

Choice of comparisons in intergroup settings: the role of temporal information and comparison motives

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Abstract

Three studies investigated comparison choices in intergroup settings, a neglected but important topic for theories of intergroup relations. Two main questions were addressed: What is role of comparison motives in determining comparison choices in intergroup contexts? How important are temporal comparisons (of the ingroup in the past or future) in intergroup settings? In Study 1 ($N = 115$), motives for Assessment or Enhancement were primed in a multi-group performance context. Compared to Controls, Assessment priming encouraged both upward and downward comparisons, while Enhancement encouraged mainly downward comparisons. In general, temporal comparisons were as prevalent as comparisons with other groups. Study 2 ($N = 199$) employed a real-world setting in which members of a mid-ranking university indicated their interest in comparing with other higher or lower status universities or with their own university in the past. Temporal comparisons were once more much in evidence, and manipulating enhancement motives again encouraged downward comparisons. In Study 3 ($N = 40$), set in the context of inter-nation student comparisons, Improvement motives were primed implicitly. This led to an increase in interest in an outgroup just above the ingroup but to a decrease in interest in future-oriented comparisons. Copyright © 2006 John Wiley & Sons, Ltd.

The concept of social comparison has long occupied a central position in social psychology. First formalised by Festinger (1954), *social comparison theory* continues to stimulate research in a number of domains of interpersonal relations research (Biernat & Billings, 2001; Buunk & Gibbons, 1997; Buunk & Mussweiler, 2001; Collins, 1996; Suls & Wheeler, 2000). The central idea in this theory is that people seek out others in order to obtain information that will help them evaluate their own abilities, the correctness of their opinions, or other aspects of their life. The vast preponderance of social comparison research has been concerned with comparisons between individuals. Yet the notion of social comparison is no less important in the field of *intergroup* relations. Several theories of

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intergroup relations are based on the idea that comparisons between groups have important psychological and behavioural consequences. *Social identity theory*, for instance, proposes that people derive part of their concept of self—and self-esteem—from their group memberships, and that comparisons between these ingroups and relevant outgroups play a major determining role in the maintenance of those identities and subsequent intergroup behaviour (SIT, Tajfel & Turner, 1986). A propensity for a positive rather than a negative self-concept may bias those intergroup comparisons and is thought to underlie the widespread occurrence of ingroup favouritism (Tajfel & Turner, 1986). In *relative deprivation theory* (RDT) also, intergroup comparisons are thought to be the primary source of group members' feelings of gratification or deprivation, from which various action tendencies are presumed to flow (Runciman, 1966; Walker & Pettigrew, 1984). In this paper we revisit this research domain to investigate the factors underlying comparison choices in intergroup settings.

In this family of social comparison theories, a recurring research question has been to identify the factors underlying the choice of comparison target. Festinger (1954) himself, followed by Goethals and Darley (1977), devoted considerable theoretical attention to this issue. As is well known, the principal hypothesis, for which there is now considerable support, is that the most frequently chosen targets will be those seen to be similar to the self, particularly on attributes related to the comparison dimension in question (e.g. Wheeler, 1966; Wheeler, Koestner, & Driver, 1982). Some qualifications to this basic hypothesis have been identified. Consistent with Festinger's (1954) hypothesised 'unidirectional drive upward', in performance related settings a tendency for mildly upward comparisons (i.e. comparisons with a target slightly above the self referent) is often observed (e.g. Blanton, Buunk, Gibbons, & Kuypers, 1999; Huguet, Dumas, Monteil, & Genestoux, 2001; Nosanchuk & Erickson, 1985; Wheeler, 1966); on the other hand, studies in comparisons in everyday settings, or where self esteem may be under threat, have found downward comparisons (i.e. comparisons with a target below the self referent) to be more prevalent (e.g. Buunk, Collins, Taylor, Van Ypren, & Dakov, 1990; Hakmiller, 1966; Wheeler & Miyake, 1992; Wood, Taylor, & Lichtman, 1985).

It is presumed that different motives underlie these various directional preferences, self-assessment (also often referred to as self-evaluation), self-enhancement and self-improvement being the most obvious candidates (Collins, 1996; Wills, 1981, 1991; Wood, 1989). It is commonly understood that 'self-assessment' refers to a desire for accurate evaluation, 'self-enhancement' to a wish to be seen in a favourable light, and 'self-improvement' to an aspiration to be better in the future (Collins, 1996; Wills, 1991; Wood, 1989). Although the implications of these different motives for comparison choice depend on several factors, there is some consensus that improvement is likely to be associated with slightly *upward* comparisons since targets just above the self offer the best prospect for raising one's own future performance, either as role models by revealing useful information about how to improve, or as motivators by providing an enhanced but attainable goal (Blanton et al., 1999; Huguet et al., 2001). In contrast, enhancement needs are most likely to be satisfied by downward comparisons since these are most likely to yield information in which the self can be seen as superior to others (Wills, 1981, 1991; although cf. Thornton and Arrowood (1966)). Although 'improvement' and 'enhancement' are conceptually similar, it is important to note that the latter refers to presenting oneself currently in the best possible light, whilst the former is concerned with potential amelioration of oneself. That is why enhancement is most likely to be associated with downward comparisons and improvement with upward comparison. Finally, self-assessment motives may be connected to the selection of similar comparisons since these will often be the most diagnostic sources of information (Festinger, 1954; Goethals & Darley, 1977; Swann, 1983) or, in the case of unfamiliar dimensions, dissimilar targets (i.e. extreme upward and downward comparisons) in order to establish the distribution of abilities in question (Wheeler et al., 1969; Wood, 1989; Wood & Taylor, 1991).

Whilst comparison choice has been extensively investigated in the interpersonal domain, there has been much less equivalent work to address the issue of choice of intergroup comparators. There is, of course, considerable evidence documenting the ubiquity of intergroup comparisons in group members' judgements and behaviour. As is well known, such comparisons are often biased in favour of the ingroup, but these biases are also dimensionally quite specific and sensitive to structural features of intergroup contexts (Brewer & Brown, 1998; Brown, 2000; Ellemers, 1993; Hogg, 2000; Mullen, Brown, & Smith, 1992). Nevertheless, it is noteworthy that in this large corpus of work, research participants are seldom given a choice of outgroup referent since this is usually determined *a priori* by the researcher (see, for example, the majority of papers included in Mullen et al.'s (1992) meta-analysis). Of course, this may correspond to the reality of many intergroup contexts since it will often be the case that comparisons with particular outgroups will impress themselves on group members by force of immediate circumstance or long-standing cultural tradition (e.g. Vanneman & Pettigrew, 1972). Yet, in many real-life intergroup situations people may be able to exercise some degree of choice over the comparison target and, naturally, the outgroup chosen will have a considerable influence over the comparison outcome (Pettigrew, 1967).

