

Reconceptualizing relative deprivation in the context of dramatic social change: the challenge confronting the people of Kyrgyzstan

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Abstract

The present study investigated the relationship between Temporal Collective Relative Deprivation and collective well-being in the context of dramatic social change in Kyrgyzstan. Traditional research has evaluated Temporal Collective Relative Deprivation by comparing a group's present situation to a point in the recent past or future. We argue that a reconceptualization of Temporal Collective Relative Deprivation is needed. We hypothesized, first, that examining several, as opposed to a single, points of comparison will better predict collective well-being. Secondly, we hypothesized that the points of comparison that will best predict collective well-being will not necessarily correspond to the most recent past or future. Third, we hypothesized that the overall trajectory of Temporal Collective Relative Deprivation perceived across time will influence the level of collective well-being. A sample of 565 Kyrgyz participants completed a questionnaire. Hierarchical regressions and group-based trajectory modeling confirmed our three hypotheses. Theoretical and methodological implications of the findings are discussed. Copyright © 2008 John Wiley & Sons, Ltd.

In the present paper, we focus on social changes at the societal level that are both dramatic and sudden. Specifically, our study was conducted in one of the newly formed independent countries that emerged from the collapse of the Soviet Union, Kyrgyzstan. Social change refers, by definition, to profound societal transformations that produce a complete rupture in the equilibrium of social structures because their adaptive capacities are surpassed (Parsons, 1964; Rocher, 1992; Rogers, 2003). As such, social changes of this magnitude, be they perceived as positive, negative, or ambiguous, are nevertheless psychologically disruptive since they affect the entire social structure that frames people's lives. Dramatic social changes have been defining events throughout history (Nolan & Lenski, 1998). Indeed, most cultures define themselves by pivotal historical events that changed the course of history: The Civil Rights Movement in the United States, the French Revolution in France, the Bolshevik Revolution in Russia, the Confederation in Canada, the implementation of Apartheid policies in South Africa, and the rise of Hitler and the Second World War in Germany and Europe (see Liu & Hilton, 2005).

The present research focuses on people confronting dramatic and sudden social change, and the psychological mechanisms that might explain their reactions to such profound change. To date, the body of knowledge in social psychology concerning the psychological adaptation mechanisms developed by individuals confronting social change in

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their environment is limited (Moscovici, 1972; Moghaddam, 1990; Rogers, 2003; Tajfel, 1972). Social change has been neglected, in part because it does not lend itself easily to a laboratory format, and in part because it requires fieldwork in very challenging social contexts.

The context for the present research was Kyrgyzstan, a relatively small country located in Central Asia. It was part of the Russian Empire and after the October revolution became one of the 15 Soviet Republics. In 1991, following the breakdown of the Soviet Union, the people of Kyrgyzstan faced daunting challenges in their lives. Understanding Kyrgyz's reactions to social change is even more urgent and current as the country has undergone a recent revolution on 24 March 2005 that resulted in the overthrow of the government. The context of social change in Kyrgyzstan provides an ideal "natural" experimental setting in which to apply and rethink current social psychological theory.

In order to gain a better understanding of how people cope and react psychologically to social change, our research builds on Relative Deprivation Theory (Crosby, 1976). Specifically, we propose a reconceptualization of Relative Deprivation Theory with a focus on Temporal Collective Relative Deprivation. We will argue that it is the *pattern of group-based relative deprivation* that needs to be the focus. Specifically, we point to the need to examine the entire array of episodes or perceived trajectory that defines a group's history and future, not just a simple comparison of the group's present status with its status in the recent "past" or near "future."

THE LEGACY OF RELATIVE DEPRIVATION THEORY

Relative Deprivation Theory has provided important insights into the psychology of well-being (e.g., Walker, 1999; Zagefka & Brown, 2005). Relative deprivation involves a cognitive component which refers to the perception of a disparity stemming from a comparison. In terms of the emotional component, relative deprivation can be defined as a feeling of dissatisfaction that follows from negatively based comparisons (Crosby, 1976; Runciman, 1966, 1968). One of the main assumptions of Relative Deprivation Theory is that people will compare their own situation, or that of their group, with subjective standards rather than with objective reality.

Relative Deprivation Theory suggests that the well-being of people will suffer under conditions of negative comparisons. These negative comparisons may take a variety of forms in the group context and have been addressed in domains such as access to equal opportunity in employment (Guimond & Dubé-Simard, 1983) and economic well-being (Dambrun, Taylor, McDonald, Crush, & Méot, 2006; Grofman & Muller, 1973). According to Relative Deprivation Theory, stress symptoms and negative collective well-being arise when negative comparisons are perceived to be undeserved, either at the personal (Crosby, 1976; Olson & Hafer, 1996; Walker, 1999; Walker & Mann, 1987) or group (Bougie & Taylor, 2007; de la Sablonnière, Tougas, & Lortie-Lussier, 2007; Walker, 1999) level.

The ongoing challenge confronting Relative Deprivation Theory is *specifying the referent* or standard that people use when making a comparison (Walker & Pettigrew, 1984). Towards addressing this issue, two useful distinctions have been made. The first distinction involves the level of comparison and contrasts *personal* comparisons with *collective* comparisons, initially referred to by Runciman (1966) as egoistical (*personal*) and fraternal (*collective*) relative deprivation. The individual is at the center of the comparison process in *personal* relative deprivation. For *collective* relative deprivation, it is the group to which the individual belongs that is compared to other groups. The focus of the present research is *collective* relative deprivation.

The second distinction refers to the target of comparison; specifically, whether a group comparison is *social* or *temporal* in nature. *Social* comparisons involve comparing one's group to another group. *Temporal* comparisons involve comparing one's group's present status with the status of one's group at another point in time. The baseline for temporal comparisons is therefore the present-day, current reality. Temporal comparisons allow people to re-evaluate their group within the context of an altered social environment. According to Temporal Comparison Theory (Albert, 1977), temporal comparisons are especially important during periods of change (Albert, 1977; Brown & Middendorf, 1996; Mummendey, Mielke, Wenzel, & Kanning, 1992) or economic hardships (Krahn & Harrison, 1992). For example, de la Sablonnière et al. (2007) found that in times of rapid social change, it is temporal comparisons that become salient as people attempt to adjust to a new reality (see also de la Sablonnière & Tougas, in press). The destabilizing nature of dramatic social changes (Albert & Sabini, 1974) means that people confront what is for them a unique situation (Hénault & de la Sablonnière, 2007). Thus, social comparisons are less salient since it is unclear what other countries or groups might serve as a

reasonable point of comparison. By contrast it is easier for people to compare their current reality to a well-defined situation of their own group in the past or to their expected situation in the future. In this sense, temporal comparisons offer people a reasonable anchor-point or basis upon which to engage the comparison process. The present research, therefore, focuses on the collective and temporal aspects of comparisons, and hence our use of the label Temporal Collective Relative Deprivation.

RECONCEPTUALIZING TEMPORAL COLLECTIVE RELATIVE DEPRIVATION

Researchers typically adopt one of two general approaches to conceptualizing Temporal Collective Relative Deprivation. The first approach involves making a personal or group comparison of the current situation with a non-specified “past” or “future.” For instance, in a study by Brown and Middendorf (1996), participants answered questions such as: “A group can consider itself satisfied if it makes good progress in time. . .” (p. 328). More recently, Zagefka and Brown (2005) asked students in England and Germany, who belonged to the cultural minority or majority group, to compare their present situation to their “own situation in the past” (p. 472). These studies illustrate the vague and potentially confusing nature of unspecified “past” or “future” comparisons in the conceptualization of Temporal Collective Relative Deprivation. Specifically, confusion may easily arise as a result of different interpretations of such a non-specified timeframe. One individual might interpret the “past” as beginning two years ago, and another as beginning 15 years ago. Nevertheless, this approach has been employed frequently in the field of temporal comparisons (Olson, Roese, Meen, & Robertson, 1995; Pye & Wilson, 2006; Sheeran, Abrams, & Orbell, 1995; Suls, Marco, & Tobin, 1991; Taylor, 1982; Taylor, Neter, & Wayment, 1995; Tougas, de la Sablonnière, Lagacé, & Kocum, 2003; Wayment & Campbell, 2000; Wilson & Ross, 2000; see also Walker & Mann, 1987).

