



Social change in South Africa: A historical approach to relative deprivation

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Dramatic social change involves profound transformations that impact an entire group moving forward. Such is the reality for race relations in South Africa. Research has found that most people report a trajectory of group-based relative deprivation that appears to parallel actual historical events. However, a significant subset of respondents reported a trajectory in which the perceived status of their group remained stable despite dramatic social change. The first goal of our research was to assess whether both the historically 'assumed' and 'stable' group trajectories arise consistently among South Africans ($N = 2,989$). The second and more important goal was to identify the factors that might account for this dichotomy in perceived trajectory building on both traditional and recent advances in relative deprivation theory as well as on social identity theory. We hypothesized that higher levels of in-group identification would be associated with the historically assumed group trajectory. Results supported this hypothesis. The third goal was to link the different group trajectories with important psychological outcomes such as personal well-being, group self-esteem, and interracial attitudes.

Everyday, millions of people confront the challenge of adjusting to dramatic social change. Social change involves profound societal transformations that affect the course of history for a group (Rocher, 1992). The goal of the present research was to understand how people cope in terms of their personal well-being, group self-esteem, and interracial attitudes when confronted with dramatic social change. To achieve this goal, we employed a historical perspective in the context of South Africa, focusing on the two main groups in South Africa: *Africans* (Black) and *white South Africans*.¹ Since the

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¹ The South African population is comprised of 4 major ethnic groups: African (Black), White, Coloured and Asian or Indian. These labels are the usual labels used for official categorization in South Africa and are commonly used among South Africans themselves (Statistics South Africa, 2011). The present study focused mainly on Africans and Whites.

introduction of apartheid in 1948, South Africa has been shaken by a series of dramatic social changes (Finchilescu & Tredoux, 2010). During the apartheid period, the white South African Government systematically segregated and discriminated against all non-white groups. In April 1994, after years of negotiation, the first multiracial election was held and resulted in the inauguration of Nelson Mandela as South Africa's first African president. While *Africans* sought justice, *white South Africans* faced threats to the economic and political power they had enjoyed for several decades.

Since the fall of apartheid, South Africa has confronted the challenge of building a united nation. Concerted efforts have been made to unify the culturally and racially diverse groups that comprise South Africa, and the adoption of 'The rainbow over South Africa' slogan (Møller, Dichow, & Harris, 1999) symbolizes this national priority. Despite efforts at reconciliation, however, there remain 47% of *Whites* who believe that a united South Africa will never be realized (Gibson, 2004; Møller et al., 1999). Beyond illustrating the challenge of achieving a genuine unification of South Africa, this statistic also reflects the fundamental struggle that has characterized intergroup relationships in South Africa. Thus, the present study investigated *Africans'* and *white South Africans'* perceptions of historical events over the past 60 years. Our research integrates both traditional and recent advances in the field of relative deprivation, as well as social identity theory.

Historical perspective

In times of dramatic social change, group members need to re-evaluate the position of their group to re-establish an anchor point to evaluate their drastically changed social environment (Moghaddam, 2002). To accomplish this, they may examine each key historical point in their group's history to evaluate the trajectory of their group's status (Bougie, Osborne, de la Sablonnière, & Taylor, 2011). For example, after the dismantlement of the Soviet Union, citizens of newly formed independent countries evaluated whether their national condition had become better or worse. It would be logical to assume that the perception of a group's position would approximate the actual social changes – positive or negative – experienced by the group. Events are not, however, always perceived unanimously among members of a group. Indeed, research has revealed that ethnic subgroups play an important role in shaping people's perceptions of dramatic national events (Bar-Tal, Kruglanski, & Klar, 1989; Finchilescu & Dawes, 1998, 1999; Liu, Wilson, McClure, & Higgins, 1999). In the context of South Africa, we might anticipate that *Africans* would consider conditions in South Africa to have been decidedly negative during the apartheid period, but dramatically improved after Nelson Mandela was elected president. This perception would be consistent with the changes that *Africans* were presumably anticipating from the democratization of South Africa, and thus we might refer to these as 'assumed' changes (Finchilescu & Dawes, 1998; Harris, 1997). Conversely, we might 'assume' that *white South Africans* would consider that conditions in South Africa took a downturn after the fall of apartheid (Korf & Malan, 2002).

Previous research suggests, however, that there are often sub-groups within a group who perceive their group's situation as remaining *stable* throughout history, despite historically 'assumed' dramatic social changes (de la Sablonnière, Taylor, Perozzo, & Sadykova, 2009; Westerhof & Keyes, 2006). Accordingly, some *Africans* may not consider the overall conditions in South Africa to have improved since the fall of apartheid. This perception of stability might indeed be consistent with the reality that the actual material conditions have not improved for many *Africans* since the end of apartheid (Møller, 1998). Likewise, some *white South Africans* may not judge the overall conditions in South

Africa to have worsened, despite the threat that the cessation of apartheid policies represented to *White* privilege. Given that *Whites* have largely been the beneficiaries of the liberalized economy in the post-apartheid period, it is possible that some *white South Africans* perceive that their group condition has not changed dramatically.

Relative deprivation

Relative deprivation involves a threatening feeling brought about by the perception of a disparity in the form of a negative comparison (Crosby, 1976). Group-based relative deprivation theory has two basic assumptions (Stouffer, Suchman, DeVinney, Star, & Williams, 1949). First, people assess the condition of their group based on subjective, as opposed to objective, targets of comparison. If the chosen target of comparison is not in their favour, they will feel dissatisfied. The second assumption is that the target of comparison is context-dependent; research shows that targets of comparison in situations of dramatic social change are different from those used in less dramatic circumstances (de la Sablonnière, Tougas, & Perenlei, 2010).

Specifically, there are two potential categories of comparison: social and temporal (Walker & Pettigrew, 1984). Social comparisons are used when people compare the situation of their own group with the situation of another group (Runciman, 1966). Temporal comparisons involve members of a group comparing their present collective situation with their group's situation at another point in time (Albert, 1977). A number of studies have demonstrated that temporal comparisons are especially relevant in the context of dramatic social change (Albert, 1977; Brown & Middendorf, 1996; de la Sablonnière, Tougas, & Lortie-Lussier, 2009). The destabilizing nature of dramatic social change (Albert & Sabini, 1974) plunges people into such turmoil that they are left without social cues that are normally useful for social comparisons (de la Sablonnière, Hénault, & Huberdeau, 2009). Consequently, resorting to temporal anchor points for comparison becomes particularly useful for evaluating the group's condition in times of dramatic social change (Albert, 1977; Brown & Middendorf, 1996). Temporal group comparisons are therefore the focus of the present research.

