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Integrating Identity and Instrumental Approaches to Intergroup Differentiation: Different Contexts, Different Motives

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In two experiments, the authors examined the interplay of two functions of intergroup differentiation: an identity function (obtaining a distinct and meaningful social identity) and an instrumental function (advancing group goals). In Experiment 1, in minimal and thus relatively meaningless groups, participants differentiate (identity function), but those with a group goal differentiated more strongly later on than those without (instrumental function). In Experiment 2, both the possibility to differentiate and the presence of a group goal were manipulated orthogonally. Highest differentiation (and cohesion and identification) resulted in the minimal condition (no goal, no prior differentiation opportunity) and in the instrumental condition (goal and prior differentiation opportunity). Mediation analyses and a group effort measure provided evidence for the different functions proposed to underlie differentiation in these two cases. The authors propose an integration between social identity and interdependence approaches to group differentiation: Different conditions promote differentiation for different reasons.

In the field of clinical psychology, there has been a recurring debate about the controversial finding that different kinds of therapies are almost equal in terms of outcome. Despite the different theoretical focus (e.g., psychoanalysis vs. behaviorism), the difference in therapy effect between those approaches is about zero (Wampold et al., 1997). This has been called the “Dodo bird verdict,” referring to the dodo character in Caroll’s (1865/1962) Alice in Wonderland. This dodo has the role of referee during a race and concludes that “everybody has won, and all must have prizes” (p. 412). Although it might seem unscientific to conclude that all theories win, recently it has been argued that for specific disorders, one therapy (and theory) may be championed over the other (Smith, Glass, & Miller, 1980); that is, in different contexts, different theories win.

In the current article, we would like to revive the dodo principle in the field of intergroup relations. Specifically, we address the motivational basis of intergroup differentiation and argue that different approaches (e.g., social identity theory vs. the interdependence tradition) both have validity, in that each offers a plausible explanation for intergroup differentiation under particular circumstances. We propose that, in general, a distinction can be made between theories of intergroup differentiation in terms of an identity function versus an instrumental function. On one hand, differentiation can help to define one’s place, and the place of one’s group, within a social structure (identity function); on the other hand, it can be linked to achieving certain goals (instrumental function). Adopting a contextual-functional approach, we argue that under different circumstances, intergroup differentiation might serve these different functions, as described by the different theories. Drawing a distinction between identity-based and more instrumental functions is not in itself new. What is new and in our view necessary is an attempt to

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integrate these within a single framework specifying domains of application. Previous research on ingroup bias has often tended to focus on either one or the other of these sorts of explanation or on critical tests of one versus the other. Here, we are not so much concerned with the questions of which and why but when, which, and why. By integrating these diverse theoretical perspectives, we hope to gain a more complete picture of the motivational factors affecting differentiation (Mackie & Smith, 1998). We begin by providing a brief overview of the literature on intergroup differentiation to introduce our rationale. Then, we present two studies providing evidence that under certain circumstances striving for a positive-distinctive group identity might motivate differentiation, whereas under other circumstances, instrumental concerns relating to intergroup competition drive this phenomenon.

The tendency to favor one’s own group above other groups, called ingroup bias, intergroup discrimination, or intergroup differentiation, has been demonstrated with both artificial and real groups (Bettencourt, Dorr, Charlton, & Hume, 2001; Brewer, 1979; Messick & Mackie, 1989; Mullen, Brown, & Smith, 1992; Tajfel, 1982). Although it is often assumed that intergroup differentiation results from a motivational process instead of a purely cognitive one, there is theoretical controversy about what exactly drives people to favor the ingroup and/or derogate the outgroup. Early research tried to explain this phenomenon as stemming from frustration (Dollard, Doob, Miller, Mowrer, & Sears, 1939) or authoritarian personality characteristics (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950). However, in the 1960s and 1970, these individualistic approaches were challenged by ones that focused on the group dimensions of intergroup differentiation. An early example is realistic conflict theory (RCT) (Levine & Campbell, 1972; Sherif & Sherif, 1969), which explained intergroup differentiation in terms of real conflict over scarce resources. In the famous Robber’s Cave experiment (Sherif, Harvey, White, Hood, & Sherif, 1961), Sherif and colleagues showed that two groups of normal boys became highly competitive and even violent when they competed for certain resources (e.g., prizes during a tournament). However, when common group goals were made salient, conflict between the groups was reduced. In short, there is strong evidence for a relation between conflicting group goals and intergroup differentiation (Jackson, 1993).

Despite the considerable impact of RCT in the study of intergroup relations, the idea that real conflict is necessary for intergroup differentiation was called into question by research from another group approach to differentiation: social identity theory (SIT) (Tajfel & Turner, 1986). SIT was developed to explain the results of studies using the minimal group paradigm (MGP) (Diehl, 1990; Tajfel, Flament, Billig, & Bundy, 1971). This paradigm was designed to examine the minimal conditions necessary for intergroup differentiation. In Tajfel et al.’s (1971) study, participants were categorized in minimal groups on the basis of preference for a certain painter. After this, they allocated small amounts of money between members of their own group and the other group. To rule out direct self-profit, there was no possibility of allocating money directly to oneself. The mere social categorization into ingroup and outgroup was sufficient to favor the ingroup. This result was obtained in the absence of contact within or between the groups and with no conflict between the groups.

To explain these results, Tajfel and his collaborators proposed that people derive part of their identity from the groups to which they belong. Because people strive for positive (social) identities, they are motivated to differentiate their own group positively from outgroups. In terms of SIT, differentiation in the MGP can be explained as a process of giving positive meaning to the “minimal” and otherwise socially meaningless social categories (Tajfel, 1969, 1978; Tajfel et al., 1971). The processes by which a person seeks meaning in social categorization are described in somewhat more detail within self-categorization theory (SCT) (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), an elaboration of SIT. Positive and meaningful group distinctiveness might be reflected among other things in enhanced self-esteem (Lemire & Smith, 1985; Oakes & Turner, 1980) or reduced uncertainty (Grieve & Hogg, 1999; Mullin & Hogg, 1998). After three decades of research, there is compelling empirical evidence for this identity-based account of intergroup differentiation (e.g., Brewer, 1979; Jetten, Spears, & Manstead, 1996, 1998; Messick & Mackie, 1989; Mummendey & Schreiber, 1984; Sachdev & Bourhis, 1987; Spears, Jetten, & Scheepers, 2002; Van Knippenberg & Ellemers, 1990).

