

The Role of Constructive Controversy for Team Support and Team Productivity: Managing Teams in China

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Strong feelings of social support are apt to a foundation for productive teamwork as team members provide each other with practical assistance as well as strengthen their relationships and their effective coordination of resources. But working in a team can be frustrating and team members may well feel angry with each other, thus threatening team support. This study argues that constructive controversy, open-minded discussion of anger, helps team social support. Structural equation results support our argument that constructive controversy of Chinese team members' anger helps them modify their angry feelings and thus help develop team social support, which leads to team productivity.

INTRODUCTION

Researchers have argued that emotions impact relationships and organizations (Ashkanasy, Hartel, & Daus, 2003; Gooty, Gavin, & Ashkanasy, 2009; Seo, Bartunek, & Barrett, 2010). Indeed, developing strong feelings of support can be very beneficial to team members (Ferris et al., 2009). However, team members may also frustrate each other and channel angry feelings toward each other (Doucet, 2004). Anger and support may not though be as incompatible as they might appear (Gibson & Callister, 2010; Suinn, 2001). Team members may be able to discuss and manage their anger in ways that enhance feelings of support (Gibson, Schweitzer, Callister, & Gray, 2009; van Kleef et al., 2008). Such discussions would be very useful for maintaining feelings of social support in teams despite inevitable frustrations and irritations. Like conflict, anger is not invariably an obstacle and can be managed constructively to strengthen relationships and productivity (Deutsch, 1973). This study proposes that constructive controversy, the open-minded discussion of opposing ideas and anger, helps team members experience a high level of team social support, which in turn results in team productivity.

This study makes several contributions to the literature. Many organizations rely upon teams to manage rapid changes, meet challenges, and accomplish goals. The present study builds upon recent research that has examined the value and conditions when teams perform. It contributes to the social support literature by confirming that team social support is a foundation for team productivity and extends

this finding to teams in Chinese organizations. This study also suggests that how team members discuss their angry feelings very much affects their social support feelings. The study specifies and documents that constructive controversy, the open-minded discussion of opposing ideas for mutual benefit, is a useful way to understand the nature of the discussion of anger that contributes to social support. It thereby relates research on constructive controversy with team support and performance. Results have important practical implications because managers have viable ways of structuring constructive controversy for their teams.

THEORETICAL DISCUSSION AND HYPOTHESES

Feeling Support

The social context such as the extent to which employees feel supported and valued in the workplace very much affects their intentions and attitudes (Armeli, Eisenberger, Fasolo, & Lynch, 1998; Eisenberger, Fasolo, & Davis-LaMastro, 1990; Settoon, Bennett, & Liden, 1996). Research confirms that individuals who feel supported by their organization and supervisors reciprocate by becoming committed, productive employees (Eisenberger et al., 1986; Rhoades & Eisenberger, 2002). When employees have positive experiences in an organization, they are willing to stay with the organization. Indeed, perceived organizational support has been found to be a critical antecedent for such outcomes as extra-role job performance (Moorman, Blakely, & Niehoff, 1998). Employees who feel supported have been found to conclude that they are insiders who then engage in citizenship behavior (Stamper & Masterson, 2002). Believing the organization supports them seems to help employees feel contented with their job and that problems are not overwhelming; as a consequence, they are not distracted with thoughts of leaving. On the other hand, when employees have negative experiences in an organization, they are less likely to stay with the organization.

Co-workers too have been found to have substantial effects on attitudinal, perceptual, and behavior outcomes (Chiaburu & Harrison, 2008; Trianna & Garcia, 2010). Indeed, psychologists have found substantial evidence that co-worker social support can be vital for people to deal with every day as well as special challenges (Cohen, 2004; Haslam et al., 2009). Social support groups help people manage the stress of adapting and living with many threats, including those to life. Social support has helped communities cope with adverse conditions and maintain their viability (Fowler & Etchegary, 2008).

