analyses revealed that stress was significantly correlated with ERD2. Protest orientation was significantly correlated with both measures of fraternal RD but with neither of the egoistic RD measures. The lack of correlation between measures of egoistic RD and fraternal RD "... indicates that egoistic RD and fraternalistic RD are separate psychological conditions." (Walker and Mann, 1984, p. 280).

In order to assess the predictive power of these two different measures of RD, multiple regression analyses were carried out. Stress symptoms were significantly predicted only by ERD2. When predicting

protest orientation, none of the ERD measures proved significant. However, both measures of fraternal RD proved significant.

It would appear that these findings support the aim of the study: to establish that egoistic RD and fraternal RD are differentially related to behavior outcomes. On the one hand egoistic RD was related to an individual's personal stress symptoms and on the other hand fraternal RD was related to an experience of group attitude i.e., protest orientation. The researchers conclude that protest orientation is a social attitude, related to collective action and would be expected to be better predicted by the social form of RD i.e., fraternal RD. The researchers also offer a directive for research using RD, by suggesting that, "The differential power of fraternalistic and egoistic RD as predictors of protest orientation and of stress symptoms is compelling evidence for underlying the fundamental distinction between these two forms of RD in analyzing and explaining the beliefs and actions of the deprived" (Walker and Mann, 1984, p. 282).

Supporters of fraternal RD and the subsequent relationship with intergroup behaviors and attitudes (Appelgryn, and Nieuwoudt, 1988, 1987; Walker and Mann, 1984; Walker and Pettigrew, 1984; Guimond and Dubé-Simard, 1983; Pettigrew, 1978; Abeles, 1976;

Vanneman and Pettigrew 1972; Runciman, 1966) have suggested that social change basically involves the relative change of the position of groups within society and not the change in position of individuals within the social structure. In order to facilitate such change, fraternal RD may significantly offer a means of explaining intergroup behaviors and attitudes. An oversight by researchers to clearly distinguish between egoistic and fraternal RD has led to some nebulousness surrounding these two concepts leading to inappropriate and often mistaken relationships being established. Moreover, the value of RDT has been questioned, due to inconclusive evidence (McPhail, 1971) relating RD with social protest. It would appear that in order for RD to offer a more meaningful tool to facilitate social theories and research the social form of RD (fraternal RD) should be utilized.

#### 2.1.5 AN INTEGRATION OF RD AND SIT

Walker and Pettigrew (1984) have suggested that RD or more especially fraternal RD, could offer a valuable extension to Tajfel's (1978) theory. It is also a characteristic of RDT. Comparisons at the intergroup level with a negative outcome results in fraternal RD and comparisons at the inter-individual level with a negative outcome results in egoistic RD (Runciman, 1966). According to Tajfel (1978) indi-

viduals strive to attain a positive social identity. To achieve this at the intergroup level, individuals strive to attain positive group distinctiveness when comparing their membership group with an outgroup. This need is accentuated if the comparison leads the individual to perceive that the situation is "illegitimate" i.e., it is not in accordance with the norms set out for equity and fairness, and "unstable" i.e., when the individual perceives that the situation is not static but could change in an upward direction for his or her membership group.

This notion of individuals striving to attain positive group distinctiveness was included in a research study conducted by Tripathi and Srivastava (1981). The researchers set out to examine the relationship between RD and intergroup attitudes. The conflict situation between Hindus and Muslims in India provided a suitable milieu to test aspects of intergroup relations.

For subjects, the researchers used a male sample of 112 muslim undergraduate and post graduate students. The researchers hypothesized that in order to attain positive group distinctiveness, those subjects who experienced high RD (at the intergroup level) would hold greater negative outgroup attitudes and more

positive ingroup attitudes than those subjects who experienced low RD at the intergroup level.

To obtain a measure of intergroup attitudes, subjects were presented with two identical adjective checklists that contained both positive and negative adjectives. There were two separate sets of instructions to tap ingroup and outgroup attitudes. To measure ingroup attitudes subjects were required to pick those adjectives they thought were most frequently used by Muslims to describe Muslims. To measure outgroup attitudes subjects were required to pick those adjectives which they thought Muslims would chose to describe Hindus. Furthermore, subjects were required to chose those adjectives they thought were most frequently used by Hindus to describe Muslims.

Intergroup (fraternal) RD was ascertained through the use of a modified version of a scale developed by Naqvi (1974). This scale comprised twenty items in Hindustani, relating to social, political and economic areas of RD as outlined by Runciman (1966). Subjects were presented with hypothetical situations within each of these three areas. They were required to rate, on a seven point scale, the chance of Hindus or Muslims being successful in each of these situations. Some of the scenarios included were getting help from the police, opportunities for

participating in the political system, employment opportunities. The sum of the discrepancy score between Muslims and Hindus for each of the twenty situations represented the score on fraternal RD.

It was found that generally Muslims held negative outgroup attitudes and positive ingroup attitudes. To obtain high and low RD subjects, the researchers divided the sample at the median of the RD scores. This resulted in two groups viz., HRD (high) and LRD (low), being formed. Findings suggest that HRD subjects held greater negative outgroup attitudes. Moreover these subjects assigned more positive and less negative characteristics to the ingroup. LRD subjects also assigned more positive and less negative characteristics to the ingroup than to the outgroup. However, the difference was found to be significant only in the case of positive characteristics. These findings suggest that HRD subjects, as opposed to LRD subjects strive more for positive group distinctiveness by demeaning and debasing the outgroup. Further support for this was gauged from the manner in which these two groups believed Hindus perceived Muslims. HRD subjects felt that Hindus evaluated Muslims in a highly negative manner while LRD subjects believed that Hindus viewed Muslims in a very positive manner. This supports the suggestion



that HRD subjects need to attain more positive group distinctiveness.

The hypothesis regarding ingroup attitudes was not substantiated. There was no significant difference between HRD and LRD groups on ingroup attitudes as predicted by Tajfel's theory. The researchers suggest that this could be due to the strong ingroup identification that exist among Muslims in India.

Due to the correlational nature of this study one cannot make any conclusions about causal relationships. In this regard, it cannot be said that intergroup RD led to negative outgroup attitudes (Tripathi and Srivastava, 1981). However it does suggest that it is plausible to expect a relationship between intergroup or fraternal RD and outgroup attitudes. The findings also show some support for Tajfel's SIT and illustrates a means by which SIT and RDT may be integrated. However, more research is required to establish inter-relationships between these two theories. In order to establish RDT as a "social" theory, the move towards adopting fraternal RD at the intergroup level of investigation should be firmly supported.

Despite a general tendency in the research literature supporting the relationship between fraternal RD and social phenomena, other researchers have

opted for using egoistic RD as their point of departure. Of note is the research and theoretical stand of Crosby (1984, 1982, 1979, 1976) and her colleagues, Crosby, Muehrer and Loewenstein (1986); (Cook, Crosby and Hennigan (1977) and Gurr (1970). Gaskell and Smith (1984) reviewed the models of RD proposed by Runciman (1966) and Gurr (1970) and developed a model which featured egoistic RD in the lead role.

Gaskell and Smith (1984) used samples of employed and unemployed black and white youth in London to empirically test those aspects of their model related to the intensity of affect toward RD objects. Some of these attitude objects included the school system, the job situation and the average employer. It was found that RD was associated with discontent. However, the correlations were not high. Discontent was directed toward the school system and the job market. Moreover, generalized negative attitudes about British society were not related to RD (Brown, 1988). It may be relevant to note that some of these attitude objects are related to social phenomena and would have been more appropriately tested, using measures of fraternal RD.

The researchers conclude by suggesting that further research should be directed toward relating RD to

group differences in values and beliefs. "We feel that, because these posited belief and value systems are shared within groups, it is important that future research should use explicitly social, group-based measures rather than individualistic ones." (Gaskell and Smith, 1984, p. 130). This may be deemed the final nail in the coffin, sealing the differential relationship between egoistic and fraternal RD and their respective behavioral and attitudinal consequences.

#### 2.1.6 THE COGNITIVE AND AFFECTIVE COMPONENTS OF RD

According to Runciman (1966), RD may vary in magnitude and degree. Magnitude refers to a perception of relative difference, while the degree of RD refers to the intensity of feeling that such a perception evokes. Gurr (1970), on the other hand, calls the cognitive or perceptual dimension of RD, the degree of RD and the affective or emotional component, the intensity. In order to resolve this inconsistency, Cook et al (1977) suggests that magnitude may be considered to refer to the perception of relative discrepancy and intensity to refer to the affect associated with this discrepancy.

Not only do Runciman and Gurr differ in the way they define the cognitive and affective components, their views are also divergent as far as the way in which they consider these components to be related. Runci-

man (1966) points out that magnitude and intensity of RD may not necessarily correlate with each other, for example, RD may be just as acutely felt when its magnitude is small as when it is large. This seems feasible as RD is considered to be a sense of deprivation so it is not directly related to the objective situation but rather to the way the individual perceives it. Gurr (1970), on the other hand, contends that the cognitive and affective dimensions are related, with an increase in magnitude leading to an increase in intensity.

If, RD is to be considered at both the level of cognition and affect, then it is necessary that they are appropriately operationalized. Runciman (1966) measured RD by asking respondents to choose those people they thought were doing better than them and whether they approved of this situation or not. He also asked whether they thought manual workers were doing better than white collar workers. Gurr (1970) on the other hand advocated the use of Cantril's (1965) ladder, as an appropriate measure of RD. Both, Runciman and Gurr have measured a perception of relative difference. In no way can inferences be made regarding the feelings of discontent or gratification that results from this perception.

This measure does not indicate the respondent's feelings about the difference. Therefore, the measures offered by Runciman (1966) and Gurr (1970) cannot be considered to cover the affective dimension of RD, nor can it be a measure of RD per se. What it does suggest, is a measure of the magnitude of RD.

Walker and Pettigrew (1984) point out that the cognitive/affective distinction has been to a large extent ill-defined or disregarded in RD research. This is evident in the research reviewed in the present chapter. In addition, they point out that most of the research conceptualizes or treats RD as a state arrived at after a conscious, rational judgement of the relative position of self or group with some referent other. In other instances, it is obvious that the cognitive/affective components have been used synonymously (cf. Abeles, 1976; Crawford and Naditch, 1970; Bowen et al, 1968). An important contributing factor is the popular and extensive use of Cantril's (1965) scale as a measure of RD. It has been stipulated that this measure simply portrays a perceived discrepancy between individuals, groups and situations. It does not provide an evaluative account of the feelings evoked as a result of this discrepancy.

In order to be recognised as a theory encompassing intergroup phenomena, it may be instructive if the affective component of RD is afforded singular attention. Taylor and Moghoddam (1987), and Walker and Pettigrew (1984) suggest that feelings of RD at the intergroup level may be able to offer important insights to intergroup conflict and protest activity. Martin and Murray (1984) point out that when considering intergroup relationships, at most times, groups are characterized by a long history of conflict. A perception of difference may not be indicative of deeper feelings of discontent and grievance that exists under such circumstances. This is obvious when considering the tense feelings that exists at the intergroup level between Protestants and Catholics in Ireland, Hindus and Muslims in India, blacks and whites in South Africa. Furthermore, discontent arising due to discrimination of sex, class, race, suggests that it is feasible to consider such intergroup relationships to be fraught with high intensity feelings. This may be considered a motivating factor for protest activity. A mere perception of relative difference between groups may not be adequate to encompass issues that relate to the feelings of intergroup or fraternal RD. Taylor and Moghaddam (1987) suggest that a perception of RD may be considered to be a precondition to feelings

of discontent and anger that are likely to be related to an experience of fraternal RD.

Research directed toward clarifying this issue has been conducted by Guimond and Dubé-Simard (1983). Their preliminary investigation suggested that even when the perception of difference between economic gains was experimentally manipulated, it did not lead to an increase in feelings of dissatisfaction. This indicates that a perception of a large gap may not necessarily result in greater feelings of dissatisfaction. This latter feeling should be measured as a separate entity (Guimond and Dubé-Simard, 1983). A similar notion had been put forth by Runciman (1966).

Subsequently, Guimond and Dubé-Simard, operationalized fraternal RD as a feeling of discontent. The study was designed to investigate the relationship between the perception of intergroup inequality or the cognitive component of fraternal RD, and the feelings of discontent to which it may give rise i.e., the affective component of fraternal RD. The study also provided another test of the hypothesis that fraternal RD is more strongly related to militant socio-political attitudes than egoistic RD.

The subjects were 80 francophone students attending night classes at the university of Montreal. In order to manipulate the perception of economic inequity between Francophones and Anglophones, two versions of a questionnaire were prepared and distributed randomly to the subjects. In one version there appeared three published economic studies that revealed that Anglophones received a higher annual income than Francophones. The other version of the questionnaire excluded these economic studies. Each participant was asked to fill either one of the two versions of the questionnaire. Respondents were asked to indicate whether they believed that the average annual income of Francophones in Quebec was about the same as that of the Anglophones. This constituted a measure of perceived economic difference between the two groups. Secondly, they were asked to what extent they experienced "some frustration or dissatisfaction" towards the way the salaries were distributed between Francophones and Anglophones in Quebec. This was a measure of fraternal RD. Furthermore, the questionnaire also measured two types of egoistic RD or personal discontent. Each respondent had to indicate to what extent he or she was satisfied with his or her personal situation when it was compared to (i) that of other Francophones and (ii) that of Anglophones.



Finally, the participant had to indicate their degree of agreement on six socio-political attitude items.

Analyses of the results indicated that respondents who had completed the questionnaire that included the three economic studies, perceived a wider economic gap between the two groups than respondents who were not informed about the economic studies. This suggested that the experimental manipulation was successful. However, the informed respondents did not experience any more discontent than the uninformed respondents. There are two major implications of these findings. Firstly, these results disconfirm the approach of Gurr (1970), Crawford and Naditch (1970) and Abeles (1976), who either explicitly or implicitly tend to propose that an increase in perceived difference leads to an increase in discontent. These researchers were also noted to have used only Cantril's scale as a measure of RD thereby providing only a measure of the cognitive aspect of RD. The present study shows that this cognition is to some extent independent of affect.

The results of this study indicated that both components of fraternal RD were related to overall nationalism. There is a tendency that feeling of fraternal RD is more strongly related to nationalism and socio-political items, than the perception of in-

equality. The evidence of a lack of a casual link between cognition and affect supports the theoretical position of Crosby (1976), Cook et al (1977) and Runciman (1966), who argue that other factors in addition to the perception that deprivation exists are needed to obtain the resultant feelings of deprivation.

The results also suggested that the perception of inequality was a precondition of fraternal RD, rather than a separate determinant of protest. It was found that fraternal RD remained significant even when the perception of inequality was controlled. The reverse was not true. This observation is made by Taylor and Moghaddam (1987).

Finally, this research study demonstrated that the feelings of fraternal RD remained associated with nationalism in contrast, it was found that there was no relationship between egoistic RD and the overall measure of nationalism.

The next issue to be raised is whether there is a relationship between feelings of fraternal RD and protest activity. This was one of the issues considered in a study conducted by Martin, Brickman and Murray (1981). They used a business context and their female subjects were presented with information from a fictitious company. The variable, manip-

ulated was the degree of inequity between the salaries of male and female employees. The findings suggest that feelings of fraternal RD correlated with the magnitude of salary inequities. Subjects were also asked to judge the extent to which they would engage in various collective actions like work slowdowns, making deliberate errors in work or attending meetings. From the results the researchers concluded that feelings of fraternal RD does not necessarily translate into collective action. It would appear that the amount of felt deprivation does not produce an equivalent willingness to participate in group action.

In conclusion, it would appear that research including the affective component of RD when studying collective or fraternal RD, is still in the embryonic stage. Moreover, fraternal RD requires emphasis in future research to explore some of the shortcomings and enhance the status of fraternal RD - to make it a meaningful endeavour as regards research directed toward collective action (Taylor and Moghaddam, 1987).

#### 2.1.7 RD RESEARCH IN SOUTH AFRICA

The South African context offers a rich milieu of intergroup relationships in various spheres. One of the most salient factors for evaluating one's quali-

ty of life appeared to be comparisons with other race groups (HSRC, 1985). In view of this, social comparison and RD becomes a factor that could play an important role. Under Apartheid legislation, the South African society was divided in terms of race groups that were objectively and blatantly relatively deprived. Recent protest activity among the disenfranchised groups and their supporters, indicates a move towards changing the positions of oppressed groups within the social structure. This is a move motivated to bring about a more equitable status quo. This phenomenon is indicative of fraternal RD, whereby individuals are motivated to participate in collective action to bring about change at the intergroup level (Appelgryn, 1991; Pettigrew 1978; Abeles, 1976; Runciman, 1966).

Research studies conducted by Appelgryn (1985, 1987), Appelgryn and Nieuwoudt (1988); Bornman, (1988) and Van Dyk (1988) indicate that fraternal RD plays an important role in negative outgroup attitudes.

The studies by Appelgryn (1985, 1987), Appelgryn and Nieuwoudt (1988) use a modified version of Cantlil's (1965) SASS, as a measure of RD. Attitudes towards outgroups were ascertained with the use of semantic differential scales. Generally, the economic, political and social position of the individual,

ingroup and outgroups were evaluated. The researcher was provided with measures of both egoistic and fraternal RD. The subjects were obtained from the following defined 'race' groups: Afrikaans-speaking whites (ASW), English-speaking whites (ESW); "coloureds"; Indians and blacks. Appelgryn's findings indicate that whites did not experience RD when comparing their position to the other three race groups.

The black subjects experience RD on the personal and group level when they compared their position to that of the other race groups. "Coloureds", felt relatively 'satisfied when the comparison group was blacks or the ingroup but experienced RD when the comparison group was Indians or whites. Indians felt relatively more satisfied when the comparison groups were "coloureds" or blacks, but experienced RD when the group was whites. Moreover, the groups differed in their experience of justice. Most of the subordinate groups, especially the "coloureds" and blacks saw their personal and group economic, political and social situation as being unjust. On the other hand among the white subjects there was an inclination to consider the situation as being just. This provides an example of the divergent norms of distributive justice held by the whites groups in South Africa.

Most South Africans are socialized to accept that being born of a certain race, subjects one to certain privileges or deprivations as the situation warrants. Oppressed group member attributed the source of injustice and their social, economic and political situation to external factors such as, discrimination due to race, poor housing facilities, inadequate and inequitable salaries, not having political power. This indicates that external factors are blamed for the group's situation not the individual. Fraternal RD, points to such attribution being a motivater for collective action (Appelgryn, 1991; Walker and Pettigrew, 1984; Guimond and Dubé-Simard 1983; Walker and Mann, 1984).

One of Appelgryn's studies assessed militancy levels of the different race groups. The results indicated that ASW held the least militant attitude and blacks the highest. The militant attitudes of blacks were significantly influenced by variables like age, negative attitudes towards whites and degree of economic deprivation.

A criticism of Appelgryn's work is the use of only the Cantril's scale as a measure of RD. Appelgryn and Nieuwoudt (1988) makes mention of "felt deprivation" this indicates an affective state. It would appear that the affective and cognitive components have been considered to be synonymous. This is an

oversight and underplays the role played by deeper feelings of anger and grievance that accompany living under oppression. It is plausible that perceiving a difference between groups does not translate into feelings of relative satisfaction as measured on a scale that taps the cognitive component of RD.