Although the minimal group effect has been replicated several times (see Diehl, 1990, for an overview), the paradigm and the theory have not been without their critics. Rabbie and colleagues (Rabbie, 1993; Rabbie, Schot, & Visser, 1989) do not question the results of the MGP but argue that they are better explained in terms of interdependence of fate than in terms of social identity. On the basis of his behavioral interaction model (BIM), Rabbie (1993) argues that the main motivation in the MGP is instrumental: Participants are motivated to gain as much money for themselves as possible. Because they cannot allocate money directly to themselves, they rely on their fellow group members in anticipation of a degree of reciprocity. As a result, they allocate more to the ingroup than to the outgroup (see Gaertner & Insko, 2000, for a related argument).
Although there is some evidence that participants in MGP studies take instrumental considerations into account (Gaertner & Insko, 2000; Rabbie et al., 1989), it is more difficult to explain why evidence for differentiation is found within the MGP when symbolic rather than material resources are at stake. For example, Turner (1975) showed that when participants had to allocate points instead of money, intergroup differentiation still occurred. There is also evidence for differentiation on trait ratings within the MGP (e.g., Jetten et al., 1998). Thus, although instrumental motivations may play a role in the MGP, the social identity explanation would seem to be necessary for at least some of the results (Diehl, 1990). Rabbie (1993) also accepts that SIT provides a better explanation of differentiation when symbolic measures of intergroup differentiation are used.

From the above analysis of the literature on differentiation and motivation, a distinction can be drawn between two kinds of approaches. On one hand, SIT and SCT explain differentiation as a way of making sense of the social environment in a way that clarifies and favors the position of one’s group. On the other hand, there are theories focusing on interdependence of fate (Gaertner & Insko, 2000; Rabbie, 1993; Rabbie et al., 1989) or conflicting group goals (e.g., RCT; Sherif & Sherif, 1969) as a source of differentiation. Both approaches have proven their worth as explanations for differentiation. Thus, we do not favor one approach above the other in any general sense. Rather, we propose that the two approaches describe different functions of differentiation and that, depending on circumstances, one or the other may provide the better explanation of this phenomenon. Specifically, we argue that differentiation as explained by SIT might fulfill an identity function, whereas interdependence and realistic conflict approaches are characterized by an instrumental function. However, we propose that the identity function, with the search for positive meaning in group membership as the main driving force, can be seen as the more primary function in that for instrumental functions to come into play there needs to be a group identity in the first place. This is simply because a group must be in some way meaningful to its members before other group processes follow (e.g., the group as a basis for reciprocity). Once a meaningful and distinctive group identity is derived, the instrumental function may constitute a valid explanation for differentiation. In other words, in a relatively meaningless context (e.g., minimal groups), SIT may frequently offer the most plausible explanation, whereas under more meaningful conditions, with resources or outcomes at stake, the instrumental function might prevail.

Although we are not the first to test predictions of instrumental approaches and SIT simultaneously (see, e.g., Duckitt & Mphuthing, 1998; Kelly, 1988), examinations of the circumstances under which the two approaches provide the best explanation of differentiation are rare. An exception is a study by Rabbie and Schot (1990). They found evidence for their interdependence hypothesis when money had to be allocated within a MGP, whereas they found evidence for SIT when symbolic points were at stake. In the current research, we only used symbolic measures of differentiation. We propose, however, that symbolic differentiation also might have an instrumental component in that it enhances intergroup distinctiveness during competition. In these terms, differentiation may reflect a perceived common fate without having a direct material influence on personal or group profit (Jackson & Smith, 1999).

In the present research, we present a contextual analysis of the two different functions of differentiation as implied in the two approaches. We refer to this as a contextual-functional analysis of intergroup differentiation. One purpose of the current work is therefore to build a bridge between the two general approaches outlined above. Despite the fact that they often approach the issue of differentiation from different perspectives, integration may generate synergy and theoretical enrichment. For example, because RCT focuses on conflicting goals within a given social structure, it can be seen as a more sociological orientation, whereas SIT has a more psychological focus in that it describes how psychological processes (e.g., identification) affect intergroup relations. However, psychological processes such as identification also can arise from conflicting goals and may be closely intertwined with instrumental motivations. Conversely, identification may provide one means of stimulating the achievement of group goals. In short, an integrative approach may offer new empirical and theoretical insights into how psychological and material factors interleave and interact.

To summarize, the current research has the following objectives: (a) We attempt to show that under different circumstances, intergroup differentiation can serve an instrumental or an identity function; (b) we propose that the identity function is the more primary motivation: A group must be a meaningfully distinct entity before members will work for it for instrumental reasons; and (c) we seek to enrich RCT and interdependence approaches by seeing how group goals affect psychological and identity-based concepts such as identification, perceived cohesion, and self-esteem. To this end, we present two (quasi-) minimal group studies. In the first study, we try to illustrate our basic argument. Directly following minimal categorization, differentiation may serve an identity function, whereas later on in the experiment, under more meaningful and competitive circumstances, differentiation may serve an instru-
mental function. In the second study, we attempt to show that the search for meaning is the more fundamental motivation by demonstrating that when the possibility for differentiation following categorization is blocked, the search for meaning and distinctiveness will transfer to a subsequent stage of the experiment. We also extend our functional analysis to related psychological constructs (identification, cohesion) and behavior (effort for the group).

EXPERIMENT 1

For this experiment, we designed a minimal group study that became less minimal during the course of the experiment. After categorization into minimal groups, participants were given the possibility to differentiate their group from the outgroup. Given the minimal character of the intergroup situation, we argue that differentiation at this stage (Time 1) is best explained by an identity function as described by SIT. In a later phase of the experiment (Time 2), we introduced a group goal (trying to win an intergroup competition) for participants in the goal condition. Apart from the fact that this makes the intergroup situation less minimal, it also shifts the context to a more realistic conflict situation. We then again measured differentiation. We predicted that at Time 1, participants in both conditions would differentiate to some extent and that differentiation in this phase of the experiment would be correlated with self-esteem (identity function). At Time 2, we predicted stronger differentiation by those in the goal condition than those in the no goal condition (instrumental function).