The second approach involves temporal comparisons of people’s current personal or group situation relative to a specific period in time, typically the recent past or future (i.e., a few years ago or in a few years from now). For example, Dambrun et al. (2006) asked participants to evaluate their current economic situation in 1 year from now. However, there are potential limitations to this approach in that the selected timeframe may not be appropriate, and other timeframes may be more influential. Previous research has generally used past or future comparisons of the very recent past or future that range from 6 months to 5 years (Abeles, 1976; Appelgryn & Bornman, 1996; Dambrun et al., 2006; de la Sablonnière et al., 2007; Frye & Karney, 2002; Guimond & Dambrun, 2002; Krahn & Harrison, 1992; McFarland & Alvaro, 2000; Robinson-Whelen & Kiecolt-Glaser, 1997; Ross, Hein, Wilson, & Sugimori, 2005; Ross & Wilson, 2002; Suls et al., 1991; Van Dyk, & Nieuwoudt, 1990; Wilson & Ross, 2001).

We propose a reconceptualization of Temporal Collective Relative Deprivation. We argue that the two commonly used approaches to the conceptualization of Temporal Collective Relative Deprivation, though legitimate, are incomplete. We hypothesize a need to focus on several past and future points of comparison in order to fully appreciate peoples’ reactions to changing conditions. We first consider the many events that comprise a group’s history and future. Second, we place greater emphasis on a group’s pivotal historical events as well as the relative importance of each event. Finally, we propose to explore the entire pattern of group-based relative deprivation across time.

Our arguments will be tested in the context of Kyrgyzstan, a country that has undergone dramatic social change throughout its history. Over the last century, the people of Kyrgyzstan have experienced multiple major life-altering events, including (1) being part of the Russian empire (Pre-Soviet period); (2) formally joining the Soviet Union in 1936 (Soviet period); (3) witnessing the collapse of the USSR and obtaining independence in 1991 (early period of independence); and (4) the 2005 Tulip Revolution, which resulted in the overthrow of the first Kyrgyz president, Askar Akaev (Present). In addition, we explore both the near and distant future by asking Kyrgyz to judge their situation in 1 year and in 10 years from the Revolutionary period, respectively.

In order to understand Temporal Collective Relative Deprivation, we propose that several points of comparison over a longer timeframe need to be taken into consideration, and these should be based on the key historical events that define a group. This proposition is in line with a previous suggestion by Liu and Hilton (2005) that a group’s representation of its history has a significant impact on the group’s social identity. In addition, we argue that how people perceive that their group situation has evolved through time influences their present collective well-being. Focusing on Kyrgyzstan allows us to take into account several important past events, or points of comparison, which may clarify the differential and

combined effects of these events on collective well-being, and consequently explain why certain people suffer from low collective well-being while others do not.

HYPOTHESES

We propose three hypotheses. Responding to the traditional method of examining Temporal Collective Relative Deprivation, whereby comparisons are made with *one* point in time in the recent past or future, or with a non-specified past or future, we argue that it is important to consider *several specific past and future points of comparison* to determine collective well-being.

Hypothesis I: While the traditional method of assessing Temporal Collective Relative Deprivation will have a modest association with collective well-being, we predict that the strength of this relationship will be enhanced significantly when more than one past and future comparison point is taken into account.

Hypothesis II: We predict that the past or future comparison(s) that will best predict present collective well-being will not necessarily correspond to the “standard” or “most recent” past or future comparisons. Specifically, the contribution of each past or future comparison in terms of collective well-being will be proportional to the importance that participants place on each point in the past or projected history of their group. The first two hypotheses will be tested with hierarchical regression analyses.

In order to further capitalize on multiple points of comparisons, we explore the pattern of Temporal Collective Relative Deprivation across time. Specifically, how one perceives that the economic situation of his/her group has, or is expected to improve and/or deteriorate throughout history may influence his/her collective well-being. The idea that the pattern of relative deprivation is crucial to determining well-being is consistent with theories in the context of relative deprivation, such as Davies’ Theory of Revolution or the J-curve model (1962, 1969), and the reversed J-curve model (Grofman & Muller, 1973). These theories point to the pivotal role of the “pattern” or of the trajectory of the person (or group), where time is the baseline (see Grofman & Muller, 1973). It is the pattern of relative deprivation that has consequences for the behavior and feelings of people. In their research, Grofman and Muller (1973) found that unstable patterns, for example, a pattern characterized by an improvement of people’s situation followed by an expected drop in the future will make them more inclined to political violence compared to people who perceive their pattern to be “stable.” Although the work of Grofman and Muller (1973) seems to be consistent with our conceptualization of the *pattern of Temporal Collective Relative Deprivation*, their method for evaluating Temporal Collective Relative Deprivation is very similar to the *standard Temporal Collective Relative Deprivation*. In their measure, only the recent past and the near future were considered. We evaluate the pattern across various points in history since it may play a crucial role in shaping people’s present well-being, as well as modulating their perceptions of their future situation. Consistent with Grofman and Muller’s findings, we believe that people who perceive a stable pattern of Temporal Collective Relative Deprivation (continuous improvement or deterioration) through time will have a higher collective well-being than people perceiving an unstable pattern across time (mixed improvements and deteriorations).

Hypothesis III: we predict that the overall pattern or trajectory of Temporal Collective Relative Deprivation perceived across time plays an important role in determining the level of collective well-being. Specifically, we propose that individuals who perceive a stable pattern of Temporal Collective Relative Deprivation across time will have higher collective well-being than those who perceive an unstable pattern. To test this hypothesis, group-based trajectory modeling will be conducted.

METHOD

Participants

The participants were recruited at different colleges and universities in Bishkek, Kyrgyzstan. Bishkek is the capital and largest city of Kyrgyzstan, with a population of approximately 900 000 people. Questionnaires were distributed between

12 April and 14 May 2005, immediately following the overthrow of President Akaev and his government on 24 March 2005. These questionnaires were distributed by two bilingual researchers (Kyrgyz and Russian) during regular class periods to a total of 743 students from 9 post-secondary educational institutions and 41 different programs of study. Participants who were included in our analysis were all Kyrgyz nationality (588; 79.1%). Participants of other ethnic backgrounds (121; 16.3%), mainly Russians or Kazakhs, and those who did not report this information (34; 4.6%) were not included in the final sample. This decision was based on the fact that the study involved questions specifically worded and intended for participants of Kyrgyz ethnic background.

Our sample of Kyrgyz participants was aged between 16 and 60 years and was comprised mainly of women (69.0%). In all, 57.3% identified Kyrgyz as their best-spoken language, 16.7% Russian and 12.1% spoke both Kyrgyz and Russian. The remaining 13.9% spoke either English, both Russian and English, German, Chinese, Arabic, Uzbek, or did not reveal their best-spoken language. Also, 96.8% of participants claimed to have a mother of Kyrgyz ethnic background, and 98.8% reported having a Kyrgyz father.

Questionnaire

The initial version of the questionnaire was developed in English. The questionnaire was then translated into the two most widely used languages in Kyrgyzstan: Kyrgyz and Russian. The translation was performed using a back-to-back translation procedure (Brislin, 1970). This procedure was used to translate both the English questionnaire into Russian, and the Russian questionnaire into Kyrgyz.

Two independent variables were assessed in the questionnaire: Temporal Collective Relative Deprivation and the perceived importance of each historical period in determining the current status of Kyrgyzstan. Four dependent variables were used to assess collective well-being: (1) collective esteem, (2) national pride, (3) clarity of cultural identity, and (4) collective hope. Finally, socio-demographic questions were posed that included nationality, date of birth, gender, best-spoken language, the nationality of their mother and father, their program of study, and educational institution.

Independent Measures

Temporal Collective Relative Deprivation

Our measure of Temporal Collective Relative Deprivation modeled that of Bougie and Taylor's (2007) who used a temporal approach to study Francophone and Anglophone collective identity. The specific wording was adapted from Dambrun et al. (2006). As in the present study, Dambrun et al. (2006) needed to adopt concrete and user friendly items for a sample in South Africa who were unaccustomed to completing formal questionnaires. In addition, to reduce the length of the questionnaire given to Kyrgyz participants and to facilitate their full understanding of all the questions, only the cognitive component of Temporal Collective Relative Deprivation was evaluated, as has been adopted in many other studies (Abeles, 1976; Bougie & Taylor, 2007; Dambrun et al., 2006; Robinson-Whelen & Kiecolt-Glaser, 1997; Suls et al., 1991; Taylor, 1982).

