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What is This?
Context Effects on the Application of Stereotype Content to Multiple Categorizable Targets

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Two studies examined how the content of the stereotype of a multiple categorizable group differs depending on the comparative context in which this group is judged. In the first experiment, participants could categorize the target (either an individual or group) in terms of study major or in terms of university affiliation. The comparative context was manipulated to enhance the salience of one of the two categories. The results revealed that the stereotype content depends on the relative salience of the categories as determined by the comparative context. These results were replicated in a second study employing a checklist procedure showing that people actually assigned different stereotypic traits to the same group depending on the salient comparative context.

Although much research on social categorization and stereotyping has focused on a single group membership (e.g., gender or nationality), people can be categorized according to multiple groups. The same person can be categorized as a social psychologist, as a woman, or as a Dutch citizen. Accordingly, Smith, Fazio, and Cejka (1996) have suggested that more attention should be paid to possible categorizations on multiple dimensions because this is more representative of the way in which people can be perceived. The limited number of studies that have addressed multiple category memberships have mainly focused on cognitive aspects of categorization such as information processing, assessing memory and reaction times, or on cross-categorizations and ingroup bias, but variations in stereotype content have not been examined.

Thus, research has neglected the possible effects of the activation of multiple categories on the actual content of stereotypes (see Stangor & Lange, 1994). Nevertheless, stereotype content is important because it reflects evaluations of the group and can influence how one behaves toward members of that group. For instance, the stereotype of women might entail being both caring and precise, whereas contextual factors may determine whether a woman is seen as caring or precise. It is important to examine the activation of social categories as well as the application of the stereotypic content that is associated with these categories (Kunda & Sinclair, 1999). We argue that the same target may be perceived in different ways depending on the relative salience of the categories, which in turn can influence the content of the particular stereotype that is applied. To the extent that stereotypes are context-dependent, different reactions to the same target may be expected in different contexts. For example, the same group of young women might be reacted to quite differently in the presence of a group of older women (i.e., when the distinction young/old is salient) than when surrounded by a group of young men, resulting in a relative stronger categorization according to gender. In principle, these young women can be perceived as being both youthful and emotional; in a gender context, the emotional part of the stereotype may be more likely to be applied than in the age context. The current study will examine the effect of comparative context on the relative salience of one of multiple possible categories and how this affects the content of the stereotype.

Research examining how one of multiple possible categorizations is activated has attempted to identify factors...
that influence the relative salience of one category over another. A number of studies have investigated category activation and category use with cognitive measures such as lexical decision tasks and name confusion paradigms. In general, it has been shown that people use accessible categories to store and retrieve social information pertaining to targets defined by a single category (Biermat & Vescio, 1993; Brewer, Weber, & Carini, 1995; Miller, 1988; Taylor & Falcone, 1982) as well as for the categorization of targets on the basis of multiple categories (Fazio & Dunton, 1997; Ford, Stangor, & Duan, 1994; Stangor, Lynch, Duan, & Glass, 1992; van Knippenberg, van Twuyver, & Pepels, 1994; Zarate & Smith, 1990). Categorization effects have been shown for externally visible category memberships such as race and gender but also for categories based on less apparent features such as academic status, major subject of study, or university town.

Furthermore, category activation and category use have been shown to be influenced by situational factors such as the topic of discussion (e.g., van Knippenberg et al., 1994) as well as perceiver-related factors such as the perceiver’s own group membership (Zarate & Smith, 1990). Thus, these studies have shown that a number of factors can affect the categorization process and may lead to the use of one category over another—in principle, equally possible—category.

Macrae, Bodenhausen, and Milne (1995) have shown that priming either one of two competing categories on the basis of which the target may be described (gender and race) indeed results in stronger activation of the primed category and inhibition of the other category. That is, when a videotape featured a Chinese woman and the category “women” was primed, participants took less time on a lexical decision task for words associated with women than for words associated with Chinese. When the race category was primed, the opposite pattern emerged. This indicates that in addition to category activation the actual inhibition of other alternative categories also may play a role in the categorization process (Bodenhausen & Macrae, 1998). Recently, Sinclair and Kunda (1999) showed that when people had to judge a Black doctor (who could be categorized either as a doctor or a Black person) who had just criticized them, the negative racial category was activated and the positive occupational category was inhibited. For participants who received positive feedback, the opposite pattern occurred; the positive category was activated and the target was perceived as a doctor rather than as a Black person. On the basis of these findings, Sinclair and Kunda (1999) argued that people purposely activate and inhibit categories and thus are able to select from the available categories those they want to use in their judgments.

Although the above studies have shown that the use of one of multiple categories depends on which category is most salient, in previous work, the categorization effects were assessed in terms of the accessibility in memory of some categories rather than others. Although various authors (Macrae et al., 1995; Smith et al., 1996; Stangor et al., 1992) have, more or less explicitly, argued that a shift in categorization also should result in a change in the content of the resulting stereotypic image, stereotype content has not been systematically measured. Even when trait ratings have been examined, they have primarily concerned evaluative judgments rather than specific stereotypes. Furthermore, these judgments were only related to the use of single categories, and the results did not lead to firm conclusions about the relationship between judgments and the different categorizations used.