Most research on temporal relative deprivation has one feature in common: Temporal relative deprivation is assessed by asking participants to compare their group's current situation with a *single point* of comparison in the past, or in the future (e.g., Abeles, 1976; Appelgryn & Bornman, 1996; Dambrun, Taylor, McDonald, Crush, & Méot, 2006). Often, researchers choose the point of comparison arbitrarily, without taking into account the particular historical context of the group. It is therefore possible that the point of comparison chosen by researchers does not correspond to the reality of the participants' group history.

Recently, we proposed a reconceptualization of relative deprivation theory. Instead of evaluating one temporal comparison point, we suggested that many comparison points are needed to evaluate the entire trajectory of relative deprivation perceived by a group. In a recent study, the trajectory of relative deprivation was examined in the context of Kyrgyzstan, formerly part of the Soviet Union (de la Sablonnière, Taylor *et al.*, 2009). Results showed that 84% of Kyrgyz perceived that their group experienced a pattern of relative deprivation that was 'assumed' – it paralleled the historical events faced by Kyrgyz over time. However, despite the dramatic social changes that impacted Kyrgyzstan, a subgroup of participants (16%) reported a pattern of temporal relative deprivation that was 'stable' over time.

These results are consistent with the literature on historical representation, which demonstrates that citizens of the same country may perceive the same national events in dramatically different ways (Huang, Liu, & Chang, 2004; Liu *et al.*, 1999). As Liu *et al.* (1999) note, ‘the telling of history can be viewed as a prototypical group activity, where different versions of history can be held among different segments of the population’ (p. 1022). Indeed, while the main events that constitute a group’s representation of history tend to be shared by all its members, their meaning is often contentious (Huang *et al.*, 2004; Liu *et al.*, 1999; see also Moscovici, 1988).

The *first goal* of the present study was to extend previous findings in the context of South Africa. The social context of South Africa allows us to examine whether there are different trajectories of relative deprivation regarding a common history among different ethnic groups. We hypothesize that two main trajectories of relative deprivation will emerge for each ethnic group. First, we theorize that many group members, either *Africans* or *white South Africans*, will display a trajectory of relative deprivation corresponding to the generally ‘assumed’ pattern based on dramatic turning points in South African history. Specifically, the ‘assumed’ pattern for *Africans* would be a ‘decreasing group-based deprivation’ trajectory where relative deprivation decreases from the apartheid period to the post-apartheid era. In contrast, for *white South Africans*, the ‘assumed’ pattern would correspond to an ‘increasing group-based deprivation’ trajectory; because *white South Africans* held almost all the economic and political power in South Africa during the apartheid period, its fall is associated with a downturn in the economic and political power held by *white South Africans* (Korf & Malan, 2002). Second, we hypothesize that a sizeable sub-group in each ethnic group will report a ‘stable’ pattern with no perceived change of relative deprivation across the same time span.

In-group identification and relative deprivation

What needs to be addressed next is *why* some perceive an ‘assumed’ trajectory and *why* others perceive one that deviates from what dramatic historical events might dictate. Therefore, our *second goal* was to identify the factors that might be associated with these two different trajectories. Our theoretical reasoning builds on social identity theory (Tajfel, 1978; Tajfel & Turner, 1979, 1986). Tajfel and colleagues hypothesized that people must identify with their group before feeling relatively deprived. Researchers suggest that a social identity forged on strong beliefs about one’s own group, or what might be labelled high in-group identification, increases sensitivity to unfavourable comparisons (Guimond & Dubé-Simard, 1983; Guimond & Tougas, 1994; Kawakami & Dion, 1995; Smith, Spears, & Oyen, 1994; Tajfel, 1978; Tougas & Veilleux, 1988, 1989, 1990; Veilleux, Tougas, & Rinfret, 1992). Empirical research, however, has yielded very inconsistent results. In-group identification was sometimes positively associated with relative deprivation, as predicted (Cakal, Hewstone, Schwär, & Heath, 2011; Kessler & Mummendey, 2002; Mummendey, Kessler, Klink, & Mielke, 1999; Tropp & Wright, 1999; Veilleux *et al.*, 1992), and sometimes, the link between in-group identification and relative deprivation was not supported (Cakal *et al.*, 2011; Dambrun *et al.*, 2006; Ethier & Deaux, 1994; Lalonde & Cameron, 1993; Tougas & Veilleux, 1988, 1990; Zagefka & Brown, 2005). To our knowledge, a compelling explanation for these inconsistent findings is yet to be proposed.

We believe that the inconsistency arises from a mis-conceptualization of temporal relative deprivation. Past research has failed to consider one of the basic assumptions of relative deprivation: The social context in which the group comparison is made may play a pivotal role in the emergence of feelings of relative deprivation (Stouffer *et al.*,

1949). Building on social identity theory (Tajfel & Turner, 1979, 1986), we argue that in-group identification plays a central role in predicting which trajectory of relative deprivation group members will perceive. This idea is based on the premise that in-group identification acts as a predictor of feelings of relative deprivation (Abrams, 1990; Tajfel, 1978; Tougas & Beaton, 2002; Tropp & Wright, 1999), and is consistent with Tajfel's (1978) view that a strong in-group identification is needed to perceive group disparities.

Accordingly, we propose that the level of in-group identification (high vs. low) will be associated with either the 'assumed' or the 'stable' group trajectory of relative deprivation. Group members with high in-group identification are more inclined to make temporal group comparisons (Kawakami & Dion, 1995), they are more likely to be aware of the threats their group has faced over time, and as a result, they are also more likely to be aware of any change in relative deprivation experienced by their group during that period. Accordingly, such individuals perceive a trajectory of relative deprivation 'assumed' on the basis of historical reality. In contrast, group members with low in-group identification will be less aware of group threats, and consequently, perceive fewer changes in relative deprivation across time. Some indirect support already exists for this hypothesis (e.g., Sahdra & Ross, 2007).