What hypotheses are suggested by one of the major theories of intergroup relations that invokes comparison processes in an explanatory capacity? In its short treatment of the issue, SIT suggests that 'similarity, proximity and situational salience are amongst the variables that determine outgroup comparability' (Tajfel & Turner, 1986, p. 17). Still, given that the central motivational factor in SIT is the desire for group—and, hence, self—enhancement, one clear prediction that it makes is that, in general, comparison choices should be mainly downward (Hogg, 2000, p. 405–406). Thus, in SIT there is little explicit emphasis on assessment and improvement motives with their corresponding comparison choice implications.¹ Theoretically, then, there appears to be a disjuncture between the presumed importance of different motives at the interpersonal level, where all three motives are operative (with assessment and improvement predominating), and at the intergroup level where a single motive (enhancement) is thought to prevail. This, then, constituted our first research question: to establish whether intergroup choices are influenced by assessment and improvement motives, in addition to enhancement motives.

In the majority of work inspired by Festinger's (1954) original theory, and also in the intergroup domain, the presumption has been that comparisons are made primarily in the social domain—that is, in relation to other individuals or groups. Yet this may not be the only comparative avenue open to people. Albert (1977) proposed that comparisons with the self at some previous time point, or even prospective comparisons into the future, may also be informative, especially if social information is not readily available or is potentially threatening. This addendum to social comparison theory is attracting increasing theoretical and empirical interest in the arena of interpersonal comparisons (Bogart, Gray-Bernhardt, Catz, Hartmann, & Otto-Salaj, 2002; Butler 1998, 2000; Karney & Frye, 2002; McFarland & Alvaro, 2000; Suls, Marco, & Tobin, 1991; Suls & Mullen, 1982; Wilson & Ross, 2000, 2001). What motives are thought to underlie temporal comparisons? Albert (1977) emphasised their role in providing self-consistency, tempered by a self-enhancing desire to see oneself as being better now than in the past. Support for such a self-enhancement motive was found by Wilson and Ross (2000) when they observed that participants generally preferred downward past comparisons (i.e. seeing oneself as worse in the past) than upward ones, and that when specifically primed with enhancement motives participants tended to make more downward past comparisons than when primed with assessment motives. Future comparisons were less in evidence in Wilson and Ross'

¹In some circumstances SIT does predict an upward comparison preference, especially under conditions of structural instability and illegitimacy (Tajfel & Turner, 1986), and there is some evidence for this (Zagefka & Brown, in press). However, note that such upward comparisons are still hypothesised to be in the service of positive distinctiveness and hence primarily satisfying an enhancement need.

(2000) study but, when made, tended in an upward direction, suggestive of an improvement motivation. McFarland and Alvaro (2000) also stress the role of enhancement motives in temporal comparisons, arguing that perceptions of the past are psychologically more malleable than contemporaneous social comparisons and hence offer more scope for fashioning a favourable self-image. In summary, past comparisons seem most likely to be associated with enhancement motives and future comparisons with improvement. However, presumably both of these general predictions will be qualified by whether one is (perceived to be) improving or deteriorating over time. Nostalgic comparisons with a golden past are unlikely to serve enhancement motives, just as gloomy prognostications about the future will do little to satisfy improvement needs.

Rather surprisingly, temporal comparisons have received much less theoretical attention within the intergroup literature than social comparisons. SIT makes no reference to the possibility that social identity could be maintained by comparing the ingroup's position over time. Some variants of RDT do acknowledge that perceptions of how the group has fared historically and might do in the future can provide the basis for feelings of deprivation (Davies, 1969; Folger, 1986), although such comparisons have been studied much less in the relative deprivation literature than social comparisons (e.g. Walker & Smith, 2002). The theoretical case for extending the range of comparisons at a group level has been made by Levine and Moreland (1986, 1987) and Haeger, Mummendey, Mielke, Blanz and Kanning (1996). These authors have proposed multi-dimensional taxonomies that incorporate different comparison objects (e.g. self, other, group), different social contexts (e.g. intragroup, intergroup) and different temporal contexts (e.g. contemporaneous, over time). As yet, however, these various models are not very precise when it comes to predicting when one mode of comparison activity will be preferred over another, although Levine and Moreland (1986) do speculate that temporal comparisons will generally be less common than social comparisons, and will tend to be made when social information is unavailable. In general, though, there is some consensus that there is still too little known about the prevalence and role of temporal comparisons in intergroup settings (Ellemers, 2002; Pettigrew, 2002). A second goal of our research was, therefore, to establish whether and when temporal comparisons will be of interest to group members in intergroup situations.

What prior research exists on the question of comparison choice in specifically intergroup contexts, whether in the social or temporal domain? An early study by Strauss (1968) found that a majority of visually impaired people chose to compare themselves with 'sighted' rather than 'blind' others, a choice which seems like an upward comparison. Bourhis and Hill (1982) found that a majority of their higher education lecturer participants made upward comparisons when evaluating their work conditions and pay. Finlay, Dinos, and Lyons (2001) found that for schizophrenic patients, lateral or downward comparisons with outgroups tended to prevail over upward comparisons. In none of these studies were temporal comparisons investigated. In studies of intergenerational comparisons, it has been found that temporal comparisons seem to become more important in later life, relative to social comparisons (Brown & Middendorf, 1996; Suls, 1986; but cf. Rickabaugh & Tomlinson-Keasey, 1997). Smith and Leach (2004) found that spontaneous intergroup comparisons were made less frequently than interpersonal comparisons, and temporal comparisons (at either a personal or group level) still less frequently. On the other hand, research conducted in national or sub-national contexts has found clear evidence of temporal comparisons coexisting with social comparisons. Brown and Haeger (1999) found evidence of both social and temporal comparisons in participants' open-ended descriptions of their country, and in a subsequent comparison choice task the prevailing direction was upward. Studies conducted in post-unification Germany have also found that temporal comparisons may be used, especially by respondents from the former Eastern part which is economically of lower status (Blanz, Mummendey, Mielke, & Klink, 2000). The predominant direction of these comparisons, whether of a social or temporal variety, was downward (i.e. reflecting favourably on the ingroup). Comparable data have been reported from other studies in Germany

(Haeger et al., 1996; Schmitt & Maes, 1998; Waldzus, Mummendey, & Kessler, 2000). Finally, Zagefka and Brown (2005) reported that members of ethnic groups in Britain and Germany tended to privilege intragroup and temporal comparisons over intergroup comparisons in evaluating their economic standing.

In summary, then, a number of studies of intergroup comparison choice exist. Given the diversity of contexts studied, and hence range of comparison motives likely to be at work, it is unsurprising that no very consistent pattern is yet visible as to the generally preferred direction of comparison, although there is a slight preponderance of findings in the upward direction. There is some evidence that group members will avail themselves of temporal comparisons if given the opportunity, and there are indications that these may be more likely amongst members of lower status groups, as might be predicted from Albert (1977) and Waldzus et al. (2000).

To explore comparison choices and their motivations, we conducted three experiments that investigated group members' choice of or interest in outgroup and temporal comparison targets in a relatively unconstrained manner.

STUDY 1

For this initial investigation into intergroup comparison choice, we decided to adopt and adapt the classic 'rank-order paradigm' devised by Wheeler (1966) in which participants request information about another's performance, having first learned their own score and those of the best and worst performers. First, we employed a group task instead of an individual one so that groups and not persons would be ranked hierarchically. Second, we varied own group rank position instead of holding this constant. This was to permit the exploration of the role of ingroup status in comparison choices since some models (e.g. Albert, 1977; Wills, 1981) suggest that comparison preferences may be different when experiencing some threat to self esteem (i.e. in lower status groups). Third, we administered two tasks separated in time, and withheld information about ingroup performance on one of these tasks. This permitted the investigation of the desire for temporal information (interest in performance in the other task) as well as the more conventional social information (interest in performance in other groups).