In another body of research examining shifts in stereotype content depending on the salience of a particular category, the focus has been on the effects of the social comparative context (Haslam & Turner, 1992; Haslam, Turner, Oakes, McGarty, & Hayes, 1992). In this work, it is argued that the comparative context in which categorization takes place determines which category becomes salient. The assumption is that when the same target is categorized in different ways, depending on the context, a different associated stereotype content may emerge. As a result, young women may be described in gender stereotypic terms when compared with young men but in age stereotypic terms when compared to older women.

Although context may have an effect on the salience of categories, the empirical studies examining stereotype content have mainly focused on the categorization of groups along a single category dimension (Doise, Deschamps, & Meyer, 1978; Spears & Manstead, 1989). Perceptions of the same group can differ depending on the relevant comparison group with which it is contrasted. Haslam and Turner (1992) showed that people attribute different characteristics to the same group depending on their frame of reference. They found that either by introducing a comparison group or varying the nature of the comparison group, shifts in the categorization occur and different stereotype content relating to the same target is applied. Similarly, Doosje, Haslam, Spears, Oakes, and Koemen (1998) concluded that drama students were judged differently depending on whether they were compared to sociology or physics majors. Hopkins, Regan, and Abell (1997) showed that shifts in stereotype content occurred as a result of changes in the comparative context and that these shifts were dependent on the relevance of the comparative dimension. Effects of context only emerged on dimensions that were relevant for the distinction between the
two comparison groups but not on dimensions irrelevant to this distinction. These studies provide support for the general notion that the comparative context affects activation of social categories and in this way determines what stereotype content will be applied. Thus, the comparative context in which the judgment of a group takes place determines how this group is perceived; as a result, the relevant content of a particular group stereotype may vary from one context to the other.

In summary, studies focusing on multiple categories and studies concerning the effects of context on categorization differ in their focus of interest. Whereas the multiple category studies from the cognitive tradition mainly focus on cognitive representations of the categories, studies concerning comparative context effects with single category memberships have mainly addressed stereotype content as a dependent variable. Because both aim to examine the relationship between stereotypes and social categorization, integrating these research traditions will lead to a better understanding of how social categorization affects actual stereotype content.

A further distinction between the multiple category studies and context studies lies in the target of categorization. In the multiple category studies, the target is usually an individual who can represent different groups or categories, whereas in the context studies, the target is always represented at the group level. In other words, in the context studies, it is clear that the stereotype of a complete category is examined; in the multiple categorization studies, the target is less clearly defined as a group representative. To the extent that an individual group member is the target, it is feasible that this particular individual is simply categorized differently depending on the salient social context. However, the added value of studying a group target is that it will enable us to demonstrate that similar shifts in perceived stereotype applicability occur when we assess the extent to which stereotypic traits are seen as characteristic of the group as a whole.

The current study is designed to examine whether the social comparative context as defined by the presence of other social groups will lead to shifts in social categorization and application of the stereotype content to the same multiple categorizable target. A target group defined on two crossed categories (major subject of study and university) will be compared with another group also defined by these categories. The other group either provides a comparison in terms of one category or the other (i.e., either major subject of study or university). We predict that this contrast will determine the accessibility of one category relative to the other and that this will be reflected in the content of the judgments of the target. In this study, stereotype content is defined by both traits and behaviors. Traditionally, stereotype content has been measured with traits only, but stereotypes also include expectations of behaviors (Anderson, 1990) and both are relevant to predict the social consequences of categorization and stereotyping. We expect that increased salience of one category dimension will lead to an increase in the perceived applicability of both stereotypic traits and behaviors associated with this dimension, as well as a reduction in the application of traits and behaviors stereotypically associated with the alternative, less salient, category dimension.

Our main prediction is that the comparative context in which categorization takes place will determine which of the two possible categories (study major or university affiliation) is relatively salient and which traits and behaviors are ascribed to the target. In our study, this should emerge in a Context × Trait/Behavior Type interaction, with the traits and behaviors that are stereotypic for the major category being applied more when the major category is most salient, whereas enhancing the salience of the university category should result in greater perceived applicability of stereotypic university traits and behaviors for the same individual or group target. Because the dimension of comparison should be relevant to the comparisons being made, no such effect is predicted for traits neutral (i.e., irrelevant) to the stereotype. Judgments in the two context conditions are compared with a condition where no comparative context is provided as a base-rate measure of stereotypic trait and behavior ascription.

PRETESTING

A pilot study was conducted to assess which stereotypic traits are generally associated with the categories used, namely, (a) students from the University of Amsterdam (UA) and (b) students majoring in economics. One set of students at the Free University Amsterdam (n = 17) was asked about their stereotype of UA students and another set of students from the same university (n = 13) was asked about their stereotype of students majoring in economics. Participants first had to generate five traits stereotypic of the target group. Then they had to rate the applicability of a list of 52 traits to the target. Ratings were given on 7-point Likert-type scales with the endpoints labeled not at all applicable to completely applicable.

