

# The Advantage of Fitting the Ingroup: Ingroup Prototypicality and Attributed Occupational Success

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## Abstract

According to social identity theory people are viewed as prototypical of a group to the extent that they possess ingroup characteristics but not outgroup characteristics. Based on this, previous research demonstrated that high-status group members (e.g., in the occupational field: men) may profit from failure in low-status domains, that is, domains in which members of a low-status group (e.g., in the occupational field: women) outperform high-status group members. In this case individual failure of a high-status group member appear highly prototypical for the high-status ingroup and therefore leads to the attribution of future occupational success (so called Failure-as-an-Asset effect). The current work extends this reasoning, by taking into account that perceived prototypicality of an individual group member is assumed to depend on meta-contrast based perception, meaning the ratio of differences between in- and outgroup characteristics and similarities of the ingroup and the respective group member. Therefore, the present study investigated how manipulated differences in ingroup prototypicality (i.e., meta-contrast quotient) of a failing male individual affect attributed occupational success. Thus, we predicted perceived prototypicality to moderate the Failure-as-an-Asset effect. In line with our hypothesis, we found that increased ingroup prototypicality lead to higher attributed occupational success.

**Keywords:** ingroup prototypicality, meta-contrast quotient, occupational success, failure-as-an-asset, social identity

## 1. Introduction

In general, failure has been shown to be linked to decrease feelings of self-worth (e.g., Crocker, Karpinski, Quinn, & Chase, 2003; Crocker & Park, 2004; Crocker, Sommers, & Luhtanen, 2002). However, under certain circumstances, research evidenced a phenomenon called Failure-as-an-Asset (FA) effect: In a series of studies by Reinhard, Stahlberg, and Messner (2008), participants had to evaluate the occupational success of a male target person (i.e., high-status group member referring to management positions). When participants were told that the male target person scored poorly on a test in which women generally outperform men, this information (failure) rendered the target person as typically masculine, which in turn led to higher attributed occupational success (asset) because men are assumed to be the high-status group according to the think-manager–think-male phenomenon (e.g., Schein, 2001). According to the social identity approach (e.g., Hogg, 2006; Tajfel, 1982; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), people are perceived more prototypical of a group the more attributes they possess that are exclusively defining this group and not other groups. The attributes belonging to a group are a cognitive representation of the beliefs, attitudes, emotions, and behavior that at the same time describe the similarities of the group members and discriminate them collectively from members of other groups (Hogg, 2006). Based on this, Reinhard et al. (2008) argued that perceived prototypicality (i.e., masculinity) of a person regarding her ingroup is the basic mechanism of the FA effect (see also Reinhard, Schindler, Stahlberg, 2014; Reinhard, Schindler, Messner, Stahlberg, & Mucha, 2011; Reinhard, Stahlberg, & Messner, 2009; Szücs, Schindler, Reinhard, & Stahlberg, 2014).

In particular, the perceived prototypicality of a group member is assumed to depend on meta-contrast based perception (i.e., Oakes, Haslam, & Turner, 1998; Turner et al., 1987). Single members of a certain group may vary on how similar they are in comparison to the prototype. Regarding the categorization of a certain male person, one can assume that he will be perceived as prototypical male, if he has a lot of characteristics that he

shares with the category “men” (Rosch & Mervis, 1975). Considering the principle of meta-contrast perception (Oakes et al., 1998), we assume that in addition to the similarity of the person to the category (“men”) the perceived difference between this category and a relevant comparable category (“women”) is of importance for judging typicality. Originally, the meta-contrast quotient (MCQ) was defined by Oakes et al. (1998) as the mean perceived difference between ingroup A (“men”) and outgroup B (“women”) in relation to the mean perceived difference within ingroup A. Thus, the higher the value of the MCQ the more group A is perceived as a group sharing the same social identity. Transferring this assumption, the FA effect should always show if the difference between the member of a high-status group and his ingroup regarding the relevant characteristics is very low and, at the same time, the difference between the average characteristics of in- and outgroup is very high.