A further issue we wished to examine in this study concerned the impact of motives on people's comparison choices in intergroup settings. As noted earlier, the motive for accurate assessment was uppermost in Festinger's (1954) theorising, while enhancement is thought to be a central motive in SIT. Accordingly, we focussed on these two motives in this experiment. To do this, we adapted a procedure reported by Wilson and Ross (2000, Study 4). In that experiment, participants were invited to provide self-descriptions following instructions which emphasised the importance of either accurate self-descriptions (evaluation condition) or self-descriptions which present the self in the most positive light (enhancement condition). We incorporated a similar instructional prime into our paradigm, adding a Control condition with no particular instructions. If, indeed, both assessment and enhancement motives can drive intergroup comparison choices, we predicted that the effects of these primes would be reflected in participants' differential interest in various kinds of information about their own and other groups. Specifically, we hypothesised that, compared to Control, those invited particularly to assess their ingroup as accurately as possible would show more interest in clear upward and downward comparison information (i.e. groups at the top and bottom of the social hierarchy, since such information would help to establish the range of group scores against which to evaluate the ingroup's performance). Wood (1989) suggested that interest in such dissimilar targets is especially likely when the evaluative context is relatively unfamiliar, heightening people's desire to find out more about the

performance dimension in question in order to arrive at an accurate assessment of their own position on it (Wheeler et al., 1969). Such was the situation in this study since it was the first time that participants had undertaken this particular task (see below). In contrast, upward comparisons should be less evident in those asked to enhance their ingroup's image, for whom only downward comparisons should be more in evidence (compared to Control).

In view of the limited previous research in this area, we did not formulate a specific hypothesis about the relative propensity for making social (intergroup) and temporal comparisons. Instead, and in the spirit of Haslam and McGarty's (2001) espousal of uncertainty generation rather than reduction, we approached the investigation of that issue in an exploratory fashion.

Method

Participants

One hundred and fifteen psychology students (97F, 18M; mean age 20.68) acted as participants as part of their course requirement.

Design

The experiment employed a 2×3 between participants design. The factors comprised the conditions to which participants were randomly assigned within each task group: Performance on Task 1 (Low vs. High) \times comparison Motive (Assess vs. Enhance vs. Control).

Procedure

Within each session (of approximately 21 participants) the experiment was introduced as a study into whether groups of students have a better understanding of psychology than individuals. Accordingly, participants were randomly assigned into 3-person groups (or occasionally 2 or 4 persons if the numbers in a session were not a multiple of three). In these groups they were invited to undertake a psychology test which, for convenience, was to be divided into two halves (labelled as Group Test No. 1 and Group Test No. 2). These comprised Task 1 and Task 2. The members of each group had to decide collectively on the answer to each question. After completing Task 1, the test forms were removed, allegedly for scoring, and the groups undertook Task 2. Following this, the members of the groups were dispersed around the room to receive the dependent measure booklets. In order to further ensure independence of responses, we randomly assigned group members to different experimental conditions such that members of the same task group were never in the same cells of the design.

The first page of the booklets contained the experimental manipulations. Thus, within each task group, participants were randomly assigned to different experimental conditions. Participants learned that their group had obtained 5(15) correct answers out of 20 in Task 1 and had thereby come 5th (3rd) out of the seven other groups in the session. There then followed two paragraphs which introduced the questionnaire. The wording for the Assess condition was as follows: 'Now that you know your group's result in test 1, you might be interested to have some other information as well. Imagine you wanted to evaluate your group's results in test 1 as accurately as possible. You would select the information that you feel is most useful and relevant for making a precise assessment of your group's performance. It is often very useful to strive for exact evaluation of one's outcomes and it helps us to cope with in

everyday life. When answering how interested you are in the various pieces of information below, please think about which information is valuable to you if you want to assess your group's result in test 1 as accurately as possible'.

In the Enhance condition, after the first sentence the wording was as follows: 'Imagine you wanted to see your group's result in test 1 in as good a light as possible. You would select the information that makes you feel best about your group's performance and that allows you to see your outcome in the most positive way. It is often very useful to strive for a positive self-image and to see one's outcome in a positive light, and it helps us to cope well in everyday life and to maintain good mental health'. The last part of the final sentence read: 'if you want to feel as good about your group's result in test 1 as possible'. In the Control condition, after the first sentence the wording was: 'We would like to find out how interested you are in various pieces of information which are listed below. We would like you to indicate the amount of your interest for each of these pieces of information. When answering how interested you are in the various pieces of information below, please think about which information is most valuable to you'.

Participants then answered the questions in the booklet and were debriefed.

Measures

The first section asked participants to indicate on 1–7 scales how interested they were in each of six pieces of information: the score of their group in Test 2; the score of the best group in Test 1; the score of the worst group in Test 1; the score of the group just above them in Test 1; the score of the group just below them on Test 1; the national average of all first year psychology students on this kind of test. The order of these items was randomised for each participant. Next followed an item designed to check on the performance variable ('How disappointed were you with your group's performance?').

Results

Analysis of the manipulation check on disappointment with own group performance revealed that the performance feedback was effective. There was a main effect for Performance, $F(1, 109) = 122.63$, $p < 0.001$, $MSE = 1.64$, confirming that those informed that they had done badly were substantially more disappointed than those who thought they had done well ($M_s = 4.84, 2.22$). There was also an interaction between Performance and Motive, $F(2, 109) = 5.23$, $p < 0.01$, $MSE = 1.64$. However, this did not materially challenge the above main effect for Performance. Simple effects analyses of the Performance variable within each Motive condition revealed that the 'low' performers were always significantly more disappointed than the 'high' performers (all $F_s > 22.00$, $p < 0.001$).²

Participants' comparison choices were analysed by examining the interval measures that tapped interest in knowing different scores. These were subjected to a $2 \times 3 \times (6)$ mixed model ANOVA: Performance \times Motive \times (Comparison interest), the final factor being repeated measures. This revealed two main effects and an interaction (see Table 1).

The main effect for Motive showed that there was reliably more interest in all comparison referents in Assess than in Control, with Enhance falling between the two [$M_s = 5.20_a, 4.96_{ab}, 4.43_b$; means not

²The mean disappointment ratings for Low and High respectively in each of the Motive conditions were: Assess (5.56, 1.84), Enhance (4.30, 2.40), Control (4.74, 2.42).