Traits were considered for selection if their mean applicability ratings were higher than the scale midpoint (4). We then selected the most stereotypic traits for each category for use in the main study, as well as the most frequently named self-generated trait. This resulted in a set of six university stereotypic traits (i.e., creative, sociable, alternative, adventurous, relaxed, nonchalant) and six major stereotypic traits (i.e., career oriented, ambitious, value status, arrogant, materialistic, prosperity ori-
ent). Furthermore, we selected four neutral traits that were neither stereotypic of UA nor economics students (i.e., active, talented, assertive, and intelligent). For each of the stereotypic traits, one or two corresponding behaviors were generated (e.g., “to conceive original ideas” should reflect the trait “creative”; “willing to take extra classes” for the trait “ambitious”), making a total of 15 behaviors (8 economics, 7 UA). No neutral behaviors were generated.

STUDY 1

Method

OVERVIEW

In this study, participants made stereotypic trait and behavior judgments regarding either an individual target or a group target. This target could be categorized on two crossed category dimensions. Depending on the experimental condition, one of these dimensions was made salient by manipulating the context in which the target was judged. The context was manipulated by varying the category membership of a comparison individual or group. In addition, a control condition was included in which no comparative context was given.

PARTICIPANTS AND DESIGN

A total of 84 non-economics students (63 women, 21 men) at the Free University of Amsterdam participated in this study; 60 were randomly assigned to one of the context conditions and 24 to the no-context condition. The study employed a 3 (context: major, university, no context) × 2 (target: individual, group) × 2 (stereotypic trait type/behavior: major, university) mixed design, where the last factor was within-subjects.

PROCEDURE

Cover story and description of the target. The study was introduced as an investigation of how people form an impression about someone they do not know well and have very little information about. In the individual target condition, participants were told that they were to act as a personnel manager who has to make a selection between applicants for a job as a “junior policy maker” and that they therefore had to judge a specific applicant. The target applicant was always described as “Mark, a student of economics at the University of Amsterdam.” Some additional information was given to render the assignment more credible (e.g., the age and extracurricular activities of the target person). This information was kept constant across experimental conditions.

The group target condition was the same as the individual target condition in all respects, except that the job applicant cover story was slightly adapted to make it plausible that a group of applicants had to be judged. Participants were to pretend that they were working in a job center and had to set up a database of potential candidates for a variety of jobs. Two groups of candidates were to be invited for interviews and participants would have to select one of these groups to stay in the database. The applicants were described as coming from a specific group of students, namely, students of economics at the UA. Additional information on their mean age and extracurricular activities also was provided, and this was constant across experimental conditions.

Manipulation of comparative context. In the two context conditions, the context in which the target was judged was manipulated by providing a description of a comparison target. The comparative context was varied by contrasting the target with another applicant (in the individual condition) or another group of applicants (in the group condition) with either a different major or a different university affiliation. In the major context condition, the comparison target was said to come from the same university as the target (UA) but supposedly had a different major (sociology), whereas in the university context, the comparison target was said to have the same major as the target (economics) but came from a different university (University of Leiden). In the no-context condition, no information about a comparison person or group was provided.

Dependent measures. After reading these descriptions, participants were asked to rate in a random order the applicability of 16 traits to the target (αmajor = .87, αuniversity = .68, αnostereotypic = .49). Participants also rated the likelihood of the target performing each of 15 behaviors (αmajor = .85, αuniversity = .59). Both traits and behaviors were rated by ticking the appropriate spot on a continuous line, ranging from 0 to 100 with the scale endpoints labeled not at all applicable to completely applicable. Participants only rated the individual or group target and not the comparative individual or group.

Two additional questions were used to examine the perceived prototypicality of the target for either category. Prototypicality is the degree to which a target stimulus is seen as representative of a category. Participants rated how prototypical the target was of the major category in general and of the university category in general on a 7-point scale ranging from 1 (not at all prototypical) to 7 (very prototypical).

Results

Preliminary analyses showed that there were no significant differences in judging individual or group targets; therefore, the data were collapsed over targets.