Applying our hypotheses in the context of South Africa, we posit that identifying with a specific ethnic group will be associated with group members' perceptions of the dramatic social changes in South Africa. Specifically, we hypothesize that *Africans* who highly identify with their group will report a 'decreasing group-based deprivation' trajectory. In contrast, we predict that *white South Africans* with high in-group identification will present an 'increasing group-based deprivation' trajectory. For both *Africans* and *white South Africans*, the lower their identification levels with their ingroup, the more they will display a 'stable' group trajectory of relative deprivation.

Trajectories of relative deprivation and outcomes

The *third goal* of the present research was to examine the relationship between the trajectories of relative deprivation and different outcomes: personal well-being, group self-esteem, and interracial attitudes. First, we aimed to replicate the results of previous research that has linked the trajectories of relative deprivation to personal well-being and group self-esteem. To our knowledge, only two studies have linked the trajectories of relative deprivation to outcomes – one with personal well-being measures (de la Sablonnière, Auger, Sadykova, & Taylor, 2010) and another with collective outcomes such as group self-esteem (de la Sablonnière, Taylor *et al.*, 2009). Both studies confirmed that it is pivotal to assess how people perceive their group trajectories across *multiple points of comparison* (see also Keyes, 2000; Keyes & Ryff, 2000; Westerhof & Keyes, 2006).

It is important to replicate these results in another social context because both previous studies were conducted in Kyrgyzstan. Replication is especially important when it comes to personal well-being as many researchers argue that personal well-being is best predicted by relative deprivation at the personal level (see recent meta-analysis by Smith, Pettigrew, Pippin, & Bialosiewicz, 2012). Although we agree with the general 'fit hypothesis' proposed by Smith *et al.* (2012), that is, that outcomes are best predicted when 'the level of reference for both the RD and outcome measures is the same' (p. 209), the situation might be different when a historical perspective is considered. Specifically, when group members share a history of dramatic and negative social changes, everyone in the community is affected and feels deprived. This widely shared feeling of deprivation is

thus likely to extend to the personal level and affect group members' personal well-being as well. Building on a theory of the 'self-concept' suggesting that the collective level can be generalized to personal psychological well-being (Taylor, 1997, 2002), we theorize that the way that people perceive their group trajectory might be associated with different levels of personal well-being. This association is consistent with research showing that feelings of relative deprivation at the collective level do affect personal well-being (Bougie, 2005; Walker, 1999; Zagefka & Brown, 2005). Particularly, in the context of South Africa, we predict that the 'increasing group-based deprivation' trajectory for *Whites* will be associated with lower personal well-being and group self-esteem when compared with stable group trajectories. Conversely, we hypothesize that the 'decreasing group-based deprivation' trajectory for *Africans* will be associated with a higher level of personal well-being and group self-esteem.

Second, our aim is to extend the outcomes of different trajectories to interracial attitudes, an outcome that is often associated with relative deprivation at the group level (see Smith *et al.*, 2012), and an outcome that is crucial to nation building in South Africa (Warner & Finchilescu, 2003). Indeed, there is a rich literature on collective relative deprivation and its link with intergroup attitudes and xenophobia in South Africa (e.g., Appelgryn & Bornman, 1996; Appelgryn & Nieuwoudt, 1988; Dambrun *et al.*, 2006; Duckitt & Mphuthing, 1998) and in other social contexts (Castano, Yzerbyt, Paladino & Sacchi, 2002; Guimond & Dambrun, 2002). More than 15 years after the fall of apartheid, South Africa is still challenged by important intergroup relations issues (Crush & Pendleton, 2004; Danso & McDonald, 2001; McDonald & Jacobs, 2005; Neocosmos, 2006).

Previous research proposed the hypothesis that high levels of group-based relative deprivation leads to higher levels of negative interracial attitudes (see Smith *et al.*, 2012). However, we argue that in the context of dramatic social change, a historical perspective between relative deprivation and interracial attitudes is necessary because the negative association between relative deprivation and intergroup attitudes that is generally found might not hold (see for instance Duckitt & Mphuthing, 1998; see also Dambrun *et al.*, 2006; for an alternative view on the relationship between relative deprivation and interracial attitudes). Specifically, we predict that the perception of the 'assumed' relative deprivation trajectory, either the 'increasing group-based deprivation' trajectory for *Whites* or the 'decreasing group-based deprivation' trajectory for *Africans*, will be associated with more negative interracial attitudes. This hypothesis is consistent with past research on relative deprivation, which suggests that any change in relative deprivation, positive or negative, is associated with negative political attitudes (Grofman & Muller, 1973; see also Davies, 1962, 1969; Gurr, 1970).

Method

Participants

A total of 2,989 randomly selected South Africans were surveyed over a month in 2006. Measures were taken to ensure that the place of residence and the racial group of the respondents were representative of the national population in South Africa. In total, the representative sample comprised of 2,527 *Africans* and 462 *Whites*, of which 1,486 were women. The average age was 37.76 ($SD = 14.37$). Afrikaans and English were identified as the native languages of *white South Africans* in 56.5% and 39.8% of cases, respectively. Amongst *Africans*, less than 1% reported Afrikaans to be their mother tongue. Overall, 31.8% of *Africans* spoke Zulu, 20.5% spoke Xhosa, 10.2% spoke North Sotho, 10.9% spoke

South Sotho, and 10.2% spoke Tswana. A minority of *Africans* also spoke Tsonga, Venda, Swazi and Ndebele.

Procedure

The field research was coordinated by the Southern African Migration project (<http://www.queensu.ca/samp/>). Applying random selection methods at every stage of sampling ensured that the sample was a representative cross-section of all South African citizens above the age of 18 years. The data closely matched the sociodemographic characteristics of the 2005 midyear population estimates provided by Statistics South Africa with respect to the population numbers per province, race, age groups, and gender. In creating the representative sample, measures were taken to ensure that the sample was weighted proportionately by the population of the suburb or the district in South Africa. Suburbs and districts were selected randomly: Once an enumerator area (i.e., a region of the country that is to be visited by an enumerator for the census) was selected, maps were used by interviewers to randomly select a location to begin interviewing. Afterwards, interviewers walked in a randomly determined direction. A predetermined interval was used to determine what the interval between each household selected would be for conducting interviews. On average, interviews lasted 1 hr.