Table 1. Comparison interest in different referents as a function of motive condition: Study 1

Condition	Comparison referents					
	Average	Temporal	Worst	Best	Above	Below
Assess ($n = 37$)	5.57 _{x ab} (1.59)	5.76 _{x a} (1.53)	5.00 _{x abc} (1.78)	5.78 _{x a} (1.36)	4.70 _{x bc} (1.79)	4.41 _{x c} (1.83)
Enhance ($n = 40$)	5.53 _{xy a} (0.99)	5.55 _{x a} (1.41)	4.98 _{x ab} (1.72)	4.62 _{y b} (1.97)	4.60 _{x b} (1.46)	4.48 _{x b} (1.60)
Control ($n = 38$)	4.79 _{y ab} (1.47)	5.50 _{x a} (1.56)	4.00 _{y bc} (1.39)	4.87 _{y ab} (1.47)	4.00 _{x bc} (1.61)	3.45 _{y c} (1.48)

*Notes:*1. *SDs* in parentheses.2. ANOVA: Motive, $F(2, 109) = 5.46$, $p < 0.005$, $MSE = 6.31$; Comparison, $F(4.39, 478.9) = 21.64$, $p < 0.001$, $MSE = 1.92$; Comparison \times Motive, $F(8.79, 478.9) = 2.11$, $p < 0.05$, $MSE = 1.92$. These effects are as amended by the Greenhouse-Geisser correction.3. Means within rows not sharing a subscript (a,b,c) are significantly different by Tukey's HSD, $p < 0.05$.4. Means within columns not sharing a subscripts (x,y) are significantly different by Tukey's HSD, $p < 0.05$.

sharing a subscript are significantly different, $p < 0.05$]. The main effect for Comparison interest revealed that participants were most interested in Temporal, followed by Average and the score of the Best and Worst groups, with rather less interest in the two similar groups just Above or Below them ($M_s = 5.60_a$, 5.30_a , 5.08_{ab} , 4.66_{bc} , 4.43_{cd} , 4.11_d , respectively; means not sharing a subscript are significantly different by Tukey's HSD, $p < 0.05$). Of relevance to our hypothesis was the Motive \times Comparison interaction. Decomposing this interaction into its simple main effects revealed that the effect of Comparison was highly reliable in all three experimental conditions (all $F_s > 4.73$, $p < 0.001$); the effect of Motive, however, was significant only in Average ($p < 0.05$), Best ($p < 0.05$), Worst ($p < 0.005$) and Below ($p < 0.05$). As predicted, participants in the Assess condition showed significantly more interest in knowing the score of the Best group than those in either the Control or Enhance conditions. In addition, as predicted, they showed more interest in knowing the score of the Worst group than those in Control. Similarly, participants in the Enhance condition showed more interest than Control participants in groups below them (Worst, just Below). Finally, participants in both the Assess and Enhance conditions showed more interest in learning about the national Average score than Controls, although in the case of Enhance the difference was only marginally significant. Note that the Performance variable had no reliable effects in this analysis.

Discussion

The first finding of note from this study was that temporal comparison information seemed to attract most interest from participants. This was most evident in the Control condition, where there was no particular emphasis placed on any particular comparison motive, but was also evident in the two experimental conditions. This is, we believe, the first time that evidence for temporal comparisons has been unambiguously demonstrated in an experimentally created intergroup setting. The reasons for these temporal comparison choices could not be unambiguously ascertained however, since the propensity for making them did not vary as a function either of the Motive or the Performance variable.

Our hypothesis was framed in terms of contrasts between each of the experimental conditions and Control. The rationale for this was that there may be several motives at work in most comparison settings. This, effectively, is what pertains in the Control condition. Priming any one motive singly (e.g. Assess or Enhance) should instigate relatively greater interest in certain kinds of comparisons but the effects of those other (unmanipulated) motives may well persist. Thus, general within-condition

comparisons amongst different targets are less informative than comparisons with Control on specific measures.

As hypothesised, motives to achieve an accurate evaluation of the group's performance or a positive image for the group proved to be important. Those encouraged to assess their group were more likely to make a strong upward comparison as was evident in Table 1. This confirms a similar finding by Wilson and Ross (2000, Exp.4), who examined self-evaluations under similar instructional sets. Participants in the Assessment condition were also more interested to learn the score of the Worst group than were the Control participants. It is likely that this represented a type of 'range-finding' as noted earlier by Wheeler et al. (1969) in the interpersonal domain and as predicted by Wood (1989) in her analysis of comparison motives. Those in the Enhance condition, on the other hand, showed a rather different pattern. They differed significantly from Controls in their interest in Worst and Below, and also from Assess in their interest to know the score of the Best group. These findings confirm that, in particular circumstances, group members may engage in different kinds of intergroup comparisons for strategic purposes.

STUDY 2

Study 1 employed *ad hoc* groups in a laboratory setting. One limitation of this paradigm was that there was a certain built-in asymmetry between the social and temporal information that was available initially since group members had at least some minimal social comparative information at their disposal (i.e. their own group's rank position relative to other groups). Conceivably, this factor could have contributed to the relative predominance of interest in temporal comparisons in that study. In an attempt to address this issue, we adopted a different approach in Study 2. In this instance we provided both social and temporal comparison information to members of a real-life social group and then elicited self-reports from them as to the likelihood of them making comparisons with a wide range of relevant comparison targets. The inclusion of an experimental manipulation, even in this naturalistic setting, allowed a further test of the impact of motives on comparison choices.

To conduct this study, we capitalised on an aspect of the British higher education system which provides a contemporary real-world analogue of the rank-order paradigm used in Study 1. British universities are regularly subjected to various nation-wide evaluations, both of their research excellence and also of the quality of the teaching that they offer. These assessments have direct consequences for institutions since government funding partly depends on them. 'League tables' of universities are published annually by national newspapers like 'The Times,' in which all universities are ranked from 1 (the most prestigious) to 101 (the least). The publication of these league tables annually attracts considerable interest from university staff who are acutely aware of the material and public relations implications of the rank position of their institution.

We thus conducted a survey amongst the staff of a mid-ranking English university a few months after the 2002 publication of 'The Times' league table. The goal was to establish which comparison targets were typically preferred by respondents. In particular, we sought to confirm our finding from Study 1 that highlighting enhancement motives would increase the probability of making a downward comparison, and also decrease the likelihood of an upward comparison.

In summary, then, we tested the following hypotheses:

1. Based on Study 1, interest in temporal comparisons will equal or exceed that in social comparisons.
2. Making enhancement motives salient would increase the preference for relatively extreme downward comparisons and decrease the preference for relatively extreme upward comparisons.

Method

Participants

One hundred and ninety-nine academics (53F, 141M, 5 unspecified; mean age 45.33 years) from university 'E' responded to a questionnaire sent to all members of the teaching and research staff, yielding a response rate of approximately 40%.

Design

Two versions of the questionnaire were prepared, one in which enhancement motives were emphasised and a 'control' version. These were randomly distributed to potential respondents to produce a two-groups between participants design.

Questionnaire

The cover sheet of the questionnaire contained a short letter inviting respondents to take part in an Opinion Survey on University League Tables. Then followed the principal measures³ of the study, in the following order: The section in which the experimental manipulation was induced and then the respondents' interest in comparing with each of the comparison targets⁴ assessed. It began by providing the (veridical) 2002 rank positions of nine universities, including the respondents' own, and the 1998 rank position of own university. Here, to maintain anonymity, these are listed alphabetically with their rank positions in parentheses: A(8), B(21), C(33), D(40), E*(42), F(44), G(54), H(90), I(91), E* in 1998 (49). 'E' was the own university. Then followed the variation in wording which constituted the experimental manipulation. The version designed to stimulate enhancement motivation read as follows:

Now imagine that you were a member of a deputation from (own university) that is to meet representatives from HEFCE.⁵ You want to argue the case that (own university) should get more funding, and to substantiate your argument, you would surely want to compare (own university) with other universities (e.g. in terms of outcomes, funding, etc.). In the meeting, which comparisons do you think you would use if you wanted to argue that (own university) should get more funding? How likely is it that you would compare (own university) with each of the universities below?