STEREOTYPIC TRAITS

Trait ratings were subjected to a 3 (context: major, university, no context) × 2 (trait type: major, university)
mixed-design analysis of variance with repeated measures on the last factor. This analysis yielded a significant main effect of trait type, \( F(2, 79) = 34.05, p < .001 \). Overall, major stereotypic traits were found more applicable \((M = 62.03)\) to the target than university stereotypic traits \((M = 49.18)\). However, this effect was qualified by the predicted significant interaction of context and trait type, \( F(2, 79) = 16.83, p < .001 \). As can be seen in Figure 1, in the major context condition, major stereotypic traits \((M = 70.02)\) were considered more applicable to the target than in the university context condition \((M = 51.54)\), \( F(1, 59) = 24.58, p < .001 \). For the university stereotypic traits, the opposite pattern emerged. University stereotypic traits were considered more applicable to the target in the university context condition \((M = 54.99)\) than in the major context condition \((M = 45.03)\), \( F(1, 59) = 9.17, p < .005 \). The stereotypic trait ratings in the no-context condition fell in between the two context conditions \((M_{\text{major}} = 63.23, M_{\text{university}} = 47.68)\), as further indicated by a significant linear trend observed over context conditions for major traits, \( F(1, 81) = 10.83, p < .002 \). Of importance, comparative context did not affect the ratings of the target in terms of neutral (nonstereotypic) traits \((M_{\text{major}} = 59.63, M_{\text{university}} = 61.35, M_{\text{no-context}} = 59.24)\), \( F(2, 79) < 1 \). This indicates that the context manipulation only affected the application of the stereotypic traits to the target, whereas ratings with respect to nonstereotypic traits remained the same over different comparative contexts.

The perceived applicability of the stereotypic traits is thus influenced by the comparative context, with the traits specific to the context-activated category perceived as more applicable to the target and the traits that are relevant to the alternative categorization seen as less applicable. In comparison to the condition in which no comparative context was provided, the ratings in the context conditions were higher for traits relevant to the category and lower for traits relevant to a category not salient in that context, although not all the contrasts with the no-context condition were statistically significant. Finally, no effect of context on nonstereotypic traits was observed.

**STEREOTYPIC BEHAVIORS**

Behavioral ratings were analyzed with a 3 (context: major, university, no context) × 2 (behavior: major, university) mixed design with repeated measures on the second factor. A main effect of behavior type was found, \( F(1, 79) = 160.85, p < .001 \). Overall, major stereotypic behaviors were found more applicable to the target \((M = 70.24)\) than were university stereotypic behaviors \((M = 47.24)\). More important, the predicted interaction between context and behavior was significant, \( F(2, 79) = 9.28, p < .001 \). Resembling the results we obtained for stereotypic traits, in the major context condition, major stereotypic behaviors \((M = 74.60)\) were considered more
applicable to the target than in the university context condition ($M = 64.03$), $F(1, 59) = 11.74$, $p < .001$. For the university stereotypic behaviors, the opposite pattern emerged. University stereotypic behaviors were considered more applicable to the target in the university context condition ($M = 51.53$) than in the major context condition ($M = 44.72$), $F(1, 59) = 8.03$, $p < .01$ (see Figure 1). Again, the behavior ratings in the no-context condition fell in between the context conditions ($M_{\text{major}} = 71.98$, $M_{\text{university}} = 46.32$), resulting in a significant linear trend over conditions for major behaviors, $F(1, 81) = 12.71$, $p < .001$, as well as for university behaviors, $F(1, 81) = 8.67$, $p < .01$. Thus, in addition to the effect of the comparative context on the stereotypic traits, the perceived applicability of stereotypic behaviors was similarly influenced by the comparative context. Although the target remained identical, different stereotypic behaviors were perceived as applicable depending on whether they were relevant to the comparative context. In accordance with the results obtained for the stereotypic trait ratings, as compared to the no-context condition, applicability ratings for the behaviors referring to the most salient dimension were increased and ratings for the behaviors related to the alternative categorization were attenuated.

PROTOTYPICALITY RATINGS

To assess whether differences in perceived prototypicality of the target could account for the effects of the comparative context on stereotype application, perceived prototypicality ratings for university and for major were separately subjected to an analysis of variance with a single factor with three levels (context: major, university, no context). For the perceived prototypicality of major, there was no significant effect of context, $F(2, 82) < 1$. The effect was significant for prototypicality of university, $F(2, 82) = 12.13$, $p < .001$. We then examined whether this measure of prototypicality could serve as a mediator for the effect of the two comparative context conditions on the trait and behavior ratings (see Baron & Kenny, 1986). However, the relationship between prototypicality and trait ratings proved not to be significant, $\beta = -.25$, $t(59) = -1.94$, $p = \text{ns}$. Similarly, the relationship between prototypicality and behavior ratings was not significant, $\beta = -.14$, $t(59) = -1.08$, $p = \text{ns}$. Hence, in this study, prototypicality should not be considered a mediator of the context effects obtained.

Discussion

We demonstrated that the influence of the comparative context on the relative salience of two competing category dimensions is reflected in the stereotype content. That is, the same individual or group target was judged differently in terms of stereotypic traits and behaviors in different comparative contexts. Specifically, in a context where a categorization according to study major is rendered salient, the major category dimension is used in judgments and the target is stereotyped primarily in terms of major stereotypic traits and behaviors. However, when the university category seems more relevant given the context, the target is described more in terms of university stereotypic traits and behaviors. In other words, the stereotypic view of the same target was consistent with the most salient category in the specific comparative context.