Method

Participants and design. Thirty-nine students from the University of Amsterdam (23 men and 16 women) participated in this experiment. Their mean age was 22 and they were paid 15 Dutch guilders (approximately U.S.$6) for their participation in this and another (unrelated) experiment. Participants were recruited from a canteen. The design consisted of one between-participants factor (group goal: no goal vs. goal) and one within-participants factor (differentiation measurement: Time 1 vs. Time 2). Participants were randomly assigned to one of the two conditions.

Overview. The experiment consisted of four phases. In the first phase, participants were categorized into minimal groups. Then, participants judged ingroup and outgroup products (differentiation Time 1) and completed a measure of collective self-esteem. In the third phase, they performed a group task. Finally, they again judged the group products (differentiation Time 2) and again completed a self-esteem scale. The only manipulation was the way in which the group task was presented. For participants in the goal condition, it was presented as an intergroup competition; for those in the no goal condition, it was not framed in any special way.

Procedure and independent variables. The experiment was run on computers and was presented as a study on perception and creativity. After arriving, participants (7-10 per session) were seated in cubicles. It was explained that we were looking for a relation between creativity and different ways of perceiving. Participants were categorized into groups by means of an adapted Klee-Kandinski paradigm (see, e.g., Oakes & Turner, 1980). The participants had to rate 10 paintings (5 by Klee, 5 by Kandinski) for attractiveness. The paintings were presented as a means by which the computer could assess whether the participant was an analytical or a synthetic perceiver. All participants were in fact categorized as synthetic perceivers. After categorization, we checked that participants were aware of their social category.

All participants were then given the opportunity to differentiate their group positively from the outgroup by rating group products (colored pictures). They judged a series of 10 colored pictures in terms of creativity and attractiveness. These pictures all consisted of the same abstract image (a collection of triangles, squares, and circles) in which only the color combinations were varied. Half of the pictures were presented as being made by members of the ingroup and the other half as being made by members of the outgroup. We told them that the pictures were created in previous experimental sessions. With the help of a pilot study (N = 15), we created two groups of pictures that were equal in creativity and attractiveness.

After the picture ratings, participants filled out self-esteem items and then participated in a group task. The task consisted of making a colored picture with three other ingroup members. The framework of this picture was the same as that used in the pictures participants had rated to measure differentiation. There was no face-to-face contact during the task; interaction took place via the computer network. Participants sat at their computer and registered their color preferences while observing the choices made by their ingroup fellows. In fact, the responses of the other members were generated by the computer and were the same for all participants.

The critical manipulation was the way in which the task was framed. In the no goal condition, participants were only given instructions about how to work on the task. In addition to this information, for participants in the goal condition, we framed the task in terms of an intergroup competition. We told the participants that the subgroup (synthetic or analytic perceivers) that created the most attractive picture would be rewarded with record tokens worth 40 Dutch guilders (approximately U.S.$16), which is a standard value for which one can...
buy one compact disc. To decide which group had created the most attractive picture, a two-step procedure would be used. First, after each session of the experiment, the computer system (which we explained contained a database of color combination preferences made by more than 1,000 persons) would select the group that had made the most attractive picture. Second, after all sessions, the products of the groups that won their session would be presented to a jury who would make a final decision about which picture was the most attractive one. Thus, to win the prize, the first step was to beat the outgroup in that particular session. Note that participants’ evaluations of the group products (i.e., the differentiation measures) could not affect their chances of receiving the prize. Thus, differentiation could not be explained simply in terms of self-interest. Moreover, there was no direct way in which an individual participant could win the prize: They had to cooperate with the ingroup in constructing the picture and were dependent on other participants to receive a reward for it. In other words, the situation can be characterized as interdependence of fate between the participants. Furthermore, there is a real conflict between the groups about material resources: If one group wins, the other loses. Finally, it should be noted that there was a relation between the categorization, the differentiation measure, and the group task: They all have to do with creativity and aesthetic judgments. It therefore seems reasonable to argue that the minimal groups should have become more meaningful for their members in the course of the experiment.

After the group task, the participants rated the same pictures as those at Time 1. As a rationale for rating pictures twice, we told the participants that we were interested in their judgments after they had some practice with combining colors. Next, participants completed measures of self-esteem (Time 2), were debriefed, and were thanked for their participation.

Dependent measures. All measures were taken via the computer. Participants made their responses by placing a cross with the computer mouse on a line on the screen. The line was a 100-point scale with not at all and very much as endpoints.

Our primary dependent measure was intergroup differentiation. We included two types of differentiation measures: a direct measure (picture ratings) and a more descriptive measure. For the direct measure, we used the picture judgments made at Time 1 and Time 2. By subtracting the scores for outgroup pictures from those of the ingroup pictures, a differentiation scale was created. Higher scores indicate stronger positive differentiation between the groups.

For the descriptive measure of intergroup differentiation, participants responded to three statements: synthetic perceivers are better than analytical perceivers, synthetic perceivers know more about art than analytical perceivers, and analytical perceivers deserve little respect for their achievements. Participants responded only once to these items, just after the second series of picture ratings.

To measure self-esteem, we used a translated version of the four-item Private subscale of Luhtanen and Crocker’s (1992) Collective Self-Esteem Scale, modified for the current intergroup context. An example item is as follows: “I’m glad to be a member of the synthetic perceivers group.”

Results

The manipulation check revealed that all participants reported their group membership in accordance with the manipulation. Two differentiation scales (differentiation at Time 1 and Time 2) were constructed on the basis of the picture ratings. First, scales were created for creativity and attractiveness for ingroup and outgroup before and after the task (eight scales in all; αs < .71). Then, these eight scales were reduced to four differentiation scales by subtracting the mean ratings of outgroup pictures from the mean ratings of ingroup pictures. Finally, the scores on attractiveness and creativity were averaged, resulting in two differentiation scales (differentiation at Time 1 and Time 2). The three items measuring descriptive differentiation also formed a reliable scale (α = .84).