³Several other secondary measures were also included which are not relevant to our current concerns.

⁴The comparison targets were carefully selected from the 101 possible universities. It was important to have a wide range of potential targets both above and below the position of the university sampled. We wished to control as far as possible some additional features of universities, apart from rank position. The British university system is marked by considerable diversity in age, type, prestige and geographical location of institutions. However, inconveniently for the purposes of methodological control, there are natural confounds amongst these various factors that prevented us from achieving a perfectly balanced set of comparison targets. Nonetheless, since our interest is primarily in variables associated with variations in comparison interest in these different targets between experimental conditions, these natural confounds do not seriously impede the interpretation of our results. All the selected universities were campus based. All were founded in the 1960's, with the exception of 'H' and 'I', former polytechnics that obtained university status after 1992. Their size, in terms of total enrolment (in K students), and distance from 'E' (in miles) are as follows: 'A' (10.6, 273), 'B' (15.8, 308), 'C' (14.5, 65), 'D' (13.2, 153), 'E' (12.2, 0), 'F' (12.2, 65), 'G' (11.8, 268), 'H' (18.8, 45), 'I' (16.5, 190).

⁵HEFCE stands for the Higher Education Funding Council for England which is the government body responsible for the allocation of all funding to universities.

Note that, in the context of a scenario about securing more funding for their university, a key objective, of which participants would have been well aware, is to present one's university in the currently most favourable light in the eyes of the HEFCE's representatives. Thus, enhancement of the university's present situation in relation to other institutions was the clearly implied order of the day here, rather than aspirational claims about its possible future. In this way, enhancement rather than improvement motives were activated. In contrast, the neutral 'control' version read as follows:

Now imagine that the latest league tables were just published this morning. You go to the senior common room for a coffee and of course the topic of the day is the position of (own university) relative to that of various other universities. When talking to your colleagues, how likely is it that you would compare (own university) with each of the universities below?

There then followed nine comparison targets (universities A-D, F-I, and E in 1998) presented in one of nine orders so that each target appeared at the head of the list equally often. Against each one, respondents had to indicate the likelihood of comparison (from 'not at all' to 'very'). All responses were provided on 1–7 scales. They were invited to provide a brief explanation of their responses, and then various demographic data were collected. Debriefing took place five months later through an article in the university newsletter and by a more detailed written report (provided on request).

Results

Respondents' ratings of the likelihood of comparison with the nine targets were analysed in a $2 \times (9)$ mixed model ANOVA: Condition (Enhance vs. Control) \times Comparison Target (A, B, C, D, F, G, H, I, E in the past). The latter factor was within subjects. This yielded a significant main effect for Target and a Condition \times Target interaction (Table 2).

The main effect for target can be seen in the right hand column of Table 2. However, since this effect was substantially qualified by the Condition \times Target interaction, a better approach is to focus

Table 2. Likelihood of comparison with different university targets as a function of condition: Study 2

Target	Condition		Marginals
	Enhance ($n = 87$)	Control ($n = 80$)	
A	3.87 _{cd} (1.86)	* 4.61 _c (1.80)	4.23
B	4.16 _c (1.70)	4.34 _c (1.87)	4.25
C	4.67 _{bc} (1.65)	4.41 _c (2.02)	4.54
D	5.07 _{ab} (1.57)	5.11 _{bc} (1.76)	5.09
F	5.11 _{ab} (1.51)	* 5.78 _{ab} (1.11)	5.43
G	3.13 _d (1.69)	* 2.40 _d (1.29)	2.78
H	2.54 _d (1.84)	2.52 _d (1.79)	2.53
I	1.61 _e (1.14)	* 1.30 _e (0.56)	1.46
E (past)	5.42 _a (1.67)	5.88 _a (1.32)	5.64

Notes:

- Occasional missing observations on individual items meant that the overall N was reduced in this analysis due to casewise deletion of missing data.
- E (past) is own university 4 years previously.
- ANOVA: Target, $F(8, 981.40) = 155.26$, $p < 0.001$; Condition \times Target, $F(8, 981.40) = 4.31$, $p < 0.001$, $MSE = 2.99$. These effects are as amended by the Greenhouse-Geisser correction.
- Column means not sharing a subscript are significantly different by Tukey's HSD procedure ($p < 0.05$).
- *Indicates that the simple effect of condition within Target was reliable, $p < 0.05$.

on the means in the Control condition which provide a baseline account of which targets were seen to be of most and least interest. As can be seen, the targets in this condition fell into three, perhaps four, groupings. As predicted by Hypothesis 1, the target of most interest was the temporal comparison with own university of few years before. In this same cluster, and not reliably different from 'E' (past), was one of the most similar status universities 'F', just below 'E' in rank position. 'D', another similar university, was also of interest. The next most likely group of comparators were the three higher status universities 'A', 'C' and 'B' (in that order). Of considerably less interest were the lower status universities 'G', 'H' and 'I', with the latter being rated the least comparable of all eight targets.

What were the effects of the experimental manipulation, as indicated by the highly significant interaction? As predicted by Hypothesis 2, the effect of the enhancement manipulation was to decrease the probability of comparing with the higher status institutions and to increase the likelihood of comparing the lowest status institutions. Note especially the simple and opposite effects for Condition within Targets 'A' and 'I': under Enhancement participants reported a lower likelihood of comparing with 'A' ($F(1, 165) = 6.80, p < 0.01$) but an increased likelihood of comparing with 'I' ($F(1, 165) = 4.78, p < 0.03$), relative to their counterparts in Control. Similar tendencies were observed for universities 'B' and 'H'; and a planned comparison of the two highest status universities (contrast weights $-1, +1$ for Enhancement and Control) with the two lowest status universities (contrast weights $+1, -1$) yielded a reliable difference, $t(981) = 2.27, p < 0.05$. There was also one unpredicted effect of condition. Enhancement salience reduced the probability of comparing with university 'F', the neighbouring university just below 'E' ($F(1, 165) = 10.16, p < 0.002$).

Discussion

The results of this study both confirm and extend the findings of Study 1. Let us begin with the baseline comparison preferences made in the Control condition. As in the laboratory, temporal comparisons ('E'(past)) were reported as being the most likely, closely followed by the similar (just inferior) university 'F'. The fact that temporal comparisons were again so popular, and this time in a context where both temporal and social information was readily available to respondents, both supports Hypothesis 1 and confirms the importance of this mode of comparison. We cannot be completely certain about the motive(s) underlying these temporal comparisons, although one possibility is that they served some enhancement needs since the 'own university' position had actually improved in recent years.

What of the direction of social comparisons? With one exception (target 'F'), intergroup comparison preferences were clearly upward (A–D were all rated > 4). As in Study 1, there was little baseline interest in making downward comparisons. In this context, then, considerations of comparison relevance for assessment and/or improvement purposes seem to have outweighed any potential group enhancement benefits to be derived from downward comparisons. The one exception to this general upward trend is the relatively high baseline rating given to 'F', the university similar to and just below 'E'. Perhaps this anomaly can best be explained by the fact that 'E' and 'F' are traditional rivals, being similar in age, geographical location and academic profile.