Furthermore, our results revealed that the stereotypic traits and behaviors associated with a salient category were applied more than in a context in which no context was manipulated. Moreover, in accordance with the findings by Macrae et al. (1995) and Sinclair and Kunda (1999), the applicability of traits and behaviors associated with the nonsalient category seems to have been attenuated when compared to the base level of applicability provided by the no-context condition. Thus, although from our results it is not possible to conclude that category use itself was activated or inhibited, we can conclude that the application of the stereotype seemed to be enhanced or suppressed in different context conditions. Of importance, differential application not only occurred for stereotypic traits but also for expectations about concrete stereotypic behaviors. However, we found no such effect for neutral nonstereotypic traits. The fact that we do not find any context effects on nonstereotypic traits indicates that the results we obtained cannot be explained as simple scale-anchoring effects, that is, as resulting from different anchors being used in relation to different comparison groups.

Although it is possible that people make differential judgments about individual targets and group targets, no evidence for such a difference was found. The results yielded similar effects for individual and group targets, showing context-dependent stereotyping emerged for both targets. Possibly, this is due to the fact that in this study, very little individuating information was given about the individuals to be judged, which may have caused participants to judge the individual target only in terms of group membership, resulting in judgments similar to judgments made of the group as a whole (Fiske & Neuberg, 1990). It is nevertheless important that we found similar effects for the group target because previous results have only been obtained in studies relating to individual targets.

However, this first study does not enable us to rule out a number of alternative explanations. To be able to interpret the results concerning activation and inhibition of the traits associated with different categories, the inherent (in)compatibility of stereotypic traits needs to be further examined. It might seem that the major stereotypic traits and the university stereotypic traits are opposites,
and that such an inverse relation between the different stereotypic traits might strengthen the activation/inhibition effect on the trait ratings to the extent that there is a logical relation between the two. If the traits associated with the different categories can be considered opposites, one might expect that when the applicability of the traits associated with one category increases, the applicability of the traits associated with the other category will decrease. To show actual activation/inhibition, we have to demonstrate that there is no intrinsic incompatibility between the two sets of traits/behaviors.

The second question is related to whether the shifts in stereotyping emerge because the target is categorized differently in different social contexts. In our opinion, the context effects on stereotype content are caused by shifts in the relative salience of the different possible categorizations because the relative salience of category dimensions is context dependent (Ellemers & van Knippenberg, 1997; Haslam & Turner, 1992; Oakes, Haslam, & Turner, 1994). Thus, although we believe that our results are, at least partly, caused by the way the target group was categorized, we did not measure category activation as such. Thus, it remains unclear whether the context caused people to see the target group as either exclusively economics or exclusively UA students and was therefore judged differently or whether it was the relative salience of the categories that determined the stereotype content. We think of a group stereotype as a broad constellation of traits and behaviors that may generally be considered characteristic for a particular group, but with some perceived as more relevant depending on the salient social context in which stereotypic judgments are made (Oakes et al., 1994). For example, whereas the stereotype of women contains many aspects (e.g., caring and precise), they might be seen as caring only when this seems to be an appropriate term to describe them in the specific social situation (e.g., nursing children at home) but not in other situations (e.g., at work). Thus, the stereotype of the group as such does not change with shifts in the context, but different aspects of the stereotype are being used as they seem relevant. For this reason, different subsets of traits of the same overall stereotype will be used in different social contexts. This is in accordance with self-categorization theory (SCT) (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), which argues that stereotypes are fluid and their application is context specific.

STUDY 2

To further examine the relationship between categorization and stereotype application, we conducted a second study. In addition to the measures used in the first study, in the second study, another measure of stereotype application was added. We examined the application of stereotypic traits with a checklist procedure (Haslam et al., 1992; Katz & Braly, 1933). Asking for a selection of stereotypic traits enables us to assess whether perceivers will choose different traits to describe the target. This will take us one step forward in understanding the application of stereotypes. Instead of demonstrating variations in the degree of applicability, we can examine whether a change of context may elicit a concern with different characteristics.

In addition to including a checklist measure, a number of other changes were made to the second study. Only ratings for the group target were made. For the sake of comparability of the two studies, we employed the same target group and context conditions as in Study 1. In addition to ratings of perceived prototypicality, we also obtained a more direct indication of how participants categorize the target group. This measure was included to further examine the process underlying the assignment of stereotypic traits and behaviors. Finally, we included some additional measures to investigate the perceived compatibility of the different stereotypic traits associated with the categories used.

In short, the second study will serve as a replication and extension of the first, adding a different stereotype measure and including some further measures to more closely examine the processes involved in the context effects on stereotype application.

Method

PARTICIPANTS

Eighty students (55 women, 25 men) from the Free University Amsterdam participated in this study. Participants were randomly assigned to one of the three conditions, resulting in a single factorial design with three levels (context: major, university, no context).

PROCEDURE

In this study, only the group target (students of economics at the UA) was used. After the introduction of the target and, where applicable, the comparison group, participants completed an adjective checklist. Participants were asked to select from a list of 52 trait adjectives (see pretest) those 6 that they felt were most applicable to the target group.

