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Report

The central tendency of a social group can affect ratings of its intragroup variability in the absence of social identity concerns

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ABSTRACT

People report less variability within in-groups than within out-groups when they make their ratings on traits on which the in-group has a higher central tendency than the out-group. Simon (1992a, 1992b) proposed that this effect is motivated by the need to protect a positive social identity. The present research tested the necessity of the social identity motive by using participants who were not members of any of the target groups that they judged. In Study 1 ($N = 60$), psychology undergraduate students reported significantly less intragroup variability on positive traits among a group of fashion designers that won a fashion competition than among a group that lost. Study 2 ($N = 75$) found a reverse effect on negative traits and confirmed the mediating role of perceived central tendency. These results demonstrate that the social identity motive is not necessary to explain the effect of central tendency on ratings of intragroup variability, and that the effect is more general than previously reported.

Introduction

A comprehensive and sophisticated account of social stereotypes requires the consideration of both *central tendency* and *intragroup variability* (e.g., Park & Judd, 1990). Central tendency refers to the extent to which the average member of a group possesses a trait. Intragroup variability refers to extent to which individual members of a group vary in the extent to which they possess a trait. To illustrate, people may perceive men to have a higher central tendency than women on the trait "aggressive", indicating that this trait is stereotypical of men. In addition, people may perceive men to be less variable than women in the extent to which they are aggressive. Again, this perception of relative intragroup homogeneity contributes to a stereotypical perception of men as being "all the same".

Importantly, central tendency has been found to affect ratings of intragroup variability. For example, people report significantly less variability within in-groups than within out-groups when they make their ratings on traits on which the in-group has a significantly higher central tendency than the out-group (i.e., in-group stereotypical traits; Brown & Wootton-Millward, 1993; Castano & Yzerbyt, 1998, Studies 1 & 2; Kelly, 1989; Pickett & Brewer, 2001; Rubin & Badea, 2007, Studies 1 & 2; Simon, 1992a; Simon & Pettigrew, 1990). To illustrate, psychology students have been found to rate psychologists as being significantly less variable than social workers on the traits *rigorous* and *theoretically trained*, because psychologists have a significantly higher central tendency than social workers on these in-group stereotypical traits (Castano & Yzerbyt, 1998).

There are two primary explanations for the effect of central tendency on ratings of intragroup variability. First, Simon (1992a, p. 412, 1992b, p. 15) proposed that traits that distinguish between the central tendencies of groups acquire a diagnostic value, and, following Tversky (1977, pp. 342–343), stimuli that share diagnostic features appear more similar to one another than stimuli that do not share those features. Second, Simon (1992a, pp. 407-408; 1992b, p. 13) proposed that people are motivated to perceive relatively less intragroup variability on traits that are stereotypical of their in-groups in order to protect a positive social identity for themselves (Tajfel & Turner, 1979). Perceiving in-group homogeneity on in-group stereotypical traits may strengthen the in-group's claim to those traits, although as we have pointed out previously, this strategy may only lead to a positive social identity when the stereotypical traits are positive, rather than negative (Rubin & Badea, 2007, p. 32).

Overview of the present research

The main aim of the present research was to test whether the social identity motive is necessary for a group's central tendency to affect ratings of its intragroup variability. All previous research that has demonstrated this effect has involved participants who

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were members of one of the two social groups that they were asked to judge. Hence, people may have rated their own group as being less variable on stereotypical traits in order to protect or enhance their own social identity (Simon, 1992a, 1992b). In the present research, we used target groups that did not include participants as group members in order to preclude the influence of the social identity motive (see Guinote, Judd, & Brauer, 2002, Study 2, for a similar approach investigating the effect of group power on ratings of intragroup variability). We took this step in order to investigate whether the social identity motive is necessary for central tendency to affect ratings of intragroup variability. Evidence of an effect occurring when participants are not members of any of the target groups would indicate that the social identity motive is not necessary, and that the effect is more general than previously reported.

We also made a series of important changes to the standard research paradigm for investigating the effect of central tendency on perceived intragroup variability. First, we tested the external validity of the effect by using an innovative method of manipulating central tendency. Specifically, we experimentally manipulated group performance in an intergroup competition in order to produce a winning group and a losing group. We then asked participants to make ratings of intragroup variability on traits that had either a positive or negative valence. We assumed that winning groups would be perceived to have a higher central tendency than losing groups on positive traits and vice versa on negative traits. In other words, people should perceive positive traits to be stereotypical of winning groups and negative traits to be stereotypical of losing groups. Based on this assumption, we predicted that people would rate winning groups as being less variable than losing groups on positive traits and more variable than losing groups on negative traits.

