Personality and Individual Differences 104 (2017) 262–265

Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

Gender differences in intergroup conflict: The effect of outgroup threat priming on social dominance orientation☆

Hitomi Sugiura [a,*,1], Nobuhiro Mifune [b], Sho Tsuboi [c], Kunihiro Yokota [d]

[a] College of Sport and Health Science, Ritsumeikan University, Kyoto, Kyoto, Japan
[b] School of Economics & Management, Kochi University of Technology, Kochi, Kochi, Japan
[c] Institute of Applied Social Psychology + Connect, Osaka, Osaka, Japan
[d] Department of Evolutionary Studies of Biosystems, The Graduate University for Advanced Studies School of Advanced Sciences, Hayama, Kanagawa, Japan

ARTICLE INFO

Article history:
Received 6 May 2016
Received in revised form 9 August 2016
Accepted 10 August 2016
Available online xxxx

Keywords:
Outgroup threat
Social dominance orientation
Male warrior hypothesis
Minimal group paradigm
Priming

ABSTRACT

The purpose of this study was to examine the effect of outgroup threat priming on social dominance orientation (SDO). Evolutionary psychologists have proposed the adaptive psychological mechanism to intergroup conflict is specific to males. We predicted that the mechanism would function as enhancement of an orientation concerning hierarchical group relations by cueing outgroup threat. We hypothesized that male participants would demonstrate a higher level of SDO than females by outgroup threat priming in a laboratory experiment. One hundred sixty-seven undergraduate students participated in the experiment that measured SDO after an outgroup priming task. Consistent with our hypothesis, results showed that males had a higher level of SDO than females by cue of outgroup threat, while females did not reveal any significant effects of the outgroup threat cue on SDO.

1. Introduction

Intergroup conflict, such as warfare, has been a crucial social problem for a long time and in many places in the world. Intergroup conflict is defined as situations where more than two groups have incompatible goals and are in competition for scarce resources (e.g., Alexander, 1987; Campbell, 1965; Sherif, 1961). In intergroup conflict situations, people tend to not only show hostility and violence toward the outgroup, but also form coalitions and show altruistic behavior toward the ingroup (Choi & Bowles, 2007; Sherif, 1961). Numerous studies have investigated ingroup cooperation and outgroup derogation in intergroup conflict, such as research on ingroup bias in the minimal group situation (Tajfel, Billig, Bundy, & Flament, 1971; Yuki & Yokota, 2009), enhancement of ingroup cooperation in an intergroup conflict game (e.g., Bornstein, 2003; De Dreu, 2010; De Dreu et al., 2010; Halevy, Bornstein, & Sagiv, 2008; Halevy, Weisel, & Bornstein, 2012; Weisel & Böhm, 2015), and outgroup derogation (e.g., Brewer, 1979; Tajfel et al., 1971; Weisel & Böhm, 2015).

Recently, from an evolutionary perspective, research has attempted to explain and analyze psychological factors triggered by intergroup conflict (Tooby & Cosmides, 1988, 2010). Evolutionary psychologists have argued that males have a psychological mechanism specified for intergroup conflict to promote their fitness by gaining access to disputed reproduction enhancing resources through protection of the ingroup and coalitional aggression (McDonald, Navarrete, & Van Vugt, 2012; Tooby & Cosmides, 1988, 2010; Van Vugt, De Cremer, & Janssen, 2007; Yuki & Yokota, 2009). However, it is unclear what psychological factors are triggered by the mechanism. Thus, in this study we aimed to reveal one such psychological factor related to the adaptive psychological mechanism to intergroup conflict specific to males. We shed light on social dominance orientation (Sidanius & Pratto, 1999) as one of the psychological factors.