A study conducted by Bornman (1988) set out to ascertain which factors influenced intergroup relations in the work situation. Random samples of ASW and "coloureds" were chosen and divided into working and non-working groups. It was found that whites and "coloureds" (entire groups) did not differ significantly in their experience of egoistic RD. However, as far as intergroup comparisons were concerned, the working "coloureds" experienced considerably more economic and social RD than their white counterparts. Other related results indicate that group factors contributed a significant proportion of the variance. According to Bornman (1988) these results proclaim the inappropriateness of using individualistic conceptualizations in studying intergroup relations. It is suggested that an adequate approach should encompass measures at the group or social level.

Van Dyk (1988), examined the relationship between different patterns of RD and attitudes towards blacks. The subjects were ASW women from a rural town. In contrast to Appelgryn (1985, 1987); Appelgryn Nieuwoudt (1988) and Bornman (1988), Van Dyk (1988) found that the white subjects experienced RD on the social, political and economic levels. Negative attitudes towards blacks correlated with subjects who experienced RD and viewed their situation as unjust. Subjects expressed despair regarding their own and their group's political prospects. They considered it unlikely that the political situation would improve in the future. They saw themselves as 'losing' while other groups made progress in striving for equal rights.

According to Van Dyk (1988), these results illustrate some of the problems to emerge as a consequence of progressive change, i.e., leading to an increase of RD among ASW, and antiblack attitudes. A shortcoming of this study is the sample that has been used. ASW women living in a rural area is not a very representative sample to generalize these findings (Appelgryn, 1991).

Du Toit and Mynhardt (1989) quoted in Appelgryn (1991), conducted a field study, to examine the link between various socio-psychological variables and desegregation. Generally it was found that economic



RD and injustice experienced by ASW and ESW significantly predicted negative attitudes towards desegregation. ASW and ESW who believed that their present and future social situation was inferior and who considered blacks and Indians to be earning too much, held more negative attitudes towards desegregation. They also considered such a situation to be unjust.

It would appear that over a very short period of time, with progressive change underway, the experience of fraternal RD has become prevalent among white South Africans, this contrasts with their earlier experience of relative gratification. The findings of Abeles (1976) and Runciman (1966) also indicated that RD may occur among dominant group members.

RD, at the intergroup level has provided insights into the negative and obstructive attitudes held by White South Africans. The findings of Appelgryn and Nieuwoudt (1988), Appelgryn (1985, 1987) indicated that white South Africans experienced relative gratification as measured by Cantril's Ladder. Later studies by Du Toit and Mynhardt quoted in Appelgryn (1991) and Van Dyk (1988) indicated that white South Africans experienced RD in the face of a changing South Africa.

## 2.2 RATIONALE

In relation to the South African context, de la Rey (1991) contends that intergroup distinction is the primary feature of the South African social structure. The Apartheid system has ensured that race has become a preponderant criterion for social categorization in South African society. Until recently the Population Registration act played a significant role in perpetuating this racial classification. This in turn had a determining influence in the economic, political and social lives of all South Africans. A report by the HSRC (1985) has indicated that racial classification is most salient when individuals wish to determine and evaluate the actions and behavior of others and self. Moreover, although there are differences within race groups as far as idiosyncratic customs, different languages, cultural norms, tribal and religious affiliations are concerned, one's racial classification either, black, white, coloured or Indian assumes a greater importance than within group differences. Despite President de Klerk's reforms, major political parties still talk about the South African population in terms of racial classification, for example, the ANC considers Indians and coloureds as minority groups within the South African social context (Daily News, 1991). Furthermore, despite several

laws being changed, blacks, coloureds and Indians are still distinguishable by not having the vote.

#### 2.2.1 FRATERNAL RD IN SOUTH AFRICA

When we consider societies that consist of unequal groups, like South Africa, the potential value of RD is immediately apparent as an important factor in explaining intergroup phenomena. The theory of RD may enhance understanding and offer a means of studying intergroup behavior, at a social psychological level, especially in the case of disadvantaged groups responding to groups that are more advantaged. In a context where deprivation in an absolute and relative sense pervades the existence of the majority of South Africans, RDT may offer important insights to intergroup phenomena.

Most studies using RD have fallen into the reductionistic trap : extrapolating findings from the individual level to account for potentially intergroup phenomena (cf. Vanneman and Pettigrew, 1972 and Gaskell and Smith, 1984). An individualistic orientation focuses attention on the individual as being the cause of intergroup behavior, such as protest activity, thereby directing the blame away from structural determinants of such behavior (Henriques, 1984). As Foster (1991) points out, South Africa is typified by intergroup conflict, therefore attempts to explain and predict such

phenomena should be directed at the intergroup level. The concept of fraternal RD suggests that at the group level, individuals perceive their membership group as being unjustly deprived of valuable resources in comparison with other groups. This, potentially leads to feelings of dissatisfaction and grievance which are considered to be a motivating factor for participation in collective action (Runciman, 1966). This may be applied to the South African context; a context in which individuals are perhaps more likely to feel aggrieved or dissatisfied due to the unjust position of their race group relative to other race groups rather than their own personal situation. This in turn being a predisposing factor for collective action.

Despite reforms taking place at present, it would be naïve to consider it enough to erase forty years of living under oppression. Existing research (Appelgryn, 1985, 1987, Appelgryn and Nieuwoudt 1988; Bornman, 1988; van Dyk, 1988; Du Toit and Mynhardt, 1989) using RD in the South African context suggest that fraternal RD is associated with negative out-group attitudes. These South African studies used a measure that only taps a perception of relative difference between groups, not the feelings concomitant with that perception. This may be considered a limitation, if one has to take cognizance of re-

search in South Africa, where there exists a long history of oppression, deprivation and conflict, feelings associated with perception may be deemed an important component. A measure of perception only, cannot fully explore the deep rooted feelings of grievance and discontent that is likely to have accompanied living under oppression. Such feelings have been suggested to be more instructive than a perception of intergroup differences with regard to fraternal RD (de la Rey, 1991; Martin, 1984; Guimond and Dubé-Simard, 1983). A review of existing literature indicates that feelings or the affective component of fraternal RD is a relatively unexplored area.

Some researchers have pointed out that the perception of RD may be considered to be a precondition for feelings of RD, furthermore, the relationship between the affective component of fraternal RD and collective phenomena has not always yielded consistent findings (Martin, et. al., 1984). It appears that there is no simple relationship between feelings of RD and behavioral outcomes. In this regard, Taylor and Moghaddam (1987) suggest that work in the area of RD should address this issue, especially if RD is to encompass collective action.

### 2.2.2 INDIAN SOUTH AFRICANS' EXPERIENCE OF RD

A study by Appelgryn and Nieuwoudt (1988), showed that blacks and ASW perceive Indians along social, economic and political dimensions as an intermediate group between blacks and whites. This study did not assess how Indian South Africans' perceive themselves. The studies by Appelgryn and Nieuwoudt (1988), Bornman (1988), van Dyk (1988) and Du Toit and Mynhardt quoted in Appelgryn (1991) have used as their target of investigation ASW, ESW, coloureds and blacks. Indians as a group have not preoccupied much attention in the South African RD research.

Indians in South Africa occupy a unique situation, having initially come as indentured labourers they have made marked progress in the economic and social spheres, and still remained disadvantaged under Apartheid legislation. Unlike the blacks they are a minority group as regards population number, and are distinguishable by having a physical identity that differs from blacks, whites and some coloureds, but at the same time they are often defined as part of the group of black people in South Africa, in the sense that they are also part of the oppressed under the Apartheid System. It will be useful to assess the position of Indian South Africans in the present changing context of racial relationships, especially the ingroup's perception of Indians. The present

study will illustrate whether Indians see themselves as being different from blacks and coloureds or whether they are aligned with these groups. Indeed, recently there has been much press coverage regarding the political affiliation of this group. In these articles the debate seems to focus on whether organizations such as the ANC, IFP and PAC can attract a significant support base within this sector of the population. This study investigates how this group perceives their relative status and whether the concept of RD is useful in predicting their protest orientation.

The study by Appelgryn and Nieuwoudt (1988), showed that better educated black subjects experienced greater fraternal RD and held more negative out-group attitudes. The researchers suggest that better educated individuals experience a high personal status but at the intergroup level their membership group is perceived to occupy a low status in the social hierarchy, hence they experience greater fraternal RD. In this regard, it may prove instructive to investigate whether such a trend extends to protest orientation among Indian South Africans. Research findings regarding level of education and intergroup phenomena have been somewhat inconsistent (cf. Caplan, 1970; McCord and Howard, 1968; Abeles, 1976; Murphy and Watson, 1970 and Marx 1967).

Fraternal RD, by definition includes the component of social comparison. Critics of RD have pointed out that failure to address the issue of social comparison has been one of the major underpinnings of RD (Taylor and Moghaddam, 1987; Walker and Pettigrew, 1984). The findings of Taylor, Moghaddam, Bellerose (1987) suggest that when considering a fraternally deprived group in South Africa, one would expect group members to chose perceived "better off" groups more frequently in order to appeal for a more equitable distribution of resources. Accordingly, one would expect Indian South Africans to chose whites as a group more frequently as a comparison other. The present study also requires subjects to offer reasons for such a choice, thereby offering evidence of motivation.

The present South African context provides a suitable milieu for investigating many of the issues that have plagued RDT and research. South Africa offers a real intergroup situation where disadvantaged groups may be seen to participate in collective action in order to assert their group's rights. Fraternal RD may prove a useful concept to explain protest orientation within the South African context.



### 2.3 AIMS OF THE PRESENT STUDY.

This study will examine Indian South Africans' experience of RD. In this regard it will investigate:

1. the ingroup's perception of their social, economic and political position in relation to blacks, whites and coloureds in South Africa.
2. the ingroup's experience of affect in relation to the perceived difference or similarity between the ingroup and each of the three target comparison race groups in South Africa.
3. whether the ingroup approve of, believe effective, previously have participated in and intend to participate in five protest types.
4. whether better educated ingroup members experience greater cognitive fraternal RD than less educated ingroup members.
5. whether better educated ingroup members experience greater affective fraternal RD than less educated ingroup members.
6. whether well educated ingroup members differ from less educated ingroup members in their measures on protest orientation.

7. to investigate the predictive impact of cognitive and affective fraternal RD and educational level on protest orientation.
8. whether fraternally deprived members compare their group's position with a perceived "better-off", "worse-off" or similar group more frequently.

Overall the findings of this study should assist in clarifying the distinction between the affective and cognitive components of fraternal RD and their impact on protest orientation.

## CHAPTER 3

### METHOD

#### 3.1 SUBJECTS

A total of 120 Indian adults from Durban and surrounding areas participated in this study. The sample comprised 77 males and 43 females. The frequency of subjects in the five age categories were as follows : 31 subjects in 18-25 age group, 41 subjects in the 25-30 age group, 25 subjects in the 30-35 age group, 11 subjects in the 35-40 age group, five subjects in the 40-50 age group and there were seven subjects who were over 50 years of age. The subjects were selected to form a group of 60 well educated (professionals) and a group of 60 less educated (non-professionals). The criterion by which the professionals were selected was on the basis of a university degree or a teacher training diploma.

There were four categories of professional people: doctors, lawyers, teachers and social workers. The non-professionals had to have at least a standard seven high school education with no professional qualification. This group was made up of technicians, clerks, nurse-aides, shop assistants, factory workers, ushers and waiters.

All subjects were randomly selected from an available pool as follows: in each category the specified number required was randomly drawn from a larger number of an available pool of participants. Doctors were obtained from a hospital and in private practice. Teachers were selected from local schools. Social workers were obtained from a government department and a private institution. From Indian suburbs lawyers in private practice were selected. The non-professionals were obtained from local shopping centres, totes, restaurants, hospitals, factories, post and telecommunication department, cinemas.

In the professional group there were 15 chosen in each category. In the non-professional group the final sample consisted of 19 clerks, 15 technicians with the remainder of the sample being made up of nurse-aides, shop assistants, factory workers, ushers and waiters.

### 3.2 MEASURES

#### 3.2.1 FRATERNAL RD - COGNITIVE COMPONENT

The present study used a modified version of Cantril's (1965) SASS. According to Cantril (1965) this scale may be used in various research situations to tap the perceptions, assumptions, goals and values of the individual. The Cantril scale consists of a

ladderlike diagram with rungs labelled 0-10, and different labels at the two extremes of the ladder for example, "your worst possible life", at the bottom rung to "your best possible life" at the top rung. Individuals may then be asked to locate themselves or others along this continuum.

In the present study, subjects were presented with a ladderlike diagram with rungs/steps labelled 0-10. They were informed that the ladder represented the social, economic and political positions of race groups in South Africa, with the top rung/step representing the best possible social, economic and political position that any race group may occupy and the lowest rung/step the worst possible social, economic and political position that any race group may occupy in South Africa. Subjects were instructed to consider the present social, economic and political positions of race groups in South Africa and to then indicate the step on which they thought each of the four race groups stood i.e., Indian South Africans, white South Africans, blacks and coloureds. Questionnaires contained one of four different sequence of race groups in order to avoid response set.

### 3.2.2 FRATERNAL RD - AFFECTIVE COMPONENT

The present study made use of a modified list of 13 emotions employed by Taylor et al (1987). A pretest was conducted with twenty subjects 10 professional and 10 non-professionals from different categories. subjects were presented with a list of 13 emotions viz., concern, confusion, satisfaction, hope, solidarity/unity, anger, rejection, anger in principle, resignation/not bothered, anxiety/worry, fear, frustration and helplessness, and were asked to rate the extent to which they felt each of these emotions when they compared the position of their group, Indian South Africans with each of the other race groups. A 7-point rating scale was used. Findings of the pretest indicated that subjects had difficulty understanding some of the emotions, furthermore, it was concluded that some of the emotions were irrelevant in the present context. The list of emotions were reduced to include collective feelings of anger, frustration satisfaction, resignation, helplessness, and anxiety/worry.

Subjects in the main study were presented with these emotions and were instructed to consider their feelings about the position of the ingroup when they compared it to the position of blacks, coloureds and whites respectively, as they had placed them on the ladder. They were then requested to rate the extent

to which they experienced each of the six emotions. A 7- point rating scale was used, where one represented the minimum amount of a given emotion and seven a high degree of a given emotion. Questionnaires contained one of 3 sequence of race groups, to avoid response set.

### 3.2.3 BIOGRAPHICAL QUESTIONNAIRE

Participants were required to fill out a general biographical questionnaire that included the following items : sex, age group, highest school education obtained, occupation, income per month and residential area. This section differentiated and identified professionals from non-professionals.

### 3.2.4 PROTEST ORIENTATION

The measure of potential for collective protest violence developed by Muller (1972) and Grofman and Muller (1973) was used to ascertain protest orientation. This measure consists of five protest types that increases in the degree of challenge that it poses to the political system.

Subjects in the present study were informed that there were many ways in which they could express dissatisfaction with the present social, economic and political position of the ingroup, Indian South Africans. They were then required to indicate whether they approved of, intended to participate in,

previously participated in, and believed effective each of the five protest types viz.,

- 1) protest meetings or marches that were permitted by the authorities,
- 2) disobeying an unjust law,
- 3) stopping government functioning by participating in defiance campaigns such as sit-ins, mass demonstrations,
- 4) violent protest demonstrations like fighting with the police, destroying property,
- 5) challenging the power of the government by taking up arms against the police, army.

#### 3.2.5 SOCIAL COMPARISON

Participants were required to indicate which of the three race groups they would chose most frequently to compare the social, economic and political position of the ingroup, furthermore, subjects had to give reasons for choosing a particular race group. These reasons were later categorized as follows: "better off", similar, "worse off" or other.

Questionnaires contained one of 3 sequence of race groups to avoid response set.



### 3.3 SCORING

#### 3.3.1 COGNITIVE FRATERNAL R.D.

Participant's responses on the ladder provided a measure of cognitive fraternal RD or a perception of intergroup differences. The ladder position (step number) of the outgroup was subtracted from the ladder position (step number) of the ingroup. A constant value of 10 was added to each score to eliminate negative scores (cf. Appelgryn and Nieuwoudt, 1988). A score above 10 indicated a perceived "worse-off" group, a score below 10 indicated a perceived "better-off" group and a score of 10 denoted a group perceived to be similar to the ingroup.

#### 3.3.2 AFFECTIVE FRATERNAL RD

Each emotion was scored individually, a score of 7 indicated a strong negative feeling and a score of 1 an absence of such a feeling. Three emotions had to be scored on a reversed rating scale from 7-1, these were satisfaction, resignation and helplessness.

A factor analysis was conducted to summarize most of the original information (6 emotions) to a minimum number of uncorrelated factors. Factors were extracted using the orthogonal method. The statistical package used was SAS factor (6.03 edition). The orthogonal rotation procedure was selected because

the factor scores were required in a subsequent regression analysis.

Factor analysis yielded two factors viz., factor one : anger, frustration, satisfaction and anxiety/worry and factor two : resignation and helplessness. Factor one was called collective active affect and factor two, collective passive affect.

TABLE 4 : FACTOR ANALYSIS OF 6 EMOTIONS FOR BLACKS

EMOTIONS	FACTOR 1	FACTOR 2
Anger	0.84	0.91 0.93
Frustration	0.86	
Satisfaction	0.75	
Resignation		
Helplessness		
Anxiety	0.77	
Eigenvalues	2.63	1.78
Present variance	0.44(44%)	0.30 (30%)
Total variance	0.74	.

TABLE 5 : FACTOR ANALYSIS OF 6 EMOTIONS FOR WHITES

EMOTIONS	FACTOR 1	FACTOR 2
Anger	0.87	0.90 0.93
Frustration	0.92	
Satisfaction	0.72	
Resignation		
Helplessness		
Anxiety	0.65	
Eigenvalues	2.55	1.81
Present variance	0.43(43%)	0.30 (30%)
Total variance	0.73	

TABLE 6 : FACTOR ANALYSIS OF 6 EMOTIONS FOR  
COLOUREDS

EMOTIONS	FACTOR 1	FACTOR 2
Anger	0.93	0.84 0.81
Frustration	0.93	
Satisfaction	0.69	
Resignation		
Helplessness		
Anxiety	0.86	
Eigenvalues	3.14	1.59
Present variance	0.52(52%)	0.26 (20%)
Total variance	0.78	

The eigenvalue represents the amount of variance accounted for by a factor.

### 3.3.3 PROTEST ORIENTATION

A summation of positive responses yielded a protest orientation score. A response Yes was coded as one and No as zero.

### 3.4 PROCEDURE

An appointment was set up to interview each randomly selected participant. The researcher informed the participants that the present study looked at Indian South Africans' perceptions of the present social, economic and political situation in South Africa. The general aim was to obtain information about their experiences, views and opinions so there were no correct or incorrect answers. Furthermore, participants were assured that all responses would be

kept in the strictest confidence and that all participants and institutions will remain anonymous. A questionnaire was handed to the participant and the researcher explained the requirements of various sections. The researcher also reiterated that the questions required considering the social, economic and political position of their group, Indian South Africans, (not their personal situation) in comparison with the other race groups. This was done to ensure that the participants' social identity was salient not their personal identity. Participants were also guided to read the instructions carefully before answering any questions. The researcher was present to answer any queries of the respondents in regard to the requirements of the various sections. The questionnaire took approximately 20-30 minutes to complete. The questionnaire was collected and the participant was thanked for his or her participation. The interviews were conducted during December 1990 - January 1991.

## CHAPTER 4

### RESULTS

#### 4.1 COGNITIVE FRATERNAL RD

##### 4.1.1 LADDER POSITIONS

The means (M) and standard deviations (SD) of the ingroup's perception of each of the four race groups' position on Cantril's Ladder are presented in Table 7. The ingroup perceived blacks to occupy a position toward the lower end of the ladder (M = 2.07), where 0 denoted the "worst possible social, economic and political position" that any race group may occupy in South Africa. The ingroup and coloureds were perceived to occupy an intermediate position on the ladder (M = 5.46 and M = 5.17 respectively). Whites were perceived to occupy a position toward the upper end of the ladder (M = 9.39), where 10 denoted the "best possible social economic and political position" that any race group may occupy in South Africa.

