Trivial and Important Criteria for Social Categorization in the Minimal Group Paradigm

FATHALI M. MOGHADDAM
Department of Psychology
McGill University, Canada

PETER STRINGER
Department of Social Psychology
Nijmegen University, the Netherlands

ABSTRACT. The study examined how the importance of a criterion for social categorization can vary with the social context. The main hypothesis was that there would be no difference between the influence of two criteria of differing real-world importance when each is used independently as the only criterion for social categorization in the same minimal group setting. The subsidiary hypothesis was that social categorization on both a trivial and an important basis would lead to positive in-group bias. The subjects were 66 schoolboys. Social categorization was on the basis of either a minimal criterion or subjects' school house-system. Both the main and the subsidiary hypotheses were confirmed.

OVER A DECADE of intergroup research using the minimal group paradigm (Billig & Tajfel, 1973) has produced an important body of evidence challenging the social cohesion model of psychological group formation (Hogg & Turner, 1985). The findings of the minimal group experiments, which have been replicated consistently (Tajfel, 1978b, 1982), demonstrate that under certain conditions group formation and discriminatory intergroup behavior can come about in the absence of all the traditional determinants of

attraction. In these experiments, subjects who have been categorized on the basis of minimal criteria, who participate under conditions of anonymity, with no face-to-face social interaction, and apparently without a link between self-interest and intergroup responses consistently discriminate in favor of the in-group.

The important implications that findings from minimal group experiments have for our understanding of psychological group formation and intergroup relations (see Tajfel, 1978d) demand that close attention be paid to the minimal group paradigm. Thus far, the main focus of critical discussions has been on methodological issues, particularly on the dependent measures (Tajfel matrices) used in minimal group experiments (Bornstein et al., 1983a, 1983b; Turner, 1983). The criterion itself for social categorization in the minimal group paradigm has received little attention.

In developing the minimal group paradigm, a major aim of Tajfel and his associates was to minimize the importance of the criteria used as the basis for social categorization. Criteria typically used as a basis for social categorization have been performance on a dot-estimation task (Tajfel, 1970) and aesthetic preferences (Turner, 1975). Tajfel has referred to these as "unimportant" (Tajfel, 1978c, p. 439) and "trivial" (Tajfel, 1978a, p. 77) criteria; similar descriptions have been used by his associates (eg., Turner, 1981, p. 75). It is perhaps not fully appreciated, however, that terms such as *unimportant* and *trivial* are used in a special sense in this context. A minimal basis for social categorization has been shown to be a powerful determining factor in the minimal group experimental context because it is sufficient to evoke strong and consistent in-group bias. Whether this effect is as powerful as that of an important criterion in the context of the minimal group paradigm is an issue for empirical investigation. The present study aimed to address this hitherto neglected question and to redirect thinking about the "trivial-important" dimension itself.

There are at least two reasons why the effect of a minimal criterion for social categorization might be as powerful as that of an important criterion in the experimental context. First, the importance of a criterion for social categorization should not be assessed from an objective standpoint, but from the subjective perspective of group members in a particular context. Many examples of social categorization in modern industrial societies have a basis that can be perceived as trivial from an objective standpoint, but that nonetheless has a powerful effect on intergroup behavior. For example, soccer might be viewed as being "just a game," and the fact that Jack and John support different soccer teams might have little or no implications for their behavior in the work setting. When they meet in another context, however, what was a trivial basis for social categorization in the office can have powerful effects in the soccer stadium, as was demonstrated so tragically by the violence involving British and Italian football supporters in Brussels in June, 1985.

Second, a trivial basis for social categorization in the minimal group paradigm could have as powerful an influence on intergroup behavior as an important criterion because there is only one basis for social categorization in the minimal group paradigm. In an experimental setting where there are so few cues for social action available to subjects, the sole basis for social categorization is likely to be interpreted as highly important, irrespective of its salience in other contexts. The key factor determining the importance of a criterion in the minimal group paradigm is therefore not the characteristics of the criterion itself, but the total lack of other social cues for subjects to use as a guide for their behavior.

These examples illustrate that two criteria for social categorization may assume very different levels of importance in one context, and similar levels of importance in another. The present study addressed this issue in the context of an all-male British public school (i.e., private boarding school). In such schools, the lives of boys are typically organized in important ways around the school house-system. Interhouse rivalry is strong, and the school house-system constitutes a highly important real-world basis for social categorization, particularly among the age group of boys who participated as subjects in this study. The characteristics of this setting allowed us to incorporate "school house" as an important real-world basis for social categorization in the experiment, alongside a trivial basis that had previously been used in minimal group experiments.