For the present study, Temporal Collective Relative Deprivation items focused on the economic conditions for Kyrgyz people (i.e., economic well-being). Participants were asked to evaluate whether the economic situation in Kyrgyzstan had improved or deteriorated between two adjacent historical periods. The decision to measure comparisons between two consecutive periods was based on previous studies exploring personal (McAdams, 1996, 2001) and cultural narratives (Bougie & Taylor, 2007). Narratives require individuals to recount, in a chronological sequence, their personal or group history by dividing it in periods or "chapters." In the present study, the historical periods included, chronologically, the Pre-Soviet to Soviet period, Soviet to Early Independence period, Early Independence to Present period, Present to Near Future period (i.e., 1 year from now), and Present to Distant Future period (i.e., 10 years from now).¹ The format of the

¹Results from previous research suggest that it is entirely appropriate to use an historical perspective to measure Temporal Collective Relative Deprivation even with younger participants who have not lived through every time period (Bougie & Taylor, 2007; Létourneau & Moisan, 2004). For example, Létourneau and Moisan (2004) asked 400 high school Quebec students to reveal what they knew of the history of Quebec and found that students had a surprisingly coherent and structured vision of their group's history.

questions designed to assess Temporal Collective Relative Deprivation took the form “How did the economic well-being of Kyrgyz people change during the (Soviet) period compared to the (Pre-Soviet) period?” Responses were made on an 11-point Likert-type scale defined at one extreme by “*definitely deteriorated*” (0) to “*definitely improved*” (10) at the other extreme.²

The selection of past historical periods was made on the basis of a focus group where Kyrgyz and Russian scholars of Kyrgyz nationality arrived at a consensus with respect to the pivotal, clearly defined periods in the history of Kyrgyzstan over the last century.

Perceived Importance of Each Historical Period

Participants were asked to rate the extent to which each historical period influenced the status, definition or identity of the Kyrgyz population today. This belief was assessed with questions such as: “To what extent do you think the Pre-Soviet (Soviet, Early Independence, Present, Near Future, Distant Future) period defines Kyrgyz people’s mentality today?” Answers were recorded on an 11-point Likert-type scale, where 0 corresponded to “*not defining of our group*” and 10 was associated with “*very defining of our group*.”

Dependent Measures (Collective Well-Being)

Collective well-being was evaluated using four different measures in order to ensure the stability of our results.

Collective Esteem

Collective esteem was evaluated using questions derived from previous scales (Ellemers, Kortekaas, & Ouwerkerk, 1999; Jackson, 2002; Luhtanen & Crocker, 1992). Participants were required to answer the following four questions: “I am glad I am Kyrgyz”; “I am proud to be a Kyrgyz”; “I feel that being Kyrgyz is not worthwhile” (recoded); and “My image of Kyrgyz is negative” (recoded). Participants were asked to indicate their answer on an 11-point Likert-type scale, ranging from 0 “*completely disagree*” to 10 “*completely agree*.” Internal consistency for this scale is .69.

Clarity of Cultural Identity

Clarity of cultural identity is a concept that was first developed by Taylor (1997, 2002). This concept refers to the extent to which individuals share knowledge about common history, values, goals, attitudes, and behaviors with other members of their group (Taylor, 2002). This definition of cultural identity corresponds to a “descriptive aspect of the self-concept that the individual shares with every member of one’s group” formed on the basis of shared “values, attitudes, beliefs, and behavioral patterns” (Taylor, 2002, p. 44). Clarity of cultural identity was included in the present study as a measure of collective well-being because previous research has established a relationship between these two constructs (Bougie & Taylor, 2007). Indeed, Bougie and Taylor (2007) demonstrated “that a clear cultural identity is associated with positive collective esteem” (p. 161). Furthermore, Taylor (1997, 2002) has suggested that clarity of cultural identity is essential to the development of positive collective esteem, since it provides the basis upon which individuals can evaluate aspects of their group membership as well as collective esteem. Mullin and Hogg (1998) also supported this conclusion with evidence from a laboratory experiment demonstrating that gaining certainty (or clarity) about one’s cultural identity leads to positive feelings about other members of one’s group.

In the context of the present study, participants were asked to evaluate the following question on an 11-point Likert-type scale: “How confident are you of (all) the answers you gave with regards to the Present period?”. The scale ranged from 0 “*not confident at all*” to 10 “*very confident*.” This format of assessing cultural identity clarity with *confidence ratings* was inspired by measures used by Baumgardner (1990) and Campbell (1990) to measure the clarity of personal identity, and

²It is important to note that in our analyses of Temporal Collective Relative Deprivation, answers were reversed such that 0 corresponded to “*definitely improved*” and 10 corresponded to “*definitely deteriorated*.”

has been found by Bougie and Taylor (2007) to be an appropriate content-dependent measure of cultural identity clarity. Indeed, *confidence ratings* in answers for each historical period were positively and consistently correlated with the concept of ingroup entitativity, which refers to the degree to which individual members of a group recognize that the group has a “real existence” (Castano, 2004).

National Pride

We evaluated national pride among Kyrgyz participants because it is believed to be an indicative of collective esteem. Indeed, previous research has assessed collective esteem by asking participants how proud they felt to belong to a group (Ashmore, Deaux, & McLaughlin-Volpe, 2004). Furthermore, group pride and collective esteem have been found to be significantly correlated in two studies conducted by Smith and Tyler (1997). In the context of the present study, participants rated their national pride at various periods across history (from Soviet to Distant Future periods) by answering questions such as the following: “Do you think Kyrgyz people had a sense of national pride during the Present (Soviet, Early Independence, Near Future and Distant Future) period?”. These questions were rated on an 11-point Likert-type scale ranging from 0 “*not proud at all*” to 10 “*definitely proud*.”

Collective Hope

While the concept of hope has not been previously studied in the context of collective well-being, it has been associated with personal self-esteem. As Snyder and colleagues (1991) have argued, “persons with higher hope should also experience an enhanced sense of [personal] self-esteem across situations” (p. 574). Moreover, Snyder et al. (1996) showed that state hope, that is, one’s level of hope at a given moment, is highly correlated with the State Self-Esteem Scale developed by Heatherton and Polivy (1991). Since personal hope has been reliably associated with personal self-esteem, we propose that hope in the betterment of one’s group reflects, at least in part, collective esteem, and more generally, collective well-being. In the context of the present study, Kyrgyz participants were asked to evaluate their hope for the betterment of their group retrospectively at each historical period, or “collective hope,” by answering the following question: “In the Present (Soviet, Early Independence, Near Future, Distant future) period, do you think the population of Kyrgyz believes that their lives will get better in the future?”. Participants were asked to rate their answer on an 11-point Likert-type scale ranging from 0 “*not at all*” to 10 “*very much so*.”

RESULTS

Preliminary Analyses

Preliminary analyses revealed that the data followed a normal distribution. Outliers that deviated by more than three standard deviations from the variable mean, and displayed a Mahalanobis distance greater than the exclusion criterion set at $p < .001$ were excluded from further analyses. These variables did not differ significantly from other variables of interest (Tabachnick & Fidell, 2001), and corresponded to 12 participants out of the initial sample of 588. Eleven cases with over 50% of their values missing were also removed from further analyses. Overall, data from 96% or 565 of our initial sample of 588 participants were retained for our analyses. Missing values were replaced by simple imputation using the PROC MI procedure in SAS. Means and standard deviations for all variables are shown in Table 1. All measures fell within an acceptable kurtosis and skewness range from -1.01 to $+1.52$ (Tabachnick & Fidell, 2001).

Correlations

Prior to testing our hypotheses, we needed to establish that the five measures of Temporal Collective Relative Deprivation could be considered as genuine independent predictors of collective well-being. Correlations were thus computed between

Table 1. Means and standard deviations (in parentheses) for independent and dependent variables ($N = 565$)

Period	Temporal Collective Relative Deprivation	Perceived importance of period	Collective esteem	National pride	Clarity of cultural identity	Collective hope
Pre-Soviet	—	5.98 (2.52) ^a	—	—	—	—
Soviet	2.57 (2.13)	6.31 (2.42) ^a	—	6.59 (2.34)	—	7.67 (1.85)
Early Independence	5.10 (2.46)	6.25 (2.09)	—	7.23 (2.01)	—	7.29 (1.85)
Present	4.87 (2.42)	6.10 (2.15) ^b	8.08 (1.94)	6.49 (2.68)	7.32 (2.08)	6.92 (2.22)
Near Future	3.57 (1.74)	6.22 (2.00)	—	7.12 (2.11)	—	6.94 (2.05)
Distant Future	2.35 (1.69)	6.80 (1.94) ^b	—	7.82 (2.02)	—	7.64 (1.85)

Note: Means with the same subscript are significantly different based on a paired samples *t*-test adjusted for multiple comparisons with the Bonferroni correction. ^a $p < .01$; ^b $p < .001$.