Social support communicates caring and concern that bolsters psychological wellbeing but social support also provides practical aid by helping to solve difficulties and problems (Cohen, 2004; Haslam et al., 2009). Social support should also be useful for teamwork in that it would appear to promote quality relationships and facilitate ongoing coordination of effort (Bell, 2007; Hackman, 1983; Ilgen, 1999). Based on the above research and reasoning, it is hypothesized that:

Hypothesis 1: Team social support develops team productivity.

Feeling Anger

This study argues that anger need not distract from social support but, if skillfully managed, can contribute to feelings of being supported. Although as a basic feeling that people experience and recognize, anger has proved difficult to define (Averill, 1982; Fitness, 2000). Behaviorists define anger as an intense affect and high arousal that are part of a syndrome of physiological, behavioral, and cognitive reactions that occur when people are emotionally provoked and can lead directly to aggression (Berkowitz, 1989, 1993; Fox & Spector, 1999). The social-cognitive approach proposes that anger develops from an intentional, unjustified provocation and frustration (Averill, 1982, 1993; Baumeister, Stillwell, & Wotman, 1990; Fitness, 2000). In the meantime, the social-cognitive approach suggests that how people consider anger and the provocateur very much affects the dynamics and outcomes of anger (Baumeister, Stillwell, & Wotman, 1990; Fitness, 2000). As cognitions affect reactions to frustration, aggression is not necessarily the only or even primary response to provocation. How people express anger and react to it depends upon their perception about the present situation and their prior learning about how to respond to provocations. Targets may accept that the frustration was not intentional. Importantly, the

other discussants can reassure the angered person that they will not continue the behavior that was experienced as intentional and unjustified. By altering their understanding of the provocation, they change their feelings and actions toward the provocateur. Effective discussion of the anger incident can provide an alternative explanation for the provocation and can help targets believe that the provocateur did not mean to harm them without justification. Therefore, people are expected to have the ability to adjust how they express and react to anger; they can develop constructive ways to manage anger as well as destructive ways.

Organizations have been found to make use of anger among team members to accomplish goals (Callister, Gray, Schweitzer, Gibson, & Tan, 2003). The direct expression of anger has been proposed as a critical first step in managing conflict (Bach & Wyden, 1968). Knowing that the other negotiator is angry can provide valuable information that the other is committed to a favorable settlement and induce concessions (Tamir, Mitchell, & Gross, 2008; Van Kleef, De Dreu, & Manstead, 2004). Open discussions of anger have been found to resolve anger and strengthen relationships (Tjosvold & Su, 2007). Suppressing anger can not only be difficult but may undermine physical health, psychological well-being, and motivation (Fitness, 2000; Suinn, 2001).

Constructive Controversy

Not all discussions can manage anger effectively (Parlami, Allred, & Block, 2010). For example, discussions with the provocateur can intensify the anger if the target is further convinced that the provocation was intentional, unjustified, and likely to continue. This study proposes that constructive controversy is a useful way to identify the nature of the discussion among team members about their angry feelings, thus fostering strong feelings of social support. Conflict involves incompatible activities; one person's actions interfere, obstruct or in some way get in the way of another's action (Deutsch, 1973). Controversy refers to the intellectual aspects of conflict in that it occurs when one person's ideas, information, conclusions, theories, and opinions are incompatible with those of another as they seek an agreement (Johnson, Johnson, & Tjosvold, 2006). People discuss their reasons and thinking about how they develop angry feelings and what is needed to resolve them. Constructive controversy of anger occurs when people discuss opposing views about their anger open-mindedly.

Studies suggest that controversy, when discussed open-mindedly, induces dynamics that would appear to promote mutual understanding and developing common agreements. Protagonists gather evidence, consider ideas, and develop a rational framework to present their position persuasively and convincingly (Tjosvold, 2008). Confronted with an opposing view, they double their efforts to elaborate their positions but they also curiously explore other perspectives and learn new information, ideas, and reasoning (Tjosvold, 2008). Then they integrate diverse ideas previously considered incompatible to create new solutions and understandings. Researchers have found that the discussion of conflict can aid solving various organizational problems (Amason, 1996; Schweiger, Sandberg, & Rechner, 1989; Tetlock, Armor & Peterson, 1994). Constructive controversy has been used to develop innovative solutions in an educational bureaucracy as educators and administrators discuss frustrations and opportunities open-mindedly (Tjosvold & McNeely, 1988). Constructive controversy is vital for teamwork, including facilitating team self-management, by promoting effective resolution of team and task issues (Alper, Tjosvold, & Law, 1998; Poon, Pike, & Tjosvold, 2001).