Our main hypothesis was that there would be no difference between the influence of a trivial and an important basis for social categorization when each is used independently as the only such basis in the minimal group paradigm. The subsidiary hypothesis was that subjects would show positive in-group bias when this strategy was available, and be fair only when a biased choice could favor an out-group but not an in-group.

Method

Subjects

Following Billig and Tajfel (1973) and Turner (1975), British schoolboys were the subjects. The final sample included 66 boys, 48 from the senior section and 18 from the junior section of a school; ages ranged from 10 to 12 years. Two subjects were eliminated because postexperimental discussions showed that they had not fully understood the instructions.

Design

The experiment consisted of one between-and two within-subjects mixed factorial design. The between-subjects factor was the basis for social categori-

zation (trivial or important). The within-subjects factors were the *treatments* (group membership of the others to whom points were awarded) and *type of choice* (anonymous others received points once from the top row and once from the bottom row of the matrices used as dependent measures).

Procedure

The procedure of the standard minimal group paradigm (Billig & Tajfel, 1973; Turner, 1978) was followed. On arrival at the experimental session, the boys were seated at tables well apart from each other and instructed not to communicate. They participated in groups of 9 to 12, and first carried out a dot-estimation task. While their performance on this task was allegedly being assessed, the subjects were told that the second part of the experiment required that they make choices to distribute rewards among others. In order to perform this second task, it was necessary that they be divided into groups. In Condition H, subjects were told that, for the sake of convenience, the school house-system would be used to divide them into groups. In Condition D, they were told that, for the sake of convenience, they would be divided into groups on the basis of performance on the dot-estimation task.

The relationship between experimentally created groups was arranged to be identical to that of groups in the school house-system. According to this system, boys in the junior section were in either Bentley or Gilmour house, whereas boys in the senior school were in either Carey, Chalmers, Livingstone, or Moffat house. Correspondingly, those in Condition D were either in groups X or Y, or else in X1, X2, Y1, or Y2. In the school house-system, membership in Gilmour automatically meant future membership in either Livingstone or Moffat, and membership in Bentley automatically meant future membership in Carey or Chalmers. Correspondingly, in the experimentally created groups, membership in group X meant automatic future membership in X1 or X2, whereas membership in group Y meant automatic future membership in Y1 or Y2. Thus, boys from the junior section were either in Bentley or Gilmour (Condition H) or X or Y (Condition D), whereas those from the senior section were in either Carey, Chalmers, Livingstone, or Moffat (Condition H) or in X1, X2, Y1 or Y2 (Condition D).

Dependent Variables

Subjects distributed points between anonymous in-group and out-group members. They made choices on the basis of four matrices, designed to measure the pull of MIP + MD (FAV) on MJP and vice versa, FAV on F and vice versa, and MD on MIP and MJP and vice versa (see Allen & Wilder, 1975; Billing & Tajfel, 1973). The definition of strategies that were available to subjects are as follows:

1. F, fairness.
2. MD, maximizing the difference in points awarded to two recipients in favor of the in-group.
3. MJP, maximizing the total number of points awarded irrespective of which recipient receives most.
4. MIP, maximizing the number of points received by the in-group recipient.
5. FAV, the combined use of MIP and MD.

The matrices used in the minimal group paradigm have been described in detail by Turner (1978) and Turner, Brown, and Tajfel (1979). The important features of the matrices used in this experiment are elaborated below (see Figure 1).

A matrix consisted of either 13 or 14 columns, each containing two numbers. Subjects distributed rewards between two groups by making two choices on the basis of each matrix. The position of the groups to whom rewards were being allocated was altered from the top row to the bottom row of a matrix across the two choices made by subjects. This alteration allowed the pull of selected bias strategies (e.g., FAV and F) to be tested against each other.

Matrix I is a direct measure of FAV. It is impossible to maximize joint profits; the fairest choices are at the center of the matrix. Only by coordinating the two choices made on the basis of matrix I can a specific fair point be achieved. That is, one could choose column 7/8 on the first choice and 8/7 on the second choice, or vice versa. Choices on matrix I were scored from 0 to 13, with maximum FAV as 0.