Questionnaire

A nationwide survey necessitated a number of considerations in developing the survey instrument so that it would be comprehensible for a South African population that is unaccustomed to formal questionnaires. First, the questionnaire was back translated from English into 5 official languages in South Africa (i.e., Afrikaans, Xhosa, Zulu, Tswana and Sesotho). Second, the specific wording of the items was designed to be concrete and user friendly. Most of them were already adapted from previous research conducted in the South African context (e.g., Dambrun *et al.*, 2006). We included items that focused on perceptions of socioeconomic status, temporal relative deprivation, ethnic group identification, life satisfaction, personal hope, group self-esteem, and interracial attitudes. Participants were also asked to answer demographic questions about their age, gender, ethnicity, and education level.

Socioeconomic status

Seven items from the Afrobarometer lived poverty index (Mattes, Bratton, & Davids, 2003) were used to assess the ability to satisfy basic survival needs. Respondents were asked how often in the last twelve months they, or their family, had gone without food, medical treatment, cash income, clean water, a shelter, home fuel, and electricity. The items ranged from 0 (*never*) to 4 (*always*). Higher scores indicate a lower ability to satisfy basic survival needs, and therefore a lower socioeconomic status. Internal consistency for this scale was .83.

Temporal relative deprivation

In the context of the present study, temporal relative deprivation was assessed at four main historical periods: (1) the time of apartheid (1948–1994), (2) the first democratic election period (1994), (3) the present time (2006), and (4) 5 years in the future. South

African scientists and experts in research on South Africa, both *Africans* and *Whites*, identified these as the four most critical historical periods. These selected periods are also supported by research conducted in South Africa by Finchilescu and colleagues (Finchilescu & Dawes, 1998, 1999; see also Finchilescu & Tredoux, 2010 for a detailed description of change in South Africa).

Temporal relative deprivation was thus assessed at these four historical periods using a single item derived from previous scales (Dambrun *et al.*, 2006; Guimond & Dambrun, 2002; Guimond & Dubé-Simard, 1983; Pettigrew & Meertens, 1995; Runciman, 1966). The four items for temporal relative deprivation focused on the overall economic conditions in South Africa at each historical period. Specifically, for each historical period, participants were asked to indicate how satisfied they were with overall economic conditions in South Africa at that time. Responses, on an 11-point Likert-type scale, ranged from 0 (*very dissatisfied*) to 10 (*very satisfied*). Items were recoded so that higher scores indicate higher levels of relative deprivation.

Ethnic group identification

Given that we expected Black and White respondents to perceive and interpret their national history differently, ethnic group identification was assessed. For the present study, participants were asked to indicate on an 11-point Likert-type scale ranging from 0 (*strongly disagree*) to 10 (*strongly agree*) the extent to which they agreed with the following statements: 'It is important for me to be a member of my ethnic group (i.e., Black, White)'. This single item was adapted from previous scales (e.g., Ellemers, Van Knippenberg, De Vries, & Wilke, 1988; Roccas, Klar, & Liviatan, 2006). A higher score on this item indicates a higher level of ethnic group identification.

Personal well-being

Two personal outcomes were evaluated: life satisfaction and personal hope ($r = .55$, $p < .001$). *Life satisfaction* was evaluated using two items from the satisfaction with life scale (Diener, Emmons, Larsen, & Griffin, 1985; $\alpha = .73$). Specifically, participants were required to answer the following two questions: 'I am satisfied with my life' and 'So far I have got the important things in my life'. Answers were recorded on an 11-point Likert-type scale ranging from 0 (*totally disagree*) to 10 (*strongly agree*). Correlation between items was adequate, $r = .56$, $p < .001$.

Personal hope was included as a measure of personal well-being because it has been associated with personal self-esteem (Snyder *et al.*, 1991). Participants were asked to rate on an 11-point Likert-type scale ranging from 0 (*strongly disagree*) to 10 (*strongly agree*) the extent to which they agree with the following questions: 'I am energetically pursuing my goals', 'Right now I see myself as being successful', and 'At this time, I am meeting the goal that I have set for myself.' Internal consistency for this scale was .83.

Group self-esteem

Our measure of group self-esteem modelled that of Ellemers and colleagues who conceptualized it as 'a positive or negative value connotation attached to his group membership' (p. 372, Ellemers, Kortekaas, & Ouwerkerk, 1999; see also Jackson, 2002). Because temporal relative deprivation was examined at the national level, group self-esteem was also evaluated at the national level. Participants indicated on an 11-point

Likert-type scale ranging from 0 (*strongly disagree*) to 10 (*strongly agree*), the extent to which they agreed with the following statement: 'It makes me proud to be a South African'. A higher score on this item indicates a higher level of group self-esteem.

Interracial attitudes

To assess *interracial attitudes*, we used an in-group bias measure (Guimond & Dambrun, 2002; Guimond, Dambrun, Michinov, & Duarte, 2003). Participants had first to indicate how favourable an opinion they have of *South African Blacks* and *South African Whites* on an 11-point Likert-type scale ranging from 0 (*unfavourable*) to 10 (*favourable*). We subtracted the ratings of the outgroup from the rating of the ingroup. Difference scores were computed because it was found to be a more adequate measure (Guimond *et al.*, 2003). Higher scores indicate greater bias in favour of the ingroup.

Results

Preliminary analyses

Preliminary analyses revealed that all measures fell within an acceptable kurtosis and skewness range and varied from -2.06 to 1.73 (Tabachnick & Fidell, 2007). The measure of group self-esteem and ethnic group identification had a kurtosis higher than ideal (4.83 and 2.58 respectively), but still acceptable to conduct our analysis (Byrne, 1998) and consistent with previous research in South Africa (e.g., Cakal *et al.*, 2011). Univariate and multivariate outliers were also identified, and our statistical analyses were conducted with and without these outliers. As the results were virtually identical, the entire initial sample of 2,989 participants was retained for presenting our results. Missing values, which were less than 5%, were replaced by simple imputation using the PROC MI procedure in SAS (Yuan, 2000). Means, standard deviations, and correlations for all variables are shown in Table 1.