Hypothesis 2 was supported. As predicted, making enhancement motives salient significantly increased interest in extreme downward comparisons and decreased interest in extreme upward comparisons. The parallels with similar results in Study 1 (see Table 1) are unmistakable and confirm that the activation of different comparison motives can have predictable consequences for intergroup relationships. Moreover, the results strongly argue against an alternative interpretation of the manipulation (that it might also have stimulated improvement motives). If that had been the case,

one should have observed a clear increase in interest in higher ranked universities. As is clear, the opposite occurred.

STUDY 3

Earlier, we noted how social comparison researchers converge in suggesting that social comparisons may be driven by any or all of motives for assessment, enhancement and improvement. Studies 1 and 2 showed that comparison choices in intergroup settings can be influenced by priming assessment and enhancement motives. The role of the third motive—group improvement—remains to be investigated. In fact, even in the interpersonal domain little or no research has specifically examined the consequences of highlighting improvement motives on comparison choice. Nevertheless, theoretically, the presumption has been that a concern with future improvement should lead people to seek out mildly upward comparisons since such targets provide the best guide or inspiration for raising one's own standing on the dimension in question (Collins, 1996; Festinger, 1954; Wood, 1989). Certainly, there is evidence that those who are exposed to or who choose slightly superior performing comparators actually improve their own subsequent performance (Blanton et al., 1999; Seta, 1982). Taylor, Neter, and Wayment (1995) found that self-reported instances of improvement motivation amongst college students were most reliably associated with making upward comparisons (though the degree of upwardness was not reported) and with future comparisons. These contrasted with the comparisons associated with self-enhancing episodes where downward and past comparisons predominated. Moreover, the consistent finding of similar-but-just-superior comparison target selection has usually been interpreted as being due, in part, to improvement or aspirational motives (Brickman & Bulman, 1977; Collins, 1996; Nosanchuk & Ericsson, 1985; Wheeler, 1966; Wood, 1989). In the intergroup domain, the role of improvement motives has not been researched. Accordingly, in Study 3 we set out to investigate the consequences of priming improvement motives.

In Studies 1 and 2 motives were manipulated in an explicit fashion. A possible objection to such manipulations is that they may have made the experimental hypotheses rather too transparent. In this study, therefore, we sought to manipulate improvement motives in implicitly, borrowing a procedure already successfully used for automatic stereotype and goal activation (Bargh, Chen, & Burrows, 1996; Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trötschel, 2001). For example, Bargh et al. (2001) first primed cooperation goals using a 'scrambled sentence' task, presented as a 'psycholinguistic task'. In an apparently unrelated resource-management task, those primed with cooperative words in the scrambled sentence task showed more cooperation than participants in the Control condition. We reasoned that if a behavioural goal like cooperation could be implicitly activated, then so too could a comparison motive like improvement.

In Study 2 we extended our research beyond the confines of the laboratory to a real-life and hence more psychologically significant comparative context. In Study 3 we exploited another naturalistic and topical intergroup context, that of the relative prosperity of students in the different countries of the European Union (EU). Previous research had already established that this was a meaningful and engaging context for students (Brown & Haeger, 1999). Moreover, at the time of conducting the study (early 2004), the question of students' living standards was also a matter of intense public debate in Britain as a result of the Government's controversial proposals to raise the level of university tuition fees by 200%. Thus, the study's relevance for our student participants seemed assured.

In view of the sparseness of previous research on the likely consequences of activating improvement motives in intergroup settings, we formulated our hypotheses rather tentatively. Still, drawing on theorising in the interpersonal domain, it seemed plausible to predict that priming improvement

motives would increase interest in outgroup countries just above the participants' own since such comparison targets would provide a realistic basis for improving the position of one's own group, perhaps by providing useful information for political lobbying of government.

What about the implications of improvement motives for interest in temporal comparisons, either with the past or the future? In general, one might expect that such motives, concerned as they are with how the group's position will ameliorate in the future, would be most naturally associated with future temporal comparisons. However, such prediction is not so straightforward because people's perceptions of particular contexts are likely to colour whether they see such future comparisons leading to improvement or deterioration (Wilson & Ross, 2000). For example, if people believe that things were better in the past or will get worse in the future, it is unlikely that stimulating improvement motives will lead to an increased interest in temporal comparisons. In contrast, memories of a rotten past or expectations of a rosy future might well lead to more temporal comparison activity consequent on priming improvement motives. In the particular context studied here, the first of these two alternative perceptions seemed more likely. The economic position of British students had worsened over previous years due to the imposition of tuition fees. Just weeks before the study was conducted the Government had won a parliamentary vote to triple those fees, leading to widespread predictions of increased levels of student hardship and debt. Thus, future temporal comparisons in this situation are unlikely to be stimulated by improvement motives; if anything, one would hypothesise that priming improvement motives would actually lead to a decrease in interest in future comparisons because of that imminent rise in tuition fees.

In summary therefore, the following hypotheses were tested:

1. Priming improvement motives will increase interest in targets just above the ingroup, relative to that shown in the control condition.
2. Priming improvement motives in this context will decrease interest in future temporal comparisons, again relative to the control condition.

Method

Participants

Forty British students (33F, 7M; mean age = 19.85 years) participated as part of their course requirement.

Design

The study used a two independent groups design: Priming condition versus Control. Participants were randomly assigned to condition.

Procedure

The manipulations and measures were administered through a questionnaire. The study was introduced as being about two separate studies, conducted by different investigators. The first 'study', entitled 'Language fluency study', was described as a pilot investigation for some research on language flexibility in which the researcher wanted to find out how difficult the tasks were. This was the scrambled sentences task that contained the priming stimuli. The task consisted of twenty sets of

four, five or six words that had to be re-arranged into grammatical sentences by omitting one of the words in each set. In the Priming condition, sixteen of the sets contained words relating to improvement motives: improved, aspirations, gain, better, raises, maximised, increased, strive, worsen, deteriorate, optimises, hopeful, achieving, developed, advanced, upgraded (e.g. doing, better, vacuum, we, are. These formed the sentence, 'we are doing better' when 'vacuum' was omitted). The remaining four sets were 'fillers'. In the Control condition, only one of the sets contained an improvement related word, the remainder all formed neutral sentences. The corresponding words in this condition were: regarded, heels, see, fun, nothing, tours, announced, watched, strive, surprising, show, likes, forgetful, eating, forgot, dined, crashed (e.g. doing, nothing, vacuum, we, are. These formed the sentence, 'we are doing nothing'). The four filler items were identical to the Priming condition. To maintain the cover story, at the end of this task participants were asked to rate its difficulty.