The scores for differentiation on the picture ratings were submitted to a mixed-model ANOVA with one between-participants factor (group goal: no goal vs. goal) and one within-participants factor (differentiation measurement: Time 1 vs. Time 2). The predicted interaction was significant, $F(1, 35) = 5.72$, $p < .05$. In line with predictions, at Time 1, the goal condition ($M = 3.89, SD = 7.63$) and no goal condition ($M = 2.81, SD = 5.02$) did not differ from each other in terms of intergroup differentiation, $F(1, 37) = 0.28$, ns. In fact, both conditions showed significant differentiation compared to zero ($ps < .05$). At Time 2, participants in the goal condition ($M = 6.78, SD = 9.90$) showed more differentiation than did those in the no goal condition ($M = –.063, SD = 8.61$), $F(1, 37) = 6.42$, $p < .05$. We also performed separate analyses for ingroup and outgroup pictures. These revealed no significant effects. This indicates that differentiation was not strictly ingroup favoring or outgroup derogating but a combination of the two. There were no effects of gender.

A single-factor ANOVA (group goal: no goal vs. goal) was performed to analyze the scores on the descriptive differentiation scale. Participants who had a group goal showed more differentiation on this measure ($M = 40.67, SD = 18.20$) than did those who had no goal ($M = \ldots$)
To explore the motivational basis for differentiation on the picture ratings at Time 1, we computed a series of correlations. The reliability of the collective self-esteem scale at Time 1 was low (α = .41). A factor analysis revealed a two-factor solution with the two positive items loading on one factor and the two negative items loading on the other factor. We decided to continue analyses with the two positive items only because the reliability of these two items (α = .82) was higher than it was for the two negatively formulated items (α = .52). There was a significant correlation between differentiation at Time 1 and self-esteem (r = .38, p < .05). However, self-esteem at Time 2 (same two items, α = .93) was not reliably related to differentiation at Time 2 (in either condition separate or together, ns < .1).

Discussion

The results provide some preliminary evidence for the proposed functional analysis of intergroup differentiation. At the beginning of the experiment, all participants showed some degree of differentiation that was related to self-esteem (identity function). However, when the intergroup situation became more meaningful, in the sense that the participants had been able to differentiate and to interact on a group task, those with a group goal showed stronger differentiation than did those without a group goal. Moreover, at Time 2, differentiation was not related to self-esteem. We explain the differentiation at Time 1 in terms of an identity function as described by SIT (Tajfel & Turner, 1986) and differentiation at Time 2 in terms of an instrumental function as described by interdependence or realistic conflict approaches (Gaertner & Insko, 2000; Rabbie, 1993; Sherif & Sherif, 1969).

The fact that we did not find clear ingroup favoritism and/or outgroup derogation in isolation but a combination of both is in line with Tajfel et al. (1971), in that the motivation for differentiation per se (the maximum differentiation strategy) is stronger than its components (favoritism and derogation). It is also worth noting that differentiation in the concrete judgments of pictures also generalized to the descriptive differentiation measure. This presumably results from the competitive intergroup situation confronting participants in the goal condition. Note that differentiation on both measures cannot readily be explained by individual self-interest per se in that neither set of ratings translates directly into the winning of the intergroup competition. Rather, differentiation suggests a psychological preparation to engage in intergroup competition at the group level. In other words, the instrumental function has a psychological component relating to the group-level self-definition (Jackson & Smith, 1999), which is more than simply gaining a distinctive identity and is not reducible to individual self-interest. Differentiation here is instrumental in a psychological sense, a refinement not always evident in RCT, where conflict often bears a more direct material relation to the achievement of group goals. Furthermore, it is hard to explain the results at Time 1 in terms of realistic conflict or interdependence of fate (Gaertner & Insko, 2000; Rabbie et al., 1989) because no material resources were at stake. Because the differentiation was mainly symbolic, we favor an explanation of these results in terms of SIT (Rabbie, 1993; Rabbie & Schot, 1990).

The fact that we only found a relation between differentiation at Time 1 and the positively formulated self-esteem items might be explained in terms of the paradigm used. Although participants might feel to some extent glad and good to be included in the group synthetic perceivers, it seems less plausible to feel regret because of inclusion in this minimal category. Related to this issue, Hunter, Platow, Howard, and Stringer (1996) and Rubin and Hewstone (1998) have proposed that domain-specific measures of self-esteem should be used to examine the relation between self-esteem and differentiation. Therefore, in Experiment 2, we included a more specific measure of self-esteem.

Although we obtained evidence for our model, some questions remain to be addressed. As stated in the introduction, we predict that the identity function has some primacy over the instrumental function: Without meaning, people will not engage in instrumental goal setting. We therefore conducted a second study in which we manipulated the possibility to differentiate at Time 1. We also sought to discern identity and instrumental motives more directly by means of additional measures and mediation analyses.

EXPERIMENT 2

In the second experiment, we manipulated the presence of a goal and the possibility to differentiate at Time 1 orthogonally, leading to four conditions: no goal, no differentiation; goal, no differentiation; no goal, differentiation; and goal, differentiation. Those in the no differentiation conditions rated the same pictures as those who could differentiate at Time 1, although there were no category labels attached to the pictures. As a check on our differentiation-opportunity manipulation, we expected that participants in the two differentiation conditions would favor their own group’s pictures more (and the outgroup’s pictures less) than those with no differentiation opportunity. The two differentiation conditions are identical to the conditions of Experiment 1. We therefore expected identical effects in the goal, differentiation condition as in the goal condition in Experiment
and will call this condition the instrumental condition. However, the current design also has interesting implications for the proposed identity function. If there is a fundamental motivation to differentiate one’s group positively from the outgroup, in the conditions where there was no opportunity to differentiate at Time 1, this motivation should still be evident at Time 2. In fact, this motivation may even be stronger after it has been blocked or delayed (Atkinson & Birch, 1970; Wicklund & Gollwitzer, 1982). Therefore, we also expected stronger differentiation at Time 2 for those who had no prior opportunity to differentiate compared to those who already had a prior differentiation opportunity. Moreover, if it is the search for a meaningful identity that drives the identity function, for those who had no prior possibility to differentiate and no group goal, the motivation to differentiate at Time 2 should be strongest because this constitutes the least meaningful situation of the design. Therefore, we will call the no goal, no differentiation condition the minimal condition. For those who had had no differentiation opportunity but who faced a group goal, the situation was probably more meaningful because they could derive meaning from the goal itself (i.e., interdependence of fate) (Rabie et al., 1989). This goal, no differentiation condition differs in an important respect from the instrumental condition. Because people in the goal, no differentiation condition did not have the opportunity to differentiate on the central dimension, we predicted that they would be less likely to engage in group-goal directed behavior than those who had. Although the goal can give meaning to the category, we thought they would be somewhat reluctant to work for a group when group distinctiveness for them has yet to be established.