$$\text{MCQ} = \frac{\text{Average ingroup characteristics} - \text{average outgroup characteristics}}{\text{Average ingroup characteristics} - \text{individual ingroup members' characteristics}}$$

According to this formula, the lower the difference between the individuals’ characteristics and the average characteristics of the individuals ingroup, the lower is the denominator of the MCQ. Keeping the numerator constant, the resulting MCQ should be higher, the lower the denominator. The higher the value of a given MCQ is the higher should be perceived prototypicality. Applying this reasoning to the findings of Reinhard et al. (2008) we assumed an increasing MCQ to lead to an increasing FA effect (i.e., occupational success). Surprisingly, to our knowledge, directly investigating effects of meta-contrast perceptions—a basic principle in social identity theory—has been neglected so far.

Specifically, in the current experiment, the moderating role of the first of the two differences mentioned above—the difference between the perceived person and the relevant ingroup—was tested. Judging exclusively the perception of men, participants received minimal information only as they were provided with information about the value of a single attribute of a male individual, the mean values for the same single attribute for his ingroup and his outgroup while keeping the difference between the two groups on the relevant attribute constant. Applying the idea of MCQ to the present paradigm, a male applicant was assumed to be perceived as very typical for his social group, if he exhibits an attribute very close to the mean occurrence of this attribute in his ingroup and, additionally, if the difference between his ingroup and the comparable outgroup is preferably huge. As the relevant attribute we used the ability in “logical reasoning”.

## 2. Method

A total of 114 students (50 male and 64 female) of a German University ( $M_{\text{age}} = 21.82$ ,  $SD = 4.751$ ) participated in a study labeled “Perception and judgment of other people” for a reimbursement of four Euros.

Participants were seated in front of a laptop. After providing demographic data, they were told that they would have to judge a person named “Peter M” according to a minimum of information. Participants were told that Peter M had participated in a test (ATLG-1) which had been developed in order to assess the ability of logical reasoning. Participants were informed that the ATLG-1 had been tested on a total of 5.000 students and was meant to examine students’ abilities of logical reasoning and its causes. Following, the individual test result of Peter M—which was 40 points for each and every condition—was presented. Additionally, the average test results of female and male students, which had already taken the test, were provided. Participants were told that the maximum test result was 100 points.

Note that the presentation of average test results of female and male students was manipulated depending on the respective condition in two steps: First, the difference between Peter M’s test result and the male ingroup was manipulated for the three experimental conditions (result-men<sub>1</sub> = 60, result-men<sub>2</sub> = 50, result-men<sub>3</sub> = 45). As a result, the distance between Peter M’s individual test result (40 points) and the average test result of his male ingroup differed for the three experimental conditions (20 vs. 10 vs. 5). Second, since the difference between the average test results of male and female students had to stay constant (i.e., 10), the average values for female students were changed accordingly (result-women<sub>1</sub> = 70, result-women<sub>2</sub> = 60, result-women<sub>3</sub> = 55). As a consequence, based on different distances between Peter M’s individual test result and the average test result for men, there were three different MCQs (low = 0.5 vs. moderate = 1 vs. high = 2).

Also, three control conditions (each corresponding one of the above mentioned experimental conditions) were established. For all three control conditions, Peter Ms’ individual test result was again presented as a value of 40 points. Deviating from experimental conditions, however, instead of presenting average test results for both men and women, only the average test result for students’ altogether was presented. The average test result for

students was formed by calculating the mean of the average test results of men and women for the three experimental conditions, respectively (i.e., 65 vs. 55 vs. 50).