Matrix II permits the assessment of FAV and F. The fair point is represented by the column 14/14, and MJP is constant throughout. When rewards

Matrix I	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Matrix II	14	15	16	17	18	19	20	21	22	23	24	25	26	
	14	13	12	11	10	9	8	7	6	5	4	3	2	
Matrix III	19	18	17	16	15	14	13	12	11	10	9	8	7	
	1	3	5	7	9	11	13	15	17	19	21	23	25	
Matrix IV	7	8	9	10	11	12	13	14	15	16	17	18	19	
	1	3	5	7	9	11	13	15	17	19	21	23	25	

FIGURE 1. The Matrices.

for in-group members are from row 14 . . . 26, and rewards for out-group members are from row 14 . . . 2, FAV and F conflict. When the reverse is the case, FAV and F coincide (column 14/14). Choices on matrix II were scored from 0 to 12, with maximum F as 0.

Matrix III allows the assessment of MIP + MD and MJP. The point of fairness is at the center (column 13/13), and MJP is on the right (column 7/25). When row 19 . . . 7 represents rewards for in-group members, and row 1 . . . 25 represents rewards for out-group members, MIP + MD and MJP conflict. When the reverse is the case, MIP + MD and MJP coincide (column 7/25). Choices on matrix III were scored from 0 to 12, with MJP as 0.

Matrix IV permits an assessment of MIP + MJP and MD. The fair point is at the centre (column 13/13). When row 7 . . . 19 represents rewards for in-group members, and row 1 . . . 25 represents rewards for out-group members, MIP + MJP and MD conflict. When the reverse is the case, MIP + MJP and MD coincide (column 19/25). Choices on matrix IV were scored from 0 to 12, with MJP as 0.

The use of the four matrices was adapted to allow for the incorporation of past, present and future in-groups and out-groups. For treatments 1 to 3, subjects distributed points between anonymous members of an in-group and an out-group: treatment 1, present in-group versus present out-group; treatment 2, present in-group versus past/future out-group; treatment 3, past/future in-group versus present out-group. For these treatments, therefore, subjects had the opportunity to show bias toward an in-group. For treatment 4, the students distributed points between anonymous members of two out-groups: present out-group versus past/future out-group. Thus, any bias shown on this treatment could favor an out-group, but not an in-group.

Results and Discussion

The results are presented and discussed in two parts. The first part addresses the main hypothesis; the second part describes the patterns of intergroup bias shown by the subjects. Throughout, Arabic numbers will be used for the four treatments and Roman for the four matrices.

Main Hypothesis

The main hypothesis tested in this experiment posited that there would be no difference between the influence of two criteria for social categorization that have different real world salience, when each is used independently as the only criterion for social categorization in two distinct but identical minimal group settings. To test this hypothesis, responses were compared across two conditions, where social categorization was on the basis of either a school

house-system (Condition H) or performance on a dot-estimation task (Condition D).

Responses on matrices II to IV were analyzed by a 2 × 4 × 2 (Condition × Treatment × Type of Choice) analysis of variance (ANOVA) with repeated measures on the second and third factors; responses on matrix I were analyzed by a 2 × 4 (Condition × Treatment) ANOVA with repeated measures on the second factor. The main effect of condition was not significant for any of the dependent measures: matrix I, $F(1, 64) = 0.38$, ns; matrix II, $F(1, 64) = 1.7$, ns; matrix III, $F(1, 64) = 0.03$, ns; matrix IV, $F(1, 64) = 1.45$, ns. The interaction effects of condition by treatment revealed the same nonsignificant pattern: matrix I, $F(3, 192) = 0.08$, ns; matrix II, $F(3, 192) = 1.67$, ns; matrix III, $F(3, 192) = 1.26$, ns; matrix IV, $F(3, 192) = 0.70$, ns. Similarly, interaction effects of condition by type of choice were not significant: matrix II, $F(1, 64) = 2.70$, ns; matrix III, $F(1, 64) = 3.17$, ns; matrix IV, $F(1, 64) = 0.52$, ns.

Because choices for treatments 1 to 3 involved distributing points between in-group and out-group members, whereas choices for treatment 4 involved distributing points between out-group members only, separate analyses were also conducted on choices across the first 3 treatments and on treatment 4 only. These analyses revealed the same pattern—no significant main effect for condition, and no significant interaction effects either for condition by treatment, or for condition by type of choice. In summary, the influence that a trivial and an important criterion for social categorization had on intergroup behavior was the same, irrespective of the past, present, or future group membership of the others to whom points were awarded and of the type of strategy (F, FAV, MD, MJP, or MIP) available to subjects for making choices.