In summary, we expected strongest differentiation, albeit for different motives, in the most minimal cell of our design (no goal, no differentiation) and the most instrumental cell of our design (goal, differentiation). Besides self-esteem, we also measured to what extent participants thought that there were instrumental reasons to differentiate. We expected self-esteem to be mediated by differentiation in the minimal condition (identity function) but not in the instrumental condition. In the instrumental condition, but not in the minimal condition, we expected instrumental motives to mediate differentiation (instrumental function).

A second objective of this study is to extend the current motivational analysis to negative contexts. That is, we changed the group goal from trying to win a prize to trying to avoid punishment. This punishment was operationalized by stating that the group with the worst pictures would have to stay in the lab to fill out additional questionnaires. There is evidence that discrimination within the MGP is stronger with respect to the allocation of positive as compared to negative resources (Mummendey & Otten, 1998). Changing the group goal to punishment avoidance can therefore be seen as a more conservative test of our model.

A final objective of this second experiment was to extend the current functional analysis to other psychological constructs relating to group identity versus instrumentality. To this end, we measured some additional variables: cohesion, identification, and effort. We proposed that the first two measures can have both an instrumental and an identity function. For instance, cohesion might be related to goal-directed behavior (Mullen & Copper, 1994) as well as being a reflection of positive distinctiveness (i.e., entitativity) (Brewer & Harasty, 1996; see also Hogg, 1992, for the identity function of cohesion). Moreover, people may on one hand identify with a group to give meaning to that category (identity function) (Tajfel & Turner, 1986) and on the other hand identify with a group as a preparation for social change (instrumental function) (Doosje, Spears, & Ellemers, 2002). We therefore predicted cohesion and identification to be highest in the minimal condition (identity function) and in the instrumental condition (instrumental function). We measured the effort participants invested in the task by means of the time they spent on the task. Because we thought effort might serve instrumental motives (winning the competition), we predicted that participants in the instrumental condition would spend the most time performing the task.

In summary, we expected the strongest effects on differentiation (and related measures) in the most minimal condition (no goal, no differentiation) and the most instrumental condition (goal, differentiation). We also expected differentiation in the minimal condition to mediate self-esteem (in keeping with the identity function) and differentiation in the instrumental condition to be mediated by instrumental motives (in keeping with the instrumental function).

Method

Participants and design. Seventy-six 1st-year psychology students (26 men and 50 women) participated in this experiment and received course credits. Their mean age was 21 and they were randomly ascribed to a 2 (group goal: no goal vs. goal) × 2 (differentiation opportunity: no differentiation vs. differentiation) between-participants design.

Procedure and independent variables. The procedure was identical to that of Experiment 1, with a few exceptions. In the conditions where there was no possibility to show differentiation, participants rated the same pictures at Time 1 as those rated by participants in the other conditions, but no category labels were attached to the pictures. It was simply stated that the pictures were made “by
groups of synthetic and analytical perceivers in earlier sessions of this research.” After the picture ratings, for those in the goal conditions, a goal was induced in the same way as in Experiment 1. However, in this second experiment, we changed the chance of winning a prize to the chance of avoiding punishment. Participants were told that the group with the worst pictures would have to stay longer in the lab to complete some additional questionnaires.

Dependent variables. We measured differentiation by means of picture ratings and by using a more general descriptive measure, as in Experiment 1. Also, at Time 2, the participants who did not have the opportunity to differentiate at Time 1 were given the possibility to do so along with the other participants.

Just before the group task, we measured perceived cohesion using five items. Because there are no established measures for assessing cohesion in minimal groups, we selected the items useful for this purpose from the measures described by Hogg (1992). An example is as follows: “Synthetic perceivers form a close-knit group.” During the task, we measured the effort participants invested in it. As an operationalization of effort, we measured the amount of time participants worked on the task.

The remaining constructs were measured after the group task and after the differentiation measures. We used six items to measure specific self-esteem with regard to the relevant dimension (creativity and good taste) in the intergroup situation. An example of a specific self-esteem item was as follows: “I’m pleased with the creativity of the group synthetic perceivers” (see Hunter et al., 1996; Rubin & Hewstone, 1998, for discussions of why dimension-specific self-esteem is the best measure for testing the relation between self-esteem and discrimination). We measured instrumental motives for differentiation with three items (e.g., “To what extent do you think participants differentiated between groups in this experiment to make their group stronger?”). We included the four identification items by Jetten et al. (1996). A typical example is as follows: “I feel strong ties with the synthetic perceivers group.”

Results

The data were analyzed using 2 (group goal: no goal vs. goal) × 2 (differentiation opportunity: no differentiation vs. differentiation) ANOVAs and MANOVAs. As in Experiment 1, there was no effect of gender in any of the analyses.

Intergroup differentiation. All participants reported their group membership correctly. We calculated differentiation measures on the basis of the picture ratings in the same way as in Experiment 1. The reliability of these scales was satisfactory (α > .71). The descriptive intergroup differentiation scale also proved to be reliable (α = .84). We included the picture ratings at Time 1 in a 2 × 2 ANOVA. There was only a main effect for differentiation opportunity, F(1, 72) = 4.80, p < .05. In line with the proposed manipulation, participants who had a differentiation opportunity at Time 1 favored ingroup pictures (M = 3.46) to a greater extent than did those who had no differentiation opportunity (M = 0.39). Moreover, the differentiation in these conditions differed significantly from zero (p < .05). We therefore can conclude that our differentiation opportunity manipulation succeeded.