Identify the different trajectories of relative deprivation

To test our first hypothesis suggesting that both an 'assumed' and a 'stable' trajectory group would emerge for *Africans* and *Whites*, we statistically generated the trajectories of relative deprivation using group-based trajectory modelling (Jones, Nagin, & Roeder, 2001; Nagin, 1999, 2005). This statistical technique adopts a semiparametric group-based modelling approach to identify the trajectories that best describe data measured at multiple points. Specifically, group-based trajectory modelling identifies whether there are distinct *group tendencies* underlying individual trajectories. In terms of our data, group-based trajectory modelling identified how many group trajectories (or clusters) arose from our retrospectively reported measures of relative deprivation. The analyses were conducted separately for *Africans* and *Whites* using a customized SAS-based procedure called PROC TRAJ (Jones *et al.*, 2001). The Bayesian Information Criterion was used to determine the optimal number of trajectories, and the shape of the trajectories (Nagin, 2005). The procedure used here follows the one explained by Nagin (2005; see also de la Sablonnière, Taylor *et al.*, 2009 for a detailed description of the procedure).²

² Because of word limitations, and because our detailed procedure for creating trajectories of relative deprivation has been described elsewhere, we did not provide the statistical details (see de la Sablonnière, Taylor *et al.*, 2009). However, we invite our readers to contact the first author for a complete version of the results section.

Table 1. Means, standard deviations (in parentheses), and correlations

Variable	Means and standard deviations										
	Africans	Whites	1	2	3	4	5	6	7	8	9
	Correlations										
Temporal relative deprivation	5.68 (2.80)	3.68 (2.29)	—	.12**	-.02	-.09**	.11**	-.09**	-.03	.15**	.09**
2. Post-apartheid	3.89 (2.27)	4.10 (2.32)		—	.52**	.40**	-.05*	-.17**	-.18**	-.12**	-.02
3. Present	3.59 (2.30)	3.76 (2.47)			—	.59**	-.09**	-.25**	-.23**	-.22**	.00
4. Future	2.92 (2.17)	3.98 (2.54)				—	-.13**	-.13**	-.16**	-.32**	-.08**
Independent variable	8.41 (2.18)	8.15 (2.18)					—	.06*	.04*	.28**	.10**
Dependent variables	6.13 (2.65)	8.04 (1.78)						—	.55**	.09**	-.02
7. Personal hope	6.21 (2.39)	7.53 (1.78)							—	.12**	.00
8. Group self-esteem	8.97 (1.68)	8.21 (2.03)								—	.13**
9. Interracial attitudes	1.67 (2.66)	0.76 (2.45)									—

* $p < .05$; ** $p < .001$.

As predicted, for both groups, the optimal model included an 'assumed' group trajectory and a 'stable' group trajectory. For *African* respondents, two stable trajectories emerged in addition to the assumed one. Figure 1 shows the estimated trajectories of relative deprivation perceived by *Africans* regarding the pattern of South Africa's economic situation across historical periods. As predicted, a significant subset of *African* participants reported the 'decreasing group-based deprivation' trajectory. *Africans* following the decreasing trajectory perceived that economic conditions in South Africa had greatly improved between the apartheid and post-apartheid periods. They also perceived that their economic condition had improved somewhat from the post-apartheid period to the present, and that it would continue to improve at a very slow pace over the next 5 years. However, the majority of *African* respondents perceived a 'stable' group trajectory. That is, the majority of *Africans* indicated that economic conditions in South Africa remained relatively the same from the apartheid period until the present, and that it will not really improve in the future. While one of the 'stable' group trajectories is associated with the perception of a moderate level of relative deprivation over time ('stable' group trajectory), the other trajectory is associated with a higher level of relative deprivation ('high-stable' group trajectory; see Figure 1).

An inspection of Figure 2 reveals that, as predicted, two main trajectories of relative deprivation emerged for *Whites*. Specifically, *white South Africans* comprising the 'increasing group-based deprivation' trajectory perceived an increase in relative deprivation from the apartheid period to the present, which was especially sharp from the apartheid to post-apartheid periods, and less pronounced afterwards. Furthermore, *white South Africans* in the 'increasing group-based deprivation' trajectory believe that the overall economic conditions in South Africa will continue to deteriorate slowly over the next 5 years. The 'stable' group trajectory reveals that the majority of *white South Africans* believe that the economic situation in South Africa has remained relatively unchanged across time and dramatic political events. Additional analyses were conducted to investigate whether Afrikaans-speaking whites perceived different trajectories from those perceived by English-speaking whites. For both groups, the same pattern of results emerged. Thus, all the analyses in the present paper combined the two white groups.

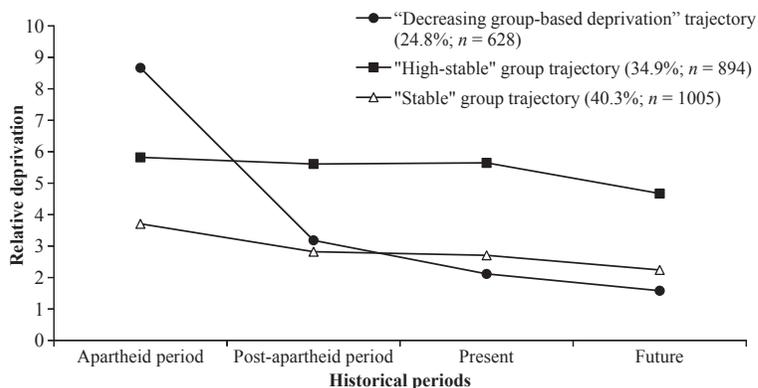


Figure 1. Estimated trajectories of relative deprivation for Africans.

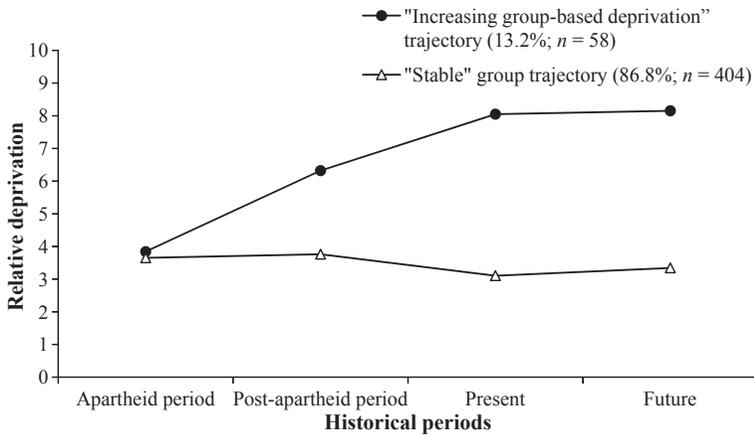


Figure 2. Estimated trajectories of relative deprivation for white South Africans.