The inclusion of these three control groups was necessary for the following reason: For each experimental condition it was predicted that participants would judge Peter M on the basis of a meta-contrast perception as explained above using Peter M's individual test result and the average test result for his ingroup (men) and the respective outgroup (women). However, it cannot be ruled out that participants will use a second mechanism to judge Peter M's individual test result based on altogether test difficulty. This assumption is based on the following rationale: If one receives an individual test result and has to interpret it, he or she will compare the individual test result to available social standards (Festinger, 1954). This is especially true for situations in which there is barely physical reality to validate an opinion or belief (Suls & Fletcher, 1983). In the experimental conditions of the present study, participants have no evidence to base their judgment about Peter M, but his individual test result and—as available social standards—the average test results for both men and women. Thus, it can be assumed that participants average test results of both groups (i.e., men and women) in order to judge the altogether test difficulty and, in a second step, to compare Peter M's individual test result with altogether test difficulty. The information gained in this process could be used by participants in addition to data received by using MCQ information.

The three control groups make it possible to control for such an effect as they solely provide in addition to Peter M's individual test result the average test result for students overall. For the control groups, it is expected that the more Peter M's test result differs from the average test result of students in a negative way the lower Peter M's perceived abilities regarding the ALTG-1 and, accordingly, his perceived chances for occupational success should be.

In order to ensure that participants had actually processed all information regarding the provided test results, participants were asked to write down the test results on a sheet of paper which had been designed for this purpose. After fulfilling this request, participants were asked to answer questions about their beliefs regarding Peter M's chances for occupational success. Items were taken from Reinhard et al. (2008). Participants rated “how much they believed that Peter M will get a leading position in a company.”; “Peter M will advance in his job position very fast.”; “Peter M will realize high income.”; “Peter M will realize high occupational status.”; and “Peter M will be very successful in his occupation.”; “Peter M will get a leading position in an engineering company.”; “Peter M will get a leading position as a chief executive officer.”; “Peter M will get a leading position as a bank manager.”; and “Peter M will realize occupational success in the field of science.”; ( $\alpha = .86$ ). For each participant, ratings of all nine items regarding Peter M's occupational success were averaged. Participants responded to all items on a 7-point Likert scale ranging from 1 (“I do not agree at all.”) to 7 (“I fully agree.”). After having completed all items, participants were thanked, paid, and fully debriefed.

### 3. Results

Data of 114 participants were analyzed in two steps. In a first step, data of experimental groups and control groups were analyzed separately. In a second step, attributed occupational success of Peter M. was adjusted for baseline effects presented by control group effects and tested for significant differences between experimental groups.

First, data was analyzed for the three experimental groups (MCQ = 0.5 vs. 1 vs. 2) using an ANOVA with MCQ as independent variable and occupational success as dependent variable. As a first trend, results show that attributed occupational success increases as MCQ increases ( $M_{0.5} = 2.89$ ,  $SD = 0.87$  vs.  $M_1 = 3.36$ ,  $SD = 0.75$  vs.  $M_2 = 3.44$ ,  $SD = 0.75$ ),  $F(2, 53) = 2.67$ ,  $p = .079$ ,  $\eta^2 = .09$ . Second, baseline data was separately analyzed for the three control groups, again using an ANOVA. Results showed that attributed occupational success differed between control conditions by trend ( $M_{\text{Control1}} = 3.27$ ,  $SD = 0.68$  vs.  $M_{\text{Control2}} = 3.26$ ,  $SD = 0.85$  vs.  $M_{\text{Control3}} = 2.72$ ,  $SD = 0.22$ ),  $F(2, 55) = 1.82$ ,  $p = .076$ ,  $\eta^2 = .09$ . However, the trend of control group means deviates from the predicted trend, especially for control group three: As for this condition, Peter M's test result of 40 is closest to the average students' test result, performance of Peter M was predicted to be rated best in comparison to the other control groups and, thus, Peter M's occupational success should have been judged by participants accordingly.

