

Priming In-Group Favoritism: The Impact of Normative Scripts in the Minimal Group Paradigm

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Results of experiments employing the minimal group paradigm (MGP) (Tajfel et al., 1971) have provided evidence that mere categorization can—at least on average—lead to in-group favoritism, i.e., allocating more resources to in-group members than to out-group members. This effect is often explained by sociomotivational processes in which persons favor their own group in order to enhance their social self-esteem (e.g., Tajfel & Turner, 1986). However, in-group favoritism in the MGP can alternatively be explained by assuming that persons simply follow social norms or scripts that are currently accessible and provide behavioral prescriptions for the task at hand. This explanation was tested by experimentally varying the accessibility of behavior scripts with a priming procedure within a MGP. As expected, priming of “loyalty” compared to priming of “equality” led to (a) higher perceptions that loyalty is expected by in-group members, (b) increased in-group favoritism, (c) increased expression of in-group identification. Moreover, while self-esteem ratings were positively correlated with in-group favoritism after priming of loyalty, this relation was reversed after priming of equality. © 2001 Academic Press

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One of the central hypotheses of social identity theory (Tajfel & Turner, 1986) is that mere categorization of persons into groups can produce discriminating behavior, even in the absence of conflicting group interests or a history of group conflict. That is, merely being labeled as a member of a group should evoke behavior that favors one's own group members and discriminates against members of other groups, given that persons accept the group categorization. To provide empirical evidence for this “mere categorization effect,” scholars routinely cite experiments employing the minimal group paradigm (MGP) (Tajfel, Billig, Bundy, &

Flament, 1971). Participants, after being divided into groups according to trivial categories (e.g., preferences for modern painters or the result of a coin flip; cf. Diehl, 1990; Jetten, Manstead, & Spears, 1996), are asked to allocate resources (e.g., points or money) between members of their own group (“in-group”) and members of another group (“out-group”) on specially prepared allocation matrices. During these allocations, participants (a) cannot allocate resources to themselves, (b) do not know the persons to whom they allocate resources, and (c) cannot expect further interactions with the other group members. The only thing they know for sure is the group membership of the allocation targets.

The usual finding in such MGP experiments is that, on average, participants give significantly more resources to in-group members than to out-group members (e.g., Mullen, Brown, & Smith, 1992). According to social identity theory (SIT), this *in-group favoritism* is a consequence of sociomotivational processes, whereby people try to maintain positive distinctiveness in social comparisons by increasing the

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status of a group when it is part of their social self-concept (e.g., Tajfel & Turner, 1986). Note that this account leads to a rather pessimistic perspective for a peaceful coexistence of social groups (cf. Billig & Tajfel, 1973).

However, even though the notion that mere categorization leads to in-group favoritism is a fixture in many social psychology textbooks, the evidence for this effect is less clear and conclusive than often assumed. A number of studies have failed to replicate in-group favoritism in the MGP (e.g., Kerr, 2000; see Mullen et al., 1992, for a review) or have implicated moderators that contradict the sufficiency of mere categorization (e.g., Berkowitz, 1994; Gaertner & Insko, 2000; Grieve & Hogg, 1999; Horwitz & Rabbie, 1982; Mummendey & Otten, 1998; Ng, 1986; Vivian & Berkowitz, 1992; Yamagishi, Jin, & Kiyonari, 1999). Moreover, SIT's central assumption that in-group favoritism is mediated by self-esteem maintenance processes has garnered only mixed support (Abrams & Hogg, 1988; Otten & Moskowitz, 2000; Rubin & Hewstone, 1998).

