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Social identity, social influence, and response to potentially stressful situations: Support for the self-categorization theory

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Abstract:

This study investigates the interplay between group identification and source membership in influencing perceived stress levels during challenging tasks. Drawing from self-categorization and social influence theories, two experiments were conducted.In Study 1, participants exposed to a video where the task was portrayed as stressful reported higher stress levels when the task was presented by an ingroup member compared to an outgroup member. However, in the "challenge" condition, where the task was seen as stimulating rather than stressful, no differences in perceived stress were observed between ingroup and outgroup sources.Study 2 further explored the role of group identification and source membership on perceived stress. Results revealed that higher group identification led to increased perceived stress levels, but only when the source was an ingroup member.These findings underscore the intricate relationship between self-categorization and social influence. They highlight that perceived stress levels in challenging situations are influenced by group identity and source membership, particularly when the source is perceived as an ingroup member. However, in situations where the task is perceived as a challenge rather than a threat, this influence may diminish.The study contributes to our understanding of social psychology and the complex dynamics involved in how individuals respond to challenging situations in a social context, offering implications for further research in this area.

Keywords: Social identity, Social influence, Stress, Self-categorization theory.

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Introduction.

In their transactional model, Lazarus and Folkman (1984) define stress as the result of a dynamic relationship between the individual and environmental demands. The authors posit that it is not the events themselves that determine the onset of a state of stress, but rather the individual's perceptions and experiences of these events. For a situation to be considered stressful, it must be perceived as such by the individual. Different

appraisals explain different emotional responses to the same situation (Tomaka, Blascovich, Kibler, and Ernest, 1997). Cognitive evaluations thus mediate the relationship between the stressor and the stress response (Lazarus and Folkman, 1984). Stress is then defined as "a relationship between the individual and their environment, which is assessed by the individual as exceeding their resources and threatening their well-being."

Following this cognitive evaluation and in order to meet the demands of the situation perceived as stressful, the individual develops stress coping strategies. Lazarus and Folkman (1984) distinguish two forms of cognitive appraisal: primary appraisal and secondary appraisal. During primary appraisal, the individual assesses the type and significance of the situation. Secondary appraisal allows them to determine how they could prevent, benefit from, or remedy the situation. Different coping strategies are then considered (e.g., denial, avoidance, modification). Among these strategies, we find seeking information and seeking help or advice (Bruchon-Schweitzer, 2001). Exchanging information with one's social network helps clarify the understanding of the potentially stressful situation (Lazarus and Folkman, 1984). Therefore, as Haslam (2004) suggests, the social context in which individuals find themselves can influence their response to stressful situations. Group membership influences the response to stressful situations.

According to Turner's self-categorization theory (1987, 1991), we can categorize at multiple levels of abstraction: a superordinate level involving the distinction between species, an intermediate level related to the comparison between social groups and, as such, social identity, and finally, a subordinate level related to differentiation within the ingroup and, consequently, personal identity (Turner, 1985). Categorizing oneself within a group results in adopting that group's norm. It is expected that the group in which one categorizes oneself has a perception of reality in line with our own. The self-categorization theory asserts that the perception of the validity of social and physical information is partly determined by an observer's belief that it comes from a relevant group whose members are perceived as qualified to inform them about social and physical reality. Consistent with this theory, Haslam, Jetten, O'Brien, and Jacobs (2004) observed that a stressful situation is only perceived as such when it is interpreted as stressful by a source considered by the subject to be qualified to inform them about social and physical reality (i.e., a person categorized as a member of a subjectively relevant group). This ingroup source is perceived as sharing similar social realities and perspectives. Therefore, social influence plays a role in the assessment of a potentially stressful situation.

The aim of Study 1 is to replicate the results of Haslam et al. (2004) with a larger sample. Therefore, we will investigate the effect of the message type and source membership on the reported stress level. The objective of Study 2 is to extend the rationale of the previous study. This time, all participants are exposed to the same type of message (a stressful message). We will, therefore, examine the effect of group identification and source membership on the reported stress level.

Study 1.

We are interested in the effect of message type and source membership on the reported stress level. In line with the self-categorization theory, our hypothesis for this study is as follows:

H1:Participants in the "stress" condition should report higher levels of stress when they encounter an ingroup source compared to an outgroup source. Participants in the "challenge" condition should report lower levels of stress when they encounter an ingroup source compared to an outgroup source. Participants in the "control" condition should not experience fluctuations in their perceived stress levels based on source membership.

Méthod.

Participants.