Participants then completed the dependent measures used in the previous study; that is, they rated the applicability of stereotypic traits and behaviors as well as prototypicality of the target for the two categories. We also included a new measure to capture how people categorized the target group, namely, by asking them to indicate the degree to which they had focused on the fact that the target group concerned students of (1) economics to (7) UA while judging this group.
As an indication of trait compatibility, we asked participants to rate the likelihood that pairs of traits might co-occur in a group. Concerning the traits stereotypic of different groups, participants were asked whether the same group could simultaneously be viewed as “ambitious” (stereotypic of economics majors) and “sociable” (stereotypic of UA). They also were asked to indicate the likelihood that traits stereotypic of the same group might co-occur, for example, “sociable” and “adventurous” (both stereotypic of UA). We thus were able to examine the coherence of the stereotypes as well as the compatibility of the university stereotype with the major stereotype.

Results

TRAIT SELECTION

We examined the frequency with which a trait was selected from the list in each of the experimental conditions. We see a different pattern of trait selection for the major context condition and the university context condition (only traits with a selection frequency of 20% and higher are reported). Traits selected in the major context were, in descending order of selection frequency, (a) career oriented, (b) value status, (c) prosperity oriented, (d) superficial, (e) realistic, (f) involved in politics, (g) self-confident, and (h) individualistic. In the university context, the following traits were selected: (a) career oriented, (b) ambitious, (c) prosperity oriented, (d) self-confident, (e) relaxed, (f) value status, (g) sociable, (h) nonchalant, (i) motivated, and (j) friendly. In the no context condition, the traits selected were (a) career oriented, (b) prosperity oriented, (c) value status, (d) ambitious, (e) realistic, (f) self-confident, and (g) motivated.

Differences in the frequency of trait selection were obtained under context conditions (see Table 1). Whereas some traits were equally likely to be selected by participants in different context conditions, others only emerged in particular context conditions. Furthermore, and important to our hypothesis, in the university context condition, stereotypic university traits were frequently selected, whereas in the major context condition, they were rarely selected, and vice versa. When no comparative context was induced, stereotypic traits were selected that were similar to those selected in the major context (e.g., value status and self-confident) as well as those that were selected in the university context (e.g., ambitious and motivated). In short, the results from the checklist procedure show that participants select different traits to describe the same target group depending on the context in which this group is judged.

TRAIT COMPATIBILITY

Stereotypic traits for the same category (major with major and university with university) are perceived to be quite compatible (mean likelihood of co-occurrence: $M_{\text{major}} = 88.43$, $M_{\text{university}} = 78.80$). The compatibility of traits stereotypic of different categories (major with university) is somewhat lower ($M_{\text{major-university}} = 60.53$) but still significantly higher than the midpoint of the scale, $F(1, 78) = 57.60, p < .001$. In addition, there was no significant effect of comparative context on perceived compatibility of traits stereotypic of different categories, $F(2, 77) = 1.54, p = n.s$, ruling out a possible mediating role of trait compatibility for the relationship between context and trait ratings.

### STEREOTYPE APPLICABILITY RATINGS

**Stereotypic traits.** Trait ratings were subjected to a 3 (context: major, university, no context)$\times 2$ (trait type: major, university) mixed-design analysis of variance with repeated measures on the last factor. This analysis yielded a significant main effect of trait type, $F(1, 79) = 141.50, p < .001$. Overall, major stereotypic traits were found more applicable ($M = 71.52$) to the target than university stereotypic traits ($M = 43.78$). This effect was qualified by the predicted significant interaction of context and trait type, $F(2, 79) = 6.50, p < .005$. In the major context condition ($M = 77.98$), major stereotypic traits were considered more applicable to the target than in the university context condition ($M = 66.99$), $F(1, 52) = 8.95, p < .005$. For the university stereotypic traits, the opposite pattern emerged. University stereotypic traits were rated more applicable to the target in the university context condition ($M = 49.11$) than in the major context condition ($M = 39.37$), $F(1, 52) = 7.30, p < .01$. The stereotypic trait ratings in the no-context condition again fell in between the two context conditions ($M_{\text{major}} = 69.84$, $M_{\text{university}} = 42.72$), as further indicated by a significant linear trend observed over context conditions for major traits, $F(1, 79) = 8.99, p < .005$, as well as for university traits, $F(1, 79) = 8.65, p < .005$. In addition, as predicted, there was no significant effect of context on the ratings on the neutral (nonstereotypic) traits ($M_{\text{major}} = 61.59$, $M_{\text{university}} = 57.23$).
Overall, the target was categorized more as an economist than in the major context condition (M = 78.89), major stereotypic behaviors were considered more applicable to the target than in the university context condition (M = 73.48), F(1, 52) = 4.15, p < .05. University stereotypic behaviors were, however, considered more applicable to the target in the university context condition (M = 51.14) than in the major context condition (M = 40.93), F(1, 52) = 9.18, p < .005. Furthermore, the behavior ratings in the no-context condition fell in between the context conditions (Mmajor = 75.37, Muniversity = 42.53), resulting in a significant linear trend over conditions for major behaviors, F(1, 79) = 10.21, p < .005. As for the stereotypic traits, for stereotypic behaviors we again replicate the findings of Study 1 (see Figure 1).