An alternative account to SIT and related sociomotivational approaches that has been largely neglected is a normative explanation. This is particularly ironic given that Tajfel's original explanation for in-group favoritism postulated a generic in-group norm (e.g., Tajfel, 1970). Persons might favor in-group members simply because it is part of a social norm or (in the terminology of the theory first making this argument, proposed by Wilder, 1986) a social script prescribing favoritism or loyalty to one's group as an expected and socially approved behavior (Wilder, 1986). Such a normative social script could be learned during social experiences in groups where group loyalty is rewarded in various ways. Especially in ambiguous decision situations in which few personal interests are at stake and there are few contextual cues for choice (e.g., the MGP), people might well base their decisions not on careful calculations of direct or indirect self interest but rather search their memory for appropriate normative scripts that give meaning to the situation and clear prescriptions for behavior (Hertel & Fiedler, 1994, 1998; Messick & Schell, 1992). As with other cognitive schemas, such a social script would be activated as a function of accessibility, which in turn would be determined by the recency and frequency of prior use (Higgins, 1996; Wegner & Bargh, 1998).

In addition to parsimoniously explaining in-group favoritism in the MGP, such a social script approach can also specify conditions under which persons should not show clear in-group favoritism. *Loyalty to the in-group* is only one possible script that can be activated within the MGP. Another is *equality*, prescribing unbiased allocation of resources to all. This simple decision heuristic has high social acceptability (Messick & Schell, 1992) and could be stored and activated from memory much like a loyalty script. Thus, persons showing different levels of in-group favoritism in the MGP could differ in the relative accessibility of social

scripts rather than in their motivation to maintain self-esteem.¹

Preliminary evidence that spontaneously accessed social scripts might underlie in-group favoritism was provided in a pair of unpublished studies (Hertel, Clotz, & Kerr, 1998; Kerr & Hertel, 1998) in which perceived norms were assessed before participants completed typical MGP allocation tasks. In-group favoritism was significantly correlated with perceived norms of in-group members (see also Jetten et al., 1996) but not with perceived expectations of out-group members or of the experimenter, nor with participants' self-esteem. However, these studies have two significant limitations. First, it is possible that participants first decided to favor the in-group and then projected their own behavioral intentions as others' normative expectations. The second problem is that perhaps participants access normative expectations within the MGP only when normative issues are made salient by the experimental procedure. A stronger test of our contention that accessible normative scripts may underlie in-group favoritism in the MGP would entail an experimental manipulation of script accessibility without making normative prescriptions salient before the allocation task. This was the primary objective of the present experiment.

It is also plausible that accessible scripts may affect not only allocation preferences, but also the subjective consequences of allocation behavior. In this view, self-enhancement following discriminating behavior predicted by SIT could occur because the MGP is interpreted in terms of a group loyalty script that endorses in-group favoritism. Under such conditions, discriminating persons are doing what (they think) they are expected to do and should consequently feel more satisfied or proud. Such an increase of self-esteem would not be based on positive social comparison (i.e., "the in-group is superior to the outgroup"), but rather on satisfaction about fulfilling normative standards. However, if the equality script were seen as applicable to the MIG situation, in-group favoritism should be unrelated or even negatively correlated with current self-esteem. Some tentative evidence for this conjecture is reported in an (unpublished) study by Vickers et al. (1985, as cited in Abrams & Hogg, 1988), in which MGP participants who discriminated contrary to a prescriptive norm of cooperation reported lower self-esteem than persons who allocated resources equally.

Finally, we also explored whether the expression of in-group identification might be affected by available scripts. While high in-group identification might be part of a loyalty

¹ Although other normative scripts could be triggered in the MGP (e.g., deservingness, equity), in the current study we focus on loyalty and equality. They seem to be prominent normative standards for intergroup contexts and also are sufficient to demonstrate empirically the feasibility of a social script explanation.

script ("stand by your group"), it might be seen as far less appropriate if equality norms—stressing universal values—were highly accessible.

To test the predictions and implications of a social script model (Wilder, 1986), we manipulated the availability of normative concepts using a priming technique. Participants were first categorized into groups. A supraliminal priming procedure adapted from prior studies (Hertel & Fiedler, 1994, 1998) was then followed. Participants subsequently allocated resources between in- and out-group members. We also assessed participants' mood and self-esteem (before and after allocation), identification with their groups, and normative beliefs. The social script model predicts that priming of "loyalty" should lead to clear in-group favoritism in allocations, to a belief that in-group members expect in-group favoritism more than equal allocations, to a *positive* correlation between in-group favoritism and self-esteem, and to stronger in-group identification. Conversely, priming of "equality" should lead to reduced or no in-group favoritism in allocations, to an attenuation or reversal in participant's in-group-favoring normative expectations, to a low or even *negative* correlation between in-group favoritism and self-esteem, and to weaker in-group identification.