Ninety students (24 males and 66 females) from the University of Burgundy Franche-Comté voluntarily participated in this study. The participants' average age is 22.27 years (SD = 1.60), ranging from 19 to 26 years. They were randomly assigned to one of the six conditions in a 2 (Source Membership: ingroup vs. outgroup) * 3 (Message Type: stress vs. challenge vs. control) design.

Materials and Procedure.

Source Membership. Before administering the task to the participants, the experimenter informed them that it might be useful to watch a video in which a participant from a previous study discusses their impressions of the task. Before viewing the video, the participants received a description indicating that the person in the video was either a first-year psychology student at UBFC, like them (ingroup condition, N = 45), or a student from a different major and university (outgroup condition, N = 45).

Message Type. Subsequently, the participants randomly watched one of the three videos created for the study. In all three videos, the person presented was the same. In one of the videos, the person responded to questions describing the task as stressful (stress condition, N = 30). In a second video, they portrayed the task as particularly challenging (challenge condition, N = 30). Finally, in the third video, they described the task as relatively interesting (control condition, N = 30).

Stress Condition:

Interviewer: "How did you find the task?"

Respondent: "I found the experience particularly stressful. My heart was racing, and I had trouble concentrating. I felt the experience becoming increasingly stressful."

Challenge Condition:

Interviewer: "How did you find the task?"
Respondent: "I found the experience particularly positive. My heart was racing, and I felt particularly focused. I felt the experience becoming increasingly stimulating."
Control Condition:
Interviewer: "How did you find the task?"
Respondent: "I found the experience relatively interesting. It's the first time I've participated in an experiment like this."

Perceived Stress Level. After watching the video, participants were required to complete a mental arithmetic test. The task involved a series of increasingly difficult additions. As the task progressed, participants had less and less time to respond. Once the mental arithmetic task was completed, participants were asked to indicate their level of agreement on an 8-question scale, ranging from 1 ("not at all agree") to 7 ("completely agree"). These questions focused on the subjective experience of stress and constituted our measure of perceived stress. The reliability analysis showed a moderately satisfactory Cronbach's alpha for this set of items (.60).

Results.

Source Membership. Linear regressions revealed an effect of source membership, $b = 0.16$, $p < .05$. The perceived stress level induced by the mental arithmetic test was higher when the impressions about the task were presented as coming from a first-year psychology student at UBFC (ingroup condition, $M = 4.15$, $SD = 0.67$) than when they were presented as coming from a student from a different major and university (outgroup condition, $M = 3.84$, $SD = 0.76$).

Message Type. Furthermore, the analysis showed no difference in the perceived stress level induced by the task presented as stressful (stress condition, $M = 4.07$, $SD = 0.71$) and the task presented as particularly challenging (challenge condition, $M = 3.68$, $SD = 0.65$) and relatively interesting (control condition, $M = 4.24$, $SD = 0.74$), $b = 0.04$, ns. However, the perceived stress level induced by the task presented as particularly challenging (challenge condition) differs significantly from that induced by the task presented as relatively interesting (control condition), $b = 0.28$, $p < .003$.

*Source Membership * Message Type*. We are particularly interested in this part of the analysis since our hypothesis only concerns the interaction effect between source membership and message type. The comparison, based on source membership, between the stress condition and the other two conditions (challenge and control) is highly significant, $b = 0.14$, $p < .007$. However, the comparison,based on source membership, between the challenge condition and the control condition is not significant, $b = -0.01$, ns. The average level of perceived stress based on source membership and message type is shown in Figure 1. However, the amount of variance explained by the variables is low, $R^2 = .22$, $p < .0008$.

Regarding our hypothesis (H1) and based on the statistical analysis, we can observe that only participants in the "stress" condition report a higher level of stress when the task is presented by an ingroup member compared to when it is presented by an outgroup member. Therefore, our hypothesis is partially supported because in the "challenge" condition, we do not find a difference in the perceived stress level when the task is presented by an ingroup member and when it is presented by an outgroup member.

Study 2.

We are interested in the effect of group identification and source membership on the reported stress level after experiencing a stressful situation. Because belonging to a group does not necessarily imply identifying with the group, our hypothesis for this study is as follows:

H2:The higher the level of group identification, the more participants should report a high level of stress, but only when the source is a member of the ingroup (vs. outgroup).

Méthod.

Participants.

One hundred and twenty employees of a service company (60 men and 60 women) voluntarily participated in this study. The participants' average age is 44.44 years (SD = 5.99), ranging from 30 to 62 years. They were randomly assigned to one of the following two conditions: ingroup vs. outgroup.

Materials and Procedure.