We therefore calculated a differential score of attributed occupational success of Peter M by subtracting the score of each control group from the score of each corresponding experimental group. As mentioned above, this procedure allows to adjust for the difficulty standard effect resulting of the different mean test results (65 vs. 55 vs. 50) assuming that participants used the mean results of men and women in each experimental condition as a reference for general test difficulty in addition to MCQ-based information. Following our hypothesis, we

expected a significant effect of the factor MCQ on the differential score. Specifically, with increasing MCQ, the differential score of attributed occupational success should increase as well. Differential scores were analyzed using an one-way ANOVA. As expected, a significant effect of MCQ occurred ( $M_{0.5} = -0.38$ ,  $SD = 0.87$  vs.  $M_1 = 0.10$ ,  $SD = 0.75$  vs.  $M_2 = 0.72$ ,  $SD = 0.75$ ),  $F(2, 53) = 9.30$ ,  $p < .001$ . The follow-up simple effects analyses showed that participants in the condition with the highest MCQ (2) rated Peter M's chance for occupational success significantly as higher in comparison to participants of the condition with moderate MCQ (1),  $F(2, 53) = 5.46$ ,  $p = .007$ ,  $d = 0.83$  and to participants with low MCQ (0.5),  $F(2, 53) = 18.52$ ,  $p < .001$ ,  $d = 1.35$ . Also, participants of the condition with moderate MCQ (1) rated Peter M's chance for occupational success significantly as higher in comparison to participants of the condition with low MCQ (0.5),  $F(2, 53) = 3.29$ ,  $p = .045$ ,  $d = 0.58$ . Thus, as predicted, the FA effect was strongest for the highest MCQ, lower for the moderate MCQ, and lowest for the low MCQ.

#### 4. Discussion

Failure in an occupational field can be an advantage (Reinhard, Stahlberg, & Messner, 2008) for members of a high-status group (e.g., men), if they in general are simultaneously outperformed by the low-status group (e.g., women). Following the basic assumptions of social identity approach, people are perceived more prototypical of a group the more attributes they possess that are exclusively defining this group and not other. Perceived prototypicality of a group member is assumed to depend on the MCQ. Results of the present study show that high prototypicality (represented by a high MCQ) leads to a higher attribution of occupational success for an individual male if his ingroup (the high status-group men) is outperformed on the same task by the low-status group (women). On the opposite, in the exact same situation low perceived prototypicality (represented by a low MCQ) leads to a lower attribution of occupational success for that male individual. In other words, the more an individual male is perceived as masculine, the stronger the FA effect.

Besides manipulating group prototypicality through varying the difference between an individual male's result and the result of men in general (by holding the difference between men and women constant), future research should refer to varying the difference between men and women (by holding the difference between men and the individual male constant). Parallel to the present study, one would expect that the higher the difference between men and women, that is, the better the result of women in general, the higher the individual male's prototypicality and the higher the attributed success.

Although results are in line with our idea, regarding the control groups, an unexpected trend for the attribution of occupational success occurred. As stated above, we expected that the more Peter M's test result would deviate from the average test result of students in a negative way the lower Peter M's perceived chances for occupational success should have been. Nevertheless, data shows a somewhat different pattern: Peter M's perceived chances for occupational success are lowest for the control condition in which his individual test result is closest to the average students test result and rise as his individual test result departs from students' average test result in a negative way. However, this trend was not statistically significant. Also, this effect was accounted for, as the relevant dependent measure results from perceived occupational success adjusted for control group effects by subtraction. Finally, one could argue that the present study uses a very restrictive paradigm as participants had to base their judgments regarding masculinity and chances of occupational success about the individual on minimal information only (e.g., performance in a test). In job interviews, however, people of the human resources department are neither willing nor able to consider information regarding each and every characteristic of an applicant in order to judge his or her prototypicality. Usually, only information on single traits (e.g., intelligence) is provided in the application and the interview.

In sum, our work extends knowledge on a basic principle in social identity theory by providing empirical evidence for the effect of meta-contrast perceptions on group prototypicality. To our knowledge, this is the first study that directly addresses effects of meta-contrast perceptions at all.

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