METHOD

Participants

Fifty-six undergraduate students from Michigan State University (15 males and 40 females, 1 with sex unrecorded) participated in the experiment to receive credit in a class. Gender was randomly distributed over conditions.

Design, Procedure, and Measures

There were two experimental conditions: one priming "loyalty" and the other priming "equality." The main dependent variables were allocation decisions, perceived behavior norms, ratings of mood and self-esteem before and after the allocation task, and in-group identification.

Minimal group categorization. The minimal groups were created with an alleged "test of cognitive representation styles." Purportedly the study was investigating differences in the way people mentally arrange perceptual elements. Therefore, we would apply a new test of "representation style" to find out whether participants were "shape dependent" or "shape independent" representers. In this test, participants had to sort five sets of symbols (e.g., letters and stars; five symbols in each set) in rows according to whatever perceptual feature they thought was most prominent. Afterward, the experimenter gave each participant a feedback sheet, categorizing all participants as "shape dependent." To avoid differences in perceived status between the groups, it was stressed that representation style was not related to intelligence or other personality variables.

Measures of self-esteem and mood. The categorization task was followed by an initial measure of feeling states. Current self-esteem was rated on three items: "How do you feel right now?" (1 = *insecure* through 7 = *self-assured*), "How self-confident do you feel right now?" (1 = *not at all* through 7 = *very strong*), and "How satisfied with yourself do you feel right now?" (1 = *not at all* through 7 = *very strong*) ($\alpha = 0.86$). Current mood was rated on a single item: "How do you feel right now?" (1 = *negative* through 7 = *positive*). The same measures were collected immediately after the allocation task ($\alpha = 0.94$ for the self-esteem measure).

Priming manipulation. After the initial measure of feeling states, participants performed a verbal memory task modeled after a priming procedure developed by Hertel and Fiedler (1994, 1998). Thirty words were scattered unsystematically over a single page. The participants were asked to study these words for 3 min so that they could reproduce as many as possible at the end of the experiment. It was further mentioned that the words could be arranged into two meaningful categories that might be helpful in memorizing the list. In fact, the total set comprised 10 filler words (e.g., *healthy*, *prosaic*, and *burned*), 10 words forming a spatial category (e.g., *concave*, *widespread*, and *squared*), and a subset of 10 words designed to prime a social script. The latter words had been originally identified in a pilot study in which 10 participants generated words that expressed positive and negative connotations of the concepts of equality and loyalty, respectively. These words were then rated by another group of 15 students on the degree to which they indicated positive/negative aspects of loyalty/equality, respectively. The 5 most highly rated words for each valence-behavior combination were then used in the main study.

Priming of *loyalty* was accomplished with words stressing positive aspects of loyalty to one's group (viz. trustworthy, buddy, devoted, team-spirited, and allegiance) and negative aspects of disloyalty (viz. unfaithful, unreliable, betrayal, disloyal, and deceitful). Priming of *equality* was accomplished with words stressing positive aspects of equality (viz. fair, just, equitable, neutrality, and impartial) and negative aspects of inequality (viz. one-sided, prejudiced, discriminating, favoritism, and biased). With this bipolar priming technique (Hertel & Fiedler, 1998), normatively prescribed behaviors were associated with positive valence and normatively proscribed behaviors with negative valence. (See Hertel, 1995, and Hertel & Fiedler, 1998, for a more detailed discussion of this priming procedure.)