Ethnic group identification association with the trajectories of relative deprivation

Our second goal was to examine whether higher levels of ethnic group identification would be associated with the ‘assumed’ group trajectory (either the ‘increasing group-based deprivation’ trajectory for *Whites* or the ‘decreasing group-based deprivation’ trajectory for *Africans*). We tested whether the level of ethnic group identification predicted the probability of belonging to a group trajectory while controlling for the potential main effect of two important variables: participant’s age and socioeconomic status. Age was included as a covariate to ensure that differences in group trajectories were not associated with the fact that older people might perceive different group trajectories because they experienced, first-hand, different historical periods than younger people. Secondly, given that socioeconomic status is a more objective measure of inequalities between social classes, socioeconomic status could have an important impact on perceptions of relative deprivation across time, and thus it was included as a covariate.

To predict the probability of group membership, we followed the procedure described by Nagin (2005). Ethnic group identification and demographic variables were dichotomized and added as covariates simultaneously with the estimation of the trajectory themselves. Analyses were conducted separately for *Africans* and *Whites*. Given that three trajectories were estimated for *Africans*, multinomial logit models were estimated for linking ethnic group identification to the three distinct trajectories of relative deprivation. However, since a two-group model defined *Whites*’ retrospectively reported measures of collective relative deprivation, a binary logit function was used for modelling group membership probability as a function of ethnic group identification and demographic variables.

Coefficient estimates, the z-score associated with each of them, and the odds ratio are presented in Table 2 for *Africans* and *Whites*. Results presented in this Table can be interpreted as separate binary logistic regression analyses that compare the ‘stable’ group trajectories with the ‘assumed’ trajectory. That is, for both *Africans* and *white South Africans*, the trajectory of comparison is the ‘assumed’ group trajectory. Accordingly, coefficient estimates indicate whether ethnic group identification increases or decreases the probability that an individual will follow the ‘stable’ group trajectory compared with the ‘assumed’ group trajectory, controlling for the effect of participant’s age and socioeconomic status. A negative estimated coefficient indicates that ethnic group

Table 2. Predictors of Trajectory Group Membership for Africans and Whites

Variables	Africans			Whites		
	Coefficient estimate	Z-score	Odds ratio	Coefficient estimate	Z-score	Odds ratio
'Stable' group trajectory						
Ethnic group identification	-1.15	-8.07**	3.16 [†]	-.78	-2.18*	2.18 [†]
Age	-.18	-1.36	1.19 [†]	.22	.68	1.24
Socioeconomic status	.17	1.27	1.18	-.11	-.36	1.12 [†]
'High-stable' group trajectory						
Ethnic group identification	-1.33	-9.12**	3.78 [†]	-	-	-
Age	.04	.30	1.04	-	-	-
Socioeconomic status	.86	6.11**	2.36	-	-	-

Note. The 'assumed' group-based deprivation trajectory is the comparison group.

[†]Odds ratio was smaller than 1, but a transformation (1/odds ratio) was applied to facilitate the interpretation.

* $p < .05$; ** $p < .001$.

identification reduces the probability of belonging to the 'stable' group trajectory compared with the 'assumed' group trajectory. In other words, a negative estimated coefficient means that respondents who highly identify with their ethnic group are more likely to follow the 'assumed' group trajectory than the stable one. Also, to assess the association of ethnic group identification with the probability of membership in each group, the 'odds ratio' was calculated (for more details see Nagin, 2005).

Results for ethnic group identification indicate that it is a powerful predictor of the 'assumed' group trajectory for both *African* and *White* respondents, even when controlling for age and socioeconomic status. For *Africans*, a high level of ethnic group identification decreases the likelihood of following one of the 'stable' group trajectories compared with the 'decreasing group-based deprivation' trajectory. Specifically, for Africans who highly identify with their ethnic group, the odds of perceiving the 'decreasing group-based deprivation' trajectory increase by a factor of 3.78 when compared with the 'high-stable' group trajectory, and by 3.16 when compared with the 'stable' group trajectory, controlling for age and socioeconomic status. Socioeconomic status did emerge as a significant predictor of the 'high-stable' group trajectory. Having a low socioeconomic status increases the odds of perceiving the 'high-stable' group trajectory by a factor of 2.36.

Results for *Whites* follow the same pattern: Higher identifiers are more likely to perceive the 'assumed' group trajectory for *Whites*. Specifically, for Whites who highly identify with their ethnic group, the odds of perceiving the 'increasing group-based deprivation' trajectory increase by a factor of 2.18 when compared with the 'stable' group trajectory, controlling for age and socioeconomic status. Neither socioeconomic status nor age were significant predictors of the trajectories for *white South Africans*.

The trajectories of relative deprivation association with personal well-being, group self-esteem and interracial attitudes

Our *third goal* was to examine whether there is a difference in personal well-being, group self-esteem and interracial attitudes between the relative deprivation trajectories. Because the posterior probabilities of belonging to a group are estimated for each respondent

simultaneously with the creation of the model, it is possible to assign respondents to the group trajectory with the highest posterior probability of belonging (Nagin, 2005). Thereafter, it is possible to perform an *Analysis of Variance* (ANOVA) or Multivariate analysis of Variance (MANOVA) with individual group membership to examine group differences. In our study, MANOVAs were conducted for our two measures of personal well-being: life satisfaction and personal hope. ANOVAs were then conducted to determine whether the ‘assumed’ group trajectory is associated with significantly dissimilar levels of group self-esteem and interracial attitudes among *Africans* and *Whites* in comparison with the ‘stable’ group trajectory. Analyses were conducted separately for *African* and *White* respondents (see Table 3).