On the next page of the booklet the second 'study' was introduced as a 'Student lifestyle questionnaire'. Participants read a short paragraph in which the economic situation of British students was described as being 'about average in Europe', according to a recent 2003 OECD report. Further information from this alleged report was presented about student expenditure on accommodation, clothing and holidays, and on graduate unemployment rates and debt levels. The position of British students on these indicators was again described as being 'neither particularly high or particularly low' and as being 'about the mid-point of the European league table'. Following this, participants were asked to imagine that they would be provided with this report and could have the opportunity 'to see some other information which would put what you have read into context'. OECD reports on the economic situation of six 'targets' were mentioned: Students in a country that did much better than Britain in 2003; Students in a country that did a bit better than Britain in 2003; Students in a country that did a bit worse than Britain in 2003; Students in a country that did a lot worse than Britain in 2003; British students in 2002; British students in 2005 (forecast). These were presented in boxes with the two upward choices in the uppermost position on the page, the two downward choices lower down, and the two temporal choices in lateral positions (the past to the left and the future to the right). Participants indicated how interested they would be to read more about the situation of each of these targets by rating their degree of interest on 5 point scales, anchored with 'not at all' and 'very much'. The order of presentation of these scales was randomised across participants.

Finally, following Bargh et al. (1996) and Bargh et al. (2001), we included some questions designed to check on participants' awareness of using particular motives. They were asked to rate how interested they were to see information that would tell them that their group had improved in the past, the future, and how diagnostic such future information would be for monitoring such improvement. Note, that in this case it is important to show that there were *no* differences between conditions in order to be sure that participants were not consciously using particular strategies (Bargh et al., 1996; Bargh et al., 2001). All these items were also on 5 point scales.

At the conclusion of the study, participants were provided with a short debriefing sheet explaining the true purpose of the study.

Results

Preliminary checks established that participants were not aware of using improvement motives. A one-way MANOVA was conducted to examine between condition differences on the three awareness check items. Neither the MANOVA effect ($F(3, 36) = 0.63, n.s.$) nor the univariate effects on the separate items (all $F_s < 2, p_s > 0.18$) were remotely significant.

Table 3. Comparison interest in different national targets as a function of condition: Study 3

Target	Condition		Marginals
	Priming ($n = 19$)	Control ($n = 21$)	
Top	3.79 (0.92)	4.00 _a (0.89)	3.90
Above	3.42 (0.84)	2.81 _b (1.08)	3.10
Below	3.00 (1.10)	2.67 _b (1.06)	2.82
Bottom	3.37 (0.90)	3.81 _a (1.08)	3.60
Past (2002)	3.58 (0.90)	3.62 _a (1.24)	3.60
Future (2005)	3.37 (1.06)	4.19 _a (0.98)	3.80

Notes:

1. ANOVA: Target, $F(5, 190) = 7.84$, $p < 0.001$, $MSE = 0.85$; Condition \times Target, $F(5, 190) = 3.15$, $p < 0.01$.

2. Means in the same column with a different subscript are significantly different by Tukey's HSD procedure ($p < 0.05$). An asterisk indicates a reliable difference between conditions by simple effects tests.

3. *SDs* in parentheses.

Participants' comparison choices were analysed by a $2 \times (6)$ mixed model ANOVA: Condition (Priming vs. Control) \times Comparison Target (top, above, below, bottom, past, future), the second factor being repeated measures. This yielded two significant effects. There was a main effect for Target. This indicated that overall participants were most interested in seeing the reports about the top country, the future 2005 report on their own country, the past 2002 report on their own country and the bottom country. However, this main effect was qualified by the expected interaction with Condition.

As can be seen in Table 3, the relatively sharp differentiation between interest in different targets in the Control condition contrasts with a more homogeneous set of interest ratings in the Priming condition. Tests of the simple effects of Target within condition revealed that this was significant in Control, $F(5, 190) = 9.87$, $p < 0.001$, but not in Priming, $F(5, 190) = 1.53$, $p < 0.20$. Of more relevance to the hypotheses were the simple effects of Condition within each comparison target. These revealed just two significant differences: as predicted, participants showed more interest in the target just Above them when improvement motives were primed ($t(190) = 2.07$, $p < 0.05$) and less interest in the potentially negative Future report on the ingroup ($t(190) = 2.78$, $p < 0.01$).

Discussion

The conclusions from this study can be simply stated. First, in yet another intergroup context, we have observed considerable interest in temporal comparisons. Examination of the baseline Control condition confirms that interest in the ingroup's future and past was at least as high as in outgroup targets. Also paralleling results from Studies 1 and 2, was the considerable interest shown in this baseline condition in the highest ranked country. This suggests that assessment motives may have predominated until we intervened with the experimental manipulation. Such a conclusion is reinforced by the interest also shown in the bottom ranked country, suggesting that some form of 'range-finding'—classically associated with assessment motives—may have been important to participants.

A second conclusion concerns the effects of arousing improvement motives. Consistent with Hypotheses 1 and 2, when improvement motives were primed, participants showed an increased interest in the fate of a country just above their own, and a decreased interest in their own group's future. The first of these results nicely confirms predictions made by Collins (1996) and Wood (1989) that such slightly upward comparisons may be especially important to satisfy improvement motives,

predictions that until now have not been extensively tested. These predictions were made with interpersonal comparisons in mind; what is interesting is that a similar outcome seems also to be observable in an explicitly intergroup context.

The other effect of priming improvement motives—a decrease in interest in future-oriented comparisons—was also noteworthy. Although, as noted earlier, it was plausible to hypothesise such a result in view of the gloomy economic prognosis facing British students, such an outcome seems at first sight at variance with Wilson and Ross' (2000, p. 929) suggestion that future temporal comparisons might be positively associated with improvement motives. However, as Wilson and Ross recognised—and, indeed, as much of their data show—future comparisons may be avoided if there is a suspicion that future prospects are uncertain or unfavourable. Perhaps that is one reason why Wilson and Ross (2000) consistently found future comparisons to be less prevalent than past or social comparisons. In any event, it seems clear that a concern with self or group improvement will not invariably lead people to focus on the future. This must depend on the specific context in which such evaluations are engendered.

Finally, it was of some interest that the arousal of improvement motives was achieved using an implicit priming procedure. This implies that people may not always be aware of their reasons for seeking out particular types of comparisons. Although the suggestion that some comparison processes have an 'automatic' component is not entirely new (Gilbert, Giesler, & Morris, 1995), this may be the first time that comparison interest at a group level has been shown to be susceptible to unobtrusive manipulation. In addition to the methodological advantage of such a procedure in circumventing possible demand effects, theoretically the finding is significant because it stands in contrast to the deliberative and strategic nature of comparisons depicted by SIT (Tajfel & Turner, 1986). An important future challenge is to describe how those more controlled processes can be integrated with implicit processes of the kind observed here.

GENERAL DISCUSSION

An integration of the results from these three studies leads to the following conclusions. First, as we had speculated on the basis of prior research, past temporal comparisons involving the ingroup seem to be made as readily as intergroup comparisons, if not more so. This contrasts with Levine and Moreland's (1986) suggestion that temporal comparisons would generally be less prevalent than social comparisons. Even when specific comparison motives are activated, group members in these studies still seemed to be very interested in how the ingroup had fared over time. To this conclusion, two comments should be added. The first is that the majority of our data derived from ratings from group members as to how much they would be interested in different kinds of comparison information. It is possible that some social desirability factors may have influenced these self-reports; perhaps university students and staff feel it is socially inappropriate to admit to being too concerned how other groups are doing. Nevertheless, since other research, which has focussed more on the consequences of intergroup and temporal comparisons rather than their initial selection, has found reliable correlates of both forms of comparison, it seems reasonable to conclude that social desirability is not a completely determining factor (Ouwkerk, 2000; Schmitt & Maes, 1998; Suls et al., 1991). Second, it is noteworthy that the prevalence of temporal comparisons was obtained in three quite disparate intergroup contexts. Moreover, in some related research conducted in the context of economic comparisons amongst ethnic groups, a similar preference for temporal comparisons was found (Zagefka & Brown, 2005, *in press*). The convergence of findings across such different research settings suggests that this finding is not specific to the social situations studied here. Theoretically, this

is of some interest since temporal comparisons have traditionally received relatively little attention in SIT.