Allocation matrices. We used four types of allocation matrices developed by Tajfel et al. (1971, Experiment 2). Each matrix consisted of two rows of numbers specifying alternative point allocations to two persons, one for each row (see Table 1). The group category of these persons (either "shape dependent" or "shape independent," along with a bogus participant number) was indicated at the be-

TABLE 1
Minimal Intergroup Matrices

Type 1	19 1	18 3	17 5	16 7	15 9	14 11	13 13	12 15	11 17	10 19	9 21	8 23	7 25
Type 2	23 5	22 7	21 9	20 11	19 13	18 15	17 17	16 19	15 21	14 23	13 25	12 27	11 29
Type 3	7 1	8 3	9 5	10 7	11 9	12 11	13 13	14 15	15 17	16 19	17 21	18 23	19 25
Type 4	11 5	12 7	13 9	14 11	15 13	16 15	17 17	18 19	19 21	20 23	21 25	22 27	23 29

ginning of each row. Matrix types 1 and 2 provided differentiation between maximizing joint profit (MJP) versus maximizing in-group profit (MIP) and maximizing the difference between in-group and out-group profit (MD). Matrix types 3 and 4 enabled differentiation between maximizing groups' difference (MD) versus maximizing in-group profit (MIP) and maximizing joint profit (MJP; see Tajfel et al., 1971, for more details). Each of the four matrices were presented four times, presenting all possible combinations of in-group and out-group membership of the top- and bottom-row person. As a result, eight of the matrices contrasted profits for in-group and out-group members (intergroup matrices), while in the other eight matrices profits were divided between two in-group or out-group members (intragroup matrices). The order in which the matrices were presented was constant, starting with two intergroup matrices followed by an intragroup matrix of in-group members and an intra-group matrix of out-group members. This order was repeated four times. Participants were asked to indicate for each of the allocation matrices the option that they preferred most. To keep the group categorization salient, participants were also asked to indicate their representation style on top of each matrix sheet. In order to increase the importance of the allocation task, participants were instructed to imagine that the allocated points represented dollars.

Postexperimental questionnaire. After the allocation task and the second measure of self-esteem and feeling

states were completed, participants filled out a postexperimental questionnaire (all ratings on 7-point scales). In order to measure perceived social norms, four possible allocation strategies (viz. equality, in-group favoritism, out-group favoritism, and maximizing common gain) were identified. Participants were asked to rate the extent to which in-group members expected them to use each strategy. Then the same ratings were obtained for out-group members' expectations. Participants were then asked how strongly they agreed with their group categorization ["I agree with my categorization as a shape-dependent (SD) or shape-independent representer (SI). . ."]. The following three items covering cognitive, evaluative, and affective aspects of group identification (e.g., Doosje, Ellemers, & Spears, 1995) measured identification with the assigned cognitive-representer group ("I identify with the group of persons that have the same representation style as I," "I feel belonging to the group of persons with the same representation style I have," and "I think I will like persons with the same representation style as I have more than persons with a different representation style"; $\alpha = 0.86$). Finally, participants were asked to recall as many words from the memory task as they could in order to determine how thoroughly the priming material had been processed. In addition, participants were asked to "explain briefly in your own words the main purpose of this study" to check for demand effects of the priming treatment or any other suspicion of the coverstory.

TABLE 2
Main Dependent Variables

	Loyalty priming	Fairness priming	Statistics
Acceptance of Group Categorization	5.2	5.1	$t(50) = .39, ns$
Ingroup favoritism in Intergroup Matrices	24.8	8.8	$t(50) = 2.21, p < .04$
Ingroup favoritism in Intragroup Matrices	4.0	8.0	$t(50) = .64, ns$
Ingroup Favoritism as Perceived In-group Norms	5.5	4.2	$t(47) = 1.97, p < .06$
Equality as Perceived In-group Norms	3.9	5.2	$t(48) = 2.36, p < .03$
Ingroup Identification	3.8	2.9	$t(50) = 2.51, p < .02$
Difference of Self-esteem Ratings before and after Allocations	-0.53	-0.42	$t(50) = .34, ns$
Difference of Mood Ratings before and after Allocations	-0.19	0.0	$t(50) = .39, ns$
Number of Recalled Priming Stimuli	2.9	4.4	$t(50) = 3.26, p < .01$