Group Identification. Identification with the company was measured using a 5-item scale. The items were translated from the group identification scale used by Doosje, Spears, and Ellemers (2002). Participants were asked to rate each item on a 7-point scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). The reliability analysis indicated a moderately satisfactory Cronbach's alpha for this set of items (.53).

Source Membership. Before administering the task to the participants, the experimenter informed them that it might be useful to watch a video in which a participant from a previous study discusses their impressions of the task. Before viewing the video, the participants received a description indicating that the person in the video was either an employee of the same company as them (ingroup condition, N = 60) or an employee from a competing company (outgroup condition, N = 60).

Perceived Stress Level. Next, the participants watched a video. Unlike Study 1, all participants watched

the same video in which the interviewee responded to questions describing the task as stressful (i.e., stress condition). The task to perform and the measurement of perceived stress were identical to Study 1. The reliability analysis indicated a moderately satisfactory Cronbach's alpha for the set of items measuring perceived stress (.63).

Results.

Source Membership. Linear regressions did not reveal any effect of source membership, $b = 0.16$, $t(118) = 1.24$, ns. The perceived stress level induced by the mental arithmetic test was similarly high when the impressions about the task were presented as coming from a first-year psychology student at UBFC (ingroup condition, $M = 4.00$, $SD = 0.75$) as when they were presented as coming from a student from a different major and university (outgroup condition, $M = 3.83$, $SD = 0.70$).

Group Identification. Furthermore, the analysis showed no difference in the perceived stress level based on the subjects' level of group identification, $b = 0.10$, $t(118) = 1.44$, ns. Indeed, the perceived stress level induced by the task was not influenced by the level of identification with the company.

*Source Membership * Group Identification.* Similar to Study 1, we are particularly interested in this part of the analysis because our hypothesis only concerns the interaction effect between source membership and group identification. The analysis revealed a highly significant interaction effect between these two variables, $b = 0.41$, $t(118) = 3.20$, $p < .002$. The average level of perceived stress based on source membership and the mean level of group identification is depicted in Figure 2. However, the amount of variance explained by the variables is low, $R^2 = .11$, $p < .004$.

Regarding our hypothesis (H2) and based on the statistical analysis, we can observe that the higher the group identification, the higher the average level of perceived stress, but only when the source is an ingroup member. Therefore, our hypothesis is supported.

General discussion.

First of all, the results of Study 1 highlight, concerning the "stress" condition, that only participants who watched a video in which the person described the task as stressful report a higher level of stress when the task is presented by an ingroup member (first-year psychology student at UBFC, like them) compared to when it is presented by an outgroup member (student from a different major and university). This result aligns with Turner's self-categorization theory (1987, 1991) and the work of Haslam et al. (2004), which suggests that the perception of the validity of social and physical information is partly determined by the belief that it comes from a relevant group whose members are perceived as qualified to inform about social and physical reality. It is worth noting that the self-categorization theory excludes the possibility that an outgroup source produces any influence, as categorizing others as members of an outgroup constitutes an alternative to influence (Turner, 1995).

However, regarding the "challenge" condition, there is no difference in the perceived stress level when the

task is presented by an ingroup member compared to when it is presented by an outgroup member. This observation can be explained by the concept of "adaptation processes." Coping strategies are defined as "cognitive and behavioral efforts to manage, reduce, or tolerate internal and/or external demands [created by the stressful situation] that threaten or exceed an individual's resources" (Lazarus and Folkman, 1984). In the challenge condition, there is neither a threat nor potential loss. Participants do not need to adopt adaptation strategies to deal with the situation.

As for the results of Study 2, they confirm, as expected, that the higher the group identification, the higher the perceived stress level. It should be noted that this result is observed only when the impressions about the task are presented as coming from an ingroup member (employee of the same company as them). Turner (1987, 1991) suggests that categorizing oneself within a group would lead to adopting the group's norm. Therefore, we can deduce that the more a participant identifies with their group, the more they perceive members of the group as qualified to inform them about social and physical reality.

This research has highlighted two major theories in social psychology: self-categorization on one hand and social influence on the other. However, one limitation of this study concerns the "control" condition (Study 1). Methodologically, it should not undergo any manipulation. However, there might be a methodological bias in the sense that the task was presented as a relatively interesting experience.

According to David and Turner (1996), the influence of ingroup sources would also depend on their numerical status and the level of self-categorization. On one hand, ingroup majorities would produce more overt influence than ingroup minorities, while the latter would have greater latent influence than the former. It would be interesting to replicate these two studies while varying the size of the ingroup source membership (minority ingroup vs. majority ingroup).

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