Second, previous research has assumed that people rate groups as being both less variable on stereotypical traits and more variable on counterstereotypical traits. However, the omission of appropriate control conditions has prevented a clear test of this assumption. In the present research, we included a control condition in which participants rated the intragroup variability of a group that occupied a middle position in the group performance rankings. Comparisons between this middle-placed group and the winning and losing groups allowed us to determine whether differences in reported intragroup variability were due to changes in the perceived variability of winning groups or losing groups or both groups.

Third, eight of the nine studies that have found an effect of central tendency on ratings of intragroup variability have used a repeated measures design in which individual research participants have provided ratings of both of the target groups under consideration (Brown & Wootton-Millward, 1993; Castano & Yzerbyt, 1998, Study 2; Kelly, 1989; Pickett & Brewer, 2001; Rubin & Badea, 2007, Studies 1 & 2; Simon, 1992a; Simon & Pettigrew, 1990; for an exception, see Castano & Yzerbyt, 1998, Study 1). This approach may have led to artefactual results because (a) it may have cued participants to their researchers' expectations of different ratings of intragroup variability for each target group, and (b) it allowed participants to make relative adjustments to their judgements of each group prior to providing their ratings. In the present research, we eliminated this potential source of demand characteristics by using a between-subjects design in which participants in each condition rated the intragroup variability of only one target group.

Study 1

In Study 1, we experimentally manipulated the performance of a fictitious group of fashion designers in an intergroup competition in order to create winning, middle-placed, and losing groups. We then asked psychology undergraduate students to rate the intragroup variability of one of these groups on a series of positive traits. If the social identity motive is *not* necessary for central tendency to affect ratings of intragroup variability, then participants should rate winning groups as having significantly less intragroup variability than middle-placed groups, and middle-placed groups as having significantly less intragroup variability than losing groups. However, if the social identity motive *is* necessary, then there should be no significant difference in the perceived intragroup variability of any of the groups, because participants are not affiliated with any of the groups.

Method

Participants

Participants were 60 female undergraduate students who were enrolled in first- and second-year psychology courses at a French university. Participants had a mean age of 20.42 years (SD = 3.26). Twenty participants were randomly assigned to each of the three group performance conditions.

Procedure

All materials were presented in the French language. Participants completed the study on an individual basis.

Participants were asked to consider five groups of fashion designers who had ostensibly taken part in a fashion competition. Participants were told that each group of designers contained four people and was named after a colour: red, green, yellow, orange, and violet. In the winning condition, the red group occupied the first place in the performance ranking of the fashion competition. In the middle-placed condition, the red group occupied the third position among the five groups. Finally, in the losing condition, the red group occupied the last place in the ranking.

Participants then viewed four portrait photographs that showed one of four young women wearing a red t-shirt who ostensibly belonged to the red group. Each woman was identified by a code (R1, R2, R3, & R4). Four statements that were ostensibly made by each woman were provided underneath each photograph. These statements indicated (a) the item of clothing that the woman had created during the fashion competition (e.g., jacket), (b) their favourite fashion designer (e.g., Jean Paul Gaultier), (c) their favourite material (e.g., leather), and (d) their feeling about the competition (e.g., "It was a very important competition").[1]

Participants then completed two measures of perceived intragroup variability: a measure of perceived intragroup similarity followed by a measure of perceived intragroup dispersion. For the measure of perceived intergroup similarity, participants drew a cross on a 100 mm horizontal line to indicate the similarity between the red group members in relation to a trait that was listed above the line. Each line was anchored *Not at all* at the left end and *Extremely* at the right end. Participants made ratings on eight 100 mm lines for eight traits (creative, hard-working, perspicacious, inspired, intuitive, original, resourceful, and flexible). A pretest that we conducted with 56 undergraduate psychology students confirmed that the traits were perceived to be socially desirable ($ps < .01$) and possessed by creative people ($ps < .05$).

[1] After viewing the photographs, participants in Study 1 completed a recall task in which they attempted to match individual members of the red group with their statements (as per Lorenzi-Cioldi, Deux, & Dafflon, 1998). This who-said-what task provided a measure of intragroup variability that did not produce any significant results ($ps > .50$). For the sake of brevity, we do not report any further information about this measure. Participants in Study 2 did not complete this who-said-what measure.