

THE POWER OF AFFECT AND COGNITION IN PREDICTING GROUP ATTITUDES TOWARD SUPERVISORS

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I collected group-level data in a laboratory experiment, and explored the roles of affect and cognition in predicting supervised groups' attitudes toward direct and indirect supervisors. Results suggest that both affect and cognition were significant predictors for the 2 target attitudes. Cognition exerted a stronger influence than affect on attitudes toward direct supervisors, whereas affect predicted attitudes toward indirect supervisors more strongly than cognition, despite the nonsignificant predictive difference. I also suggest how to improve supervised groups' attitudes toward supervisors through affective and cognitive interventions.

Keywords: group attitudes, affect, cognition, direct supervisors, indirect supervisors.

Interest in the nature of attitudes dates back to the inception of social psychology. One theoretical perspective indicates that attitudes derive from affect and cognition (Eagly & Chaiken, 1995). Affect refers to the positive or negative feelings concerning the attitude objects, whereas cognition relates to the beliefs or thoughts about the attitude objects (Schleicher, Watt, & Greguras, 2004). Understanding the power of affect and cognition in predicting attitudes can help shape more effective interventions to influence these attitudes (Esses & Dovidio, 2002). Therefore, in this study, I identified the supervised groups' affect and

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cognition associated with their supervisors to examine the contribution of each in predicting group attitudes.

It has been shown in a number of previous studies that affect was a stronger predictor of attitudes than cognition in a variety of attitude domains (Kim & Morris, 2007; Porter & Diefenbach, 2009), especially in intergroup contexts (Jussim, Nelson, Manis, & Soffin, 1995; Pettigrew & Tropp, 2008). In contrast, other researchers have shown that cognition predicted attitudes more strongly than affect. Eagly and Mladinic (1989), examined the structure of gender attitudes toward women and men, and Eagly, Mladinic, and Otto (1994) explored the bases of attitudes toward four social groups (women, men, Democrats, Republicans). In addition, researchers have examined moderators in the effects of affect and cognition on attitudes. For example, Esses, Haddock, and Zanna (1993) focused on intergroup attitudes, and found that affect had a greater impact on out-group attitudes than cognition for most target groups, but these effects varied because of different attitude objects. In accordance with this perspective on the role of moderators, I considered two types of supervisor, direct and indirect, for exploring how affect and cognition predict attitudes toward supervisors. *Direct supervisors* are defined as *those who interact directly with supervised groups, while indirect supervisors are those in the higher levels of management who interact indirectly with supervised groups* (Borgogni, Russo, & Latham, 2011). Previous researchers have shown that attitudes toward direct and indirect supervisors are related to job satisfaction (Walumbwa, Wang, Lawler, & Shi, 2004) and organizational commitment (Rhoades, Eisenberger, & Armeli, 2001), and could significantly predict collective action toward supervisors (Kelly & Kelly, 1994). Distinguishing the influences of affect and cognition on attitudes toward distinct types of supervisor will offer vital information for practitioners who are concerned with improving supervised groups' satisfaction through affective and cognitive interventions (Mehrabian, 1967) in organizational management.

McCauley (1972) and Myers and Lamm (1976) suggested that group attitudes that would be influenced by in-group interactions (e.g., group discussions) are quite different from those of individuals within the group. As well, Saguy, Dovidio, and Pratto (2008) suggested that group-level research should be extended and the nature and course of actual interactions between groups examined. Furthermore, Zhou and Wang (2012) collected attitudes at a group level and indicated that supervised groups' attitudes could predict their hostile collective action. However, which component (affect or cognition) predicts these group attitudes has not been understood. Therefore, in this study, I aim to extend the findings of previous researchers by assessing attitudes of groups rather than individuals, and by investigating the power of affect and cognition in predicting group attitudes.

Malhotra (2005) reviewed affect-cognition interaction research and suggested that cognition was more likely to dominate attitudes if processing resources in attitude formation were high. By contrast, affect was more likely to dominate attitudes if processing resources were low. In this study, attitudes toward direct supervisors were formed with higher processing resources because direct supervisors directly influenced the interests of supervised groups through their interactions. In contrast, attitudes toward indirect supervisors were formed with lower processing resources because indirect supervisors had no direct impact on supervised groups as there were no interactions. Therefore, I proposed the following hypotheses:

Hypothesis 1: Cognition will be a stronger predictor of attitudes toward direct supervisors than affect.

Hypothesis 2: Affect will be a stronger predictor of attitudes toward indirect supervisors than cognition.

Method

Participants

Participants were 152 undergraduate volunteers from a Chinese university, ranging in age from 18 to 33 years ($M = 21.77$). They were randomly assigned to 1 of 38 groups, each of which consisted of four members (Tajfel, Billig, Bundy, & Flament, 1971).

Procedure

Participant groups were given a short oral introduction describing the purpose of the experiment as a team cooperation study. A female experimenter asked participant groups to perform a community programming task in which they needed to choose 10 essential facilities for a new community from 20 options (e.g., greenbelt, shop, food market, and drugstore). The amount of the reward for the groups would depend on their performance. This was decided by how many of their choices were consistent with the programming experts' answers.