RESULTS

Acceptance of Categorization

We first analyzed whether participants in the two priming conditions were comparable in relevant aspects. First, there were no meaningful differences in participants' agreement with their group categorization (i.e., belonging to the shape dependant group), $t < 1$. Also, although several dispositional variables that were collected weeks before the main experiment (viz. general values for loyalty or equality, Schwartz, 1992; social orientation, e.g., van Lange et al., 1997) showed correlations with in-group favoritism and/or in-group identification, there were no meaningful differences between the two priming conditions (t 's < 1.4) on these variables, verifying the success of random assignment.

Only four participants failed to endorse their categorization as a "shape dependent representer" (i.e., gave ratings below the midpoint of the scale) and were excluded from further analyses. Among the remaining participants, there were no differences in endorsement of the categorization between the two priming conditions, $t < 1$. The suspicion check at the end of the study revealed no comments suggesting that participants saw any connection between the priming words of the "learning task" and the allocation task. Five participants mentioned intergroup conflicts as part of the study's focus. Although such a belief, per se, does not provide a demand characteristic interpretation for our primary hypothesis, we will consider these participants separately in some analyses.

In-group favoritism in allocation matrices. We expected priming effects to occur in intergroup allocation matrices since the primed norms (especially "loyalty") are most relevant when in-group and out-group interests are in direct conflict. In intragroup matrices participants allocated points either between two in-group members or between two out-group members. Responses to the latter matrices can also reflect in-group favoritism (although rather indirectly, because one cannot exhibit favoritism through a single judgment, but only through a pattern across several separate judgments) when participants tend to maximize joint gains more strongly in intragroup matrices with in-group members than with out-group members (Tajfel et al., 1971, Experiment 2). However, because loyalty norms do not imply "punishing" out-group members, we did not expect effects of our normative priming in this second type of matrices.

As a simple index of in-group favoritism, we computed the difference between points allocated to in-group and to out-group members in the intergroup matrices. Analyzing these difference scores in a 2 (loyalty vs equality priming) $\times$ 2 (intergroup vs intragroup matrices) showed the expected result pattern. Type of matrices showed a significant main effect, $F(1, 50) = 6.25$, $p < .02$, that was moderated by a significant interaction effect, $F(1, 50) =$

5.93, $p < .02$. When compared to equality priming, loyalty priming led to higher in-group favoritism in the intergroup matrices [$M_{\text{diff.}} = 24.8$ more points for in-group members with loyalty priming vs 8.8 for equality priming, $F(1, 50) = 4.88$, $p < .04$], but not in the intragroup matrices ($M_{\text{diff.}} = 4.0$ for loyalty vs 8.0 for equality, $F < 1$). The simple main effect of priming in the intergroup matrices became even stronger when we excluded the five participants who mentioned intergroup conflicts as study subject, $F(1, 45) = 7.07$, $p < .02$, further arguing against conscious compliance with experimental demands as a plausible explanation of our results.² [There remained some degree of in-group favoritism in the equality priming condition; the mean difference score of 8.8 was significantly greater than 0, $t(25) = 2.37$, $p < .03$.]

Perceived Norms

Participants reported how much they perceived in-group favoritism and equality to be expected by their in-group members. A 2 (Priming) $\times$ 2 (In-group favoritism vs equality) repeated-measures ANOVA revealed a significant interaction effect, $F(1, 45) = 6.19$, $p < .02$; other F 's < 1 . As expected, priming of loyalty related concepts led to a stronger expectation of in-group favoritism as in-group norm ($M = 5.5$) than equality ($M = 3.9$), whereas priming of equality led to the reverse ($M = 4.2$ and 5.2, respectively).