Table 2. Correlations among Temporal Collective Relative Deprivation measures ($N = 565$)

Temporal comparisons	1	2	3	4	5
1. Distant past	—	-.07 [†]	.06	.10*	.23***
2. Moderate past		—	.28***	.06	.10*
3. Standard past			—	.22***	.20***
4. Standard future				—	.46***
5. Distant future					—

[†] $p \leq .10$; * $p \leq .05$; *** $p \leq .001$ (two-tailed).

these five measures of Temporal Collective Relative Deprivation and are presented in Table 2. From inspection of the correlations, it can be seen that none of the associations between Temporal Collective Relative Deprivation was multicollinear. They ranged from $-.07$ to $.46$ and the average correlation was low ($r_{\text{mean}} = .10$). These results point to the independence and distinctiveness of Temporal Collective Relative Deprivation measures.

Hierarchical Regression Analyses (Hypotheses I and II)

We tested our first two hypotheses using four hierarchical regression analyses (one for each dependent variable), allowing us to test both hypotheses simultaneously. In order to test our first hypothesis, that collective well-being is better predicted by assessing Temporal Collective Relative Deprivation at several points in time rather than at a single point, the regression analyses included two steps. The traditional approach to measure Temporal Collective Relative Deprivation has been to use a single and recent point in the past or future. Thus, the first step of the regression analyses included the traditional, most recent, Temporal Collective Relative Deprivation scores (standard past and standard future). The second step introduced Temporal Collective Relative Deprivation scores associated with the moderate and distant past, as well as distant future comparisons. Our aim was to demonstrate that adding distant and moderate past, in addition to distant future comparisons to the prediction of collective well-being explained more variance in collective well-being than standard past and future comparisons alone.

Results from the hierarchical regression analyses supported our first hypothesis. Table 3 displays the standardized (β) and non-standardized (B) regression coefficients, as well as the standard errors of the regression coefficients ($SE B$), for all Temporal Collective Relative Deprivation variables used to predict each of the four dependent variables. In addition, R values for each step in the analyses are displayed. For multicollinearity diagnostic statistics, all predictors had acceptable tolerance values ($>.74$) and variance inflation factors (<1.50).

The results indicate that the traditional approach to assessing Temporal Collective Relative Deprivation (Step 1: the single most recent past and near future comparisons) was not significantly related to the four collective well-being measures taken together. Addressed individually, Step 1 was related significantly to three of the four measures of collective well-being, that is, collective esteem, national pride, and collective hope.

Table 3. Summary of hierarchical regression analyses when predicting dependent variables from Temporal Collective Relative Deprivation ($N = 565$)

Temporal Relative Deprivation	Collective esteem			National pride			Clarity of cultural identity			Collective hope			Total R	
	B	SE	β	B	SE	β	B	SE	β	B	SE	β		
Step 1														
Standard past	-0.03	0.03	-.04	-0.23	0.05	-.21***	-0.01	0.04	-.02	-0.20	0.04	-.22***	.29***	.39***
Standard future	-0.15	0.05	-.14***	-0.25	0.06	-.16***	-0.08	0.05	-.07	-0.36	0.05	-.28***	.08	
Step 2														
Standard past	-0.03	0.04	-.03	-0.19	0.05	-.17***	-0.01	0.04	-.02	-0.16	0.04	-.17***	.39***	.48***
Standard future	-0.04	0.05	-.03	-0.08	0.07	-.05	0.03	0.06	.03	-0.21	0.05	-.16***	.30***	
Moderate past	0.05	0.03	.07	-0.04	0.05	-.03	0.08	0.04	.09*	-0.07	0.04	-.08*		
Distant past	-0.11	0.04	-.12**	-0.16	0.05	-.12**	-0.18	0.04	-.19***	-0.11	0.04	-.11**		
Distant future	-0.25	0.05	-.22***	-0.36	0.07	-.23***	-0.23	0.06	-.19***	-0.32	0.06	-.25***		

Note: For collective esteem, $R^2 = .02$ for Step 1 ($p = .001$); $\Delta R^2 = .07$ for Step 2 ($ps < .001$). For national pride, $R^2 = .09$ for Step 1 ($p < .001$); $\Delta R^2 = .07$ for Step 2 ($ps < .001$). For clarity of cultural identity, $R^2 = .01$ for Step 1 ($p = ns$); $\Delta R^2 = .08$ for Step 2 ($ps < .001$). For collective hope, $R^2 = .16$ for Step 1 ($p < .001$); $\Delta R^2 = .07$ for Step 2 ($ps < .001$). * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed).

The results demonstrate clearly that adding Temporal Collective Relative Deprivation measures relating to the distant and moderate past, as well as distant future, comparisons significantly increased the predictive value of Temporal Collective Relative Deprivation on collective well-being for all four dependent variables. For instance, Temporal Collective Relative Deprivation scores based on distant and moderate past, and distant future comparisons taken together had a significant predictive value on collective esteem independent of the traditional measure of Temporal Collective Relative Deprivation, $\Delta R^2 = .07$, $F_{\text{step2}}(3, 559) = 10.90$, $p < .001$. Furthermore, the adding of the moderate to distant past or future comparisons rendered the standard future measure non-significant in terms of predicting collective esteem ($\beta = -.14$ drops to $\beta = -.03$).

Results from hierarchical regression analyses also supported our second hypothesis that collective well-being is better predicted by Temporal Collective Relative Deprivation related to comparisons with points in time other than the most recent ones. While it was previously observed that recent past and future comparisons were not significantly related to the four collective well-being measures taken together, two other comparison points were consistently and strongly associated with all collective well-being measures. Indeed, Temporal Collective Relative Deprivation focusing on the most distant past and future comparisons (considered in step 2 of hierarchical regression analyses) was negatively related to the four measures of collective well-being. For example, while the standard measures of Temporal Collective Relative Deprivation were not significantly associated with clarity of cultural identity, distant past and distant future Temporal Collective Relative Deprivation was a significant predictor of clarity of cultural identity, $\beta = -.19$, $p < .001$. Thus, our results suggest that adding predictors such as Temporal Collective Relative Deprivation based on distant past and distant future comparisons to the standard measures based on most recent past and future comparisons significantly improved the predictive power of Temporal Collective Relative Deprivation.

Results from further analyses provided even more substantial support for our second hypothesis. First, the distant past and distant future comparisons, which were found to have the highest predictive value for collective well-being, also corresponded to the most important historical periods for Kyrgyz ($M = 6.31$ and $M = 6.80$, see Table 1). Second, distant past and distant future comparisons were associated with the only significant differences in importance between consecutive periods. As we were interested in testing which time comparison (either distant past: Pre-Soviet with Soviet, moderate past: Soviet with Early Independence, etc.) was associated with the strongest increase or decrease in perceived importance between consecutive historical periods, we performed five paired samples *t*-tests adjusted for multiple comparisons with the Bonferroni correction. Results showed that the only significant differences corresponded to the Pre-Soviet/Soviet periods (distant past) comparisons, $t(564) = -2.66$, $p < .01$, and to the Present/Distant Future periods (distant future) comparisons, $t(564) = -6.58$, $p < .001$. Therefore, the Soviet period was found to be significantly more important ($M = 6.31$) than the Pre-Soviet period ($M = 5.98$). Also, the Distant Future period was perceived as significantly more important ($M = 6.80$) than the Present period ($M = 6.10$).³

Group-Based Trajectory Modeling (Hypothesis III)

Step 1. Creating the Group Trajectories

Retrospectively reported measures of Temporal Collective Relative Deprivation at five different historical period transitions were analyzed using a statistical approach developed by Nagin and colleagues (Jones & Nagin, 2007; Jones,