Three t-tests were carried out to ascertain if there is a significant difference between the perceived ladder position of the ingroup compared to each of the perceived ladder positions of the three outgroups. The statistical package used was SAS T-TEST (6.03 edition). These results appear in Table 8 and indicate that there was a statistically significant difference between the perceived position of the

ingroup relative to blacks ( $t = 22.64, p < 0.0001$ ), where the ingroup was perceived to occupy a higher position on the ladder relative to blacks. There was no statistically significant difference between the perceived ladder position of the ingroup relative to that of coloureds ( $t = 1.89, p < 0.0615$ ). There was a statistically significant difference between the perceived position of the ingroup relative to whites ( $t = -24.00, p < 0.0001$ ), where the ingroup was perceived to occupy a lower position on the ladder relative to whites.

4.1.2 LADDER DIFFERENCE SCORES

RD was computed by subtracting the ladder score of the outgroup from the ingroup. The means and SD of the Ladder difference scores of the ingroup appear in Table 9. This represents the ingroup's experience of cognitive fraternal RD when the ingroup compared their social, economic and political position to that of each of the three outgroups.

Table 7 : Perceived Ladder Positions : Means and SD

Race Group	M	SD
Blacks	2.07	1.56
Coloureds	5.17	1.66
Indians	5.46	1.59
Whites	9.39	0.90

Table 8 : t-Scores on Ladder positions of outgroups

Race Group	t-scores	p<
Blacks	22.64	0.0001
Whites	-24.00	0.0001
Coloureds	1.89	0.0615

Table 9 : Ladder Difference Scores : Means and SD

Ingroup vs outgroup	M	SD
RD vs blacks	13.392	1.641
RD vs whites	6.092	1.773
Rd vs coloureds	10.292	1.692

A score below 10 denotes cognitive fraternal RD, a score above 10 denotes an absence of cognitive fraternal RD, and a score of 10 denotes a group similar to the ingroup.

Results indicate that the ingroup experienced cognitive fraternal RD when the comparison group was whites (M = 6.092). It appears that the ingroup see themselves as occupying a worse off position relative to whites. The ingroup did not experience cognitive fraternal RD when the comparison outgroup was blacks (M = 13.392). This suggests that the ingroup perceived themselves as occupying a better-off position relative to blacks. Coloureds were per-

ceived to experience an equivalent social, economic and political position as the ingroup ( $M = 10.292$ ).

#### 4.2 Affective component of fraternal RD.

The affective component of fraternal RD was gauged from six emotions, viz., anger, frustration, satisfaction, resignation, helplessness and anxiety/worry. The means and SD of these six emotions when the ingroup compared their social, economic and political position to that of each of the three outgroups are presented in Table 11. Six one-way ANOVAs (see Table 10) with repeated measures were performed to assess whether the ingroup differed on each emotion with changes in the racial identity of the target group. The statistical package used was Systat MGLH : Analysis of Variance (1990)<sup>1</sup>.

For anger, there was a statistically significant difference in way the ingroup felt about blacks, whites and coloureds, [Wilks' Lambda = 0.462,  $F(2, 118) = 68.716$  ( $p < 0.000$ )]. Subsequent Sheffé tests (see Appendix E) indicated that there was a statistically significant difference between the way the ingroup felt about blacks versus whites ( $F = 84.756$ ,  $p < 0.05$ ). The ingroup felt more angry about the position of whites ( $M = 5.925$ ) than that of blacks ( $M = 4.892$ ). A statistically significant difference between blacks and coloureds on anger was

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1. Systat (1990) package was used due to the unavailability of SAS (6.03 edition) at the UDW Computer Centre.



TABLE 10 : SUMMARY OF 6-ONE-WAY ANOVAS

ONE-WAY ANOVA FOR EMOTION 1 - ANGER

SS	DF	MS	F	P
59.004	1	59.004	34.675	0.000
202.496	119	1.702		
187.068	1	187.068	130.872	0.000
170.099	119	1.429		

Wilks' Lambda = 0.462  
F-Statistic = 68.716      DF = 2, 118      Prob = 0.000

ONE-WAY ANOVA FOR EMOTION 2 - FRUSTRATION

SS	DF	MS	F	P
65.104	1	65.104	33.921	0.000
228.396	119	1.919		
143.113	1	143.113	92.866	0.000
183.388	119	1.541		

Wilks' Lambda = 0.540  
F-Statistic = 50.349      DF = 2, 118      Prob = 0.000

ONE-WAY ANOVA FOR EMOTION 3 - SATISFACTION

SS	DF	MS	F	P
41.667	1	41.667	24.148	0.000
205.333	119	1.725		
44.006	1	44.006	43.520	0.000
120.328	119	1.011		

Wilks' Lambda = 0.712  
F-Statistic = 23.818      DF = 2, 118      Prob = 0.000

also revealed ( $F = 37.994, p < 0.05$ ). The ingroup expressed more anger about the perceived position of blacks ( $M = 4.892$ ) than the perceived position of coloureds ( $M = 3.900$ ). There was a statistically significant difference on anger expressed by the ingroup when the comparison groups were whites and coloureds ( $F = 158.325, p < 0.05$ ). The ingroup felt more angry about the perceived position of whites ( $M = 5.925$ ) than that of coloureds ( $M = 3.900$ ).

Table 11 : Ingroup's experience of affective  
fraternal RD : Means and SD

Emotions	Comparison Group		
	Blacks	Whites	Coloureds
anger M SD	4.892 1.669	5.925 1.251	3.900 1.876
frustration M SD	5.042 1.611	5.858 1.245	4.000 1.992
satisfaction M SD	5.833 1.386	6.158 1.202	5.000 1.744
resignation M SD	4.325 2.042	4.250 2.224	4.617 1.911
helplessness M SD	3.958 2.217	3.958 2.159	4.217 1.793
anxiety/worry M SD	5.433 1.499	5.508 1.517	4.333 1.812

Results indicated that there was a statistically significant difference in the way the ingroup experienced frustration in relation to the perceived difference between blacks, whites and coloureds, [Wilks' Lambda = 0.540,  $F(2, 118) = 50.349$ , ( $p < 0.000$ )]. Sheffé tests indicated a statistically significant difference in the manner in which the ingroup felt about blacks versus whites ( $F = 23.200$ ,  $p < 0.05$ ). The ingroup felt more frustrated about the position of whites ( $M = 5.858$ ) than blacks ( $M = 5.042$ ). There was a statistically significant difference between blacks and coloureds ( $F = 37.83$ ,  $p < 0.05$ ). The ingroup expressed more frustration about the perceived position of blacks ( $M = 5.042$ ) than coloureds ( $M = 4.000$ ). There was also a statistically significant difference on frustration between whites and coloureds ( $F = 120.28$ ,  $p < 0.05$ ). The ingroup experienced greater frustration about the position of whites ( $M = 5.858$ ) than coloureds ( $M = 4.000$ ).

With regard to satisfaction, there was a statistically significant difference in the way the ingroup felt about blacks, whites and coloureds, [Wilks' Lambda = 0.712,  $F(2, 118) = 23.818$ , ( $p < 0.000$ )]. Sheffé tests revealed no difference in the ingroup's experience of satisfaction when the outgroups were

blacks and whites ( $F = 4.653$ ,  $p > 0.05$ ). However, there was a statistically significant difference in the ingroup's expression of satisfaction when the comparison groups were blacks and coloureds, and whites and coloureds. The ingroup felt more dissatisfied about the perceived position of blacks (5.833) than coloureds ( $M = 5.000$ ) and more dissatisfied about the position of whites ( $M = 6.158$ ) than coloureds ( $M = 5.000$ ).

As regards the emotions resignation and helplessness there was no statistically significant difference in the way the ingroup felt about blacks, whites and coloureds, [Wilks' Lambda for resignation = 0.973,  $F(2, 118) = 1.609$ , ( $p < 0.204$ )] and for helplessness, Wilks' Lambda = 0.977,  $F(2, 118) = 1.419$ , ( $p < 0.246$ ).

On the emotion anxiety/worry there was a statistically significant difference between blacks, whites and coloureds, Wilks' Lambda = 0.691,  $F(2, 118) = 26.369$ , ( $p < 0.000$ ). Sheffé tests indicated no difference between the way ingroup felt about blacks versus whites ( $F = 0.024$ ,  $p > 0.05$ ). There was a statistically significant difference between blacks and coloureds ( $F = 49.186$ ,  $p < 0.05$ ) whereby the ingroup felt more anxious/worried about the perceived position of blacks ( $M = 5.433$ ) than coloureds ( $M = 4.333$ ). Finally, there was a statistically

significant difference between whites and coloureds ( $F = 56.123, p < 0.05$ ). In this instance the ingroup expressed more anxiety/worry about the perceived position of whites ( $M = 5.508$ ) than coloureds ( $M = 4.333$ ).

#### 4.3 PROTEST ORIENTATION

The ingroup's attitudes toward protest orientation are presented in Table 12 and it includes the frequency and percentage of participants who approve of, intend to participate in, previously participated in and believe effective each of five protest types. Results indicate that approximately 65% - 80% of the present sample approve of, intend to participate in and believe effective protest meetings or marches allowed by the authorities (protest type one). An approximate 40% - 60% approve of, intend to participate in and believe effective protest types two and three compared to below 10% who approve of, intend to participate in and believe effective protest types four five. Of the present sample 45% previously participated in protest type one and approximately 20% previously participated in protest types two and three whereas a negligible percentage previously participated in protest type four and none in protest type five. The overall mean on protest orientation by the ingroup was 6.128

Table 12 : Ingroup's attitudes toward different types of protest (frequency and percentages)

Protest Type	Attitude toward protest type (frequency and percentage)			
	Approve of	Intend to participate in	Previously participated in	Believe Effective
1. protest meetings or marches/allowed by the authorities.	91 75.8%	81 67.5%	54 45%	96 80%
2. disobeying an unjust law	71 59.2%	52 43.3%	26 21.7%	65 54.2%
3. sit-ins, mass demonstrations etc.	46 59.2%	39 32.5%	27 22.5%	63 62.5%
4. destroying property	1 0.8%	1 0.8%	3 2.5%	5 4.2%
5. taking up arms against the government	6 5.0%	2 1.7%	0 0	10 8.3%

#### 4.4 Professionals vs Non-professionals

##### 4.4.1 Cognitive fraternal RD

Means and SD of the ingroup professionals and non-professionals on cognitive fraternal RD when they compared their social, economic and political position to that of the three outgroups (blacks, whites and coloureds) are presented in Table 14. A 2x3 MANOVA (professional vs non-professional and RD vs blacks, RD vs whites, RD vs coloureds) was carried out to investigate if there was a significant difference between professionals and non-professionals in their experience of cognitive

TABLE 13 : SUMMARY OF 2 X 3 MANOVA

DEGREE	SS	DF	MS	F	P
RDVSBLKS ERROR	10.208 310.383	1 118	10.208 2.630	3.881	0.051
RDVSBLKS ERROR	0.008 373.983	1 118	0.008 3.169	0.003	0.959
RDVSBLKS ERROR	18.408 322.383	1 118	18.408 2.732	6.738	0.011

Wilks' Lambda = 0.923  
F-Statistic = 3.209                      DF = 3, 116                      Prob = 0.026

fraternal RD (see Table 13). The statistical package, Systat, MGLH : Multivariate Models (1990) was used. Wilks' Lambda = 0.923;  $F(3,116) = 0.923$  ( $p < 0.026$ ) showed that there was a statistically significant difference between professionals and non-professionals and their experience of cognitive fraternal RD. Furthermore, results indicate that there was a statistically significant difference between professionals and non-professionals when the comparison group was blacks  $F(1,118) = 3.881$ ,  $p < 0.051$ ; and when the comparison group was coloureds  $F(1,118) = 3.881$   $p < 0.011$ , but there was no statistically significant difference when the comparison group was whites  $F(1,118) = 0.003$ ,  $p < 0.95$ .

It was found that professionals experienced a greater absence of cognitive fraternal RD ( $M = 13.683$ ) than non-professionals ( $M = 13.100$ ) when the comparison group was blacks ( $M = 13.683$ ). Professionals also experienced less cognitive fraternal RD ( $M=10.683$ ) than non-professionals ( $M=9.900$ ) when the comparison groups was coloureds.



Table 14 : Cognitive fraternal RD of PProfessionals and Non-professionals : Means and SD.

	Comparison Group		
	RD vs Blacks	RD vs Whites	RD vs Coloureds
Professionals M SD	13.683 1.546	6.100 1.504	10.683 1.295
Non-professionals M SD	13.100 1.694	6.083 2.019	9.900 1.946

#### 4.4.2 AFFECTIVE FRATERNAL R.D.

The means and SD of the six emotions making up the affective component of fraternal RD of professionals and non-professionals are presented in Table 15.

Table 15 : Affective fraternal RD of Professionals and Non-professionals : Means and SD.

Emotions	Professionals			Non-Professionals		
	Blacks	Whites	Coloureds	Blacks	Whites	Coloureds
anger M SD	5.137 1.513	6.150 1.291	4.033 1.939	4.467 1.722	5.700 1.253	3.767 1.817
frustration M SD	5.517 1.308	6.100 1.069	4.250 2.030	4.567 1.750	5.617 1.367	3.750 1.936
satisfaction M SD	6.283 1.010	6.533 0.791	5.233 1.598	5.383 1.563	5.783 1.415	4.767 1.863
resignation M SD	4.833 1.967	5.067 2.033	4.933 1.956	3.817 2.004	3.433 2.118	4.300 1.825
helplessness M SD	4.350 2.223	4.783 1.949	4.417 1.871	3.567 2.158	3.133 2.054	4.017 1.702
anxiety/worry M SD	5.667 1.336	5.550 1.588	4.517 1.799	5.200 1.624	5.467 1.455	4.150 1.821

A 2 X 18 MANOVA (statistical package, Systat MGLH : Multivariate Models 1990) was performed to assess whether professionals and non-professionals differed in their rating on six emotions, concerning the perceived difference between the ingroup and blacks, whites and coloureds respectively (see Table 16). The results indicate a statistically significant difference between professionals and non-professionals in their rating of the six emotions, [Wilks' Lambda = 0.694;  $F(18, 101) = 2.474$  ( $p < 0.002$ )]. Moreover, there was a statistically significant difference between professionals and non-professionals on the following emotions when the target group was blacks, with professionals experiencing more anger ( $M = 5.317$ ,  $p < 0.005$ ), frustration ( $M = 5.517$ ,  $p < 0.001$ ), dissatisfaction ( $M = 6.283$ ,  $p < 0.000$ ), resignation ( $M = 4.833$ ,  $p < 0.006$ ). There was no statistically significant difference between professionals and non-professionals on the feelings of helplessness ( $p < 0.053$ ) and anxiety/worry ( $p < 0.088$ ) when the target outgroup was blacks.

There was a statistically significant difference between professionals and non-professionals on the following emotions when the target group was whites, with professionals experiencing more anger ( $M = 6.150$ ,  $p < 0.048$ ), frustration ( $M = 6.100$ ,  $p < 0.033$ ), dissatisfaction ( $M = 6.533$ ,  $p < 0.000$ ), resig-

nation ( $M = 5.067$ ,  $p < 0.000$ ), helplessness ( $M = 4.783$ ,  $p < 0.000$ ). There was no statistically significant difference when the emotion was anxiety/worry ( $p < 0.765$ ).

Furthermore, there was no statistically significant difference between professionals and non-professionals and their rating on the six emotions when the target group was coloureds.

#### 4.4.3 Protest Orientation

Professionals and non-professionals attitudes toward the different protest types (frequency and percentages) are presented in table 14. An approximate 45% to 60% ( $N = 27-37$ ) of the professionals as compared to 20% to 45% of the non-professionals ( $N = 14-26$ ) approve of, intend to participate in and believe effective protest type three. There is an overall drop in the number and percentage of participants that approve of, intend to participate in, previously participated in and believe effective protest types four and five. 10% of the professionals approve of challenging the government and 13% believe it effective while none of the non-professionals approve of protest type five and 3% believe it effective.

Table 17 : Professionals' (p) and non-professionals' (NP) attitudes toward different types of Protest (frequency and percentages)

Protest Type	Attitude toward protest type (frequency and percentage)							
	Approve of		Intend to participate in		Previously participated in		Believe Effective	
	P	NP	P	NP	P	NP	P	NP
1. protest meetings or marches/allowed by the authorities.	55 91.7%	36 60%	49 81.7%	32 53.3%	40 66.7%	14 23.3%	57 95%	39 65%
2. disobeying an unjust law	43 71.7%	28 46.7%	29 48.3%	23 38.3%	20 33.3%	6 10%	37 61.7%	28 46.7%
3. sit-ins, mass demonstrations etc.	32 53.3%	14 23.3%	27 45%	12 20%	20 33.3%	7 11%	37 61.7%	26 43.3%
4. destroying property	1 1.7%	0 0	1 1.7%	0 0	2 3.3%	1 1.7%	5 8.3%	0 0
5. taking up arms against the government	6 10%	0 0	2 3.3%	0 0	0 0	0 0	8 13.3%	2 3.3%

#### 4.5 PREDICTING PROTEST ORIENTATION

A stepwise multiple regression procedure was performed to assess the predictive impact of ten IVs on protest orientation. The statistical package used was SAS REG (6.03 edition). This was made up of the cognitive and affective components of fraternal RD and occupational status i.e., professionals vs non-professionals. The following variables constituted the cognitive component of fraternal RD : RD vs whites, RD vs blacks, RD vs coloureds. The affec-

tive component was made up of factor 1 whites, factor 2 whites, factor 1 blacks, factor 2 blacks, factor 1 coloureds and factor 2 coloureds.

The stepwise technique results in a set of IVs that are valuable in predicting the DV. At the same time those IVs that do not provide additional prediction are excluded. The sequence in which variables are entered is based on statistical rather than theoretical criteria. At each step of entry, the variable that contributes most of  $R^2$  is entered. This procedure continues and usually results in the formation of a subset of IVs that are effective in predicting the DV (Tabachnick and Fidell, 1983).

In order to determine if there were any potential problems with the regression model, the studentized residual scatterplot was examined. If all the assumptions of the regression model are upheld then the plot will reflect a random rectangular scatter around zero (Tabachnick and Fidell 1983). An examination of the studentized residual scatterplot for protest orientation revealed non-linearity with the scatter being curved instead of rectangular. Typically this may be overcome by transforming variables or by adding other terms to the regression equation. However, Tabachnick and Fidell (1983) caution that overfitting with too many terms may lead to diffi-

culty in interpretation which is not worth the gain in R. Moreover, plots used in textbooks to depict normality, "are somewhat idealized, constructed to be clear illustrations of violations. As Weisberg (1985, p. 131) states, 'Unfortunately, these idealized plots cover up one very important point; in real data sets, the true state of affairs is rarely this clear.'" (Stevens, 1986, p. 75). Personal communication with a Professor of statistics (UD-W) confirmed that transformation not necessary.

A summary of the stepwise procedure for protest orientation appears in Table 18. There were only five IVs selected to form the set of predictor variables.

Table 18 : Summary of stepwise procedure for dependent variable protest orientation.