Thus, the first major implication we draw is that theorising on social identity processes needs to be expanded to include temporal means of identity development and maintenance. In these studies we did not set out to investigate the link between temporal comparisons and identification. However, in other work we have found the strength of identification is as strongly related to temporal comparisons as it is to intergroup comparisons, if not more so (Brown & Zagefka, 2005). So it would seem to be a important goal for future research to delineate this link more precisely so that we have a better understanding of when and how group members resort to these different methods of evaluating and potentially enhancing their group.

The second conclusion concerns the motives that underpin the choice of comparison targets in intergroup settings. The evidence here is of two sorts: Indirect and direct. An indirect inference is possible from noting the modal comparison choices made in the Control conditions of the three studies. As we have just noted, past temporal comparisons were often the norm and these did not seem to be confined to those groups for whom social comparisons might be unfavourable (i.e. lower status groups). Moreover, since the outcome of such temporal comparisons was not always definitely favourable in the paradigms we used, it is uncertain that they were being employed wholly for enhancement purposes, even if this is usually the case in other contexts (cf. McFarland & Alvaro, 2000; Wilson & Ross, 2000; Zagefka & Brown, 2005, in press). Perhaps accurate assessment was also a motive at work here. What about the social (intergroup) comparisons? In all three studies, when these were made, they were primarily in an upward direction, and were rather less likely for any outgroups beneath them. There is some concordance between these findings and those obtained elsewhere, in both interpersonal (Nosanchuk & Erickson, 1985; Wheeler, 1966) and intergroup settings (e.g. Bourhis & Hill, 1982; Brown & Haeger, 1999), which again suggests that group members are often concerned more with assessment/improvement of their group than with its enhancement.

Superficially, such findings seem to be rather at odds with those theoretical accounts that emphasise the importance of obtaining positivity through social comparisons (e.g. Tajfel & Turner, 1986; Wills, 1981). However, one finding from the Control condition of Study 2 told a slightly different story since interest in comparing with the nearby, similar but slightly 'inferior' university 'F' was almost as high as that in temporal comparison. And in Study 3, in the Control condition there was also substantial interest in the bottom country. Although it is difficult to be certain as to the reason behind the discrepancy between this evidence for downward comparison with its virtual absence in Study 1, one reason could be the greater meaningfulness of the comparative context and ingroup identity in the naturalistic settings of Studies 2 and 3. In any event, the selection of such 'inferior' outgroups was more consistent with what might have been predicted from SIT, since it implied that respondents were interested in achieving some positive distinctiveness for their ingroup.

If there was only limited evidence of group enhancement motives in participants' 'spontaneous' comparison choices in the Control conditions, it is clear that when this motive is specifically primed people's comparison interest shifted predictably. Studies 1 and 2 revealed that group members' choices were reliably influenced downward by inviting participants to focus specifically on achieving a favourable ingroup image. And, in Study 1, an explicit focus on arriving at an accurate group evaluation led to increased interest in both ends of the intergroup hierarchy. Of further note was the effect of stimulating improvement motives in Study 3, which led to an increased interest in the country just above the ingroup, presumably because such a comparison target offered a basis for pressing the ingroup's political claims for improvement, especially since its own immediate future prospects were so gloomy. This is direct evidence that three motives hypothesised to be operative in interpersonal domains are also important at an intergroup level (Tajfel & Turner, 1986; Wood, 1989). The next

research challenge is to identify the circumstances which give rise to one motive rather than another. In the settings studied here it seems that assessment and improvement predominated, perhaps because the groups' status positions appeared to be rather immutable and mostly legitimate. According to SIT, in such 'secure' identity conditions the 'search for positive distinctiveness'—indicative of enhancement motivation—is somewhat attenuated (Tajfel & Turner, 1986). In that sense, the findings obtained here may be most generalisable to those intergroup settings where there is little dispute over the ranking criteria. In contrast, in contexts involving comparisons in more unstable or debatable hierarchies—for example, in periods of economic or political upheaval—motives for equity restoration or enhancement might come more to the fore (Tajfel & Turner, 1986; Van Knippenberg & Van Oers, 1984; Zagefka & Brown, *in press*).

As in any exploratory research in a relatively new field, some limitations to our studies ought to be acknowledged. At a methodological level we recognise that it would have been helpful in interpreting some of our findings if we had included additional manipulation checks and process measures. Whilst this was difficult for practical reasons in Study 2, and might not have been so illuminating for the implicit processes of Study 3, the inclusion of potential mediator variables in Study 1 could have provided further information on the operation of different comparison motives. Secondly, it should be recognised that the very different contexts of the three studies—small group performance evaluations, inter-university comparisons, inter-nation student financial well-being—probably means that the temporal comparisons had different functional significance for the participants in each case. For example, the short time scale and 'two test format' of Study 1 might have generated 'a desire for completion' in addition to stimulating improvement oriented temporal comparisons; in contrast, in Study 2, where the temporal information given already indicated historical improvement (from rank 49 to 42), the high interest in temporal comparisons might well have been for group enhancement reasons. Third, it could well have been useful to have supplemented our quantitative approach with some qualitative methods. A relevant model in this respect, especially for Study 2, is Elsbach and Kramer's (1996) analysis of US business school reactions to the publication of nationwide university rankings. Elsbach and Kramer (1996) showed how groups' reactions to (changes in) league table positions can go beyond simply shifting the direction of intergroup comparisons and can also involve the subtle redefinitions of the league tables themselves (e.g. changing the list of eligible comparators, differently emphasising the importance of various judgement criteria). Such in-depth qualitative research might have been helpful in 'decoding' some of the systematic patterns in respondent comparison interest ratings observed in these three studies.

In conclusion, we recognise that these experimental studies of intergroup comparison choice are only the first steps in addressing the research questions posed at the outset. Much still needs to be done to identify the situational factors that stimulate different comparison motives and thus change the balance between group members' propensity for making comparisons of the ingroup over time and with other groups. The importance of this research is underlined by recent research that has focussed on the consequences of intergroup and temporal comparisons. For example, Ouwerkerk (2000) has demonstrated that the affective consequences of receiving upward or downward comparison information about another group's performance are reliably moderated by information about the ingroup's progress over time. In a different setting, Mummendey, Klink and Brown (2001) found that priming participants to evaluate their country in temporal terms eliminated a positive correlation between national identification and xenophobia that was observed when they evaluated their country socially, relative to others. In sum, given the centrality of comparison processes to several theories and the material and psychological importance of the consequences of different comparison choices made by groups in society, the continued investigation of the antecedents and consequences of such choices would seem to be particularly timely.

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