The means with regard to the two differentiation measures at Time 2 are displayed in Table 1. We expected highest differentiation in the instrumental condition (goal, differentiation) and in the minimal condition (no goal, no differentiation). We analyzed the two differentiation measures at the multivariate level using a 2 × 2 MANOVA. There was a multivariate interaction between the two factors, F(2, 72) = 3.06, p < .05. As can be seen in Table 1, those in the minimal condition and in the instrumental condition showed highest differentiation on both measures at Time 2.

Although there were no univariate effects on the picture measure, there was a reliable univariate main effect for differentiation opportunity on the descriptive measure, F(1, 72) = 4.47, p < .05. Those who had no prior differentiation opportunity at Time 1 showed more differentiation at Time 2 (M = 35.38) than did those who had already had a differentiation opportunity (M = 25.88). The univariate interaction on the descriptive measure also was significant, F(1, 72) = 5.12, p < .05. Testing the univariate simple main effects revealed a marginally significant difference between the participants in the instrumental condition and the no goal, differentiation condition, F(1, 72) = 2.88, p < .10. The simple main effect between the minimal condition and the no goal, differentiation condition proved to be significant, F(1, 72) = 9.84, p < .01. In sum, participants differentiated to the strongest extent in the minimal condition and the instrumental condition. Although the multivariate differentiation interaction was significant and means are in the predicted direction, differentiation was stronger on the indirect (descriptive) than on the direct (picture) measure.

Identity and instrumental motives. The scales proposed to measure identity (self-esteem; α = .92) as well as instrumental motives (α = .80) both proved to be reliable. There were significant interactions on self-esteem, F(1, 72) = 7.92, p < .01, and on instrumental motives, F(1, 72) = 5.49, p < .05 (see Table 1). Self-esteem was reliably higher in the minimal condition than in the goal, no differentiation condition, F(1, 72) = 5.67, p < .05, and the no goal, differentiation condition, F(1, 72) = 5.79, p < .05. Further-
differentiation was attributed more strongly to instrumental motives in the instrumental condition than in the no differentiation condition, \( F(1, 72) = 4.60, p < .05 \). There were no other reliable simple main effects.

In sum, participants in the most minimal condition scored highest on self-esteem, whereas participants in the most instrumental condition scored highest on instrumental motives.

Following Baron and Kenny (1986), we tested mediation models corresponding to identity and instrumental functions. First, we tested whether self-esteem in the minimal condition was mediated by differentiation; second, we tested whether intergroup differentiation was mediated in the instrumental condition by instrumental motives. We tested mediation for specific simple main effects on differentiation because we had similar effects in the two critical conditions (i.e., differentiation was highest in the minimal condition and the instrumental condition) but expected different functions to be served by these two effects. In other words, showing mediation for the full interaction would not be sufficient for disentangling these different functions.\footnote{A strong case for different motives operating in different conditions would be made if the predicted mediator applies to one relationship (e.g., identity motives in the minimal condition) but not to the other (e.g., no identity motives in the instrumental condition). We used the descriptive differentiation measure in the analyses below because this was the only measure that revealed effects at the univariate level. We focused on the differences between the minimal and instrumental condition on one hand and (in both cases) the no goal, differentiation condition on the other because the critical comparison for the identity function is the presence and absence of a differentiation opportunity, and for the instrumental function, the presence or absence of a group goal. In other words, the comparison between the minimal condition and no goal, differentiation condition reflects the clearest comparison between those who had and those who did not have a differentiation opportunity at Time 1. Second, because we propose that the instrumental function does not come into play without some sense of group distinctiveness, to assess the instrumental function we compared those who had and those who did not have a group goal after a differentiation opportunity (i.e., no goal, differentiation condition vs. instrumental condition).

Full mediation requires three steps (Baron & Kenny, 1986): first, a relation between the criterion and the predictor (the original effect to be mediated; Step 1); second, a relation between the predictor and the proposed mediator (Step 2); and finally, a significant decrease of initial relationship between predictor and the criterion when controlling for the mediator (Step 3).

For the identity function, we tested whether the minimal condition–no goal, differentiation simple main effect on differentiation mediated the similar effect on

### Table 1: Means and Standard Deviations on Differentiation, Self-Esteem, Instrumental Motives, Cohesion, Identification, and Effort as a Function of Differentiation Opportunity and Group Goal (Experiment 2)

<table>
<thead>
<tr>
<th>Measure</th>
<th>No Differentiation</th>
<th>Differentiation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Goal (Minimal)</td>
<td>Goal</td>
</tr>
<tr>
<td>Differentiation on pictures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>7.40</td>
<td>3.36</td>
</tr>
<tr>
<td>( SD )</td>
<td>11.95</td>
<td>8.14</td>
</tr>
<tr>
<td>Descriptive differentiation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>30.83</td>
<td>30.68</td>
</tr>
<tr>
<td>( SD )</td>
<td>19.91</td>
<td>20.89</td>
</tr>
<tr>
<td>Self-esteem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>59.23</td>
<td>46.11</td>
</tr>
<tr>
<td>( SD )</td>
<td>16.50</td>
<td>19.14</td>
</tr>
<tr>
<td>Instrumental motives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>53.32</td>
<td>45.32</td>
</tr>
<tr>
<td>( SD )</td>
<td>23.16</td>
<td>19.71</td>
</tr>
<tr>
<td>Cohesion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>42.90</td>
<td>33.46</td>
</tr>
<tr>
<td>( SD )</td>
<td>21.16</td>
<td>17.41</td>
</tr>
<tr>
<td>Identification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>45.09</td>
<td>32.37</td>
</tr>
<tr>
<td>( SD )</td>
<td>24.59</td>
<td>20.42</td>
</tr>
<tr>
<td>Effort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>47.75</td>
<td>44.58</td>
</tr>
<tr>
<td>( SD )</td>
<td>14.66</td>
<td>14.12</td>
</tr>
</tbody>
</table>