After engaging in constructive controversy, angry team members are more likely to integrate their ideas and develop a common understanding of how the angry feelings initially developed. They come to understand the thinking of their teammates as they receive and interpret each other's actions and appreciate why their teammates became angry. Open-minded discussion of anger situation strengthens the team's capacity to resolve frustrations and develop viable solutions. These discussions help them both resolve issues and strengthen their relationships, key aspects of social support. They confirm to team members that they listen to each other, understand each other's perspective, and are committed to mutually beneficial solutions. On the basis of this confirmed evidence, team members believe that their team has considerable social support. Based on the above research and reasoning, it is hypothesized that:

Hypothesis 2: Engaging in constructive controversy over angry situations develops team social support.

METHOD

Participants

With the approval of top and middle management, employee teams from different companies in a city in eastern China, were recruited to participate in the. To reduce potential concern for being involved in evaluating others, participants were assured that their responses would be held totally confidential and used for research only. Participants had to have at least two years of work experience, be presently employed, and be willing to participate. In addition, the participants were chosen to represent a wide range of industries. One hundred and eighty sets of paired questionnaires (team leaders vs. team members) were distributed and 145 sets were collected, among which 34 sets were dropped from the data because the questionnaires were not completed, or only one questionnaire was included in a pair. The final data includes 111 sets of valid questionnaires.

Participants worked in a variety of industries in China, specifically, 5% from Manufacturing, 2% from Construction, 13% from Transportation, Storage, Postal and Telecommunications, 14% from Wholesale, Retail and Catering, 21% from Banking and Insurance, 4% from Real Estate, 8% from Social Services, 3% from Health Care, and Social Welfare, 9% from Education, Culture, Film and Television, 8% from Scientific Research and Polytechnic Services, 5% Government Institutions, Party and Social organizations, and 8% from other industries.

Among leaders whose responses were included in the data sets, 68% were male; 58% were 21-30 years old, 32% were 31-40, 8% were 41-50 and 2% were 51-60; the average age is 31 years old. Regarding education level, 1% completed middle school, 22% were college graduates, 46% were university graduates, and 31% had graduate education or above. The average working tenure was 3.4 years. Among employees whose responses are included in the data sets, 66% were male; 78% were 21-30 years old, 12% were 31-40, 6% were 41-50 and 4% are 51-60; average age is 29 years old. Regarding education level, 8% completed middle school, 27% were college graduates, 24% were university graduates and 45% had graduate education or above. The average working tenure was 3.5 years.

Measures

To test the hypotheses, team members completed questionnaires that measured constructive controversy and team social support; while team leaders completed the measure of team productivity. The 5-item scale of was constructive controversy developed from a set of experimental studies (Tjosvold, 1998) and questionnaire studies in North America (Alper et al., 1998) that measured the social interaction of team members when the team was engaged in open-minded discussion. Team members were asked to answer on a 7-point scale (1= strongly agree; 7=strongly disagree) about their degree of agreement with the five statements. (This scale was also used for all items in the study.) A sample item from the scale was "Team members express their own views about anger directly to each other." Coefficient alpha of the scale was .85.

Team social support is the focus on the extent that team members can turn to each other when they have difficulties (Cassidy, 1994). A sample item is "Team members can count on each other to distract their worries in times of stress". This scale's coefficient alpha was .89. As with other research on work teams (Cohen & Ledford, 1994; Goodman, Devadas, & Griffith-Hughson, 1988), obtaining objective work outcome measures proved impossible. Companies did not collect team level productivity data. Therefore, we asked team leaders to provide ratings of their team's productivity. They completed a six item scale adapted from Barker, Tjosvold, & Andrews, (1988). Sample items are "Team members meet or exceed their productivity requirements" and "Team members do their part to ensure that their products will be delivered on time". Coefficient alpha of this scale was .82.