³Based on comments by a reviewer, an alternative way to test our second hypothesis was performed. Specifically, we evaluated if the change in importance between two consecutive periods would play the role of a moderator between Temporal Collective Relative Deprivation and collective well-being. In all, 20 hierarchical regression analyses (five for each measure of present collective well-being) were performed. They first revealed that the change in importance from Pre-Soviet to Soviet periods was a significant moderator between Temporal Collective Relative Deprivation and collective esteem, $\beta = -.11$, $p \leq .01$. Another significant interaction between the change in importance from Present to Distant Future periods and Temporal Collective Relative Deprivation also predicted collective esteem, $\beta = -.08$, $p < .05$. Changes in importance associated with recent past, recent future, and moderate past comparisons were not significant moderators of collective esteem. The two significant interactions predicting collective esteem were drawn. In line with hypothesis II, they both showed that collective esteem was lowest when Temporal Collective Relative Deprivation was high and importance between Pre-Soviet and Soviet periods, or Present and Distant Future periods, had increased. In addition, when Temporal Collective Relative Deprivation was high but importance between Pre-Soviet and Soviet periods, or Present and Distant Future periods, had decreased, collective esteem was higher. However, as for the other three measures of collective well-being, the change in importance between any two consecutive periods was not found to be a significant moderator. Our second hypothesis was thus partially confirmed with these analyses, suggesting the need to conduct more research on the moderating role of period importance, or of the change in importance between consecutive periods, in predicting collective well-being.

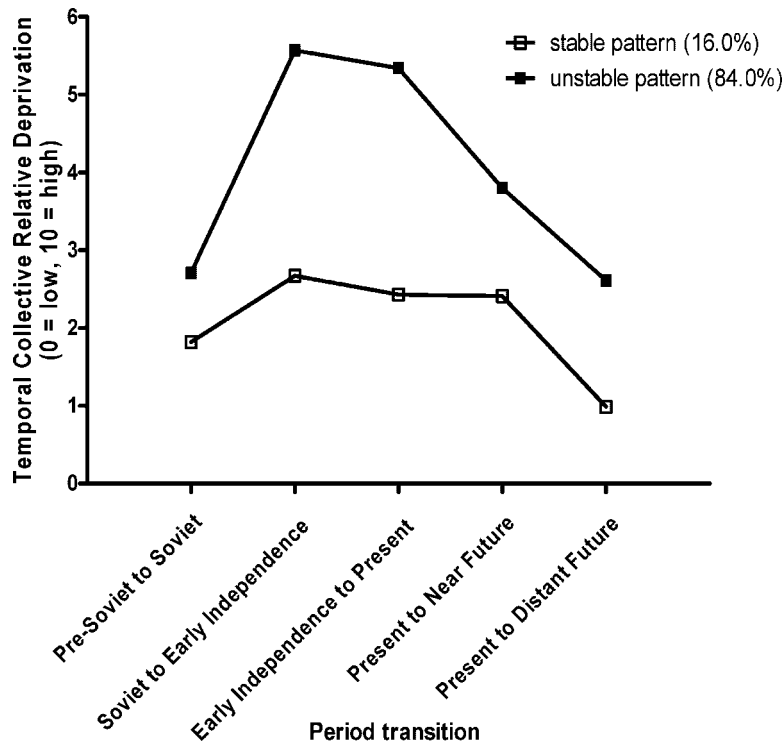


Figure 1. Trajectories of Temporal Collective Relative Deprivation regarding the economic well-being of Kyrgyz from the Pre-Soviet Period to the Distant Future Period

Nagin, & Roeder, 2001; Nagin, 1999, 2005; Nagin & Land, 1993; Roeder, Lynch, & Nagin, 1999). This technique uses a semiparametric, group-based modeling approach to identify the trajectories that best describe data measured at multiple points. Specifically, the statistical model underlying group-based trajectories uses finite mixtures of specified probability distributions to determine, by maximum likelihood, the parameter estimates describing the model that best fits the data (Jones & Nagin, 2007; Nagin, 1999, 2005). As all the variables explored in the present study were measured using Likert-type scales, the censored normal distribution (CNORM) was used to estimate trajectories and group memberships (Jones & Nagin, 2007; Jones et al., 2001; Nagin, 1999, 2005). The program used to perform group-based trajectory modeling is a customized SAS-based procedure called PROC TRAJ (Jones et al., 2001).

Figure 1 shows the estimated trajectories associated with the Temporal Collective Relative Deprivation perceived by Kyrgyz regarding the pattern of their group's economic well-being across historical periods. In all, we estimated a model with two different trajectories. According to probabilities of group membership, 84.0% (95% CI: 76.8%, 91.3%) of Kyrgyz, that is 475 persons, perceived the "unstable" pattern, while 16.0% (95% CI: 8.6%, 23.3%), or 90 Kyrgyz, composed the "stable" pattern group. First, the trajectory of the "unstable" pattern group reveals that the majority of Kyrgyz who participated in the study believed that the economic well-being of Kyrgyz people had first improved from the Pre-Soviet to Soviet periods, to then deteriorate in the transition between the Soviet and Early Independence periods. Major improvements of Kyrgyz's economic well-being are then expected to occur in 1–10 years after the time of the study. Second, Kyrgyz composing the "stable" pattern group perceived another *pattern* of Temporal Collective Relative Deprivation, such that their economic well-being would have greatly improved from the Pre-Soviet to the Soviet periods, to then improve at a slightly slower pace until the time of the study, when participants believed that their economic well-being would improve even more in the next 10 years.

To better illustrate the unstable and stable patterns of Temporal Collective Relative Deprivation, Figure 2 presents each pattern as it would appear if it was represented, not by the relative improvement or deterioration in Kyrgyz's economic

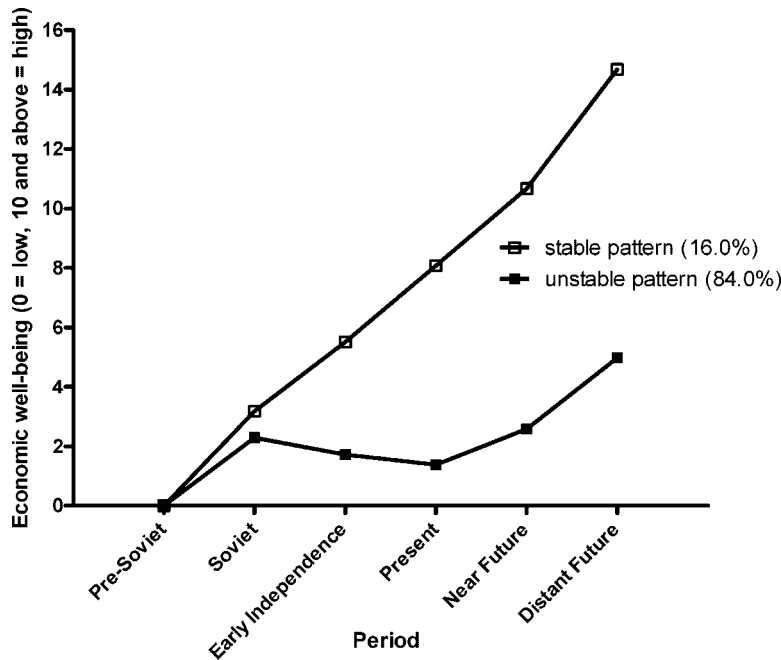


Figure 2. Simplified representation of Temporal Collective Relative Deprivation trajectories using the perceived economic well-being of Kyrgyz from the Pre-Soviet Period to the Distant Future Period

well-being between each comparison point, but rather by the absolute improvement or deterioration of economic well-being from one period to the next.⁴ Figure 2 thus shows that the 16% of Kyrgyz participants who reported a “stable” pattern of Temporal Collective Relative Deprivation actually perceived that their economic well-being steadily improved from the Pre-Soviet to Present periods, and that it will improve even more steeply in the future. However, the remaining Kyrgyz participants who perceived that their economic well-being followed an “unstable pattern” of Temporal Collective Relative Deprivation actually believed that their situation had not improved steadily in the past and is only expected to improve in the future.