**Discussion**

The second study replicated and extended the results obtained in Study 1. This time, we showed context-dependent stereotype application by employing a checklist procedure. Whereas there was some overlap in the selection of stereotypic traits between the context conditions, differences between context conditions were profound. The same traits that were selected as highly applicable to the target group in one context were considered less or not at all applicable to the same target in the other comparative context. Whereas traits stereotypic of the university were rarely selected by participants in the major context condition, they were selected by a considerable proportion of the people in the university context condition. Thus, when placed in a university context condition, the university affiliation of the target strongly qualifies the stereotype applied to this group. In the no-context condition, participants selected traits corresponding to those selected by participants from either context condition, indicating that perceivers acknowledged both category memberships of the target. This combination of traits assigned to the target in the no-context condition (in addition to the compatibility ratings) confirms that the two stereotypes are not seen as mutually exclusive. This indicates that (in)compatibility of traits is not the reason that application of the one results in suppression of the other.

Interestingly, whereas for instance both “value status” and “ambitious” can be considered stereotypic traits for students of economics, the first is mainly selected in the major context condition, whereas the latter is mainly chosen in the university context condition. This indicates that a stereotype of one and the same group may contain many different traits but that some of these might be applicable in one situation, whereas others seem more apt to be used in a different situation.

### Prototypicality and Categorization

Further analyses revealed that the context manipulation did not affect the perceived prototypicality of the target for the university category, F(2, 79) = 1.68, p = ns, or the major category, F(2, 79) = 1.35, p = ns.

We did, however, find a significant effect of context on the categorization of the target, F(2, 78) = 3.44, p < .05. Overall, the target was categorized more as an economics student than a UA student in all contexts, but more so in the major context condition (M = 1.69) than in the university context condition (M = 2.67), F(1, 52) = 6.71, p < .05. Ratings of the no-context condition fell in between (M = 2.15) and did not differ significantly from either context condition.

Because the context manipulation did affect categorization, we tested whether categorization mediated the comparative context effects for trait and behavior ratings. For trait ratings, first a direct relationship between the comparative context and trait ratings was found, \( \beta = -.42, t(52) = -3.26, p < .01 \). Second, the context was predictive of the categorization, \( \beta = .34, t(52) = 2.59, p < .05 \), and categorization was predictive of trait ratings, \( \beta = .44, t(52) = -3.51, p < .001 \). However, when both context and categorization were entered into the equation simultaneously, the relationship between context and trait ratings was less strong but remained significant, \( \beta = -.30, t(52) = -2.34, p < .05 \). For ratings of behaviors, similar analyses revealed that context was a significant predictor of behavior ratings, \( \beta = -.44, t(52) = -3.48, p < .01 \), and categorization was predictive of behavior ratings, \( \beta = -.50, t(52) = 4.10, p < .001 \). Again, when both context and categorization were entered into the equation, the indirect effect of context on behavior ratings was reduced but remained significant, \( \beta = -.30, t(52) = -2.46, p < .05 \).

Thus, evidence was obtained that the level of categorization only partially mediated the effect of context on trait and behavior ratings. This indicates that although the target is categorized differently in the different context conditions, the categorization of the target cannot fully explain the obtained effects of context on the application of stereotypic traits and behaviors.
When comparing stereotypic trait selection with applicability ratings, it is important to note that although some traits are less likely to be selected in some conditions, they still might be found applicable when rated separately. And similarly, the fact that some traits are selected by most people does not mean that there is no variation in the ratings of the perceived level of applicability. There is both considerable overlap and important differentiation between the judgments in the different context conditions. It seems that the stereotype about the group does not completely change but that the level of applicability of stereotypic traits shifts with variations in context.

The stereotype about a group may consist of many different traits of which the level of applicability varies with variations in the social context. Instead of the target as a whole being categorized differently, it seems that the stereotype content seems to shift from one context to another (Haslam et al., 1992). These results attest to the argument made by SCT (Turner et al., 1987) that the content of stereotypes is fluid and that perceived applicability is dependent on the social context. This notion is further supported by the results with respect to the trait behavior ratings, which were highly similar to those obtained in Study 1. By using the same measures as in Study 1 concerning the application of stereotypic traits and behaviors, we again showed an effect of comparative context on applicability ratings.