STEP	VARIABLE ENTERED (REMOVED)	PARTIAL R**2	MODEL R**2	F	PROB.>F
1	Factor 1 blacks	0.1992	0.1992	29.3588	0.0001
2	Factor 2 whites	0.1298	0.3290	22.6353	0.0001
3	RD vs blacks	0.0228	0.3519	4.0895	0.0455
4	P vs NP	0.0195	0.3714	3.5634	0.0616
5	Factor 2 coloureds	0.0141	0.3855	2.6171	0.1085

The unique contribution of these five IVs is given by the partial R\*\*2 values.The variable that had the highest unique variance was Factor 1 blacks, which contributed 20% of the variance ( $p < 0.0001$ ), Factor

2 whites contributed 13% of the variance ( $p < 0.0001$ ) and RD vs blacks contributed 2.3% of the variance ( $p < 0.05$ ). The addition of the category professionals vs non-professionals and Factor 2 coloureds did not contribute significantly to the variance ( $p > 0.05$ ). The variables Factor 1 blacks, Factor 2 whites and RD vs blacks together accounted for 35% of the total variance ( $p < 0.05$ ).

#### 4.6 SOCIAL COMPARISON

The frequencies and percentages of the target out-group (blacks, whites or coloureds) chosen by the ingroup to compare their social, economic and political position and reason for choice are presented in Table 19. The statistical package used was Systat, Tables (1990). The ingroup chose to compare their position with whites (77 out of 120 respondents) most frequently as apposed to blacks (22 out of 120 respondents) or coloureds (21 out of 120 respondents). The most frequent reason for choosing whites (67 out of 77 respondents) considered them to be a better-off group. The most frequent reason for choosing coloureds (19 out of 21 respondents) and blacks (11 out 22) was because the ingroup considered these groups to be similar to the ingroup. On the other hand 7 out of 22 respondents chose blacks because this group was perceived to be worse-off.

Table 19 : Social Comparison : Target group chosen and reason for choice  
(frequency and percentage)

Comparison Group	Comparison group chosen		Reason for choosing comparison group (frequency & % )							
			better-off		similar		worse-off		other	
	frequency	percentage	frequency	percentage	frequency	percentage	frequency	percentage	frequency	percentage
Blacks	22	18.3	1	0.8	11	9.2	7	5.8	3	2.5
Whites	77	64.2	67	55.8	4	3.3	0	0	6	5.0
Coloureds	21	17.5	0	0	19	15.8%	1	0.8	1	0.8



## CHAPTER 5

### DISCUSSION

#### 5.1 INTERPRETATION OF THE FINDINGS

The present study utilized the social or group form of RD i.e., fraternal RD, consequently the measuring instruments were designed to ensure that the respondents' social (group) identity was silent. Using Cantril's Ladder, it was found that the ingroup perceived themselves as occupying an intermediate social, economic and political position in South Africa. The ingroup ( $M = 5.46$ ) perceived whites to be better off ( $M = 9.39$ ), blacks to be worse off ( $M = 2.07$ ) and they perceived coloureds to occupy a similar position to themselves ( $M = 5.17$ ).

Results using the ladder difference scores indicated a statistically significant difference in the perceived better off position of the ingroup relative to blacks ( $M = 13.392$ ) and a statistically significant difference in the perceived worse off position of the ingroup relative to whites ( $M = 6.092$ ). There was no statistically significant difference between the perceived position of the ingroup relative to coloureds ( $M = 10.292$ ).

These findings are congruent with the findings of Appelgryn and Nieuwoudt (1988) and Appelgryn (1985,

1987), where Indians were perceived as an intermediate group with white South Africans occupying a better-off position and blacks a worse off position. Contrary to the present study coloureds perceived Indians to occupy a better-off position relative to themselves.

#### 5.1.1 THE COGNITIVE VS AFFECTIVE COMPONENTS OF FATHERAL RD.

The failure to clearly differentiate between the cognitive and affective components has been a shortcoming of RD research. Although Runciman (1966) and Gurr (1970) initially pointed out this difference when it came to empirical testing, research has fallen short by not taking cognisance of this difference. This is characteristic of those studies that have only used Cantril's scale to measure RD and subsequently inferred "feelings" of RD. (c f. Crawford and Naditch, 1970; Bowen et al, 1968). Typically if a group is perceived to occupy a worse off position, feelings of satisfaction or gratification is usually inferred.

The findings of the present study revealed that the ingroup perceived blacks to occupy a statistically worse-off position, as mentioned in the preceding section. Examination of the ingroup's feelings about this perceived difference, revealed that the ingroup experienced statistically significant more

anger ( $M = 4.892$ ), frustration ( $M = 5.042$ ), dissatisfaction ( $M = 5.833$ ) and anxiety/worry ( $M = 5.433$ ) about the relative position of blacks than that of coloureds.

The preceding findings suggest that a perception of difference or similarity is not directly related to feelings regarding this difference or similarity. Moreover, findings of the present study further supports the theoretical postulation of Runciman (1966) who contended that magnitude and affect may not necessarily covary. This was borne out by the research study conducted by Guimond and Dubé-Simard (1983). These researchers experimentally manipulated the magnitude of difference between groups. It was found that this did not necessarily lead to an increase in feelings of dissatisfaction. If anything, the findings of the present study clearly reinforces the need to include a cognitive as well as an affective dimension in any research endeavour utilizing RD. This is of particular importance within the South African context, which has been characterized by severe intergroup conflict.

A society where issues of justice and fairness in the equitable distribution of resources play a central role in determining people's feelings, it seems plausible that the ingroup should feel anger,

frustration, dissatisfaction and anxiety/worry about the perceived relative position of blacks in South Africa. An insight into their underlying motivation for such feelings was ascertained by examining their responses to the questionnaire involving reasons for their comparison choice. Most of the respondents referred to the unequal distribution of resources and believed that the ingroup and blacks shared a similar plight with regard to being oppressed under Apartheid legislation. In such circumstances, it is perhaps expected that groups living under oppression may provide a challenge to the existing status quo in an attempt to bring about a more equitable and just position of groups within such a context.

#### 5.1.2 THE INGROUP AND PROTEST ORIENTATION

The findings of the present study suggests that the ingroup was not prepared to participate in protest activities that warranted a high level of challenge to the government, in order to obtain a more equitable position for the ingroup. It must be borne in mind that such actions that challenge the status quo have serious consequences such as lengthy jail sentences.

It was found that 65% to 80% of the ingroup approved of, intended to participate in and believed effective the following protest types : meetings or marches allowed by the authorities, disobeying an

unjust law, sit-ins and mass demonstrations. However, the ingroup was more reluctant when the protest activity required destroying property and directly challenging the government. In this regard it was found that 21.7% of the respondents had previously disobeyed an unjust law, 22.5% had previously participated in mass demonstrations and 2.5% had participated in acts that destroyed property. None of the respondents had participated in acts that directly confronted the government such as fighting with the police, taking up arms against the government authorities. Overall, the mean for protest orientation was 6.158 with the highest possible score being 20.

Variables that contribute to the variance on protest orientation may provide insights into the ingroup's protest orientation (see subsection 5.1.4 below). A question that has often arisen is whether Indians in South Africa consider themselves to be aligned with blacks in their struggle for a just society or are they fulfilling a middle of the road position?

### 5.1.3 PROFESSIONALS VS NON-PROFESSIONALS ON FRATERNAL RD AND PROTEST ORIENTATION

Results of the present study indicated a statistically significant difference between professionals and non professionals and their experience of cognitive and affective fraternal RD.

It was found that professionals experienced significantly ( $p < 0.05$ ) less cognitive fraternal RD than non-professionals when the comparison groups were blacks and coloureds. There was no significant ( $p > 0.05$ ) difference between professionals and non professionals when the comparison group was whites.

On affective fraternal RD, professionals experienced significantly more ( $p < 0.05$ ) anger, frustration, dissatisfaction and resignation than non professionals when the target comparison group was blacks. In addition to these emotions, professionals experienced significantly more ( $p < 0.05$ ) helplessness than non professionals when the comparison group was whites. Results indicated no significant different ( $p > 0.05$ ) between professionals and non professionals on affective fraternal RD when the target comparison group was coloureds.

The findings of this study does not lend support to the findings of Appelgryn and Nieuwoudt (1988), where individuals with higher levels of education

experienced greater fraternal RD. However, the results on cognitive versus affective fraternal RD support the theoretical contention of Runciman (1966) that perception and associated feelings of RD may not necessarily covary. Furthermore, empirical findings by Guimond and Dubé-Simard (1983) showed that there is an absence of a causal link between cognition and affect. The findings of the present study offers further support that perception and feelings of fraternal RD are independent entities and should be measured separately.

A criterion for distinguishing professionals from non professionals was level of education level. Professionals had to have attended a tertiary institution, most often this was university. Such tertiary level institutions are usually characterized by more radical and activistic orientation. Generally students are noted for taking a stand for the cause of a more just society. Findings of the present study indicated that approximately 45% to 60% of the professionals approve of, intend to participate in and believe effective sit ins and mass demonstrations, compared to 20% to 45% of the non professionals. Moreover, 10% of the profession-

als approve of challenging the government and 13% believe it effective while none of the non professionals approve of challenging the government and 3% believe it effective.

#### 5.1.4 THE INFLUENCE OF COGNITIVE AND AFFECTIVE FRATERNAL RD ON PROTEST ORIENTATION

The following independent variables accounted for 35% ( $p < 0.05$ ) of the variance on protest orientation: Factor 1 blacks (20%), factor 2 whites (13%) and RD vs blacks (2.28%). It may be observed that the affective component of fraternal RD accounted for a greater proportion of the variance (33%) than the cognitive component (2.28%). These results support the findings of Guimond and Dubé-Simard (1983), where it was found that feelings of fraternal RD were associated with nationalism. Perhaps, these findings reiterate the need to consider feelings of fraternal RD when considering an intergroup or social context.

It would appear that the ingroup feels aligned and sympathetic about the deprived position of blacks in South Africa. The independent variable that contributed the most variance on protest orientation was factor 1 blacks. The emotions that constituted factor 1 were anger, frustration, satisfaction and anxiety/worry. This perhaps has impor-



tant political implications for the ingroup's support in the struggle for a new constitution and government.

While the variance of 35% suggests that the affective and cognitive components of fraternal RD are important predictors of protest orientation, the unexplained variance indicates that there are other factors which influence protest orientation. The study by Martin et.al (1981), where feelings of fraternal RD did not lead to a willingness to participate in collective action suggests that other issues need to be taken into consideration. It would appear that there are other variables within the South African social context that play a role in determining individuals protest orientation and willingness to participate in collective action. Future studies may explore more fully those variables other than RD within the South African social context that may lead to an increase in the variance on protest orientation.

#### 5.1.5 SOCIAL COMPARISON

The present study included the component of social comparison, an issue which plays a central role in RDT and which has yet to be clarified. The findings of the present study supports Taylor et al's (1987) contention that individuals choose many groups, depending on their reason for comparison. According

to Festinger (1954) comparisons are made with a similar other. Pettigrew (1978) on the other hand suggests that in an intergroup context, diametrically opposite groups are chosen for example, black-white; native-immigrant. However, according to Taylor et al (1987), a better-off other is chosen when individuals wish to make a plea for a more equitable distribution of resources. The findings of the present study are consistent with this contention. The ingroup chose whites most frequently (64.2%) and the reason for their choice was that whites were a better-off group (55.8%).

These findings have important ramifications for research dealing with social comparison. It provides a means of investigating the motivation for comparison and why a certain group is chosen as the comparison other.

## 5.2 LIMITATIONS OF THE PRESENT STUDY AND SUGGESTIONS FOR FUTURE RESEARCH.

Sample size and questions regarding the representative nature of the sample are always important considerations in any research investigation. Given the fact that the sample was drawn from a local Durban population and comprised 120 subjects, one may question the generalizability of these results to the Indian South African population. However,

it must be acknowledged that the history of protest activity of Indians in Durban is not the same as the history of protest activity of Indians in other parts of South Africa.

Financial and time constraints dictated the size of this sample. Future research should attempt to investigate the experience of fraternal RD among all South Africans. This may provide useful insights into the way South Africans perceive their relative positions and the concomitant feelings related to such perceptions.

A further limitation of the present study is that it may be relevant to a specific time period. The research was conducted at a time when South Africa was on the brink of what appeared to be some fundamental political changes. In this respect the findings of this study may be more relevant to Apartheid society than a post-Apartheid society. Future research should investigate fraternal RD in a post-Apartheid context.

A third limitation, concerns the types of measures used in the study. For instance, on the measuring scale that assessed the affective component of RD, one of the emotions, resignation, was not well comprehended by all of the subjects. Perhaps it

would be more appropriate to utilize a measuring scale that was developed within the population.

This may be done by asking respondents to spontaneously suggest adjectives that they would use to describe the way they felt about the perceived relative difference between groups.

The scale that measured cognitive fraternal RD (Cantril's Ladder) may be criticized for its subjective nature. Individuals may differ in their conceptualization of what constitutes the best or worst possible social, economic and political position.

Finally, a conceptual limitation of this study refers to the researcher combining the social, economic and political dimensions into a composite. To a large extent these dimensions exist independently and may be considered as separate entities in research (cf. Appelgryn, 1988).

The present study offers a direction for future research considering fraternal RD, in that research studies should take cognisance of the cognitive and affective components of RD. Further research is required to explore the differential relationship of these two components to various social phenomena. Moreover, a research area worthy of pursuit is to explore the variables other than or in addition to

fraternal RD that leads to participation in protest activity, especially in the present idiosyncratic social context that exists.

### 5.3 CONCLUSION

Given the limited body of research examining fraternal RD and certain problems associated with RD studies in general, the present study contributes in an important manner towards the body of research on RD at the intergroup level. Furthermore, it offers a contribution toward research focussing on intergroup relations within the South African social context. The study succeeds in pointing out that there exists a differential relationship between perceiving intergroup differences (cognitive fraternal RD) and the concomitant feelings associated with such perceptions (affective fraternal RD). Moreover, the findings suggest that feelings of fraternal RD may play a more crucial role than perceptions of intergroup differences in predicting socially related behavior and attitudes. Although it is accepted that this study is not without its limitations, the study does nevertheless raise some important questions and suggests avenues for future research.

## REFERENCES

Abeles, R.P. (1976). Relative deprivation, rising expectations, and Black military. Journal of Local Issues, 32(2), 119-137.

Appelgryn, A.E.M. (1985). Sosiale vergelyking en relatiewe deprivasie : 'n Onderzoek na die dinamika van intergroepverhoudings. [Social comparison and relative deprivation : Investigating the dynamics of intergroup relations] Unpublished doctoral dissertation, University of South Africa, Pretoria.

Appelgryn, A.E.M. (1987). Relatiewe deprivasie en militantheid in die Suid-Afrikaanse konteks. [Relative deprivation and militancy in the South African context] Suid-Afrikaanse Tydskrif vir Sosiologie, 18(3), 95-101.

Appelgryn, A.E.M. (1991). Social comparison and relative deprivation : perceived justice and intergroup attitudes. In Foster, D., & J., Louw-Potgieter (Eds.), Social Psychology in South Africa. Johannesburg : Lexicon Publishers.

Appelgryn, A.E.M., & Niewoudt, J.M. (1987). Relative Deprivation and the Ethnic Attitudes of Blacks and Afrikaans - Speaking Whites in South Africa. The Journal of Social Psychology, 128(3), 311-323.

- Bernstein, M., Crosby, F. (1980). An Empirical Examination of Relative Deprivation Theory. Journal of Experimental Social Psychology, 16, 442-456.
- Birrel, D. (1972). Relative Deprivation as a factor in conflict in Northern Ireland. Sociological Review, 20, 317-343.
- Bornman, E. (1988). Tussengroepvoerhoudinge met spesifieke verwysing na die werksituasie. Ongepubliseerde Ma-verhandeling, Universiteit van Suid-Afrika, Pretoria.
- Bowen, D.R., Bowen, E., Gawiser, S., & Masotti, L.H. (1968). Deprivation, mobility and orientation toward protest of the urban poor. In L.H. Masotti & D.R. Bowen (Eds.), Riots and Rebellion. California: Sage Publications.
- Brown, R. (1988). Group Processes : Dynamics within and between groups. Oxford : Basil Blackwell.
- Cantril, H. (1965). The pattern of human concerns. New Jersey : Rutgers University Press.
- Caplan, N. (1970). The new Ghetto man : A review of recent empirical studies. Journal of Social Issues, 26, 59-73.

Cook, J.D., Crosby, F., & Hennigan, K.M. (1977). The construct validity of Relative Deprivation. In J.M. Suls, & R.L. Miller (Eds.), Social comparison processes. Theoretical and Empirical perspectives. New York : John Wiley & Sons.

Crawford, J.J., & Naditch, M. (1970). Relative deprivation, powerlessness and militancy : The psychology of protest. Psychiatry, 33, 208-223.

Crosby, F. (1976). A model of egoistical relative deprivation. Psychological Review, 83, 85-113.

Crosby, F. (1979). Relative Deprivation Revisited : A Response to Miller, Boke and Halligan. American Political Science Review, 73, 103-112.

Crosby, F. (1982). Relative deprivation and working women. New York : Oxford University Press.

Crosby, F., Muehrer, P., & Loewenstein, G. (1986). Relative deprivation and explanation : Models and concepts. In J.M. Olson, C.P. Herman, & M.P. Zanna (Eds.), Relative deprivation and social comparison : The Ontario Symposium, 4 New Jersey : Lawrence Erlbarum Associates.

Davis, J.C. (1959). A formal interpretation of the theory of relative deprivation. Sociometry, 22, 280-296.



Davis, J.C. (1962). Toward a theory of revolution. American Sociological Review, 27, 5-19.

Davis, J.C. (1969). The J-curve of rising and declining satisfaction as a cause of some great revolutions and a contained rebellion. In H.D. Graham & T.R. Gurr (Eds.), Violence in America : Historical and comparative perspective. Washington, D.C. : National Commission on the causes and prevention of violence.

de la Rey, C. (1991). Intergroup relations : theories and positions. In D. Foster, & J. Louw-Potgieter (Eds.) Social Psychology in South Africa. Johannesburg : Lexicon Publishers.

Dibble, U. (1981). Socially shared deprivation and the approval of violence : Another look at the experience of American blacks during the 1960s. Ethnicity, 8, 149-168.

Dollard, J., Doob, L., Muller, N., Mowrer, O., & Lears, R. (1939). Frustration and aggression. New Haven : Yale University Press.

Downie, N.M., & Heath, R.W. (1974). Basic Statistical methods. New York : Harper and Row.

Dubé-Simard, L., Guimond, S. (1986). Relative deprivation and social protest : The personal-group issue. In Olson, J.M., Herman, C.D., & Zanna, M.P. (Eds.). Relative deprivation and social comparison. The Ontario symposium, 4, New Jersey : Lawrence Erlbaum Associates.

Foster, D. (1991). In Foster, D., & Louw-Potgieter (Eds.). Social Psychology in South Africa. Johannesburg : Lexicon Publishers.

Gaskell, G., & Smith, P. (1984). Relative deprivation in black and white youth : An empirical investigation. British Journal of Social Psychology, 23, 121-131.

Grindstaff, C.F. (1968). The Negro, urbanization, and relative deprivation in the deep South. Social Problems, 15, 342-352.

Grofman, B.N. & Muller, E.N. (1973). The strange case of relative gratification and potential for political violence : The V-curve hypothesis. American Political Science Review, 67, 514-539.

Guimond, S., & Dubé-Simard, L. (1983). Relative deprivation theory and the Quebec Nationalist Movement : The cognition-emotion distinction and the personal-group deprivation issue. Journal of Personality and Social Psychology, 44(3), 526-535.