Step 2. Multivariate Analyses of Variance

Following modeling of Temporal Collective Relative Deprivation trajectories, we were most interested in evaluating if different trajectories or *patterns* of Temporal Collective Relative Deprivation are associated with dissimilar levels of collective well-being among Kyrgyz participants. As the PROC TRAJ procedure automatically creates a file where all participants are shown with their respective trajectory group membership, it was then possible to perform a multivariate analysis of variance (MANOVA) with individual group membership as the sole between group factor to examine differences between trajectory groups on our four measures of collective well-being. The MANOVA revealed a main effect of trajectory group membership on collective well-being measures, as detected by Wilks’ criterion, $F(1, 560) = 12.92$, $p < .001$ and partial $\eta^2 = .08$. Further analysis of the significant group membership main effect on separate dependent variables first showed a statistical trend for participants in the stable Temporal Collective Relative Deprivation group to

⁴The patterns were drawn by first using an arbitrary starting point at the Pre-Soviet period, which was chosen to be 0 in order to more easily illustrate the two patterns. Stemming from this starting point, each pattern was then represented by measuring the number of units by which the economic situation of Kyrgyz was perceived to improve or deteriorate at each period transition. For example, if we examine the “unstable” pattern of Temporal Collective Relative Deprivation in Figure 1, the first point, located at the transition between the Pre-Soviet and Soviet periods, is approximately 2.75. When drawing this point in Figure 2, we would have to arbitrarily locate the economic situation of Kyrgyz during the Pre-Soviet period at 0, and then represent their economic situation during the Soviet period as being 2.25 units *higher than what it was* at the Pre-Soviet period, thus equal to 2.25. Indeed, in Figure 1, Kyrgyz perceived that their economic situation had improved from 2.25 units from the Pre-Soviet to Soviet periods compared to the neutral, no change (i.e., no improvement and no deterioration) score of 5 (or $5 - 2.75 = 2.25$). The remaining “unstable” pattern of perceived economic well-being of Kyrgyz and the “stable” pattern were then obtained using the same calculations.

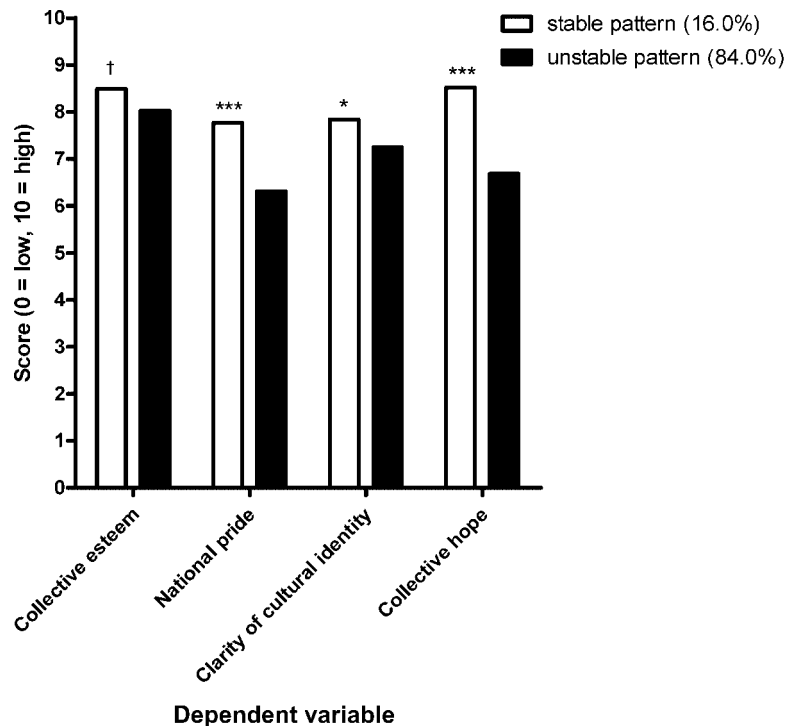


Figure 3. Average scores on dependent variables by Temporal Collective Relative Deprivation Trajectory Group.
 Note: † $p = .06$; * $p < .05$; *** $p < .001$ (two-tailed).

have a higher collective esteem ($M = 8.49$, $SD = 1.78$) than participants reporting the unstable pattern ($M = 8.02$, $SD = 1.95$), $F(1, 563) = 3.67$, $p = .06$, $\eta^2 = .01$. It was also found that Kyrgyz in the stable trajectory had a significantly higher score on national pride ($M = 7.77$, $SD = 2.37$) than individuals in the unstable Temporal Collective Relative Deprivation group ($M = 6.31$, $SD = 2.68$), $F(1, 563) = 19.48$, $p < .001$, $\eta^2 = .03$. A similar statistically significant difference between trajectory groups was found regarding cultural identity clarity, $F(1, 563) = 5.26$, $p < .05$, $\eta^2 = .01$, and Kyrgyz's collective hope, $F(1, 563) = 47.27$, $p < .001$, $\eta^2 = .08$. A graphical representation of average scores on collective esteem, national pride, cultural identity clarity, and collective hope for each trajectory group is shown in Figure 3.

In addition, since national pride and collective hope were variables measured retrospectively at five different periods in time, it was of interest to examine if there were differences between individuals with distinct Temporal Collective Relative Deprivation trajectories on these two variables at each historical period (from Soviet to Distant Future). To do so, an additional MANOVA was performed that included national pride and collective hope measures as dependent variables (see Table 4). Overall, the two patterns of Temporal Collective Relative Deprivation were found to differ significantly on national pride and collective hope as revealed by a significant main effect of trajectory group membership using Wilks' criterion, $F(1, 554) = 7.54$, $p < .001$, $\eta^2 = .12$. Specifically, participants in the stable Temporal Collective Relative Deprivation trajectory group reported significantly more national pride at all time periods, with the exception of the Soviet period, which tended to show a significant difference, than members of the unstable Temporal Collective Relative Deprivation group. Collective hope was also found to be significantly higher at all five time periods for the stable Temporal Collective Relative Deprivation group compared to the "unstable" group.

Step 3. Dual Trajectory Models Linking Temporal Collective Relative Deprivation From Pre-Soviet to Distant Future Periods to Trajectories of National Pride and Collective Hope

Another strategy designed to determine if distinct patterns of Temporal Collective Relative Deprivation in time are associated differently with national pride and collective hope measured at multiple times is dual trajectory modeling. This

Table 4. Multivariate analysis of variance for national pride and collective hope in relation to Temporal Collective Relative Deprivation trajectory groups

Source	<i>M</i> (SD) unstable pattern (<i>n</i> = 492)	<i>M</i> (SD) stable pattern (<i>n</i> = 73)	<i>df</i> _{between subjects} (<i>df</i> _{within-group error})	<i>F</i> (<i>F</i> _{within-group error})	η^2	<i>p</i> -values
Trajectory group			1 (554)	7.54***	.12	.000
National pride						
Soviet period	6.53 (2.33)	7.03 (2.35)	1 (563)	2.91 (5.45) [†]	.01	.089
Early Independence period	7.10 (2.00)	8.07 (1.88)	1 (563)	14.91 (3.95)***	.03	.000
Present period	6.31 (2.68)	7.77 (2.37)	1 (563)	19.48 (6.96)***	.03	.000
Near Future period	6.94 (2.09)	8.30 (1.87)	1 (563)	27.41 (4.27)***	.05	.000
Distant Future period	7.69 (2.01)	8.71 (1.88)	1 (563)	16.64 (3.97)***	.03	.000
Collective hope						
Soviet period	7.60 (1.87)	8.15 (1.66)	1 (563)	5.72 (3.41)**	.01	.017
Early Independence period	7.18 (1.80)	7.99 (2.01)	1 (563)	12.21 (3.35)***	.02	.001
Present period	6.68 (2.19)	8.52 (1.68)	1 (563)	47.27 (4.55)***	.08	.000
Near Future period	6.74 (1.99)	8.29 (1.90)	1 (563)	38.62 (3.93)***	.06	.000
Distant Future period	7.47 (1.85)	8.81 (1.46)	1 (563)	35.20 (3.24)***	.06	.000

[†]*p* ≤ .10; ***p* < .01; ****p* < .001 (two-tailed).

model extension originally developed by Nagin and Tremblay (2001) allows for an analysis of the relationship between trajectories of two related variables that both evolve in time. First, trajectory groups for the two variables are estimated separately. Second, we determined the probability of belonging to each trajectory group of one variable (e.g., national pride) conditional upon membership in each trajectory group of the other variable (Jones & Nagin, 2007), here Temporal Collective Relative Deprivation. We now report the estimated trajectories for *national pride* and *collective hope* as they will then be linked to trajectories of Temporal Collective Relative Deprivation.