Each participant group acting as a task group was told that there were three other groups in their large team, including another task group, a task supervisory group, and a team supervisory group. Within the pyramidal team structure, the team supervisory group belonged to the highest level, the task supervisory group was in the middle, and the two task groups, including the participant groups themselves, stayed at the lowest level. The team supervisory group (the participant groups' indirect supervisors) made the rules of the team task but had no interactions with participant groups. The task supervisory group (the participant groups' direct supervisors) decided how to distribute a help manual between the two task groups that could greatly improve their performance. In

addition, if the performance of both task groups was acceptable, an additional bonus would be allocated by the direct supervisors. In this manner, participant groups interacted with their direct supervisors in the programming task via the help manual distribution and the bonus allocation.

After this task, participant groups were asked to discuss their feelings and thoughts about the direct and indirect supervisors. Then the participant groups' affect, cognition, and attitudes toward both types of supervisor were assessed. The order of the discussions and measures for direct and indirect supervisors was counterbalanced. All participant groups were told that their evaluations of supervisors would not be revealed to anyone other than the experimenter.

Measures

All group indices were assessed by averaging the group members' reports of affect, cognition, and attitudes, and assigned to the group as a whole (Barsade, 2002) on 4-point scales without middle points. There were no individual data in this study.

Group affect was assessed using three items based on an affective scale taken from Crites, Fabrigar, and Petty's (1994) study. Participants responded to the question, "How does your group feel about your direct/indirect supervisors?" with the following bipolar adjectival pairs: happy-unhappy, relaxed-angry, and loving-hateful. For affect toward direct supervisors, the alpha coefficient was .62, and for affect toward indirect supervisors, the alpha coefficient was .68.

Group cognition was assessed using three items based on the Group Perceptions Survey (see Jackson et al., 1996). Participants responded to the question, "What does your group think of your direct/indirect supervisors?" with the following bipolar adjectival pairs: responsible-irresponsible, hardworking-lazy, and helpful-useless. For cognition toward direct supervisors, the alpha coefficient was .69, and for cognition toward indirect supervisors, the alpha coefficient was .74.

Participant groups' attitudes were measured using items based on the General Evaluation Scale (see Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). Participants answered the question, "Generally, how does your group evaluate your direct/indirect supervisors?" with the following bipolar adjectival pairs: warm-cold, friendly-hostile, suspicious-trusting, positive-negative, admirable-disgustful, and respectable-contemptible. For attitudes toward direct supervisors, the alpha coefficient was .73, and for attitudes toward indirect supervisors, the alpha coefficient was .77.

Results

The results from correlation comparison shown in Table 1 indicate that both affect and cognition were significantly associated with the two target attitudes.

Specifically, cognition was more closely related to attitudes toward direct supervisors than affect. Hypothesis 1 was supported. However, the correlation between affect and attitudes toward indirect supervisors was slightly stronger than that of cognition, although this difference was not statistically significant. Hypothesis 2 was partly supported.

Table 1. *Predicting Attitudes from Affect and Cognition*

DV: Attitudes	Affect		Cognition		<i>r</i> significant difference test	<i>R</i> ²	β significant difference test
	<i>r</i>	β	<i>r</i>	β			
Direct supervisors	.79**	.26**	.93**	.74**	<i>t</i> (35) = -3.42, <i>p</i> < .01	.89**	<i>t</i> (35) = -1.85, <i>p</i> < .1
Indirect supervisors	.77**	.53**	.72**	.31 ⁺	<i>t</i> (35) = .72, <i>p</i> > .1	.63**	<i>t</i> (35) = 1.67, <i>p</i> > .1

Note. DV = dependent variable; *r* = bivariate correlation between predictor and attitudes.

** *p* < .01, ⁺ *p* < .10.

I regressed both affect and cognition on attitudes to retest my hypotheses separately for direct and indirect supervisors. The results also shown in Table 1 suggest that both affect and cognition could significantly predict the two target attitudes. Specifically, as cognition was a stronger predictor of attitudes toward direct supervisors than affect, that Hypothesis 1 was supported, whereas affect predicted attitudes toward indirect supervisors more strongly than cognition. However, the difference in the standardized regression coefficients was not statistically significant either. These findings confirmed the results from correlation comparison and Hypothesis 2 was partly supported.

Discussion

Results suggest that cognition exerted a stronger influence on attitudes toward direct supervisors than did affect. In contrast, affect predicted attitudes toward indirect supervisors slightly more strongly than did cognition, despite the nonsignificant predictive difference.

These results can be explained by information in Malhotra's (2005) attitude formation study. Because processing resources are high for direct supervisors, owing to their direct interactions, supervised groups are more likely to use cognitive reactions to form attitudes in a systematic way. However, because processing resources are low for indirect supervisors, owing to the lack of direct interactions, supervised groups are more likely to use affective reactions to form attitudes in an automatic way.

The findings in this study contribute to an understanding of the effects of affect and cognition on attitudes in two important ways. Firstly, the power of

affect and cognition in predicting supervised groups' attitudes toward direct and indirect supervisors is shown. Because the target attitudes in this study were newly formed in the laboratory, future researchers should examine these results using the subordinates' attitudes toward direct and indirect supervisors in an organization.

Secondly, through these findings an understanding of how to effectively change supervised groups' attitudes toward their supervisors has been developed. Previous researchers have found that attitudes based on affect can change more easily with affective persuasion, whereas cognitively based attitudes are susceptible to persuasive, cognitive information (Huskinson & Haddock, 2004). Thus, supervised groups' attitudes toward direct supervisors may alter under the persuasion of cognitive information, but their attitudes toward indirect supervisors can be altered only by affective information.

In conclusion, I have provided insight into the power of affect and cognition in predicting supervised groups' attitudes toward direct and indirect supervisors. Future researchers can further apply my findings to improving group attitudes through affective and cognitive interventions.

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