Gurney, J.N., & Tierney, K.J. (1984). Relative deprivation and social movements : A critical look at twenty years of theory and research. The Sociological Quarterly, 23(1), 33-49.

Gurr, T.R. (1968). A causal model of civil strife : A comparative analysis using new indices. American Political Science Review, 62, 1104-1124.

Gurr, T.R. (1970). Why men rebel. Princeton, New Jersey : Princeton University Press.

Hair, J.F.(Jnr.), Anderson,R.E., Tatham,R.L. & Grablowsky,B.J. (1979). Multivariate data analysis. Oklahoma,U.S.A. : Petroleum Publishing Company.

Henriques, J. (1984). Social psychology and the politics of racism. In J. Henriques, W. Hollway, C. Urwin, C. Venn & V. Walkerdine (Eds.), Changing the subject. London : Methuen.

Human Sciences Research Council (1985). The South African Society. Pretoria : HSRC.

Korpi, W. (1974). Conflict, power and relative deprivation. American Political Science Review, 68, 1569-1578.

Martin, J. (1986). The tolerance of injustice. In Olson, J.M., Herman, C.D., & Zanna, M.P. Relative deprivation and social comparison. The Ontario Symposium, 4 New Jersey : Lawrence Erlbaum Associates.

Martin J., Brickman, P., & Murray, A. (1984). Moral outrage and pragmatism : Explanations for collective action. Journal of Experimental Social Psychology, 20, 484-496.

Martin, J., & Murry, A. (1983). Distributive injustice and unfair exchange. In K.S. Cook & D.M. Messick (Eds.), Theories of equity : Psychological and sociological perspectives. New York : Praeger.

Martin, J., Price, R., Bies, R., & Powers, M. (1979). Now that I can have it, I don't want it : The effects of opportunity on discontent and aspirations. In L. Larwood and B. Gutek (Eds.), Women's Career Development. New York : Sage.

Marx, G.T. (1967). Protest and Prejudice : A study of belief in the black community. New York : Harper and Row.

McCord, W., & Howard, J. (1968). Negro opinions in three riot cities. American Behavioural Scientist, 11(4), 24-27.

McPhail, C. (1971). Civil disorder participation : A critical examination of recent research. American Sociological Review, 36, 1058-1073.

Merton, R.K. & Kitt, A.S. (1950). Contributions to the theory of reference group behaviour. In Merton, R.K. and P.F. Lazarsfeld, Continuities in social research studies in the scope and method of "The American Soldier." Glencoe, Illinois : The Free Press. reprint (1974) by Arno Press Inc. USA.

Miller, A.H. Bolce, L.H., & Halligan, M. (1977). The J-curve theory of the black urban riots : An empirical test of progressive relative deprivation theory. American Political Science Review, 71, 964-982.

Muller, E.N. (1972). A test of a partial theory of potential for political violence. American Political Science Review, 66, 928-959.

Naqvi, N. (1974). Relative deprivation and attribution of blame. Unpublished Master's degree. University of Allahabad.

Pettigrew, T.F. (1964). A profile of the Negro American. Princeton, New Jersey : Van Nostrand.

Pettigrew, T.F. (1978). Three issues in ethnicity : Boundaries, deprivations and perceptions. In J.M. Yinger & S.J. Cutler (Eds.). Major Social Issues. New York : The Free Press.

Portes, A. (1971). On the logic of post-factum explanations : the hypothesis of lower - class frustration as the cause of leftist radicalism. Social Forces, 50, 26-44.

Runciman, W.G. (1966). Relative deprivation and social justice ; A study of attitudes to social inequality in twentieth century England. Berkeley : University of California Press.

SAS/STAT user's guide. (1988). Release 6.03 edition. Gary, N.C. : SAS Institute Inc.

Stevens, J. (1986). Applied multivariate statistics for the social sciences. Hillsdale, New Jersey: Lawrence Erlbaum Associates, Inc.

Stouffer, S.A., Suchman, E.A., DeVinney, L.C., Star, S.A., & Williams, R.M. (1949). The American Soldier : Adjustment during army life. Vol. 1. Princeton : Princeton University Press.

Systat : The system for statistics. (1990). Evanston, IL : Systat Inc.

Tabacknick, B.G., & Fidell, L.S> (1983). Using Multivariate Statistics. New York. Haper & Row Publishes.

Tajfel, H. (1972). Experiments in a vacuum. In J. Israel & H. Tajfel (Eds.), The context of social psychology. London : Academic Press.

Tajfel, H. (1978). Differentiation between social groups. London : Academic Press.

Taylor, D.M., & Brown, R.J. (1979). Towards a more social psychology. British Journal of Social and Clinical Psychology, 18, 173-180.

Taylor, D.M., & Moghaddam, F.M. (1987). Theories of Intergroup Relations. International Social Psychological Perspectives. New York : Praeger.

Taylor, D.M., Moghaddam, F.M., & Bellerose, J. (1987). Social Comparison in an intergroup context. Journal of Social Psychology, 129(4), 499-515.

Tripathi, R.C., & Srivastava, R. (1981). Relative deprivation and intergroup attitudes. European Journal of Social Psychology, 11(3), 313-318.

Useem, B. (1980). Solidarity model, breakdown model, and the Boston anti-busing movement. American Sociological Review, 45, 357-369.

Van Dyk, A.C. (1988). Etniese houdings in die huisvrou-huishulp kontaksituasie. Ongepubliseerde Ma-verhandeling, Universiteit van Suid-Afrika, Pretoria.

Vanneman, R.d., & Rettigrew, T.F. (1972). Race and Relative deprivation in the urban United States. Race, 13(4), 461-486.

Walker, I., & Mann, L. (1987). Unemployment, relative deprivation and social protest. Personality and Social Psychology Bulletin, 13, 275-283.

Walker, I., & Pettigrew, T.F. (1984). Relative deprivation theory : An overview and conceptual critique. British Journal of Social Psychology, 23, 301-310.



## Appendix A : Questionnaire

The following study looks at Indian South Africans' perceptions of the present social , economic and political situation . This study is an attempt to gain information about your experience , views and opinions. Therefore , there are no correct or incorrect answers . All responses will be held in the strictest of confidence .Your name or any other identifiable information will not be required and you will remain anonymous .Information obtained from this study will yield results in the form of general statistics .

Your responses will make a valuable contribution towards this study .

Thank you very much for your participation .

MISS P. RAJU

UNIVERSITY OF DURBAN - WESTVILLE .

Section 1

Biographical Questionnaire

Please cross (X) the appropriate box where applicable.

1. Sex : ☐ ☐

2. Age :

18 - 25 ☐

31 - 35 ☐

41 - 50 ☐

25 - 30 ☐

36 - 40 ☐

Over 50 ☐

3. Highest school standard passed. Std. \_\_\_\_

4. Post-school qualifications e.g. degrees,  
diplomas, other

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5. Occupation \_\_\_\_\_

6. Approximate income per month

less than R500

R500 - R1000

R1000 - R1500

R1500 - R2000

R2000 - R3000

R3000 - R4000

over R4000

7. Residential area \_\_\_\_\_

## Section 2

Please read the following instruction and respond as accurately as possible.

The following ladderlike diagram represents the social, economic and political position of race groups in South Africa. The highest rung/step represents the best possible social, economic and political position that any race group may occupy and the lowest rung/step represents the worst possible position that any race group may occupy.

10	best possible social, economic and political position.
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	worst possible social, economic and political position.

Consider the present social, economic and political situation in South Africa. Where would you place :

1. Blacks (step number) \_\_\_\_\_
2. White South Africans (step number) \_\_\_\_\_
3. Coloureds (step number) \_\_\_\_\_
4. Indian South Africans (step number) \_\_\_\_\_

In this section we will consider your feelings about the position of your group, Indian South Africans, compared to each of the other race groups as you have placed them on the ladder. Please rate the extent to which you feel each emotion by placing a cross (X) in the appropriate box.

- a) When you compare the position of Indian South Africans with the position of Blacks as you have placed them on the ladder :

How angry do you feel about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
not at all angry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	extremely angry

How frustrated do you feel about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
not at all frustrated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	extremely frustrated

How satisfied do you feel about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
not at all satisfied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	extremely satisfied

Do you feel a sense of resignation about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
definitely no	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	definitely yes

Do you feel a sense of helplessness about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
definitely no	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	definitely yes

How worried or anxious do you feel about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
not at all anxious or worried	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	extremely anxious or worried

b) When you compare the position of Indian South Africans with the position of Whites as you have placed them on the ladder:

How angry do you feel about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
not at all angry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	extremely angry

How frustrated do you feel about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
not at all frustrated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	extremely frustrated

How satisfied do you feel about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
not at all satisfied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	extremely satisfied

Do you feel a sense of resignation about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
definitely no	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	definitely yes

Do you feel a sense of helplessness about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
definitely no	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	definitely yes

How worried or anxious do you feel about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
not at all anxious or worried	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	extremely anxious or worried

c) When you compare the position of Indian South Africans with the position of Coloureds as you have placed them on the ladder:

How angry do you feel about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
not at all angry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	extremely angry

How frustrated do you feel about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
not at all frustrated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	extremely frustrated

How satisfied do you feel about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
not at all satisfied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	extremely satisfied

Do you feel a sense of resignation about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
definitely no	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	definitely yes

Do you feel a sense of helplessness about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
definitely no	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	definitely yes

How worried or anxious do you feel about the difference or similarity between these groups as shown on the ladder ?

	1	2	3	4	5	6	7	
not at all anxious or worried	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	extremely anxious or worried



Please read the following question, then place a cross (X) in the appropriate box.

1. If you had to compare the social, economic and political position of your group, Indian South Africans, with another racial group, which group will you choose most frequently.

Blacks	<input type="checkbox"/>
Whites	<input type="checkbox"/>
Coloureds	<input type="checkbox"/>

2. Why would you choose this group most frequently? (Please answer as fully as possible)

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There are many possible ways for people to show their protest or disagreement with the present social, economic and political situation. I am going to describe a number of such ways.

Please indicate by placing a cross (X) in the appropriate box, whether you approve of, intend to participate in, have previously participated in bringing about a change for your group's present position.

1. Do you approve of taking part in protest meetings or marches that are permitted by the authorities?

YES	NO
-----	----

2. Do you intend to participate in any protest meetings or marches that are permitted by the authorities?

YES	NO
-----	----

3. Have you previously participated in protest meetings or marches that have been permitted by the authorities?

YES	NO
-----	----

4. Do you believe participating in protest meetings or marches is effective in bringing about change?

YES	NO
-----	----

5. Do you approve of disobeying an unjust law for example the Group Areas Act, Population Registration Act?

YES	NO
-----	----

6. Do you intend disobeying an unjust law such as the Group Areas Act?

YES	NO
-----	----

7. Have you previously disobeyed an unjust law eg. Separate Amenities, Group Areas Act?

YES NO

8. Do you believe that disobeying an unjust law is effective in bringing about change?

YES	NO
-----	----

9. Do you approve of stopping government functioning by participating in defiance campaigns such as sit-ins, mass demonstrations, take-overs of buildings etc?

YES	NO
-----	----

10. Do you intend to participate in such defiance campaigns?

YES	NO
-----	----

11. Have you previously participated in such defiance campaigns?

YES	NO
-----	----

12. Do you believe such definance campaigns are effective in bringing about change ?

YES	NO
-----	----

13. Do you approve of violent protest demonstrations, mentioned above ?

YES	NO
-----	----

14. Do you intend to participate in voilent protest demonstrations mentioned above?

YES	NO
-----	----

15. Have you previously participate in violent protest demonstrations?

YES	NO
-----	----

16. Do you believe that violent protest demonstrations are effective in bringing about change?

YES	NO
-----	----

17. Do you approve of challenging the power of the government by taking up arms against the police, army?

YES	NO
-----	----

18. Do you intend to participate in actions challenging the power of the government by taking up arms?

YES	NO
-----	----

19. Have you previously participated in actions challenging the government by taking up arms?

YES	NO
-----	----

20. Do you believe that challenging the power of the government by taking up arms is effective in bringing about change?

YES	NO
-----	----

## Appendix B : Raw data

Structure for database: A:rel.dbf  
 Number of data records: 120  
 Date of last update : 05/23/91

Field	Field Name	Type	Width	Dec
1	ID	Numeric	3	
2	SEX	Numeric	1	
3	AGE	Numeric	1	
4	PVSNP	Numeric	1	
5	OCCUP	Numeric	1	
6	INC	Numeric	1	
7	RDVSBLS	Numeric	2	
8	RDVSWHTS	Numeric	2	
9	RDVSCOL	Numeric	2	
10	EBLK_1	Numeric	1	
11	EBLK_2	Numeric	1	
12	EBLK_3	Numeric	1	
13	EBLK_4	Numeric	1	
14	EBLK_5	Numeric	1	
15	EBLK_6	Numeric	1	
16	EW1	Numeric	1	
17	EW2	Numeric	1	
18	EW3	Numeric	1	
19	EW4	Numeric	1	
20	EW5	Numeric	1	
21	EW6	Numeric	1	
22	ECOL1	Numeric	1	
23	ECOL2	Numeric	1	
24	ECOL3	Numeric	1	
25	ECOL4	Numeric	1	
26	ECOL5	Numeric	1	
27	ECOL6	Numeric	1	
28	PT1_A	Numeric	1	
29	PT1_I	Numeric	1	
30	PT1_P	Numeric	1	
31	PT1_B	Numeric	1	
32	PT2A	Numeric	1	
33	PT2I	Numeric	1	
34	PT2P	Numeric	1	
35	PT2B	Numeric	1	
36	PT3A	Numeric	1	
37	PT3I	Numeric	1	
38	PT3P	Numeric	1	
39	PT3B	Numeric	1	
40	PT4A	Numeric	1	
41	PT4I	Numeric	1	
42	PT4P	Numeric	1	
43	PT4B	Numeric	1	
44	PT5A	Numeric	1	
45	PT5I	Numeric	1	
46	PT5P	Numeric	1	
47	PT5B	Numeric	1	
48	FO	Numeric	2	
49	GROUP	Numeric	1	
50	REASON	Numeric	1	
51	LADIND	Numeric	2	
52	LADBLK	Numeric	2	
53	LADWHT	Numeric	2	
54	LADCOL	Numeric	2	
** Total **			65	

[illegible]

f a c t l b l k		f a c t l w h t		f a c t l c o l		p v s n p	p o	r d v s b l k s	r d v s w h t s	r d v s c o l
1.41984	0.20150	1.12615	0.13114	1.72993	-0.04639	1	7	15	5	11
-0.04660	-0.99470	0.11535	-1.02963	-0.95180	0.44493	1	4	15	6	11
-0.06187	0.69369	0.44840	0.99907	0.42173	0.25292	1	6	11	5	8
-0.67042	1.18967	-1.15269	1.02601	0.11370	1.01750	2	8	16	8	12
-0.45430	0.88502	-0.63857	0.91536	-0.80809	1.15303	2	6	16	7	12
-0.65871	1.09816	-0.58912	0.99645	0.11370	1.01750	2	9	13	7	12
1.15829	1.34758	0.77614	1.31964	1.65132	1.40295	1	5	12	5	9
-0.47446	1.08018	-0.42057	-0.32657	-1.11716	1.97163	1	8	15	6	13
1.34842	1.36769	0.27556	1.31941	-0.19306	-0.32210	1	6	12	6	10
0.55040	0.87346	0.32577	0.95653	-0.35240	-0.29214	1	6	15	8	12
-1.44425	0.52332	0.11535	-1.02963	-0.82161	-0.24612	1	8	15	6	11
0.76603	-1.21877	-1.19285	1.16883	1.09941	-0.33154	1	13	18	8	14
-0.23495	1.22848	0.09357	1.62711	0.41495	1.06749	1	11	16	7	12
0.75075	0.46962	0.77735	0.50919	-2.04184	1.33089	1	11	14	7	10
0.95035	-1.70505	0.61766	-1.73188	1.34748	-2.18866	1	2	15	6	8
-1.04852	0.51180	-0.47176	0.84501	-0.19984	0.49248	2	5	15	7	11
-0.65614	0.95643	-1.20616	0.91497	0.12150	1.06626	2	4	16	8	12
-1.04562	-0.11498	-1.82510	-0.18944	-0.19306	-0.32210	2	3	12	4	11
-0.82693	-0.56136	-0.84899	-1.07080	-0.93272	0.10538	2	0	6	7	8
0.35074	-1.03558	1.14133	-0.10622	0.56137	-0.53722	2	7	14	5	8
1.15037	-1.62384	1.08558	-1.44972	1.74565	-0.33626	2	2	11	2	5
0.15392	0.87409	0.03632	0.98435	-1.11837	0.13013	2	9	14	5	8
-0.83959	0.34933	-1.44944	-0.96417	-0.17037	-0.44838	2	0	14	7	9
-0.66472	0.71505	-0.44821	-1.00007	0.28521	-0.23080	2	1	12	8	11
0.33610	1.02549	0.78792	0.39710	-0.47317	0.17945	2	5	13	4	7
-1.04562	-0.11498	-1.52637	0.00666	-0.19306	-0.32210	2	0	12	6	8
-1.04347	-0.75266	-1.08883	-0.75061	-0.03813	-0.33012	2	0	12	8	10
1.32051	0.86406	0.34095	0.71918	-0.03115	-0.16654	1	3	14	6	9
0.38093	-0.82460	-0.70964	-0.08922	0.55208	-0.70514	1	3	13	7	11
1.41984	0.20150	1.12615	0.13114	1.72993	-0.04639	1	9	14	4	11
0.72251	0.45105	0.85558	0.71650	1.12701	-0.69889	1	12	13	6	11
-0.45910	0.68343	1.05027	1.31790	-0.06833	1.17374	1	5	13	7	11
-0.04511	-0.66227	-0.34327	-1.08787	-0.93710	-0.70828	1	3	13	8	10
-0.60872	1.43136	-2.49434	1.88603	-0.82288	1.85805	1	6	14	6	12
0.20966	-1.66323	1.06452	-0.75110	-1.41059	1.05303	1	4	17	8	11
-0.42452	-1.15988	-0.31402	0.18600	0.09998	-1.35981	1	6	13	6	10
1.34842	1.36769	1.05027	1.31790	0.26991	-1.09470	1	12	15	6	10
0.19173	-0.32111	-0.13440	-0.27811	0.29032	0.01984	1	9	13	9	10
0.15557	-1.55116	0.28217	-1.09997	-0.02250	-1.06818	1	1	15	7	12
-1.28246	-0.45615	0.11535	-1.02963	-0.33155	-1.16694	1	2	13	7	11
0.39745	-0.71451	0.88934	0.92698	0.28303	-0.65271	1	12	13	3	10
-0.84775	0.60390	-1.82697	0.30177	-0.50109	0.44248	1	7	12	7	9
1.34842	1.36769	0.73295	0.67396	1.18551	1.51966	1	19	14	8	12
0.75174	-0.98553	0.38948	-1.03137	-1.11589	-0.13253	1	10	15	5	11
0.95193	1.36832	0.48670	1.34746	0.72850	1.59251	1	16	14	7	11
-0.25114	-1.12659	0.76082	1.34571	0.38102	-1.44619	1	4	14	8	11
-0.26286	-1.03508	-1.37814	-0.51152	-0.20004	-0.48568	1	1	12	6	11
0.94572	0.05535	0.73430	0.07479	-1.57511	-1.72677	1	14	13	6	10
-0.65572	1.45238	0.31974	1.20652	0.62230	1.29828	1	13	13	4	11
-0.05683	-0.57076	-0.04805	-0.27409	-0.02675	-0.18847	1	13	14	4	12
1.34907	0.39758	1.08062	0.84319	1.68276	0.82322	1	13	13	3	11
0.57897	0.40699	-0.42623	0.13295	-0.50129	-0.53568	1	10	13	4	10
1.35039	-1.54262	1.10168	0.14457	1.65571	-1.97508	1	12	16	6	13
-1.02943	0.48015	1.08558	-1.44972	-1.09092	0.61128	1	0	11	6	10
-0.28252	0.94766	-0.46412	1.19539	0.07079	1.00740	1	11	13	8	11