The results of group-based trajectory modeling revealed that Kyrgyz participants reported two distinct patterns of national pride from the Soviet to Distant Future periods, as presented in Figure 4. A first trajectory, which was labeled the

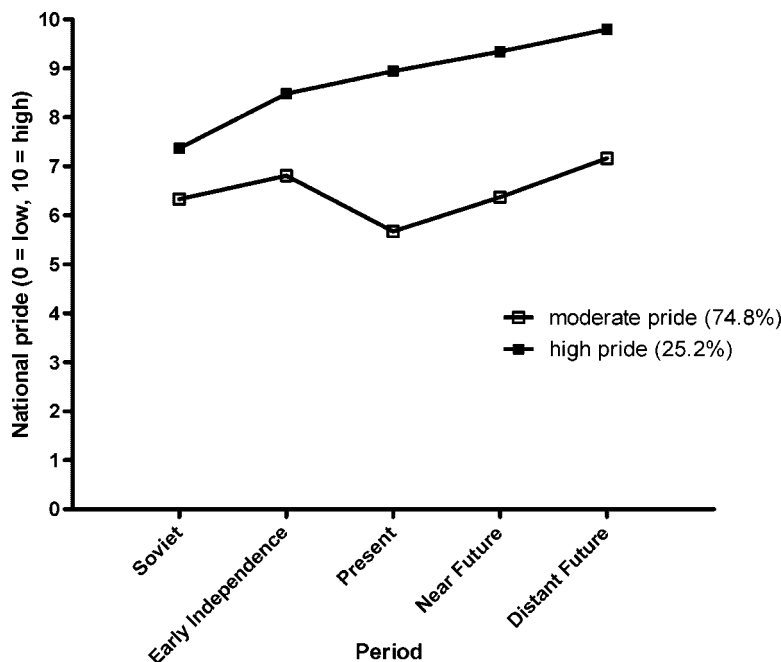


Figure 4. Trajectories of national pride from the Soviet Period to the Distant Future Period

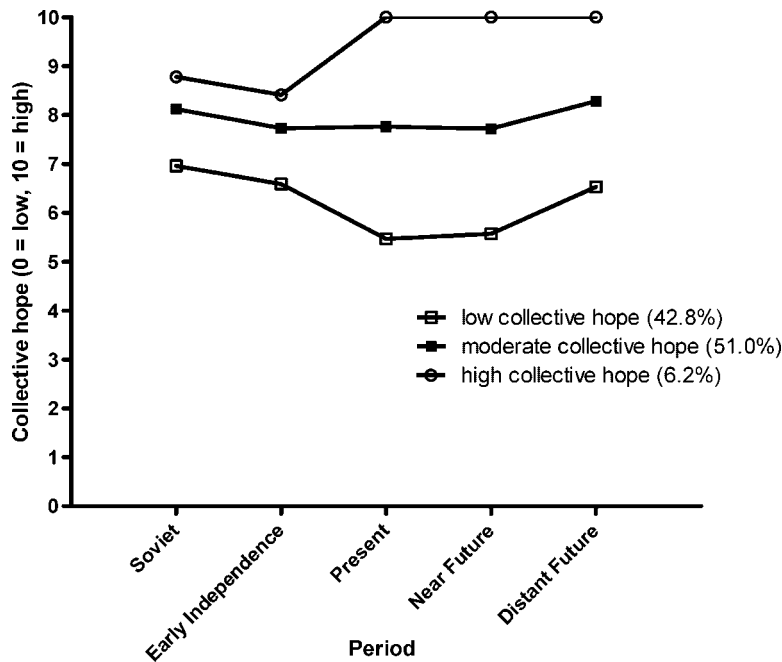


Figure 5. Trajectories of collective hope from the Soviet Period to the Distant Future Period

“moderate pride” group, reveals that approximately three quarters of the Kyrgyz questioned (74.8%; 95% CI: 69.3%, 80.2%) believed that Kyrgyz felt somewhat proud during the Soviet and Early Independence periods, to then being uncertain of their pride of being part of the Kyrgyz nation at the time of the study, and finally expected to be relatively proud again in future years. A second trajectory, named the “high pride” group, shows that 25.2% (95% CI: 19.8%, 30.7%) of Kyrgyz participants reported a steadily rising pattern of national pride from the Soviet to the Distant Future periods.

Similarly, regarding Kyrgyz participants’ collective hope, a three-group model was also estimated, as shown in Figure 5. Approximately 43% (95% CI: 32.9%, 52.7%) of Kyrgyz participants responded that Kyrgyz moderately believed that their lives would improve during the Soviet period. This same trajectory group, which was termed the “low collective hope” group, also reported that Kyrgyz’s hope decreased from the Soviet period until the Present time, to then augment back only when Kyrgyz think about the future in 10 years. The second trajectory estimated, representing the “moderate collective hope” group, believed that Kyrgyz had been in the past periods, and will be in the future, quite hopeful about their life. Probability of trajectory group membership in the moderate collective hope corresponded to 51.0% (95% CI: 41.1%, 60.8%). The third trajectory found refers to the “high collective hope” trajectory. Approximately 6% (95% CI: 4.1%, 8.4%) of participants believed that Kyrgyz were markedly hopeful during the Soviet Period, to then become very hopeful at the time of the study. Collective hope was expected to stay very high in the future.

Upon linking previously estimated trajectories of Temporal Collective Relative Deprivation (see Figure 1) with patterns of *national pride* and *collective hope* across historical periods (see Figures 4 and 5), the results shown in Table 5 were obtained. It shows the probabilities in percentages of belonging to each of the national pride and collective hope trajectory groups if the participant is a member of the “stable” or “unstable” pattern group. Temporal Collective Relative Deprivation group membership seems to be a strong predictor of membership in a given national pride or collective hope trajectory group. For example, this can be observed by the fact that while 84.3% of participants reporting an “unstable” pattern trajectory are predicted to show the moderate national pride trajectory, when individuals report the “stable” Temporal Collective Relative Deprivation trajectory, their probability of being in the moderate pride group drops to 6.7%. Also, being in the “unstable” pattern group is associated with much lower chances of belonging to the high pride group (15.7%). Membership in the “stable” Temporal Collective Relative Deprivation group, however, is associated with very

Table 5. Percent probabilities of membership in each national pride or collective hope trajectory conditional on the pattern of Temporal Collective Relative Deprivation

	Patterns of Temporal Collective Relative Deprivation	
	Unstable	Stable
National pride		
Moderate	84.3	6.7
High	15.7	93.3
Collective hope		
Low	74.3	0.0
Moderate	25.6	79.7
High	0.1	20.3

high probabilities of showing the high pride trajectory (93.3%). To further demonstrate that patterns of Temporal Collective Relative Deprivation were associated with trajectories of national pride, a chi-square analysis was performed on the results obtained from dual trajectory modeling. The analysis revealed a significant difference between Temporal Collective Relative Deprivation trajectory groups for their pattern of national pride, $\chi^2(1, n = 565) = 684.67, p < .001$. Regarding the trajectories of collective hope, similar results were obtained (see Table 5). The chi-square analysis revealed a significant difference between stable and unstable patterns of Temporal Collective Relative Deprivation in terms of the trajectories of collective hope, $\chi^2(2, n = 565) = 688.38, p < .001$. In sum, belonging to a trajectory involving an “unstable” pattern of Temporal Collective Relative Deprivation greatly increases the probability of showing a trajectory characterized by a generally lower pride in the Kyrgyz nation and less collective hope.

DISCUSSION

The aim of the present research was to offer a reconceptualization of Relative Deprivation Theory. To test the heuristic value of this theoretical innovation, we based our analyses on one important dimension of relative deprivation, Temporal Collective Relative Deprivation. The traditional method for operationalizing Temporal Collective Relative Deprivation has been to compare one’s present situation with either a recent point in the past or future, or with an unspecified “past” or “future.” This traditional approach claims that Temporal Collective Relative Deprivation has a negative impact on present-day collective well-being. The present study consistently supports three conclusions that build on this traditional claim of Relative Deprivation Theory.