The perceived expectations of in-group members (combined as a difference score: in-group favoritism – equality) correlated significantly with in-group favoritism in the intergroup allocation matrices, $r(n = 52) = .391$, $p < .01$, but not in intragroup matrices, $r < .08$. Including this perceived-norm variable as a predictor along with the dummy-coded priming variable in a mediation analysis with in-group favoritism as dependent variable reduced the impact of the priming effect to nonsignificance, $t < 1.2$, suggesting that the priming effect on in-group favoritism may have been at least partly mediated by different perceived in-group norms. Similar results were observed when perceived in-group norms were included as a covariate in an ANCOVA of in-group favoritism with priming as the independent variable.

In-Group Identification

In order to test whether the priming manipulation also affected feelings of in-group identification, we analyzed the

² Similar results were obtained when we analyzed "pull scores" as alternative way to show in-group bias (cf. Tajfel et al., 1971). Loyalty priming produced stronger tendencies toward both MIP/MD (vs MJP) and MD (vs MIP & MJP) strategies relative to equality priming; participants in the latter condition allocated more equally between in- and out-group. Length limits of *Journal of Experimental Social Psychology*'s Report format prohibit presenting these analyses in detail; the interested reader may obtain them from the authors.

identification ratings of participants after the allocation task. The analysis of the average of the three relevant items ($\alpha = 0.86$) revealed a significant priming effect, $t(50) = 2.51$, $p < .02$. Consistent with our conjecture, after the loyalty priming participants expressed higher identification with the in-group ($M = 3.83$) than after the equality priming ($M = 2.86$). Mediation analyses suggest that this effect is a direct consequence of the priming rather than mediated by allocation behavior. There was no significant correlation between in-group identification and in-group favoritism in the inter-group allocation matrices. Moreover, entering in-group favoritism as a second predictor (along with priming, dummy coded) into a regression equation of in-group identification did not change the predictive value of the priming factor.

Self-Esteem and Feeling States

We combined the three self-esteem items to create scale scores (α 's = 0.86 and 0.94 for the two measure times, respectively). We then correlated mood and self-esteem ratings with in-group favoritism (intergroup matrices only). No significant correlations occurred, either for ratings of self-esteem or general mood before the allocation task or for difference scores of self-esteem or general mood ratings before vs after the allocation tasks, all r 's $< .20$.

However, the relationship between self-esteem and in-group favoritism in the intragroup matrices (which measured in-group bias more indirectly, see above) was moderated by the priming treatment. In the loyalty priming condition, the correlation between in-group bias and the difference in self-esteem before and after the allocation task showed a positive relationship, $r(n = 26) = .34$. Participants who showed relatively high in-group bias scored higher in self-esteem after the allocation task than before. However, this relation was reversed in the equality priming condition, $r(n = 26) = -.33$; $z = 2.36$, $p < .02$. Here, in-group bias was associated with a decrease in self-esteem.³

Recall of Priming Stimuli

Participants in the priming conditions did not differ in the recall of filler and spatial words of the "learning task." However, equality priming words were better recalled ($M = 4.4$) overall than loyalty priming words ($M = 2.9$), $t(50) = 3.26$, $p < .01$. This might be due to certain characteristics (frequency of use, length, etc.) of the different words. However, correlational analyses suggest that recalling more words was not associated with stronger priming effects. The

correlation between number of recalled priming words and prime-consistent allocation was marginally stronger in the loyalty condition ($r = .43$) than in the equality condition ($r = .10$; $z = 1.22$, $p < .12$). In addition to suggesting that only a little cognitive effort may be required to evoke priming effects, this result provides yet additional evidence against an explanation of the priming effects as participants' conscious compliance with experimental demands.

DISCUSSION

The purpose of this experiment was to test whether experimentally varied accessibility of social scripts could alter in-group favoritism and related variables in a MIG experiment. The results clearly indicated that it could. Priming of *loyalty* produced significantly more in-group favoritism than priming of *equality*. Moreover, the analyses of perceived expectations of in-group members suggests that these priming effects were at least partly mediated by the perceived in-group norms. In addition, the analyses of self-esteem and mood ratings showed that the experienced consequences of these allocation tendencies were also affected by the normative priming. In accordance with the implications of the activated scripts, in-group favoritism was associated with enhanced self-esteem in the loyalty priming condition, but with decreased self-esteem when participants were primed with equality.