-0.20186	0.81268	0.21243	1.13792	-0.03845	1.27183	1	9	8	3	9
1.34875	0.88263	1.09580	0.60584	1.55208	0.02714	1	11	15	5	12
1.13262	1.18728	0.88934	0.92698	1.63633	1.12982	1	9	13	4	10
-0.81198	-0.00476	0.71912	0.31214	-0.65501	1.31385	1	6	14	5	8
-0.04792	0.94550	-0.57786	-0.03405	-0.50734	-0.28411	1	6	12	6	8
1.34842	1.36769	1.05027	1.31790	1.65132	1.40295	1	4	13	7	11
0.41075	0.50741	0.44826	0.78779	0.32904	0.11267	1	3	15	6	13
0.95645	1.41899	-0.01700	1.08459	-0.34800	-0.31407	1	9	15	6	13
-0.01450	0.04465	0.43308	1.02514	-0.63324	0.77241	1	2	12	4	10
0.83324	0.18203	1.05027	1.31790	1.25631	0.02156	1	10	15	7	12
-0.63667	1.56371	-1.85594	1.69145	-1.73361	1.54447	1	10	15	8	10
-0.81528	0.52223	-0.83439	0.86124	-0.05086	1.18421	1	11	14	8	10
-0.31717	0.44619	-0.57596	0.67603	-0.24933	0.08240	1	4	12	7	11
-1.02916	-0.56873	-0.66463	-1.22210	-1.11716	1.97163	2	11	11	1	10
1.17423	-1.31091	0.91877	-1.37937	0.08173	-1.13507	2	2	11	7	13
0.55545	1.36895	1.08558	-1.44972	-1.57950	1.65126	2	5	11	1	9
-0.02354	-0.05670	0.92218	-0.69418	0.31410	-0.04009	2	6	12	5	8
-1.29091	1.90043	-0.00636	0.39649	0.20494	0.17284	2	6	13	7	11
0.19044	0.27632	0.77054	-0.86119	-1.73463	0.68113	2	6	12	5	9
0.35741	-1.62257	0.01393	-1.55950	-1.24627	-0.41964	2	1	13	6	10
-0.44006	-1.27583	-1.24449	-0.94756	-1.86908	-1.10421	2	3	14	7	12
0.95391	-1.54199	0.52201	-1.42016	-2.04184	1.33089	2	4	14	7	10
0.54753	-1.60247	0.81146	-1.44798	-1.40839	-0.63599	2	1	13	5	10
1.40555	0.43473	1.11097	0.36849	1.71421	0.24348	2	7	14	4	9
-0.81596	-0.66376	0.54060	-0.97233	-0.33105	0.32019	2	5	12	7	11
0.17450	-1.38870	0.64202	-0.44245	0.41641	-0.05851	2	4	15	5	11
-1.04562	-0.11498	-0.86076	-0.14826	-0.19306	-0.32210	2	9	13	8	11
1.34842	1.36769	1.05027	1.31790	-0.19306	-0.32210	2	2	15	5	10
-0.45103	-0.86278	-0.39273	-1.16896	1.62427	-1.39534	2	6	12	6	8
-0.38658	-0.25012	-0.91086	-1.08826	0.91981	-0.55835	2	1	13	9	11
-0.02727	-0.73246	-1.31362	0.63509	0.40944	-0.22210	2	6	13	6	11
1.35039	-1.54262	1.08558	-1.44972	1.65571	-1.97508	2	8	14	5	9
1.35039	-1.54262	1.08558	-1.44972	1.65571	-1.97508	2	6	14	8	11
1.15037	-1.62384	0.91877	-1.37937	-0.99050	-0.56526	2	11	15	6	11
0.37555	-0.83503	0.14323	-0.35787	1.05371	-0.58794	2	9	14	7	10
-0.68997	-0.39860	-1.62153	-1.08780	-0.06091	-0.65202	2	6	12	6	8
-0.02126	-0.34935	-0.44089	0.47827	0.21875	0.83578	2	12	15	8	12
1.14206	1.38842	0.21257	1.34920	-1.62402	-1.15750	2	11	14	7	11
-0.63176	-0.04577	1.08558	-1.44972	-0.33199	0.82241	2	2	13	5	11
0.03797	-0.74487	0.20371	-1.30554	-0.01883	-0.52710	2	5	13	4	9
1.35039	-1.54262	1.08558	-1.44972	1.65571	-1.97508	2	9	14	5	8
-1.44425	0.52332	1.08558	-1.44972	-0.80912	1.20706	2	4	13	8	12
-0.20914	-0.02613	-0.02947	0.17374	-0.03739	-0.89313	2	7	16	11	15
-1.23574	-0.13509	-1.61561	-0.03492	-0.19306	-0.32210	2	1	11	6	8
-1.64199	0.14946	-2.65702	0.68345	-0.35322	-0.17732	2	0	14	10	11
-1.66714	0.43397	-1.10990	-0.05199	-0.18412	0.20261	2	0	11	8	9
1.34842	1.36769	1.05027	1.31790	1.65132	1.40295	2	10	13	3	4
-2.63230	-1.88329	-3.56530	-1.69601	-1.44890	-2.27431	2	0	15	9	11
-1.04562	-0.11498	-1.82510	-0.18944	-0.19306	-0.32210	2	0	13	6	12
-2.43972	1.56610	0.74948	-0.16257	-1.90271	1.16454	2	0	11	2	9
-1.85072	-0.51816	-0.68218	-1.14115	1.65571	-1.97508	2	5	14	5	8
-1.40706	-0.33775	-1.89577	0.21681	0.12235	0.11586	2	3	11	6	8
-3.43966	-1.59765	0.25862	0.74510	-1.73912	0.25487	2	2	12	8	11
-0.27209	-0.30636	0.39479	0.67675	-0.19306	-0.32210	1	11	14	8	11
1.35039	-1.54262	1.08558	-1.44972	-0.50109	0.44248	2	7	12	6	8
-0.03265	-0.74289	0.11535	-1.02963	-0.34800	-0.31407	1	10	14	7	10
-0.64558	0.04744	-0.88739	-0.11633	0.11516	-0.10851	2	3	13	4	8
0.19711	-0.31067	-0.46339	-0.76272	-0.66750	-0.13933	1	7	13	8	11
-0.02512	-1.37013	0.11535	-1.02963	1.03945	-1.42408	2	0	13	4	8
-0.64721	-0.63002	-0.58075	-0.61127	-0.50221	-0.86904	2	3	14	6	12
1.34907	0.39758	1.04686	0.63271	1.20636	0.64486	1	6	13	3	9
0.82185	-0.21152	0.88934	0.92698	-0.35082	-1.80554	1	8	13	5	11
0.55040	0.87346	-0.17302	1.04111	0.73284	1.16099	1	4	14	7	11
-1.06173	0.27087	-1.33812	-0.86562	-0.18954	-0.63880	2	0	15	8	12

## Appendix C : Factor Analysis

# Principle Component Analysis - Coloureds

Means and Standard Deviations From 120 observations

	ECOL1	ECOL2	ECOL3
Mean	3.9	4	5
Std Dev	1.87598714	1.99157891	1.74413784
	ECOL4	ECOL5	ECOL6
Mean	4.61666667	4.21666667	4.33333333
Std Dev	1.91053397	1.79253041	1.81188111

## Correlations

	ECOL1	ECOL2	ECOL3	ECOL4	ECOL5	ECOL6
ECOL1	1.00000	0.90867	0.55218	-0.12098	-0.28088	0.71943
ECOL2	0.90867	1.00000	0.63383	-0.13030	-0.18831	0.71027
ECOL3	0.55218	0.63383	1.00000	0.10340	0.05107	0.48928
ECOL4	-0.12098	-0.13030	0.10340	1.00000	0.59127	-0.11086
ECOL5	-0.28088	-0.18831	0.05107	0.59127	1.00000	-0.36913
ECOL6	0.71943	0.71027	0.48928	-0.11086	-0.36913	1.00000

# Principle Component Analysis - Coloureds

Initial Factor Method: Principal Components

Prior Communality Estimates: ONE

Eigenvalues of the Correlation Matrix: Total = 6 Average = 1

	1	2	3	4	5	6
Eigenvalue	3.141527	1.587536	0.519528	0.406799	0.267685	0.076925
Difference	1.553992	1.068007	0.112729	0.139114	0.190760	
Proportion	0.5236	0.2646	0.0866	0.0678	0.0446	0.0128
Cumulative	0.5236	0.7882	0.8748	0.9426	0.9872	1.0000

2 Factors will be retained by the MINEIGEN criterion.

## Factor Pattern

	FACTOR1	FACTOR2
ECOL1	0.92534	0.08128
ECOL2	0.92984	0.15038
ECOL3	0.68906	0.44764
ECOL4	-0.22981	0.84171
ECOL5	-0.39790	0.80582
ECOL6	0.85717	-0.01099

Variance explained by each factor

FACTOR1	FACTOR2
3.141527	1.587536

Final Communality Estimates: Total = 4.729063

ECOL1	ECOL2	ECOL3	ECOL4	ECOL5	ECOL6
0.862857	0.887216	0.675179	0.761286	0.807667	0.734859

# Principle Component Analysis - Whites

Means and Standard Deviations from 120 observations

	EWI_1	EWI2	EWI3
Mean	5.925	5.85833333	6.15833333
Std Dev	1.25130184	1.24546797	1.20220968

	EWI4	EWI5	EWI6
Mean	4.25	3.95833333	5.50833333
Std Dev	2.22382062	2.1591931	1.51738294

## Correlations

	EWI_1	EWI2	EWI3	EWI4	EWI5	EWI6
EWI_1	1.00000	0.83429	0.47161	0.02491	-0.04782	0.37874
EWI2	0.83429	1.00000	0.54266	-0.02655	-0.10846	0.46085
EWI3	0.47161	0.54266	1.00000	0.20509	0.17414	0.31482
EWI4	0.02491	-0.02655	0.20509	1.00000	0.71798	-0.00560
EWI5	-0.04782	-0.10846	0.17414	0.71798	1.00000	-0.23458
EWI6	0.37874	0.46085	0.31482	-0.00560	-0.23458	1.00000

# Principle Component Analysis - Whites

Initial Factor Method: Principal Components

Prior Communality Estimates: ONE

Eigenvalues of the Correlation Matrix: Total = 6 Average = 1

	1	2	3	4	5	6
Eigenvalue	2.549091	1.811697	0.711289	0.533549	0.241376	0.152998
Difference	0.737394	1.100408	0.177740	0.292173	0.088378	
Proportion	0.4248	0.3019	0.1185	0.0889	0.0402	0.0255
Cumulative	0.4248	0.7268	0.8453	0.9343	0.9745	1.0000

2 factors will be retained by the MINEIGEN criterion.

## Factor Pattern

	FACTOR1	FACTOR2
EWI_1	0.87437	-0.00475
EWI2	0.91901	-0.06360
EWI3	0.71664	0.30662
EWI4	0.05166	0.90209
EWI5	-0.08457	0.92855
EWI6	0.64544	-0.19398

Variance explained by each factor

FACTOR1	FACTOR2
2.549091	1.811697

Final Communality Estimates: Total = 4.360789

EWI_1	EWI2	EWI3	EWI4	EWI5	EWI6
0.764550	0.848623	0.607589	0.816437	0.869366	0.454224

# Principle Component Analysis - Blacks

Means and Standard Deviations from 120 observations

	EBLK_1	EBLK_2	EBLK_3
Mean	4.89166667	5.04166667	5.83333333
Std Dev	1.66927667	1.61086559	1.38620656

	EBLK_4	EBLK_5	EBLK_6
Mean	4.325	3.95833333	5.43333333
Std Dev	2.04225325	2.21680303	1.49920614

## Correlations

	EBLK_1	EBLK_2	EBLK_3	EBLK_4	EBLK_5	EBLK_6
EBLK_1	1.00000	0.67047	0.47513	0.12134	0.03738	0.52931
EBLK_2	0.67047	1.00000	0.52247	0.04438	-0.07246	0.58052
EBLK_3	0.47513	0.52247	1.00000	0.22708	0.08796	0.42727
EBLK_4	0.12134	0.04438	0.22708	1.00000	0.73063	-0.03815
EBLK_5	0.03738	-0.07246	0.08796	0.73063	1.00000	-0.16140
EBLK_6	0.52931	0.58052	0.42727	-0.03815	-0.16140	1.00000

# Principle Component Analysis - Blacks

Initial Factor Method: Principal Components

Prior Communality Estimates: ONE

Eigenvalues of the Correlation Matrix: Total = 6 Average = 1

	1	2	3	4	5	6
Eigenvalue	2.629595	1.784454	0.550708	0.467210	0.315328	0.252704
Difference	0.845141	1.233746	0.083498	0.151882	0.062624	
Proportion	0.4383	0.2974	0.0918	0.0779	0.0526	0.0421
Cumulative	0.4383	0.7357	0.8275	0.9053	0.9579	1.0000

2 factors will be retained by the MINEIGEN criterion.

## Factor Pattern

	FACTOR1	FACTOR2
EBLK_1	0.83695	-0.00313
EBLK_2	0.86195	-0.12524
EBLK_3	0.74906	0.14541
EBLK_4	0.18477	0.90939
EBLK_5	0.02806	0.92624
EBLK_6	0.76820	-0.25040

Variance explained by each factor

FACTOR1	FACTOR2
2.629595	1.784454

Final Communality Estimates: Total = 4.414050

EBLK_1	EBLK_2	EBLK_3	EBLK_4	EBLK_5	EBLK_6
0.700502	0.758643	0.582230	0.861131	0.858711	0.652834

## Appendix D : t-tests : Means and SD

SAS

Analysis Variable : DIFF1

$$\text{DIFF1} = \text{LADIND} - \text{LADBLK}$$

N Obs	T	Prob> T
120	22.6360765	0.0001

Analysis Variable : DIFF2

$$\text{DIFF2} = \text{LADIND} - \text{LADWHT}$$

N Obs	T	Prob> T
120	-24.0027525	0.0001

Analysis Variable : DIFF3

$$\text{DIFF3} = \text{LADIND} - \text{LADCOL}$$

N Obs	T	Prob> T
120	1.8880193	0.0615

	LADBLK	LADCOL	LADIND	LADWHT
N OF CASES	120	120	120	120
MEAN	2.067	5.167	5.458	9.392
STANDARD DEV	1.560	1.057	1.587	0.901
SUM	248.000	620.000	655.000	1127.000
MEDIAN	2.000	5.000	6.000	10.000

Appendix E : Affective fraternal RD: 6-One-way ANOVAS  
and Scheffé tests.



NUMBER OF CASES PROCESSED: 120

DEPENDENT VARIABLE MEANS

EBLK1	EWI1	ECOL1
4.892	5.925	3.900

UNIVARIATE AND MULTIVARIATE REPEATED MEASURES ANALYSIS

\*\*\*\*\*  
\* WITHIN SUBJECTS EFFECTS \*  
\*\*\*\*\*

-----  
+ TRIALS FACTOR: a +  
-----

TEST FOR EFFECT CALLED: CONSTANT

NULL HYPOTHESIS CONTRAST ABC'

1	2
-0.701	-1.249

-1  
INVERSE CONTRAST  $A(X'X)^{-1}A'$

0.008

HYPOTHESIS SUM OF PRODUCT MATRIX  $H = CB'A'(A(X'X)^{-1}A')^{-1}ABC'$

	1	2
1	59.004	
2	105.061	187.068

ERROR SUM OF PRODUCT MATRIX  $G = CE'EC'$

	1	2
1	202.496	
2	52.267	170.099

SINGLE DEGREE-OF-FREEDOM POLYNOMIAL CONTRASTS

DEGREE	SS	DF	MS	F	P
1	59.004	1	59.004	34.675	0.000
ERROR	202.496	119	1.702		
2	187.068	1	187.068	130.872	0.000
ERROR	170.099	119	1.429		

UNIVARIATE REPEATED MEASURES F-TEST

SOURCE	SS	DF	MS	F	P
HYPOTHESIS	246.072	2	123.036	78.591	0.000
ERROR	372.594	238	1.566		

MULTIVARIATE TEST STATISTICS

WILKS' LAMBDA =	0.462				
F-STATISTIC =	68.716	DF =	2, 118	PROB =	0.000
PILLAI TRACE =	0.538				
F-STATISTIC =	68.716	DF =	2, 118	PROB =	0.000
HOTELLING-LAWLEY TRACE =	1.165				
F-STATISTIC =	68.716	DF =	2, 118	PROB =	0.000

NUMBER OF CASES PROCESSED: 120

DEPENDENT VARIABLE MEANS

EBLK2	EWB2	ECOL2
5.042	5.858	4.000

UNIVARIATE AND MULTIVARIATE REPEATED MEASURES ANALYSIS

\*\*\*\*\*  
\* WITHIN SUBJECTS EFFECTS \*  
\*\*\*\*\*

-----  
+ TRIALS FACTOR: a +  
-----

TEST FOR EFFECT CALLED: CONSTANT

NULL HYPOTHESIS CONTRAST ABC'

1	2
-0.737	-1.092

-1  
INVERSE CONTRAST A(X'X) A'

0.008

HYPOTHESIS SUM OF PRODUCT MATRIX  $H = CB'A'(A(X'X)^{-1}A')'ABC'$

	1	2
1	65.104	
2	96.526	143.113

ERROR SUM OF PRODUCT MATRIX  $G = CE'EC'$

	1	2
1	228.396	
2	64.266	183.388

SINGLE DEGREE-OF-FREEDOM POLYNOMIAL CONTRASTS

DEGREE	SS	DF	MS	F	P
1	65.104	1	65.104	33.921	0.000
ERROR	228.396	119	1.919		
2	143.113	1	143.113	92.866	0.000
ERROR	183.388	119	1.541		

UNIVARIATE REPEATED MEASURES F-TEST

SOURCE	SS	DF	MS	F	P
HYPOTHESIS	208.217	2	104.108	60.172	0.000
ERROR	411.783	238	1.730		

MULTIVARIATE TEST STATISTICS

WILKS' LAMBDA =	0.540				
F-STATISTIC =	50.349	DF =	2, 118	PROB =	0.000
PILLAI TRACE =	0.460				
F-STATISTIC =	50.349	DF =	2, 118	PROB =	0.000
HOTELLING-LAWLEY TRACE =	0.853				
F-STATISTIC =	50.349	DF =	2, 118	PROB =	0.000

NUMBER OF CASES PROCESSED: 120

DEPENDENT VARIABLE MEANS

EBLK3	EWB3	ECOL3
5.833	6.158	5.000

UNIVARIATE AND MULTIVARIATE REPEATED MEASURES ANALYSIS

\*\*\*\*\*  
\* WITHIN SUBJECTS EFFECTS \*  
\*\*\*\*\*

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+ TRIALS FACTOR: a +  
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TEST FOR EFFECT CALLED: CONSTANT

NULL HYPOTHESIS CONTRAST ABC'