The first conclusion is that it is advantageous to consider more than one past or future point of comparison. Specifically, the present results suggest that other past and future comparisons than the most recent ones need to be considered when attempting to understand how the perceptions of a group’s past and future can influence the way its members feel. This finding concurs with a study conducted by Liu and colleagues (2005) which demonstrated that across cultures, people base their historical representations on events which happened over a relatively long term. Clearly, individuals’ present-day perceptions are a function of a weighted combination of their perceptions of all the key events in the history of their group.

The second conclusion is that certain points of comparison are more influential or relevant for collective well-being than others. Furthermore, contrary to the traditional approach to Temporal Collective Relative Deprivation, past and future points of comparison that were most influential in terms of present-day collective well-being were not limited to the most recent past or future. This might be explained by the fact that the periods associated with distant past and future comparisons were also perceived to be the most important historical periods. For example, the establishment of the Kyrgyz Soviet Socialist Republic in 1936 appears to be a key event in the history of Kyrgyz, which is still of relevance for their identity today. Prior to that event, Kyrgyz were nomads under the Russian Empire’s repressive rule, which confiscated their lands, discouraged education, introduced taxation, forced labor, and price policies. In reaction to the Russian takeover, numerous revolts were instigated and many Kyrgyz left their country for the Pamirs, Afghanistan, and China. Conversely,

joining the powerful Union of Soviet Socialist Republics brought for Kyrgyz considerable cultural, educational, social, and economic developments, such as increased agricultural and industrial production.

The role of the importance of historical periods in determining the weight of each temporal comparison for predicting present collective well-being remains, however, to be further explored. By demonstrating that distant past and future comparisons were associated with the most important periods for defining present Kyrgyz's identity, as well as with the only significant increases in importance between consecutive periods; the present study is only a first step towards exploring this role. As such, future studies should aim to demonstrate more clearly how the importance or the change in importance between periods influences the relationship between Temporal Collective Relative Deprivation and collective well-being.

In addition, as defining events were derived from the history of Kyrgyz over the last century, the time lapses between defining events varied widely in terms of their duration, ranging from 1 year to 118 years. These differences in duration could have led to increased importance ratings for the Soviet period and greater regression coefficients associated with distant past Temporal Collective Relative Deprivation when predicting collective well-being. Indeed, the Soviet period corresponded to the beginning of a new era following the Pre-Soviet period which lasted 118 years. However, as the time interval corresponding to distant future comparisons was of 10 years only (between Present and Distant Future periods), this possibility could hardly explain why they highly and consistently predicted collective well-being measures, or were related to the most important period for defining Kyrgyz's identity today (the Distant Future period). Future studies should try to either evaluate Temporal Collective Relative Deprivation at equally spaced time intervals or control for differing time lapses between historical periods. Results from our study thus remain to be replicated with fixed time intervals or an appropriate statistical control for unequal time lapses.

The third conclusion we can derive from our findings is that how a group member perceives the evolution of his or her group's situation across time influences his or her present collective well-being. Specifically, perceiving an "unstable" pattern of Temporal Collective Relative Deprivation, characterized by improvements and deteriorations of the group's situation over time, is associated with less collective well-being than perceiving a "stable" pattern. These results suggest that it is the difference in the stability of the trajectories of Temporal Collective Relative Deprivation that might explain differential collective well-being. Indeed, similar results have been reported at the individual level. It has been demonstrated that perceiving one's personal life as having improved or deteriorated is associated with more depressive symptoms (Keyes & Ryff, 2000), and less positive affect (Keyes, 2000), than perceiving one's personal life as stable over time. Stability at the personal and collective levels serves three functions. First, it may fulfill a physiological need for homeostasis (Lazarus & Folkman, 1984). Secondly, it may provide an individual with a sense of continuity (Troll & Skaff, 1997). Finally, perceiving one's life as stable may sustain self-consistency, the basic motive to maintain a consistent self-image over time (Lecky, 1945), which may contribute to a view of the world as coherent and controllable (Janoff-Bulman, 1992).

Clearly, our research raises a question that plagues most research on relative deprivation; the direction of the association between Temporal Collective Relative Deprivation and collective well-being. For the present study, our interpretations of the direction were based on a large number of studies where Relative Deprivation has been theorized and presented as an independent variable influencing well-being (for examples see Bougie & Taylor, 2007; Crosby, 1976; Walker & Mann, 1987; Zagefka & Brown, 2005). In addition, results from an experimental study performed by Walker (1999), which found that (personal) relative deprivation had negative consequences for (personal) self-esteem also support the direction of the interpretations made in the present study. However, the possibility that current collective well-being influences perceptions of historical changes in the economic well-being of Kyrgyz cannot be ruled out. It is thus possible that Kyrgyz with a high present collective well-being reported less Relative Deprivation when thinking back in time of their group history. To shed light on the direction of the correlation between Temporal Collective Relative Deprivation and collective well-being, future studies might include a clear manipulation or prime.

Implications and Future Directions

Our study has theoretical and methodological implications. In terms of theory, our research goes beyond Temporal Collective Relative Deprivation. The focus of the present study should be applicable to other important categories of Relative Deprivation, such as social comparisons and comparisons at the personal level.

Social comparisons involve members of a group comparing their collective situation to the one of another group. Kyrgyz might compare themselves to Russians living in Kyrgyzstan. Traditional Relative Deprivation research would involve asking Kyrgyz participants to make such a comparison to the present. Our reconceptualization would require that any present-day comparison be made in the context of the same comparison at other points in the history of relations between the two groups. For example, Kyrgyz making a present-day comparison with Russians may well feel very positive despite judging that Russians are better off. This non-intuitive reaction might arise because, in the past, Russians held a position of extreme privilege and the gap might well have been substantially reduced in the present. Thus, the use of multiple points in history and of group trajectories may be as important for social intergroup comparisons as the present study has demonstrated for temporal group comparisons.

Our reconceptualization should also be applicable to Relative Deprivation at the personal level. Just as the present study demonstrated that it is important to take into account the overall history of a group in order to more accurately predict collective well-being, it would be essential to take into account the overall history of an individual to determine his or her present state of mind. For instance, an assessment of the personal economic condition of an individual Kyrgyz citizen would necessitate an overview of his/her lifelong financial situation, and not merely an assessment of his/her individual past.

Moving beyond Relative Deprivation, our study is also relevant to recent developments in the realm of social representations. Results from the present study further demonstrate the importance of evaluating the impact of social representations spanning the entire history of a group on its members' social identity, as it has been proposed by Liu and colleagues (Liu et al., 2005; Liu & Hilton, 2005). However, our study raises a new avenue of research on social representations by suggesting that distinct periods or events composing social representations can impact differentially on individuals' well-being, depending on their importance at the present time. In addition, we suggest that members of a group who share different social representations of their group history may consequently differ in their actual collective well-being.

Methodologically, the present research demonstrates the necessity for future research to consider a different operationalization of Temporal Relative Deprivation. That is, when investigating the relationship between temporal or social-temporal comparisons (at the personal or group level) and well-being (at the personal and/or collective level), many past or future points of comparison should be considered in this analysis. Our results suggest that every past point of comparison should be evaluated based on its contribution to, or influence on, present-day group or individual identity. This methodology should be further adjusted to take into account the past points of comparison most influential in determining Temporal Relative Deprivation with respect to the area in which this research is being conducted. Also, patterns of Temporal Relative Deprivation need be evaluated.

Towards addressing this issue, the innovative theory and research of McAdams, who introduced the "personal narrative" (1996, 2001), and extended by Bougie and Taylor (2007) with respect to the "collective narrative," may be promising. This measure involves having participants narrate their life story in the form of "life chapters," ranging from the distant past to the expected future. Important aspects of this methodology include the temporal sequencing of various "life chapters," as well as the implication that the specific way in which participants choose to sequence their personal narrative is indicative of what is meaningful to them.

CONCLUDING REMARKS

Our study supports the view that Kyrgyz citizens have been affected by the history of social change in their country. How people cope with social change is highly dependent on external forces disrupting a society's power-and-reward structure (Katz, 1983; Moghaddam, 2002). For elites and a small minority of well-placed individuals, social change implies new opportunities and positive experiences which facilitate the process of adaptation. However, social change represents a devastating experience for the vast majority of individuals who are less advantaged and are unable to reap its direct benefits. The present study focused on the impact of social change on this "vast majority" because of its dramatic effects on well-being. Our reconceptualization of Relative Deprivation emphasizes the importance of helping people integrate dramatic social change into the established history of their collective and personal lives.

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