These results confirm the main hypothesis and have two implications for an understanding of intergroup behavior. First, particularly in relation to experimental laboratory studies of intergroup behavior, the importance of a criterion used for social categorization should not be judged from an objective standpoint, but according to the subjective meaning of the situation from the perspective of the subjects. Experimental subjects seek out information that allows them better to understand the social context and their expected role within it (Rosenthal, 1966). In the context of the minimal group paradigm, the only information they have is that, on the basis of a minimum criterion, they share membership of a particular group with anonymous others; on the basis of the same minimum criterion, anonymous others share membership of an out-group. Regardless of how important this information is in other contexts, it assumes high importance in the minimal group setting simply because it constitutes the only guide for interpreting the social situation and taking action.

The second implication of our findings is that the effect of a minimal

criterion for social categorization on intergroup behavior can be just as powerful as that of an important criterion: Ethnocentric behavior can come to life and bloom on the basis of trivial differences between groups. The outcome of this process can be the same as when there are important differences between groups. A key but neglected feature of behavior in such situations is the ability of group members to transform the significance of a criterion for social categorization. The findings emphasize the active way in which individuals interpret, ascribe meaning to, and personalize the social world.

Patterns of Intergroup Bias

Our second hypothesis was that subjects would show positive in-group bias when this strategy was available, and be fair only when a biased choice could favor an out-group but not an in-group. Subjects distributed points between in-group and out-group members on treatments 1 to 3, but between out-group members only on treatment 4. Our hypothesis predicted, therefore, that subjects' choices would show positive in-group bias on treatments 1 to 3, but that they would be unbiased on treatment 4.

As hypothesized, the direction of subjects' choices on treatments 1 to 3 showed the pull of FAV, MIP and MD, whereas the direction of their choices on treatment 4 showed the pull of F and MJP. The strength of positive ingroup bias on treatments 1 to 3 was confirmed by the significance of the main effect, type of choice, when choices on treatments 1 to 3 were analyzed: matrix II, $F(1, 64) = 329.21$, $p < .01$; matrix III, $F(1, 64) = 169.71$, $p < .01$; matrix IV, $F(1, 64) = 132.16$, $p < .01$. The main effect of type of choice was not significant when choices on treatment 4 were analyzed: matrix II, $F(1, 64) = 1.12$, *ns;* matrix III, $F(1, 64) = 0.97$, *ns;* matrix IV, $F(1, 64) = 1.35$. The same pattern emerged when choices on matrix I were analyzed by a one-sample t test of the significance of the deviation of choices from the unbiased mean of 6.5. In summary, subjects chose a strategy of positive in-group bias on treatments 1 to 3 and an unbiased strategy on treatment 4.

Differences between subjects' choices on treatments 1 to 3 and treatment 4 were shown by the significance of the interaction effect type of choice by treatment when choices on all 4 treatments were analyzed: matrix II, $F(3, 192) = 48.10, p < .01$; matrix III, $F(3, 192) = 50.90, p < .01$; matrix IV, $F(3, 192) = 41.50, p < .01$. This interaction effect was not significant when choices on only treatments 1 to 3 were analyzed: matrix II, $F(2, 128) = 0.92$, *ns;* matrix III, $F(2, 128) = 0.74$, *ns;* matrix IV, $F(2, 128) = 1.23$, *ns*. Thus choice strategies did not differ across treatments 1 to 3, where positive in-group bias was possible, but they did differ between these first 3 treatments and treatment 4, where positive in-group bias was not possible.

Results of Condition D confirm the often replicated finding that group formation and positive in-group bias can come about in the absence of all the traditional determinants of attraction (Tajfel, 1978b; Tajfel, 1982). The results of Conditions D and H considered together, however, strongly suggest that under certain conditions the influence of a minimum criterion on psychological group formation and intergroup behavior can be just as powerful as a criterion that is of fundamental importance in everyday life.

Tajfel and his associates have used the conceptual framework of social identity theory to postulate a motivational basis for behavior in the minimal group paradigm (Tajfel & Turner, 1979). According to this theory, the desire to achieve a positive social identity, defined as that part of the self-identity that is derived through membership in a group, leads group members to strive to improve the position of the in-group in relation to out-group(s). Viewed from this perspective, our findings suggest that the desire for a positive social identity triggered by psychological identification with a group formed on a trivial basis can, under certain conditions, be just as powerful as that triggered by identification with a group formed on an important basis.

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