1	2
-0.589	-0.606

-1  
INVERSE CONTRAST  $A(X'X)^{-1}A'$

0.008

HYPOTHESIS SUM OF PRODUCT MATRIX  $H = CB'A'(A(X'X)^{-1}A')'ABC'$

	1	2
1	41.667	
2	42.820	44.006

ERROR SUM OF PRODUCT MATRIX  $G = CE'EC'$

	1	2
1	205.333	
2	72.073	120.328

SINGLE DEGREE-OF-FREEDOM POLYNOMIAL CONTRASTS

DEGREE	SS	DF	MS	F	P
1	41.667	1	41.667	24.148	0.000
ERROR	205.333	119	1.725		
2	44.006	1	44.006	43.520	0.000
ERROR	120.328	119	1.011		

UNIVARIATE REPEATED MEASURES F-TEST

SOURCE	SS	DF	MS	F	P
HYPOTHESIS	85.672	2	42.836	31.306	0.000
ERROR	325.661	238	1.368		

MULTIVARIATE TEST STATISTICS

WILKS' LAMBDA =	0.712				
F-STATISTIC =	23.818	DF =	2, 118	PROB =	0.000
PILLAI TRACE =	0.288				
F-STATISTIC =	23.818	DF =	2, 118	PROB =	0.000
HOTELLING-LAWLEY TRACE =	0.404				
F-STATISTIC =	23.818	DF =	2, 118	PROB =	0.000

NUMBER OF CASES PROCESSED: 120

DEPENDENT VARIABLE MEANS

EBLK4	EWK4	ECOL4
4.325	4.250	4.617

UNIVARIATE AND MULTIVARIATE REPEATED MEASURES ANALYSIS

\*\*\*\*\*  
\* WITHIN SUBJECTS EFFECTS \*  
\*\*\*\*\*

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+ TRIALS FACTOR: a +  
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TEST FOR EFFECT CALLED: CONSTANT

NULL HYPOTHESIS CONTRAST ABC'

1	2
0.206	0.180

-1  
INVERSE CONTRAST  $A(X'X)^{-1}A'$

0.008

HYPOTHESIS SUM OF PRODUCT MATRIX  $H = CB'A'(A(X'X)^{-1}A')^{-1}ABC'$

	1	2
1	5.104	
2	4.462	3.901

ERROR SUM OF PRODUCT MATRIX  $G = CE'EC'$

	1	2
1	231.396	
2	78.965	304.932

SINGLE DEGREE-OF-FREEDOM POLYNOMIAL CONTRASTS

DEGREE	SS	DF	MS	F	P
1	5.104	1	5.104	2.625	0.108
ERROR	231.396	119	1.945		
2	3.901	1	3.901	1.523	0.220
ERROR	304.932	119	2.562		

UNIVARIATE REPEATED MEASURES F-TEST

SOURCE	SS	DF	MS	F	P
HYPOTHESIS	9.006	2	4.503	1.998	0.138
ERROR	536.328	238	2.253		

MULTIVARIATE TEST STATISTICS

WILKS' LAMBDA =	0.973				
F-STATISTIC =	1.609	DF = 2, 118	PROB =	0.204	
PILLAI TRACE =	0.027				
F-STATISTIC =	1.609	DF = 2, 118	PROB =	0.204	
HOTELLING-LAWLEY TRACE =	0.027				
F-STATISTIC =	1.609	DF = 2, 118	PROB =	0.204	

NUMBER OF CASES PROCESSED: 120

DEPENDENT VARIABLE MEANS

	EBLK5	EWHS	ECOL5
	3.958	3.958	4.217

UNIVARIATE AND MULTIVARIATE REPEATED MEASURES ANALYSIS

\*\*\*\*\*  
\* WITHIN SUBJECTS EFFECTS \*  
\*\*\*\*\*

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+ TRIALS FACTOR: a +  
-----

TEST FOR EFFECT CALLED: CONSTANT

NULL HYPOTHESIS CONTRAST ABC'

	1	2
	0.183	0.105

-1  
INVERSE CONTRAST  $A(X'X)^{-1}A'$

0.008

HYPOTHESIS SUM OF PRODUCT MATRIX  $H = CB'A'(A(X'X)^{-1}A')^{-1}ABC'$

	1	2
1	4.004	
2	2.312	1.335

ERROR SUM OF PRODUCT MATRIX  $G = CE'EC'$

	1	2
1	193.496	
2	24.535	245.165

SINGLE DEGREE-OF-FREEDOM POLYNOMIAL CONTRASTS

DEGREE	SS	DF	MS	F	P
1	4.004	1	4.004	2.463	0.119
ERROR	193.496	119	1.626		
2	1.335	1	1.335	0.648	0.422
ERROR	245.165	119	2.060		

UNIVARIATE REPEATED MEASURES F-TEST

SOURCE	SS	DF	MS	F	P
HYPOTHESIS	5.339	2	2.669	1.448	0.237
ERROR	438.661	238	1.843		

MULTIVARIATE TEST STATISTICS

WILKS' LAMBDA =	0.977				
F-STATISTIC =	1.419	DF =	2, 118	PROB =	0.246
PILLAI TRACE =	0.023				
F-STATISTIC =	1.419	DF =	2, 118	PROB =	0.246
HOTELLING-LAWLEY TRACE =	0.024				
F-STATISTIC =	1.419	DF =	2, 118	PROB =	0.246

NUMBER OF CASES PROCESSED: 120

DEPENDENT VARIABLE MEANS

EBLK6	EWI6	ECOL6
5.433	5.508	4.333

UNIVARIATE AND MULTIVARIATE REPEATED MEASURES ANALYSIS

\*\*\*\*\*  
\* WITHIN SUBJECTS EFFECTS \*  
\*\*\*\*\*

-----  
+ TRIALS FACTOR: a +  
-----

TEST FOR EFFECT CALLED: CONSTANT

NULL HYPOTHESIS CONTRAST ABC'

1	2
-0.778	-0.510

-1  
INVERSE CONTRAST A(X'X) A'

0.008

HYPOTHESIS SUM OF PRODUCT MATRIX  $H = CB'A'(A(X'X)^{-1}A')ABC'$

	1	2
1	72.600	
2	47.631	31.250

ERROR SUM OF PRODUCT MATRIX  $G = CE'EC'$

	1	2
1	183.400	
2	60.910	169.417

SINGLE DEGREE-OF-FREEDOM POLYNOMIAL CONTRASTS

DEGREE	SS	DF	MS	F	P
1	72.600	1	72.600	47.107	0.000
ERROR	183.400	119	1.541		
2	31.250	1	31.250	21.950	0.000
ERROR	169.417	119	1.424		

UNIVARIATE REPEATED MEASURES F-TEST

SOURCE	SS	DF	MS	F	P
HYPOTHESIS	103.850	2	51.925	35.027	0.000
ERROR	352.817	238	1.482		

MULTIVARIATE TEST STATISTICS

WILKS' LAMBDA =	0.691				
F-STATISTIC =	26.369	DF =	2, 118	PROB =	0.000
PILLAI TRACE =	0.309				
F-STATISTIC =	26.369	DF =	2, 118	PROB =	0.000
HOTELLING-LAWLEY TRACE =	0.447				
F-STATISTIC =	26.369	DF =	2, 118	PROB =	0.000

SCHEFFÉ TESTS (Downie and Heath, 1974)

1. One-Way ANOVA

Emotion 1 (anger)

Df (2,118) ; critical value 6.14

EBLK 1

$M_1 = 4.892$

EWHT 1

$M_2 = 5.925$

ECOL1

$M_3 = 3.900$

$$\begin{aligned} F &= \frac{(M_1 - M_2)^2}{Sw^2 \left[ \frac{N_1 + N_2}{N_1 \cdot N_2} \right]} \\ &= \frac{(4.892 - 5.925)^2}{1.566 \left[ \frac{120 + 120}{120 \cdot 120} \right]} \\ &= 84.756 \end{aligned}$$

$$\begin{aligned} F &= \frac{(M_1 - M_3)^2}{Sw^2 \left[ \frac{N_1 + N_2}{N_1 \cdot N_2} \right]} \\ &= \frac{(4.892 - 3.900)^2}{1.566 \left[ \frac{120 + 120}{120 \cdot 120} \right]} \\ &= 37.994 \end{aligned}$$

$$\begin{aligned}
 F &= \frac{(M_2 - M_3)^2}{S_w^2 \left[ \frac{N_1 + N_2}{N_1 \cdot N_2} \right]} \\
 &= \frac{(5.925 - 3.900)^2}{1.566 \left[ \frac{120 + 120}{120 \cdot 120} \right]} \\
 &= 158.325
 \end{aligned}$$



## 2. One-Way ANOVA

Emotion 2 - frustration

Df (2,118) ; critical value 6.14

EBLK 2  
 $M_1 = 5.042$

EWHT 2  
 $M_2 = 5.858$

ECOL2  
 $M_3 = 4.000$

$$\begin{aligned} F &= \frac{(M_1 - M_2)^2}{Sw^2 \left[ \frac{N_1 + N_2}{N_1 \cdot N_2} \right]} \\ &= \frac{(5.042 - 5.858)^2}{1.730 \left[ \frac{120 + 120}{120 \cdot 120} \right]} \\ &= 23.200 \end{aligned}$$

$$\begin{aligned} F &= \frac{(M_1 - M_3)^2}{Sw^2 \left[ \frac{N_1 + N_2}{N_1 \cdot N_2} \right]} \\ &= \frac{(5.042 - 4.000)^2}{1.730 \left[ \frac{120 + 120}{120 \cdot 120} \right]} \\ &= 37.831 \end{aligned}$$

$$\begin{aligned}
 F &= \frac{(M_2 - M_3)^2}{Sw^2 \left[ \frac{N_1 + N_2}{N_1 \cdot N_2} \right]} \\
 &= \frac{(5.858 - 4.000)^2}{1.730 \left[ \frac{120 + 120}{120 \cdot 120} \right]} \\
 &= 120.28
 \end{aligned}$$

### 3. One-Way ANOVA

Emotion 3 - satisfaction  
Df (2,118) ; critical value 6.14

EBLK 3  
 $M_1 = 5.833$

EWHT 3  
 $M_2 = 6.158$

ECOL3  
 $M_3 = 5.000$

$$\begin{aligned} F &= \frac{(M_1 - M_2)^2}{Sw^2 \left[ \frac{N_1 + N_2}{N_1 \cdot N_2} \right]} \\ &= \frac{(5.833 - 6.158)^2}{1.368 \left[ \frac{120 + 120}{120 \cdot 120} \right]} \\ &= 4.653 \end{aligned}$$

$$\begin{aligned} F &= \frac{(M_1 - M_3)^2}{Sw^2 \left[ \frac{N_1 + N_2}{N_1 \cdot N_2} \right]} \\ &= \frac{(5.833 - 5.000)^2}{1.368 \left[ \frac{120 + 120}{120 \cdot 120} \right]} \\ &= 30.174 \end{aligned}$$

$$\begin{aligned}
 F &= \frac{(M_2 - M_3)^2}{Sw^2 \left[ \frac{N_1 + N_2}{N_1 \cdot N_2} \right]} \\
 &= \frac{(6.158 - 5.000)^2}{1.368 \left[ \frac{120 + 120}{120 \cdot 120} \right]} \\
 &= 59.073
 \end{aligned}$$

#### 4. One-Way ANOVA

Emotion 6 - anxiety/worry  
Df (2,118) ; critical value 6.14

EBLK 6  
 $M_1 = 5.433$

EWHT 6  
 $M_2 = 5.508$

ECOL6  
 $M_3 = 4.333$

$$\begin{aligned} F &= \frac{(M_1 - M_2)^2}{Sw^2 \left[ \frac{N_1 + N_2}{N_1 \cdot N_2} \right]} \\ &= \frac{(5.433 - 5.508)^2}{1.482 \left[ \frac{120 + 120}{120 \cdot 120} \right]} \\ &= 0.024 \end{aligned}$$

$$\begin{aligned} F &= \frac{(M_1 - M_3)^2}{Sw^2 \left[ \frac{N_1 + N_2}{N_1 \cdot N_2} \right]} \\ &= \frac{(5.433 - 4.333)^2}{1.482 \left[ \frac{120 + 120}{120 \cdot 120} \right]} \\ &= 49.186 \end{aligned}$$

$$\begin{aligned}
 F &= \frac{(M_2 - M_3)^2}{Sw^2 \left[ \frac{N_1 + N_2}{N_1 \cdot N_2} \right]} \\
 &= \frac{(5.508 - 4.333)^2}{1.482 \left[ \frac{120 + 120}{120 \cdot 120} \right]} \\
 &= 56.123
 \end{aligned}$$

Appendix F : Protest Orientation : ingroup frequency and No. ,

COUNT	CUM COUNT	PCT	CUM PCT	PT1A
29	29	24.2	24.2	0
91	120	75.8	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT1I
39	39	32.5	32.5	0
81	120	67.5	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT1P
66	66	55.0	55.0	0
54	120	45.0	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT1B
24	24	20.0	20.0	0
96	120	80.0	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT2A
49	49	40.8	40.8	0
71	120	59.2	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT2I
68	68	56.7	56.7	0
52	120	43.3	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT2P
94	94	78.3	78.3	0
26	120	21.7	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT2B
55	55	45.8	45.8	0
65	120	54.2	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT3A
74	74	61.7	61.7	0
46	120	38.3	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT3I
81	81	67.5	67.5	0
39	120	32.5	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT3P
93	93	77.5	77.5	0
27	120	22.5	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT3B
57	57	47.5	47.5	0
63	120	52.5	100.0	1



COUNT	CUM COUNT	PCT	CUM PCT	PT4A
119	119	99.2	99.2	0
1	120	.8	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT4I
119	119	99.2	99.2	0
1	120	.8	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT4P
117	117	97.5	97.5	0
3	120	2.5	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT4B
115	115	95.8	95.8	0
5	120	4.2	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT5A
114	114	95.0	95.0	0
6	120	5.0	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT5I
118	118	98.3	98.3	0
2	120	1.7	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PT5P
120	120	100.0	100.0	0

COUNT	CUM COUNT	PCT	CUM PCT	PT5B
110	110	91.7	91.7	0
10	120	8.3	100.0	1

COUNT	CUM COUNT	PCT	CUM PCT	PO
12	12	10.0	10.0	0
7	19	5.8	15.8	1
8	27	6.7	22.5	2
9	36	7.5	30.0	3
10	46	8.3	38.3	4
8	54	6.7	45.0	5
16	70	13.3	58.3	6
7	77	5.8	64.2	7
5	82	4.2	68.3	8
10	92	8.3	76.7	9
6	98	5.0	81.7	10
9	107	7.5	89.2	11
5	112	4.2	93.3	12
4	116	3.3	96.7	13
2	118	1.7	98.3	14
1	119	.8	99.2	16
1	120	.8	100.0	19

TOTAL OBSERVATIONS: 120

Appendix G : Professionals vs non-professionals cognitive  
fraternal RD 2 x 3 MANOVA

LEAST SQUARES MEANS.

PVSNP	=	1.000	N OF CASES =	60.000
		RDVSBKLS	RDVSWHTS	RDVSCOL
MEAN		13.683	6.100	10.683
STANDARD DEV		1.546	1.504	1.295
PVSNP	=	2.000	N OF CASES =	60.000
		RDVSBKLS	RDVSWHTS	RDVSCOL
MEAN		13.100	6.083	9.900
STANDARD DEV		1.694	2.019	1.946

TEST FOR EFFECT CALLED: PVSNP

NULL HYPOTHESIS CONTRAST AB

	RDVSBKLS	RDVSWHTS	RDVSCOL
	0.292	0.008	0.392
	-1		
INVERSE CONTRAST A(X'X)	A'		
	0.008		

HYPOTHESIS SUM OF PRODUCT MATRIX  $H = B'A'(A(X'X)^{-1}A')$  AB

	RDVSBKLS	RDVSWHTS	RDVSCOL
RDVSBKLS	10.208		
RDVSWHTS	0.292	0.008	
RDVSCOL	13.708	0.392	18.408

ERROR SUM OF PRODUCT MATRIX  $G = E'E$

	RDVSBKLS	RDVSWHTS	RDVSCOL
RDVSBKLS	310.383		
RDVSWHTS	112.400	373.983	
RDVSCOL	152.583	173.400	322.383

SINGLE DEGREE-OF-FREEDOM POLYNOMIAL CONTRASTS

DEGREE	SS	DF	MS	F	P
RDVSBKLS	10.208	1	10.208	3.881	0.051
ERROR	310.383	118	2.630		
RDVSWHTS	0.008	1	0.008	0.003	0.959
ERROR	373.983	118	3.169		
RDVSCOL	18.408	1	18.408	6.738	0.011
ERROR	322.383	118	2.732		

MULTIVARIATE TEST STATISTICS

WILKS' LAMBDA =	0.923				
F-STATISTIC =	3.209	DF =	3, 116	PROB =	0.026
PILLAI TRACE =	0.077				
F-STATISTIC =	3.209	DF =	3, 116	PROB =	0.026
HOTELLING-LAWLEY TRACE =	0.083				
F-STATISTIC =	3.209	DF =	3, 116	PROB =	0.026

**Appendix H : Professionals vs non-professionals affective  
fraternal RD 2 x 18 MANOVA**

=====

THE FOLLOWING RESULTS ARE FOR:  
PVSNP = 1.000

TOTAL OBSERVATIONS: 60

	EBLK1	EBLK2	EBLK3	EBLK4	EBLK5
N OF CASES	60	60	60	60	60
MEAN	5.317	5.517	6.283	4.833	4.350
STANDARD DEV	1.513	1.308	1.010	1.967	2.223

	EBLK6	ECOL1	ECOL2	ECOL3	ECOL4
N OF CASES	60	60	60	60	60
MEAN	5.667	4.033	4.250	5.233	4.933
STANDARD DEV	1.336	1.939	2.030	1.598	1.956

	ECOL5	ECOL6	EWB1	EWB2	EWB3
N OF CASES	60	60	60	60	60
MEAN	4.417	4.517	6.150	6.100	6.533
STANDARD DEV	1.871	1.799	1.219	1.069	0.791

	EWB4	EWB5	EWB6	RDVSBLS	RDVSCOL
N OF CASES	60	60	60	60	60
MEAN	5.067	4.783	5.550	13.683	10.683
STANDARD DEV	2.033	1.949	1.588	1.546	1.295

	RDVSWHTS
N OF CASES	60
MEAN	6.100
STANDARD DEV	1.504

THE FOLLOWING RESULTS ARE FOR:  
PVSNP = 2.000

TOTAL OBSERVATIONS: 60

	EBLK1	EBLK2	EBLK3	EBLK4	EBLK5
N OF CASES	60	60	60	60	60
MEAN	4.467	4.567	5.383	3.817	3.567
STANDARD DEV	1.722	1.750	1.563	2.004	2.158

	EBLK6	ECOL1	ECOL2	ECOL3	ECOL4
N OF CASES	60	60	60	60	60
MEAN	5.200	3.767	3.750	4.767	4.300
STANDARD DEV	1.624	1.817	1.936	1.863	1.825

	ECOL5	ECOL6	EW1	EW2	EW3
N OF CASES	60	60	60	60	60
MEAN	4.017	4.150	5.700	5.617	5.783
STANDARD DEV	1.702	1.821	1.253	1.367	1.415

	EW4	EW5	EW6	RDVSBLS	RDVSCOL
N OF CASES	60	60	60	60	60
MEAN	3.433	3.133	5.467	13.100	9.900
STANDARD DEV	2.118	2.054	1.455	1.694	1.946

RDVSWHTS

N OF CASES	60
MEAN	6.083
STANDARD DEV	2.019

## SINGLE DEGREE-OF-FREEDOM POLYNOMIAL CONTRASTS

DEGREE	SS	DF	MS	F	P
EBLK1	21.675	1	21.675	8.253	0.005
ERROR	309.917	118	2.626		
EBLK2	27.075	1	27.075	11.341	0.001
ERROR	281.717	118	2.387		
EBLK3	24.300	1	24.300	14.031	0.000
ERROR	204.367	118	1.732		
EBLK4	31.008	1	31.008	7.863	0.006
ERROR	465.317	118	3.943		
EBLK5	18.408	1	18.408	3.835	0.053
ERROR	566.383	118	4.800		
EBLK6	6.533	1	6.533	2.955	0.088
ERROR	260.933	118	2.211		
EW11	6.075	1	6.075	3.977	0.048
ERROR	180.250	118	1.528		
EW12	7.008	1	7.008	4.657	0.033
ERROR	177.583	118	1.505		
EW13	16.875	1	16.875	12.837	0.000
ERROR	155.117	118	1.315		
EW14	80.033	1	80.033	18.573	0.000
ERROR	508.467	118	4.309		
EW15	81.675	1	81.675	20.371	0.000
ERROR	473.117	118	4.009		
EW16	0.208	1	0.208	0.090	0.765
ERROR	273.783	118	2.320		
ECOL1	2.133	1	2.133	0.604	0.439
ERROR	416.667	118	3.531		
ECOL2	7.500	1	7.500	1.905	0.170
ERROR	464.500	118	3.936		
ECOL3	6.533	1	6.533	2.169	0.143
ERROR	355.467	118	3.012		
ECOL4	12.033	1	12.033	3.362	0.069
ERROR	422.333	118	3.579		
ECOL5	4.800	1	4.800	1.500	0.223
ERROR	377.567	118	3.200		
ECOL6	4.033	1	4.033	1.231	0.269
ERROR	386.633	118	3.277		

## MULTIVARIATE TEST STATISTICS

WILKS' LAMBDA =	0.694				
F-STATISTIC =	2.474	DF = 18, 101	PROB =	0.002	
PILLAI TRACE =	0.306				
F-STATISTIC =	2.474	DF = 18, 101	PROB =	0.002	
HOTELLING-LAWLEY TRACE =	0.441				
F-STATISTIC =	2.474	DF = 18, 101	PROB =	0.002	

Appendix I : Professionals vs non-professionals Protest  
Orientation. Frequency and No.