To ensure conceptual consistency, back translation was adopted in this study. Two native Chinese members of the research team translated the questionnaires originally written in English into Chinese. the

questionnaires were translated back into English to check for possible deviation (Brislin, 1970). The questionnaires were also pre-tested to make sure that respondents clearly understood every phrase, concept, and question. The original questionnaire was piloted on several employees who were not part of the final sample. They indicated that it had too many items. Several scales were shortened before another group of employees completed the new questionnaire that was used in the study.

ANALYSIS

Scale validation

To test the factorial structure of the measurement items, we conducted a series of confirmatory factor analyses to test whether the participants' ratings would load on three distinct factors, namely constructive controversy, social support, and team productivity. The confirmatory factor analyses were conducted using AMOS.

We compared the 3-factor hypothesized model, labeled as M0, to the two alternative 2-factor models with combining constructive controversy and social support (M1) and combining social support and team productivity (M2). M3 was a single-factor with all items.

Results of this series of confirmatory factor analyses are shown in Table 1. The changes in model chi-square for all the three alternative models were significant, indicating that the hypothesized 3-factor model fit the data best. We were, therefore, confident that the three constructs used in this study were able to capture unique variances and were distinctive psychological constructs.

TABLE 1
RESULTS OF THE CONFIRMATORY FACTOR ANALYSIS OF THE MEASUREMENT MODELS

	d.f.	Model χ^2	$\Delta\chi^2$	CFI	NFI
Baseline 3-factor model (M ₀)	102.0	126.4	-	0.97	0.88
2-factor Model (M1) combining constructive controversy and social support	118.0	401.2	274.8	0.69	0.62
2-factor Model (M2) combining employee social support and team productivity	104.0	379.0	252.6	0.72	0.64
Single Factor Model	119.0	545.5	419.1	0.54	0.48

Note: N=111; **p<.01; *p<.05.

Hypotheses Testing

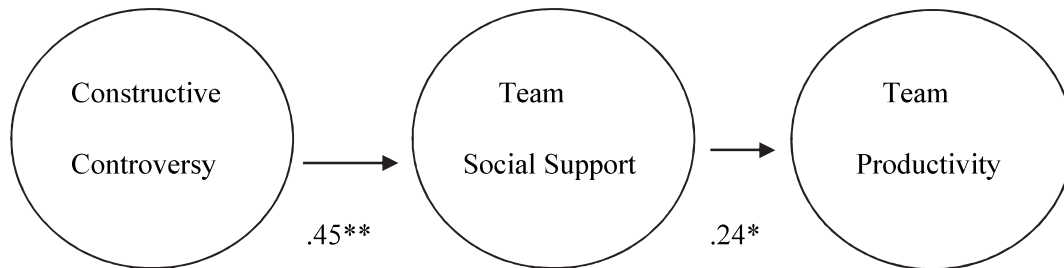
The hypotheses imply that there should be no direct effects between constructive controversy and team productivity. Team social support mediates the relationship between constructive controversy and team productivity. Correlational analyses were used as an initial examination of the hypotheses. To more vigorously test the proposed model that team social support mediates the relationship between constructive controversy and team productivity, a structural equation analysis was conducted using AMOS.

Zero-order correlations provide an initial examination of the hypotheses linking constructive controversy, team social support and team productivity (see Table 2). Team support was positively related to team productivity ($r=.24$, $p<.05$). In addition, constructive controversy is positively related to team social support ($r=.45$, $p<.01$).

The path coefficients of the theorized model helped to explore the findings more specifically (see Figure 1). Constructive controversy had a significant positive relationship with team social support (β

=.45, $p < .01$). Team social support had a significant relationship with team productivity ($\beta = .24$, $p < .05$). These findings on path coefficients provide a good support for the study's hypotheses and suggest that constructive controversy and team social support can be essential for developing team productivity. Both hypotheses were supported by the results of the data analysis.