\( n = 20 \) for the no differentiation condition; \( n = 19 \) for the differentiation condition.
self-esteem. Regressing self-esteem (the criterion) on differentiation opportunity (the predictor) resulted in a reliable effect: \( \beta = -0.37, p < 0.05 \) (Step 1). Moreover, the relation between differentiation opportunity at Time 1 and differentiation at Time 2 (the mediator) also was significant, \( \beta = -0.47, p < 0.01 \) (Step 2). When regressing self-esteem on descriptive differentiation and differentiation opportunity simultaneously, the effect of differentiation opportunity decreased, \( \beta = -0.12, p = 0.41 \), whereas the effect of the mediator remained significant, \( \beta = 0.51, p < 0.01 \) (Step 3). The Sobel test (see Baron & Kenny, 1986) showed that the decrease in the direct effect of differentiation opportunity on self-esteem when controlling for differentiation was reliable \( (Z = 2.42, p < 0.05) \). To assess whether identity motives also drove differentiation in the instrumental condition, we performed a similar analysis for the no goal, differentiation–instrumental condition simple main effect. However, there was no direct effect of group goal on self-esteem \( (p > 0.10) \) (i.e., no effect to be mediated). In sum, the effect on self-esteem in the minimal condition, but not that in the instrumental condition, was mediated by descriptive intergroup differentiation as predicted.

We then assessed whether higher differentiation in the instrumental condition was mediated by instrumental motives. To test this, we focused on the no goal, differentiation–instrumental condition simple main effect. The presence of a group goal (the predictor) marginally predicted differentiation (the criterion), \( \beta = 0.30, p < 0.08 \) (Step 1). Moreover, there was a significant effect of presence of a goal on instrumental motives (the mediator; Step 2), \( \beta = 0.40, p < 0.05 \). When regressing differentiation on instrumental motives and presence of a group goal simultaneously, the effect of group goal decreased, \( \beta = -0.14, p = 0.36 \), whereas the effect of the mediator remained significant, \( \beta = 0.45, p < 0.05 \) (Step 3). The Sobel test indicated a significant decrease of the initial effect of presence of a group goal \( (Z = 1.80, p < 0.05) \). When applying the same analyses to the minimal condition–goal, no differentiation simple main effect, no evidence of mediation was found. After controlling for instrumental motives, the initial effect of differentiation opportunity on descriptive differentiation remained significant and the Sobel test was nonsignificant. In sum, the effect on differentiation in the instrumental condition, but not the minimal condition, was at least partially mediated by instrumental motives.

Cohesion, identification, and effort. The scales for cohesion \( (\alpha = 0.83) \) and identification \( (\alpha = 0.88) \) both proved to be reliable. There were reliable interactions on cohesion, \( F(1, 72) = 4.77, p < 0.05 \), and identification, \( F(1, 72) = 5.89, p < 0.05 \). As can be seen in Table 1, the highest scores on these measures were in the minimal condition and in the instrumental condition.

There was also a significant interaction with respect to the time participants invested in the group task, \( F(1, 72) = 4.19, p < 0.05 \). As can be seen in Table 1, those who had a prior differentiation opportunity and who were then confronted with a group goal invested the most time in the task. The difference between the instrumental condition and the no goal, differentiation condition proved to be reliable, \( F(1, 72) = 4.52, p < 0.05 \).

Discussion

The results of Experiment 2 largely replicate and also extend those of Experiment 1. In the instrumental condition and the minimal condition, participants showed highest differentiation, cohesion, identification, and self-esteem. The results on the descriptive differentiation measure were mediated by instrumental motives in the instrumental condition but not in the minimal condition. Conversely, the results on descriptive differentiation mediated self-esteem enhancement in the minimal condition but not in the instrumental condition. In sum, we have evidence of an instrumental function of differentiation in the instrumental condition and an identity function in the minimal condition, in line with predictions. Finally, those in the instrumental condition put most effort into the task. This latter result shows that people who had a goal but no prior differentiation opportunity did not work for the (as yet nondistinctive) group.

The effects in the minimal condition are best explained, we would argue, as resulting from the active search for a meaningful and distinctive group identity. In this condition, the opportunity to seek group distinctiveness was blocked at Time 1. At Time 2, they showed highest differentiation, which was reflected in higher levels of self-esteem. Also with regard to the other measures (identification, cohesion), we propose that the participants in the minimal condition used these to give some meaning to an otherwise meaningless social category. Although the search for meaning and distinctive identity is central to the social identity approach (Tajfel, 1978; Turner et al., 1987), this is to our knowledge the first demonstration of this principle in operation. The fact that the identity motivation in this condition transferred to a later stage in the experiment in our eyes illustrates the fundamental nature of the motivation to give meaning to one’s group (Atkinson & Birch, 1970; Wicklund & Gollwitzer, 1982). Moreover, the fact that no significant increase in effort was observed in this condition is also consistent with the proposition that meaning ascription must precede an instrumental function and that effort is more instrumental than expressive of identity. Indeed, if we consider the levels of differentiation, and scores on the cohesion, identification, and self-esteem measures, these were always highest in the minimal condition (evidence for the identity function), and
the measure of effort is the only exception to this pattern.

We explain the effects in the instrumental condition in terms of an instrumental function of differentiation. The participants in this condition had the opportunity to differentiate their group in a meaningful way from the outgroup, a prerequisite for gaining a distinctive group identity in this context and allowing other motivations to operate. After that, they were confronted with a goal that could only be fulfilled by intragroup cooperation and intergroup competition. This instrumental motivation mediated differentiation, led to more effort in the task, and also was reflected in stronger group commitment and higher perceived cohesion. Of interest, participants in this condition also showed higher self-esteem than those in the two intermediate conditions, although this effect was not mediated by differentiation. We will return to this effect below.