In terms of personal well-being, MANOVAs revealed a main effect for trajectory group membership on both life satisfaction and personal hope for *Africans* (Wilk’s = .93, $F(4, 5,046) = 48.60, p < .001, \eta^2 = .04$) as well as for *Whites* (Wilk’s = .99, $F(2, 459) = 3.61, p < .05, \eta^2 = .02$). In terms of personal well-being for *Africans*, further analysis revealed that *Africans* who perceived the ‘decreasing group-based deprivation’ trajectory had higher levels of life satisfaction and personal hope than those who reported the ‘high-stable’ group trajectory ($p < .001$). However, results showed that *Africans* who reported the ‘decreasing group-based deprivation’ group trajectory did not differ in terms of life satisfaction and personal hope from the ‘stable’ group trajectory. For *Whites*, being in the ‘increasing group-based deprivation’ trajectory was associated with a lower level of life satisfaction and personal hope compared with the ‘stable’ group trajectory, as predicted.

In terms of group self-esteem, ANOVAs showed that for *Africans*, perceiving the ‘decreasing group-based deprivation’ trajectory is associated, as predicted, with a higher level of group self-esteem compared with those who reported the ‘stable’ group trajectory ($p < .001$) or the ‘high-stable’ group trajectory ($p < .001$). For *Whites*, the results for group self-esteem are the same as those obtained for personal well-being.³

Table 3. Means, standard deviations (in parentheses), and univariate effects of group trajectory on personal well-being, group self-esteem and interracial attitudes

Dependent measures	Descriptive statistics			Statistics		
	‘Assumed’ group trajectory	‘Stable’ group trajectory	‘High-stable’ group trajectory	<i>F</i>	<i>p</i> <	η^2
<i>Africans</i> (<i>N</i> = 2,527)						
Life satisfaction	6.54 _a (2.72)	6.60 _a (2.35)	5.31 _b (2.73)	$F(2, 2,524) = 69.88$	.001	.05
Personal hope	6.77 _a (2.42)	6.53 _a (2.25)	5.45 _b (2.34)	$F(2, 2,524) = 75.18$	.001	.06
Group self-esteem	9.56 _a (1.05)	9.00 _b (1.47)	8.50 _c (2.07)	$F(2, 2,524) = 78.51$	.001	.06
Interracial attitudes	2.21 _a (2.98)	1.55 _b (2.47)	1.42 _b (2.58)	$F(2, 2,522) = 18.18$	.001	.01
<i>Whites</i> (<i>N</i> = 462)						
Life satisfaction	7.47 (1.71)	8.12 (1.78)		$F(1, 460) = 6.69$	.05	.01
Personal hope	7.08 (1.94)	7.59 (1.75)		$F(1, 460) = 4.21$	.05	.01
Group self-esteem	7.10 (2.88)	8.37 (1.83)		$F(1, 460) = 20.55$	.001	.04
Interracial attitudes	3.38 (3.05)	0.38 (2.10)		$F(1, 460) = 90.82$	.001	.16

Note. Means with different subscripts are significantly different.

³ Note that we are confident about our results because the analyses were also conducted using another measure of collective esteem where the items focused on respondent’s racial group rather than their national group. The results yielded the same pattern.

Regarding interracial attitudes, ANOVAs revealed an effect of trajectory group membership on interracial attitudes for both *Africans* and *Whites*. A posteriori Tukey test showed that, as expected, *Africans* who perceived the ‘decreasing group-based deprivation’ trajectory had more negative interracial attitudes than those who followed the ‘stable’ group trajectory ($p < .001$) or the ‘high-stable’ group trajectory ($p < .001$). For *Whites*, the results follow the same pattern: *White South Africans* who perceived the ‘increasing group-based deprivation’ trajectory had more negative interracial attitudes than those who followed the ‘stable’ group trajectory.⁴

Additional analyses were conducted to control for the potential effect of socioeconomic status and ethnic group identification. Results remained unchanged, although some effect sizes in our study are small.

Discussion

Dramatic social change is a relentless characteristic of modern geopolitics. While there are some changes that are relatively gradual, many countries are challenged by dramatic social change that completely disrupts their social structures. The present research focused on the fall of apartheid in South Africa, which was an important group-based change that impacted every South African.

Recent research in social psychology suggests that there is substantial variation in how social change is perceived and experienced (Goodwin, 2009). What is the pattern of these differences, and how can we predict them? How do these differences relate to people’s personal well-being, their group self-esteem, and their interracial attitudes? The present study focused on these questions, leading to three major conclusions.

The first conclusion is that there are, indeed, systematic differences in how group members perceive social change. Specifically, we found that some group members followed a trajectory of relative deprivation corresponding to the pattern of ‘assumed’ impact brought about by social change. Other group members, however, reported no change in relative deprivation despite dramatic social changes. The fall of apartheid was such a dramatic geopolitical event that to all observers it seemed clear that *Whites* lost the privileged status they once enjoyed, and *Africans* were poised to realize their aspirations following decades of repression. Clearly, this perception is not shared by all *Africans* and *Whites*.

Why might some individuals report a stable group trajectory of relative deprivation even in the face of a change as dramatic and far-reaching as the fall of apartheid? This perception of stability might reflect the fact that the economic structure of South African society has not changed much since the end of apartheid (Møller, 1998). Despite *Africans’* optimism following the first democratic election in 1994 (Harris, 1997), *Africans* did not benefit from the social changes as much as they would have thought. Alternatively, *white South Africans* have been the beneficiaries of the market-oriented economic reforms in post-apartheid South Africa. Therefore, this lack of change in the economic structure of the South African society may well account for the perception of stability found in the present study.

The second conclusion we can derive from our results is that ethnic group identification plays a central role in predicting which trajectory of relative deprivation

⁴ Differences in group trajectories in terms of xenophobia were also examined using a measure of attitude towards African immigrants and the results were similar.

group members will endorse. Consistent with social identity theory (Tajfel & Turner, 1986), research has shown that high in-group identifiers experience more relative deprivation (Ellemers & Bos, 1998; Kessler & Mummendey, 2002; Mummendey *et al.*, 1999; Tropp & Wright, 1999; Veilleux *et al.*, 1992). However, this link has not always been confirmed empirically (Ethier & Deaux, 1994; Lalonde & Cameron, 1993; Tougas & Veilleux, 1990; Zagefka & Brown, 2005), and no compelling explanation for these inconsistent findings has been proposed.