The second study also enabled us to rule out some alternative explanations for the results of the first study. An important question that remained to be answered was whether the shift in the application of stereotype content was caused by a different categorization of the target group. Whereas we tried to get an indication of this by measuring prototypicality in the first study, in the second study we more directly assessed how the target group was categorized. This information enabled us to examine whether the differences between the contexts could be ascribed to changes in categorization of the target group. We were able to demonstrate that the target was categorized differently across context conditions. Overall, participants perceived the target group more in terms of major than in terms of the university categorization. However, this was more pronounced in the major context than in the no-context or university context conditions. The target group was thus categorized differently in the different contexts. This time, we did not, however, obtain differences in perceived prototypicality of the target for either category, indicating that the target group was not perceived as more representative of one category over the other. However, the target was shown to be categorized differently; thus, we tested whether categorization was a mediator for the effect of context on the trait and behavior ratings. The analyses showed that categorization only partly mediated the effects of context. Thus, although the effect of context could be partly explained by different categorization of the target in the different contexts, it still had a significant independent effect on the trait and behavior ratings. This suggests that the ratings were affected more by the context directly than by the categorization of the target per se. In our view, this shows that the categorization of the target is not shifted to either the major category or the university category but that only the relative salience of these categories is affected. It also attests to the idea that when studying social judgments it is important to consider the social context in which these judgments are made (Ellemers & van Knippenberg, 1997; Haslam & Turner, 1992; Oakes et al., 1994).

Finally, we ruled out trait incompatibility as an alternative explanation for our findings that certain ratings in the context conditions were increased, whereas others were attenuated relative to the ratings obtained for the no-context condition. Traits stereotypic of the two categories were generally perceived as compatible, and furthermore, participants in the no-context condition chose to use both types of traits to describe the target group.

GENERAL DISCUSSION

In two studies, it was demonstrated that the influence of the comparative context on the relative salience of two competing category dimensions is reflected in the stereotype content. The same multiple categorizable target was judged differently in terms of stereotypic traits and behaviors across different contexts. Thus, in addition to previous evidence showing that people prefer to use one category dimension over the other when retrieving information from memory for multiple categorizable groups (Ford et al., 1994; Stangor et al., 1992; van Knippenberg et al., 1994), we demonstrated that, as has been argued before on a theoretical level (Macrae et al., 1995; Smith et al., 1996; Stangor et al., 1992), shifts in the relative salience of multiple categorizations indeed result in an actual shift of stereotype content, in the sense that different characteristics are associated with the same group. We have gained additional support for the notion that the relative salience of category dimensions is context dependent (Ellemers & van Knippenberg, 1997; Haslam & Turner, 1992; Oakes et al., 1994).

Thus, contextual cues not only increase the likelihood that a salient category is used as a cognitive structure but also elicit particular stereotypical trait perceptions of a target and results in actual differences in expectations about possible behavior of this target. Most stereotypes will entail a broad array of traits, behaviors, and expectations. Furthermore, people seem to choose
from the available stereotype content those aspects that serve the specific situation in which the judgments are made. Thus, people’s reactions toward a stereotyped target will be determined by the stereotype content perceived as most relevant in the specific social context (i.e., fit) (Oakes, 1987). Future research could pursue this issue by investigating whether these context-dependent judgments also are reflected in the behavioral responses of the perceiver toward the target.

Whereas context effects on categorization and stereotype content were demonstrated on both category dimensions, differences between the category dimensions that we used also were obtained. Overall, we found an effect of stereotypic dimension, showing that the targets were generally judged more in terms of major stereotypic traits and behaviors than university stereotypic traits and behaviors. This finding is in accordance with results from previous studies showing that shifts in categorization and stereotyping are not only dependent on context but also may be determined by the specific dimension of comparison (Ellemers, van Rijswijk, Roefs, & Simons, 1997; Hopkins et al., 1997). Although this shows that some dimensions may fit the specific situation better (Oakes, 1987), or are generally more accessible than others, it is important to note that parallel effects of comparative context occurred on both category dimensions, attesting to the generalizability of the effects of social context.

CONCLUSIONS

The two different research areas we described, namely, (a) studies examining multiple category activation and (b) research on context-dependent category activation, seem to be closely related in the sense that they try to answer the same kind of questions concerning category activation and stereotyping, albeit from a different viewpoint. Although they are investigating similar issues, the two approaches have developed separately and have, so far, not been examined concurrently. In the case of multiple category activation, only more cognitive measures have been examined, whereas the context studies examining stereotype content have only addressed single category groups. In this study, both were combined, and the stereotype content of a multiple categorizable group was measured with perceived applicability of stereotypic traits and behaviors as well as with trait selections. In the current studies, it has been demonstrated that the two types of research traditions referred to, although theoretically and methodologically different, yield results that are complementary to each other and if combined might lead to a better understanding of stereotyping as a result of the relative activation of social categories.

Furthermore, the results we obtained serve to make the point that it is important not solely to rely on activation measures but also to examine the resulting stereotype content, that is, ascriptions of stereotypical traits and behaviors, more directly. The extent to which categorization effects emerge on these measures may predict how perceivers will act on the basis of their stereotypic views. For instance, we are likely to behave differently toward the same young woman on the basis of the specific stereotype content that is activated by the comparison other, which is reflected in expectations we form about her traits and behaviors. Thus, when we meet a young woman and compare her to a young man, we might think of her as sensitive and not able to lift heavy things and help her carry a box. However, were we to compare her with an elderly woman (instead of a young man), we might think of her as assertive and do expect her to carry that heavy box herself.

REFERENCES