Some explanation needs to be given for why the effects were stronger on the descriptive differentiation measure than on the picture ratings. These results do not replicate the findings in Experiment 1. The more negatively framed group goal might be responsible for this. As noted in the introduction to this experiment, people are more reluctant to differentiate on negative dimensions within the MGP (Mummendey & Otten, 1998). This second experiment can therefore be regarded as a more conservative test of our model. It is important to note that it was not the allocations that were negative in valence but rather the consequences of failing on the group task. However, participants still might have been more reluctant to differentiate on the dimension that directly affected the fate of ingroup and outgroup in this context (the attractiveness/beauty of the pictures). On a more abstract and indirect measure (the descriptive measure), participants were less reluctant to claim ingroup superiority. Taken one step further, the effect on the specific self-esteem scale in the instrumental condition can be interpreted as a superiority claim at an even more abstract (but dimension-related) level. Expressing pride and satisfaction with group performance can be regarded as favoritism on behalf of a solid group, moving to instrumental goals. In other words, in this more negative context, participants may have been reluctant to claim superiority directly when superiority meant punishing the outgroup, although at a more abstract level they still showed ingroup favoritism.

GENERAL DISCUSSION

We began this article by distinguishing between two different approaches to intergroup differentiation, one focusing on identity and the other focusing on interdependence and group goals. We proposed that both orientations are valid but that each provides a better explanation for differentiation under specific circumstances. We distinguished between the identity and instrumental functions of differentiation. The former is well elaborated by SIT (Tajfel & Turner, 1986) and the latter is represented by interdependence and realistic conflict approaches (Rabbie, 1993; see also Gaertner & Insko, 2000; Sherif & Sherif, 1969). We hypothesized that differentiation might have different functions in different contexts. Specifically, we predicted that under more or less minimal group circumstances, such as the MGP, differentiation might primarily serve an identity function, whereas under competitive intergroup circumstances, differentiation might serve an instrumental function.

In Experiment 1, we showed that differentiation can be a reaction to a new and as yet relatively meaningless group membership. We explained this effect, which was correlated with self-esteem, in terms of the search for a meaningful and distinctive group identity (Tajfel, 1969, 1978). That is, differentiation can help to define a group’s place within the social structure and indeed reassure its members that it actually exists as an entity. Later in the experiment, when the group was more meaningful due to prior differentiation and the performance of a group task, those with a competitive group goal differentiated to a stronger extent than those without such a goal. In the second experiment with a different design, it was again shown that participants are most likely to favor the ingroup either under meaningless situations (again reflected in higher self-esteem) or after differentiation has afforded a distinctive group identity that is also accompanied by an instrumental goal (instrumental function). Moreover, we showed that the two functions are also reflected in other psychological constructs relating to the group (identification, cohesion) and found evidence that the relevant functions mediated the relevant effects. Finally, we showed that primarily instrumental contexts (but not contexts driving identity motives) are related to greater effort on behalf of the group. This is in line with our argument that the instrumental functions can only come into play when the group has sufficient meaning to motivate instrumental behavior in the service of group identity.

A further theoretical contribution of these studies comes from the integration of psychological concepts into RCT and the suggestion that more than purely material interests are at work in the instrumental context. The role of intrapsychological mechanisms in RCT has remained somewhat ambiguous. The results in the most instrumental condition for the group cohesion, identification, and self-esteem measures in particular (Experiment 2) provide clear evidence of psychological effects that are difficult to reduce to self-interest (even the differentiation measures were not directly related to...
group outcomes). These psychological effects may be a passive reflection of the competitive nature of the situation or may represent more active psychological preparation for group mobilization.

The interactive pattern found in our data underlines any attempt to explain the group differentiation found in our studies exclusively in terms of one of the two theoretical traditions that are proposed to underlie the identity/instrumental distinction. For example, recent debates about whether the minimal group effect is best explained by interdependence principles or in terms of SIT suggest a quest for the critical experiment and one theory takes all (see, e.g., Bourhis, Turner, & Gagnon, 1997; Gaertner & Insko, 2000). The present findings are not consistent with this quest for a single explanatory theory or principle. Consider the minimal condition of Experiment 2, which in the present research is closest to the truly minimal group. If perceived interdependence and reciprocal expectations of rewards among group members in this condition were sufficient to explain differentiation, this would not explain why differentiation was lower in the adjacent conditions and then rose again in the most instrumental condition. For this reason, we think that a combination of these two theoretical traditions (social identity and interdependence) provides the most complete account of our data.

To conclude, what can the dodo offer the study of intergroup relations? Of course it is not our stance that all theories are essentially correct. However, when there is substantial evidence for two seemingly conflicting approaches, as is the case with the social identity and interdependence traditions, we think that both must have prizes. If this makes it sound like our dodo is sitting on the fence, we hope that this provides it with a vantage point viewing the two sides of the debate and thereby enables it (quite literally) to fulfill a moderating role. The revised dodo verdict should therefore be “both have won, both must have prizes, but in different contexts.”

NOTES

1. Throughout this article, we refer to intergroup differentiation, or differentiation for short, as a general tendency to differentiate the ingroup positively from the outgroup. We refer to the manifestation of this in terms of a tendency to judge or evaluate the ingroup as more positive than the outgroup as ingroup bias. We refer to the behavioral expression of this tendency as intergroup discrimination.

2. It is important to note that we do not mean that the social categorization process is itself meaningless but rather that it triggers a search for meaning when the categorization is minimal (and meaning is lacking).

3. It was explicitly mentioned that the database on which the first assessment of pictures was made was formed on the basis of a pretest and that the current study was the first in which mode of perceiving (i.e., the group distinction) would be linked to certain color combinations. In other words, this rules out the possibility of indirect self-interest and that participants would show ingroup favoritism because they expected the participants whose responses were in the database had done the same (a reciprocity principle; see Rabbie, 1993).

4. We also tested mediation for the full interaction by means of an ANCOVA procedure. Both mediations also were shown by means of these less specific analyses.

5. We dummy-coded the presence of a group goal (no goal vs. goal) and differentiation opportunity (no differentiation vs. differentiation) as 0 and 1. This means that the betas for the relations between differentiation opportunity on one hand and differentiation at Time 2 and self-esteem on the other are negative because in the minimal condition, no differentiation opportunity at Time 1 results in more differentiation and self-esteem at Time 2.

6. The directed nature of our prediction (i.e., we expected a decrease of the original effect) justified one-tailed testing.

REFERENCES


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