Our results also revealed priming effects on the expression of in-group identification. Loyalty priming produced higher identification scores than equality priming. This is consistent with our assumption that expression of in-group identification might be part of a broader behavior script prescribing group-supporting activities. Whereas sociomotivational approaches conceive in-group identification as a precondition for in-group favoritism (e.g., Turner et al., 1986), our results indicate that both in-group identification and in-group favoritism might be a consequence of available social norms or scripts.

There was no overall correlation between in-group favoritism and self-esteem or general mood ratings, either for preallocation ratings or for the difference between post- and preallocation ratings. This result is in line with the growing body of research that finds little evidence for a general relation between self-esteem and discriminating behavior (Rubin & Hewstone, 1998). This does not mean that the allocation decisions were wholly unrelated to participant's feeling states. At least for more indirect measures of in-group bias (viz. based on the intragroup matrices), we found correlations between self-esteem ratings and in-group bias. However, these correlations were moderated by the priming treatment. A positive relation between in-group favoritism and self-esteem ratings was only found when loyalty norms were primed before the allocation task. When participants were primed with equality, the expression of in-group fa-

³ The same result pattern occurred in analyses of pull scores for maximizing joint profit (MJP) in in-group intragroup matrices compared to out-group intragroup matrices. In-group bias in maximizing joint profits correlated positively with increase of self-esteem after loyalty priming, $r = .26$, but negatively after equality priming, $r = -.41$, $z = 2.38$, $p < .01$.

voritism was associated with a decrease in self-esteem. SIT's self-esteem maintenance prediction only seems to be viable when group loyalty (or reciprocity; cf. Gaertner & Insko, 2000; Yamagishi et al, 1999) is the prevalent social norm. When the intergroup situation is approached in terms of equality, in-group favoritism is counterproductive for self-esteem maintenance. The restriction of these self-esteem effects to the indirect measure of group favoritism was not predicted and at present, we can only offer a speculative explanation. The primed social scripts were directly relevant to allocations in the intergroup matrices, but not to the intragroup matrices. Following those prescriptions for the former allocations may not have been a particular source of pride or self-congratulation. However, the tendency to show favoritism through the indirect route (allocating points so that pairs of in-group members tended to get more points in total than pairs of out-group members) was more sensitive to our participants' stable personal dispositions.⁴ It is possible that when our participants retrospectively reviewed their allocation behavior, those whose stable dispositions inclined them to act more in concert with the primed script may have felt relatively greater self-esteem than those whose dispositions inclined them to act contrary to those scripts. This interpretation suggests that, instead of in-group favoritism fostering social self-esteem, participants seemed to evaluate themselves relative to what they currently perceived to be socially approved behavior.

It is not plausible that the current priming effects are due to conformity to perceived expectations of the experimenter (Berkowitz, 1994; Orne, 1962). Although a supraliminal priming technique entails the risk that participants might detect the priming treatment, the current experiment included several indications that this was not the case. First, none of the participants described any suspicion of a connection between the learning task and the allocation task, even though asking the question itself in the end of the experiment might have raised doubts about the cover story (see Hertel & Fiedler, 1994, 1998, for similar results with the same priming technique). Second, when we excluded participants who mentioned that the study was somehow related to intergroup conflicts, the priming effects were even stronger. Third, the correlation between the number of priming words recalled and in-group favoritism was stronger in the priming condition where *fewer* words were recalled. Although few cognitive resources seem to be necessary to produce priming effects, these effects were not facilitated

when the priming stimuli were easier to memorize and, thus, to detect. Perhaps the strongest argument against an experimental-demand explanation of our priming effects is the growing evidence showing that awareness of priming treatments tends to lead to contrast away from rather than assimilation toward the primed concepts (e.g., Hertel & Fiedler, 1994; Strack et al., 1993).