Results from the present study demonstrate that in-group identification does not necessarily lead to a higher or lower relative deprivation level. Rather, high in-group identification only predicts membership in the 'assumed' group-based relative deprivation trajectory. High and low in-group identifiers may reveal distinct group trajectories because they have been exposed, or choose to expose themselves, to dissimilar information about their ingroup (e.g., Sahdra & Ross, 2007). Because group members high in in-group identification are more inclined to make group comparisons (Kawakami & Dion, 1995), it may make them more aware of changes and threats that their group has faced over time and thus, perceive the 'assumed' trajectory for their group. This point of view is shared by Vallone, Ross, and Lepper (1985), who suggest that highly identified group members pay more attention to attacks directed at their group.

The third conclusion is that perceiving either an 'assumed' or a 'stable' group trajectory impacts personal well-being, group self-esteem, and interracial attitudes. Specifically, perceiving the 'increasing group-based deprivation' trajectory for *Whites* is associated with less personal well-being and group self-esteem compared with the stable pattern. Conversely, perceiving the 'decreasing group-based deprivation' trajectory for *Africans* is associated with greater personal well-being than perceiving a 'high-stable' group trajectory, and greater group self-esteem than perceiving a 'stable' group trajectory or a 'high-stable' group trajectory. This finding for *Africans* contradicts previous research. For example, Westerhof and Keyes (2006) demonstrated that the perception of one's collective trajectory, having changed either for the better or for the worse, is associated with negative well-being. We demonstrate that for *Africans*, perceiving a 'decreasing group-based deprivation' trajectory is actually associated with greater personal well-being and group self-esteem.

In terms of interracial attitudes, results revealed that the perception of the 'assumed' group trajectory is negatively associated with interracial attitudes for both *Africans* and *Whites*. This result confirms the thesis that people who perceive the 'assumed' group trajectory are more inclined to make group comparisons (Kawakami & Dion, 1995). As such, if they strongly identify with their own group in this comparison process, they are more likely to favour their own group to the detriment of other groups and thereby hold negative interracial attitudes.

Limitations

The present study suffers from two limitations that should be taken into consideration in future studies. First, our research indicates that social change affects the way group members interpret their collective history through relative deprivation. That is, the extent to which people perceive their group as an important part of their identity influences how they perceive social change; by extension, people interpret through this lens the history that defines their group's identity. Nevertheless, as our data are correlational, we are careful to avoid implying causation between these constructs. For example, the possibility that it is the perception of past events that influences people's current level of social

identification cannot be ruled out (see Liu & Hilton, 2005). To fully test the causal link between social identity and group trajectory in the context of social change, future studies will need to include a distinct manipulation or a prime.

The second limitation is that several of the measures were composed of a single item. Generally, researchers aim for multiple items to measure a single conceptual variable to increase the reliability of the measure. However, some researchers have criticized this approach, suggesting that sometimes multiple items are problematic in decreasing content validity because the questions are often too similar, leading to the common method bias (Bergkvist & Rossiter, 2007) and an inflated alpha (Rossiter, 2002). Thus, some researchers have proposed the use of one-item scales that are concrete and understandable (Bergkvist & Rossiter, 2007; Rossiter, 2002), and decrease participants' fatigue associated with answering the questionnaire. This is an important consideration when conducting research with samples that have little experience with formal questionnaires and where literacy is an issue. Many studies have tested the utility of one-item scales similar to those we used in the present research (e.g., Robins, Hendin, & Trzesniewski, 2001; Tropp & Wright, 2001; see also Reysen, 2010). Nevertheless, to check the reliability of our single-item measures, future studies should implement multiple-item scales.

Future directions

Previous research indicates that members of the same group might perceive social change that challenged their group's history in different ways (de la Sablonnière, Taylor *et al.*, 2009; Finchilescu & Dawes, 1998, 1999; Goodwin, 2009; Moscovici, 1988). Against this backdrop, the current research shows that it is essential to use a statistical method that allows for the testing of different perceived group trajectories, such as group-based trajectory modelling. Indeed, the present study illustrates that different trajectories of relative deprivation may emerge even among people who share a common group history.

Given the personal nature of group trajectory perceptions, it is important to allow for maximal flexibility in measuring this variable. Although we provided participants with a selection of historical periods that were deemed significant by history experts, these might have been limited. Specifically, to evaluate in greater depth the importance of past historical events on the perception of individuals' group trajectory, future studies might use the innovative theory and research of McAdams (1996, 2001), who introduced the 'personal narrative' strategy. Bougie *et al.* (2011) extended this strategy to the collective level by introducing the 'collective narrative'. This methodology requires participants to 'tell the story' of their group using 'life chapters'. An important aspect of this method involves the temporal sequencing of various historical events, which can be useful in future research on associations between perceptions of collective history and important outcome variables. Another research tool that could prove useful is essay writing, which was used extensively in South Africa as a means of revealing different 'future orientations' for South Africans of various ethnic origins (Danziger, 1963; du Preez, Bhana, Broekman, Louw, & Nel, 1981; Finchilescu & Dawes, 1999).

The present study can also serve as a basis for future research oriented towards decreasing interracial tensions between ethnic groups. Bar-On and colleagues (Adwan & Bar-On, 2004; Bar-On & Kassem, 2004) used an innovative historical approach with the aim of resolving intergroup conflict and addressing group trauma. For example, in one study, they worked closely with Jewish and Palestinian students who were asked to listen to each other's narratives as a means of 'work[ing] through intractable conflicts' (Bar-On &

Kassem, 2004, p. 289). Because they were building on finding similarities between the groups, their method had a positive impact by way of increasing empathy and openness among the participants. Having established that the way people perceive their group history has important consequences for intergroup relations, the technique used by Bar-On and colleagues could be helpful in diverse cultural contexts.

Conclusion

The present research provides new insights in terms of how South Africans perceive and respond to the legacy of apartheid and its dramatic fall. While many *Whites* did indeed perceive the loss of political power and status associated with the fall of apartheid, many *Whites* reported no perceived change over time. Similarly, while many *Africans* perceived an upward trajectory for their group, many others did not. These results parallel what has been found in another country affected by dramatic social change: Kyrgyzstan.

These two important patterns offer compelling insights into why members of the same group do not all follow a single pattern of relative deprivation. Our results show that in-group identification plays a pivotal role. Moreover, our results show that the different perceived patterns are associated with personal well-being, group self-esteem, and interracial attitudes. Clearly, social psychology needs to develop methodologies that capture the entire history of a group so that the complexity of peoples' responses to what appears to be a blatant geopolitical event can be appreciated.

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