1.1. The male warrior hypothesis

Evolutionary psychologists proposed the "male warrior hypothesis" that assumes the psychological mechanism adaptive to intergroup conflict is present almost exclusively in males (McDonald et al., 2012; Tooby & Cosmides, 1988, 2010; Van Vugt et al., 2007). The hypothesis assumes that males execute "adaptive" behaviors more readily, attending to cues that the ingroup is threatened by an outgroup. Consequently, reproductive success is achieved by gaining access to resources (McDonald et al., 2012; Tooby & Cosmides, 1988). Coalitional aggression, which involves cooperation within the group for attacks toward the outgroup, is needed to win the conflict. Therefore, males behave

☆ This study was supported by funding from the Japan Society for the Promotion of Science (Grant-in-Aid for Young Scientists [B], 26780351, 26780344). We sincerely thank Yosuke Otsubo, Keiko Ishii, Ayano Yagi, and the graduate students of the psychology lab in Kobe University for allowing us to use the laboratory and their assistance in data collection. We also thanks Joanna Schug in the College of William & Marry.

* Corresponding author at: College of Sport and Health Science, Ritsumeikan University, Kyoto, Kyoto, Japan.
E-mail address: hsugiura@fc.ritsumei.ac.jp (H. Sugiura).
[1] Postal address: 1-1-1 Noji-higashi, Kusatsu, Shiga 525-8577, Japan

http://dx.doi.org/10.1016/j.paid.2016.08.013
0191-8869/

cooperatively toward the ingroup and discriminately toward the outgroup (i.e., ingroup bias) as adaptive behavior in intergroup conflict situations (Van Vugt et al., 2007; Yuki & Yokota, 2009). The adaptive psychological mechanisms could be triggered by outgroup threat priming. Evidence of the male warrior hypothesis in laboratory experiments has shown the ingroup bias specific to males by cueing outgroup threat (Yuki & Yokota, 2009).

However, it is unclear what psychological factors underlie the mechanism. In the field of social psychology, psychological factors that have been identified that cause and enhance ingroup cooperation and outgroup derogation in intergroup conflict include cohesiveness (Rabbie, Benoist, Oosterbaan, & Visser, 1974), attitude toward immigrants (Esses, Jackson, & Armstrong, 1998), emotions (Cottrell & Neuberg, 2005), and social identity (Brown et al., 1992; Jackson & Smith, 1999). However, the research has not investigated gender differences. What psychological factors cause the male-specific behavior in the intergroup conflict situation? In the present study, we focused on social dominance orientation.

1.2. Social dominance orientation

Social dominance orientation (SDO) is defined as "the degree to which individuals' desire and support group based hierarchy and the domination of inferior groups by superior groups" (Sidanius & Pratto, 1999, p.48). SDO has been used widely as a psychological factor predicting intergroup behaviors. For example, research has shown SDO related to ingroup cooperation and outgroup derogation (Sidanius, Haley, Molina, & Pratto, 2007; Sidanius, Pratto, & Mitchell, 1994). Moreover, studies have indicated males tend to exhibit higher SDO than females (Levin, 2004; Pratto, Stallworth, Sidanius, & Siers, 1997; Sidanius, Sinclair, & Pratto, 2006; Wilson & Liu, 2003). Consistent with the male warrior hypothesis, it is argued that the evolutionary origin of the gender difference in SDO is rooted in the higher fitness of males by engaging in intergroup conflict (Sidanius & Kurzban, 2003). Men enhance their fitness through intergroup conflict because they obtain resources and new females as mating resources from the group that loses the conflict. Thus, a higher level of SDO in males is potentially achieved evolutionally through intergroup conflict situations. Morrison and Ybarra (2008) demonstrated that participants who perceived high outgroup threat and deeply identified with their ingroup showed higher SDO. This finding suggests that the SDO of males is not at a high level that is stable, but automatically enhanced in response to social context as readiness to cope with intergroup conflict.