More conscious adoption of (in-group) norms might imply different and more complex processes than the rather unconscious application of social scripts observed here. Whether such adoption could be driven by motives to reduce subjective uncertainty (cf. Grieve & Hogg, 1999; Hogg & Abrams, 1993; Hogg & Mullin, 1999) or by other motives (e.g., simple conformity processes, Asch, 1955) remains to be determined. It is plausible, though, that more conscious normative interpretations of intergroup settings will show effects qualitatively similar to those observed here. As mentioned before, earlier studies have already demonstrated links between perceived in-group norms and in-group favoritism when normative issues were salient before an allocation task (Hertel et al., 1998; Kerr & Hertel, 1998; see also Hertel, Aarts, & Zeelenberg, 2000; Hinkle & Brown, 1990; Jetten et al., 1996; Mummendey & Otten, 1998). Also, as we noted above, Tajfel and his colleagues initially considered norms as an explanation for in-group favoritism effects (Billig, 1973; Billig & Tajfel, 1973; Tajfel, 1970). However, they soon dismissed this approach in favor of the sociomotivational account of SIT because they considered such a normative explanation to be circular (Billig & Tajfel, 1973) and found it difficult to specify which norms would be activated in any given situation (see also Jetten et al., 1996; Reynolds, Turner, & Haslam, 2000). The current study has drawn on recent knowledge of the existence and availability of cognitive scripts to begin such a specification.

Space constraints preclude a thorough discussion of the ability of other current theories of in-group favoritism to account for the present results as well as the implications of our results for those theories. We can, though, make a few relevant points. It is not obvious how the present results could be predicted by SIT or related theories, like self-categorization theory. One possibility (see Turner et al., 1987) is that equality priming somehow undercuts identification with the current minimal group in favor of identification with a superordinate group (e.g., all participants in the experiment). And indeed, equality priming significantly reduced identification with participants' cognitive-representation-style group. However, this explanation also predicts that level of identification should have been related to the magnitude of in-group favoritism, which was not the case in our study.

On the other hand, the present findings seem reconcilable with several other empirical and theoretical challenges to SIT. Mummendey and her colleagues (e.g., Mummendey &

⁴ Recall that some weeks prior to the study, participants indicated the importance of loyalty and fairness as general values in their life (using the format employed in Schwartz's, 1994, value survey). An index of the relative importance of these two values was defined as the difference between the loyalty and fairness ratings. This index correlated significantly ($r = .40, p < .01, n = 46$ due to some missing data) with in-group favoritism based on the intragroup matrix allocations, but was uncorrelated ($r = .07, ns$) with in-group favoritism based on the intergroup matrices.

Otten, 1998) have reported that members of minimal groups do not show the usual in-group favoritism when allocating negative outcomes, apparently in contradiction of SIT (although see Reynolds et al., 2000). We speculate that another highly accessible normative script is “do no harm” (e.g., Baron, 1996). Being faced with the task of taking away resources from other participants might make this script more accessible compared to scripts that prescribe in-group favoritism. Others (Rabbie et al., 1989; Yamagishi et al., 1999; Gaertner & Insko, 2000) have presented evidence that people believe that group members are mutually obligated to reciprocate one another’s beneficial actions and that this reciprocity expectation might underlie in-group favoritism. If the present analysis is valid, this suggests that the normative script activated in the MGP (and the loyalty script primed in the present study) may not prescribe unconditional generosity toward in-group members, but in-group favoritism that can (see Gaertner & Insko, 2000, Experiment 1; Ng, 1986) and will be reciprocated by fellow group members. Clearly, the ultimate utility of the social script model will also require identifying the precise content and boundary conditions of alternative norms in intergroup settings.

Besides its parsimony and consistency with other theories and findings, we see the social script approach as providing a more optimistic view of intergroup relations. Currently, the most widely held inference from the MGP literature is that intergroup discrimination is a nearly inevitable consequence of our quest for satisfying self-definitions. The social script view suggests that intergroup behavior is guided by social norms that are accessible and seen as applicable. Although some such norms prescribe in-group favoritism, others do not. By increasing the applicability and accessibility of the latter type of norm, intergroup interaction need not inevitably result in intergroup discrimination.

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