-----Systat 5.0-----

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT1A
5	5	8.3	8.3	0
55	60	91.7	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT1A
24	24	40.0	40.0	0
36	60	60.0	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT1I
11	11	18.3	18.3	0
49	60	81.7	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT1I
28	28	46.7	46.7	0
32	60	53.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT1P
20	20	33.3	33.3	0
40	60	66.7	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT1P
46	46	76.7	76.7	0
14	60	23.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT1B
3	3	5.0	5.0	0
57	60	95.0	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT1B
21	21	35.0	35.0	0
39	60	65.0	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT2A
17	17	28.3	28.3	0
43	60	71.7	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT2A
32	32	53.3	53.3	0
28	60	46.7	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT2I
31	31	51.7	51.7	0
29	60	48.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT2I
37	37	61.7	61.7	0
23	60	38.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT2P
40	40	66.7	66.7	0
20	60	33.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT2P
54	54	90.0	90.0	0
6	60	10.0	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT2B
23	23	38.3	38.3	0
37	60	61.7	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT2B
32	32	53.3	53.3	0
28	60	46.7	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT3A
28	28	46.7	46.7	0
32	60	53.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:  
PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT3A
46	46	76.7	76.7	0
14	60	23.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:  
PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT3I
33	33	55.0	55.0	0
27	60	45.0	100.0	1

THE FOLLOWING RESULTS ARE FOR:  
PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT3I
48	48	80.0	80.0	0
12	60	20.0	100.0	1

THE FOLLOWING RESULTS ARE FOR:  
PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT3P
40	40	66.7	66.7	0
20	60	33.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:  
PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT3P
53	53	88.3	88.3	0
7	60	11.7	100.0	1

THE FOLLOWING RESULTS ARE FOR:  
PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT3B
23	23	38.3	38.3	0
37	60	61.7	100.0	1

THE FOLLOWING RESULTS ARE FOR:  
PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT3B
34	34	56.7	56.7	0
26	60	43.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT4A
59	59	98.3	98.3	0
1	60	1.7	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT4A
60	60	100.0	100.0	0

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT4I
59	59	98.3	98.3	0
1	60	1.7	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT4I
60	60	100.0	100.0	0

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT4P
58	58	96.7	96.7	0
2	60	3.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT4P
59	59	98.3	98.3	0
1	60	1.7	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT4B
55	55	91.7	91.7	0
5	60	8.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT4B
60	60	100.0	100.0	0

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT5A
54	54	90.0	90.0	0
6	60	10.0	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT5A
60	60	100.0	100.0	0

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT5I
58	58	96.7	96.7	0
2	60	3.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT5I
60	60	100.0	100.0	0

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT5P
60	60	100.0	100.0	0

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT5P
60	60	100.0	100.0	0

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PT5B
52	52	86.7	86.7	0
8	60	13.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PT5B
58	58	96.7	96.7	0
2	60	3.3	100.0	1

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 1

COUNT	CUM COUNT	PCT	CUM PCT	PO
1	1	1.7	1.7	0
2	3	3.3	5.0	1
3	6	5.0	10.0	2
4	10	6.7	16.7	3
6	16	10.0	26.7	4
2	18	3.3	30.0	5
8	26	13.3	43.3	6
3	29	5.0	48.3	7
3	32	5.0	53.3	8
5	37	8.3	61.7	9
5	42	8.3	70.0	10
6	48	10.0	80.0	11
4	52	6.7	86.7	12
4	56	6.7	93.3	13
2	58	3.3	96.7	14
1	59	1.7	98.3	16
1	60	1.7	100.0	19

THE FOLLOWING RESULTS ARE FOR:

PVSNP = 2

COUNT	CUM COUNT	PCT	CUM PCT	PO
11	11	18.3	18.3	0
5	16	8.3	26.7	1
5	21	8.3	35.0	2
5	26	8.3	43.3	3
4	30	6.7	50.0	4
6	36	10.0	60.0	5
8	44	13.3	73.3	6
4	48	6.7	80.0	7
2	50	3.3	83.3	8
5	55	8.3	91.7	9
1	56	1.7	93.3	10
3	59	5.0	98.3	11
1	60	1.7	100.0	12

## Appendix J : Stepwise Multiple Regression



Stepwise Procedure for Dependent Variable PO

Step 1 Variable FACTBLK Entered R-square = 0.19923318 C(p) = 28.76286822

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	1	412.80949309	412.80949309	29.36	0.0001
Error	118	1659.18217358	14.06086588		
Total	119	2071.99166667			

Variable	Parameter Estimate	Standard Error	Type III Sum of Squares	F	Prob>F
INTERCEPT	6.15833380	0.14230671	4551.00902153	323.66	0.0001
FACTBLK	1.86252131	0.14374188	412.80949309	29.36	0.0001

Bounds on condition number: 1, 1

Step 2 Variable FACT2WHT Entered R-square = 0.32903986 C(p) = 7.29637696

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	2	681.76785549	340.88392775	28.69	0.0001
Error	117	1390.22381117	11.88225480		
Total	119	2071.99166667			

Variable	Parameter Estimate	Standard Error	Type III Sum of Squares	F	Prob>F
INTERCEPT	6.15833380	0.11467251	4551.00912055	383.01	0.0001
FACTBLK	1.62105083	0.31997549	305.72410350	25.73	0.0001
FACT2WHT	1.52333324	0.31997543	268.95836241	22.64	0.0001

Bounds on condition number: 1.025373, 4.101491

Step 3 Variable RDVSBLSK Entered R-square = 0.35188878 C(p) = 5.16574324

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	3	729.11061625	243.03687208	20.99	0.0001
Error	116	1342.88105042	11.57656078		
Total	119	2071.99166667			

Variable	Parameter Estimate	Standard Error	Type III Sum of Squares	F	Prob>F
INTERCEPT	0.81016995	2.66282343	1.07163547	0.09	0.7615
FACTBLK	1.49379560	0.32223526	248.78018815	21.49	0.0001
FACT2WHT	1.41797239	0.32002098	227.27841911	19.63	0.0001
RDVSBLSK	0.39936507	0.19748452	47.34276075	4.09	0.0455

Bounds on condition number: 1.080037, 9.600459

Step 4 Variable PVSNP Entered R-square = 0.37136746 C(p) = 3.64438186

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	4	769.47027544	192.36756886	16.98	0.0001
Error	115	1302.52139122	11.32627297		
Total	119	2071.99166667			

## SAS

Variable	Parameter Estimate	Standard Error	Type III Sum of Squares	F	Prob>F
INTERCEPT	3.10000655	2.89979101	12.94430839	1.14	0.2873
FACT1BLK	1.32716399	0.33073057	182.38432819	16.10	0.0001
FACT2WHP	1.16675466	0.34338041	130.76607357	11.55	0.0009
PVSNP	-1.33655690	0.70803907	40.35965919	3.56	0.0616
RDVSBLS	0.37808308	0.19566310	42.29057869	3.73	0.0558

Bounds on condition number: 1.327849, 19.19819

Step 5 Variable FACT2COL Entered R-square = 0.48547489 C(p) = 3.09403599

	DF	Sum of Squares	Mean Square	F	Prob>F
Regression	5	198.70075738	159.74015148	14.30	0.0001
Error	114	1273.29090929	11.16921850		
Total	119	2071.99166667			

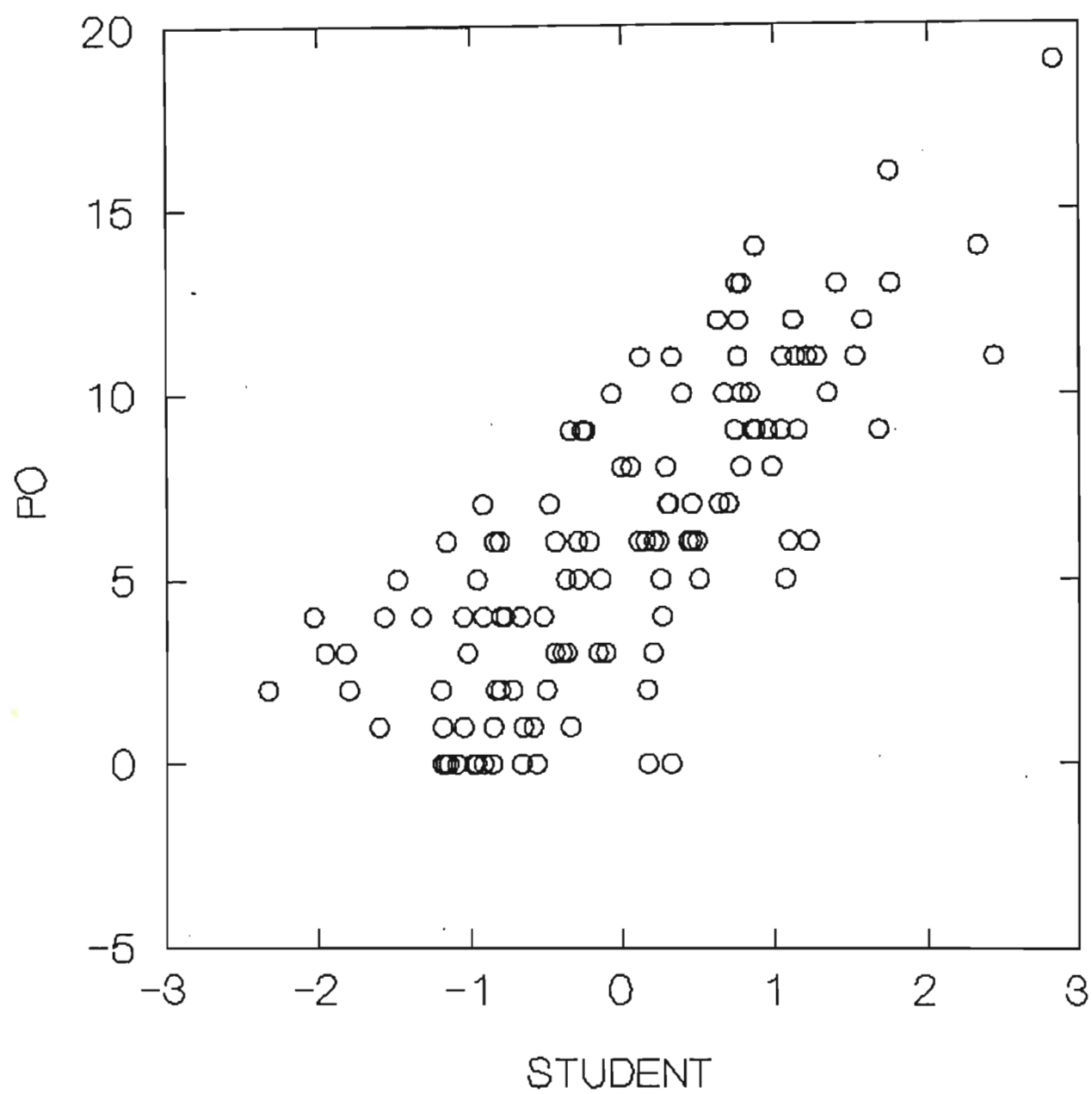
Variable	Parameter Estimate	Standard Error	Type III Sum of Squares	F	Prob>F
INTERCEPT	2.33055577	2.91863281	7.12168671	0.64	0.4262
FACT1BLK	1.38696370	0.33050324	196.69872114	17.61	0.0001
FACT2WHP	0.93060200	0.37092396	70.30415307	6.29	0.0135
FACT2COL	0.55277054	0.34169474	29.23048194	2.62	0.1085
PVSNP	-1.29760174	0.70352518	37.99673931	3.40	0.0677
RDVSBLS	0.43117716	0.19705417	53.47650558	4.79	0.0307

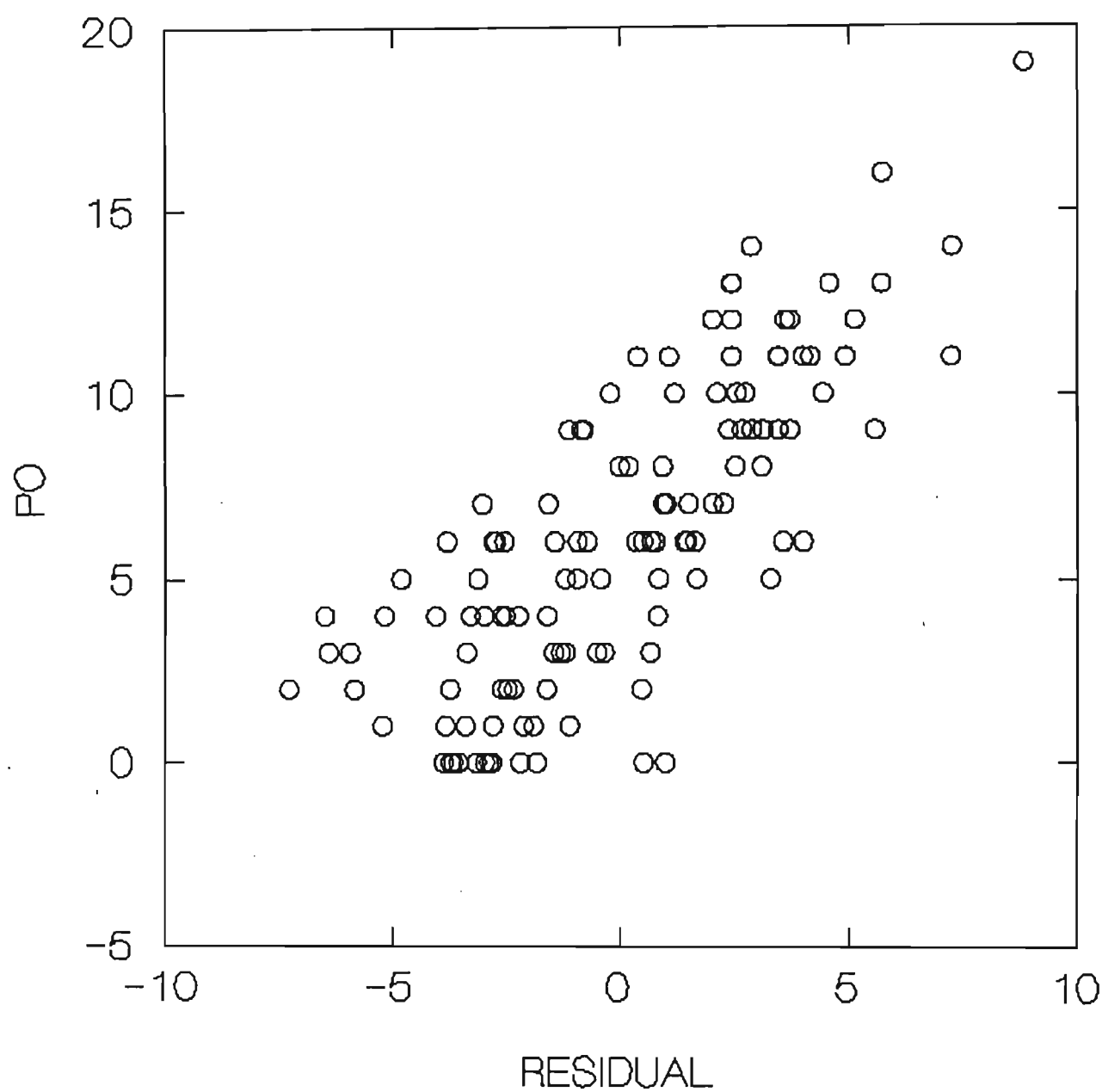
Bounds on condition number: 1.465866, 31.58782

All variables in the model are significant at the 0.1500 level.  
No other variable met the 0.1500 significance level for entry into the model.

## Summary of Stepwise Procedure for Dependent Variable PO

Step	Variable Entered	Variable Removed	Number In	Partial R**2	Model R**2	C(p)	F	Prob>F
1	FACT1BLK		1	0.1992	0.1992	28.7629	29.3588	0.0001
2	FACT2WHP		2	0.1298	0.3290	7.2964	22.6353	0.0001
3	RDVSBLS		3	0.0228	0.3519	5.1657	4.0895	0.0455
4	PVSNP		4	0.0195	0.3714	3.6444	3.5634	0.0616
5	FACT2COL		5	0.0141	0.3855	3.0940	2.6171	0.1085





Appendix K : Social Comparison frequency and No.

	CUM		CUM	
COUNT	COUNT	PCT	PCT	GROUP
22	22	18.3	18.3	1
77	99	64.2	82.5	2
21	120	17.5	100.0	3

	CUM		CUM	
COUNT	COUNT	PCT	PCT	REASON
68	68	56.7	56.7	1
34	102	28.3	85.0	2
8	110	6.7	91.7	3
10	120	8.3	100.0	4

	CUM		CUM		
COUNT	COUNT	PCT	PCT	REASON	GROUP
1	1	.8	.8	1	1
11	12	9.2	10.0	2	1
7	19	5.8	15.8	3	1
3	22	2.5	18.3	4	1
67	89	55.8	74.2	1	2
4	93	3.3	77.5	2	2
6	99	5.0	82.5	4	2
19	118	15.8	98.3	2	3
1	119	.8	99.2	3	3
1	120	.8	100.0	4	3