1.3. The current study

We examined whether the perceptual cue of outgroup threat had an effect on SDO only among males. The outgroup threat priming was used to trigger the adaptive psychological mechanism to intergroup conflict. The experiment included two sessions. The first session involved outgroup threat priming (Yuki & Yokota, 2009) and engaging in the Prisoner's Dilemma game (PD-Game). The second session involved self-rating of SDO. In the outgroup threat priming task, participants were told to read three essays and circle all nouns within a limited time. In the second essay, a foreign author claimed the territorial right of the island between their country and Japan, and criticized Japanese attitudes with aggressive words. This essay emphasized a conflict related to resources. The reason why participants experienced the PD-Game before rating their SDO was to make a group boundary salient. Levin and Sidanius (1999) and Sidanius et al., (1994) reported that ingroup favoritism was caused by SDO when a group boundary was made salient (or enhanced ingroup identification). This evidence suggests an interaction effect between salience of group boundary and the perceptual cue of outgroup threat on SDO. The experience of the PD-Game in which the group belongingness of the partner alters in each trial would stress the group boundary, such as "us vs. them." In this experiment, in the situation where a group boundary was kept salient, it was tested whether SDO would be enhanced only in males by triggering the psychological mechanism adaptive to outgroup threat.

2. Method

2.1. Participants

One-hundred sixty seven undergraduate students of Kobe University participated in the experiment (88 females, 79 males; Mean age was 18.86, $SD = 0.86$). Participants received 1000–1200 Japanese yen ($9–10) as a reward depending on the result of the PD-Game. Four–five participants per session engaged in the tasks. In the case of three participants in one session, one confederate joined in. In all sessions, the gender composition was heterogeneous. Participants were randomly assigned to the control group or outgroup threat condition.

2.2. Procedure

The study was approved by the research ethics committee of Hiroshima Shudo University. Participants sat in a small room with a door, which was kept open in the first session. A female experimenter fashioned casually told participants the experiment included two sessions that were not related to each other. Participants signed an informed consent form and were then given an explanation about "the experiment of social cognition." The first session included three tasks: a language task, calculation task, and questionnaire on emotions. First, in the language task participants searched for and circled the nouns in three essays, and as many as possible within 5 min (Yuki & Yokota, 2009). In the second essay, the cue of outgroup threat was manipulated by changing the essay topic. Half of the participants were assigned to the threat condition and read an essay in which a foreigner insisted on the territorial right of the island located between Japan and their own country, and criticized the attitude of Japan in aggressive words (e.g., "we do not hesitate to fall into war"). The other half of participants in the control condition read the essay about arts without any words of intergroup relations. After the language task, participants completed a "calculation task" that included twenty easy additions in thirty seconds as a distraction task. Finally, participants completed the PANAS-X (Watson & Clark, 1994), a questionnaire that asked about their current mood. The use of the PANAS-X was for the purposes of having the participants infer that the study was examining their mood so as to minimize response bias.

When all of these tasks were completed, a male experimenter in a lab coat came in just after the female experimenter had left. He closed the door to the room and told participants the second session to investigate decision-making would begin. Participants were first asked to perform a picture preference test (Tajfel et al., 1971) in which they decided which of two paintings they preferred in thirty-two pairs of abstract paintings. Based on their preference, participants were divided into either the Klee group (preference for pictures by Klee) or the Kandinsky group (preference for pictures by Kandinsky). Next, participants rated the level of their identity with an ingroup and an outgroup (Grieve & Hogg, 1999). After completion, participants were asked to perform the decision-making task in which they played the PD-Game with randomly selected partners from the ingroup and outgroup. The PD-Game served to make their subjective "us vs. them" boundary salient through transactions with ingroup and outgroup members. (The results of PD-Game are not reported here because they were not relevant to the purpose of the study.) Participants were not informed of their partner's decisions and how much total money they earned in the PD-game.

After completion of the game, participants rated their post-ingroup and post-outgroup identity and SDO. SDO was measured with the 16-item SDO_6 scale (Pratto, Sidanius, & Levin, 2006; Cronbach's $\alpha = 0.84$). All items were rated on a scale from 1 (*strongly disagree/disapprove*) to 7 (*strongly agree/favor*). To check salience of intergroup boundary experienced by the PD-Game, post-identity and pre-identity