**FIGURE 1
HYPOTHESIZED MODEL**



Note: $p < .10$; ** $p < .01$; * $p < .05$

**TABLE 2
CORRELATIONS AMONG VARIABLES**

	Mean	s.d	(1)	(2)	(3)
(1) Constructive controversy	4.92	.98	1		
(2) team social support	5.56	.83	.45**	1	
(3) team productivity	5.68	.78	.18	.24*	1

Note: ** $p < .01$; * $p < .05$; $N = 111$.

The χ^2 of the Indirect Effects Model was .9 (d.f.=1) and the χ^2 of the Direct Effects Models was 28.4 (d.f.=2) (see Table 3). These results indicate that omission of the mediating effects of irritability significantly deteriorated the Indirect Effects Model. The NFI and CFI of the Direct Effects model were .12 and .10 whereas the Indirect Effects Model had NFI and CFI of .97 and 1.0 respectively. Both fit indices of the Indirect Effects Model were considered as indicating good model fit, given the usually accepted critical value of .90 (Bentler & Bonnett, 1980). Results of the causal model comparison suggest that the Indirect Effects Model be accepted.

**TABLE 3
COMPARISON AMONG MODELS**

Model	Model χ^2	$\Delta\chi^2$	d. f	NFI	CFI
Saturated Model	0.00	-	0	-	-
Mediating Effects Model	0.9	-	1	.97	1.0
Direct Effects Model	28.4	27.5	2	.12	.10

Note: $N = 111$; ** $p < .01$; * $p < .05$.

The path coefficients (see Table 4) of the accepted model helped to explore the findings more specifically. Results indicated that constructive controversy has significant positive effects on team social support ($\beta = .45$, $p < .01$), which has significant positive effects on team productivity ($\beta = .24$, $p < .05$).

TABLE 4
HYPOTHESIZED MEDIATING EFFECTS MODEL

Path from	Path to	Path Coefficient
Constructive controversy	Team social support	.45***
Team social support	Team productivity	.24*
Model χ^2	0.9	
CFI	1.00	
d.f.	1	
NFI	.97	

Note: N=111; **p<.01; *p<.05

DISCUSSION

Researchers have increasingly emphasized the importance of emotions and relationships because they can affect how team members coordinate their effort and integrate their ideas so that teams are productive (Druckman & Olekaalns, 2008; Seo et al., 2010). Social support has long been considered valuable for individual wellbeing; results from this study confirm that it can be very useful for team productivity. Results also suggest that even though team members frustrate and anger each other as they work together, these feelings do not inevitably disrupt teamwork. Team members can discuss provocations openly where they listen to each other, develop integrated understanding of the provocations, and reach agreements for how to proceed. Specifically, the results of this study supports the theorizing that constructive controversy contributes to team productivity through developing social support.

Constructive Controversy for Social Support

Researchers are convinced that social support is very valuable for individuals and teams (Armeli et al., 1998; Eisenberger et al., 1990; Moorman et al., 1998; Settoon et al., 1996; Rhoades & Eisenberger, 2002). One reason for the power of social support may well be that it involves several related processes, including communicating caring and concern, recommending practical suggestions, and giving concrete assistance to solve difficulties (Cohen, 2004; Haslam et al., 2009). Social support also develops from and helps to build quality relationships (Bell, 2007; Hackman, 1983; Ilgen, 1999).

Prior research has not identified antecedents to social support. An important contribution of this study is that this study provides evidence that constructive controversy about anger situations contributes substantially to social support. The open-minded discussion of opposing views about anger situations appears to convince team members that they are willing and able to support each other. Previous research suggests several dynamics by which constructive controversy can develop social support (Tjosvold, 2008). When they disagree constructively, team members not only express their views directly but ask each other questions, listen to and actually understand each other's arguments, and subsequently these dynamics strengthen relationships. Studies have also demonstrated that constructive controversy can help teams develop quality solutions to even complex problems (Johnson et al., 2006). It would seem that constructive controversy can provide team members practical experience in developing the feelings, relationships, and practices of social support. Future research can specify the constructive controversy dynamics that promote social support.

Chinese Values

Chinese values have long been theorized to be difficult to engage in open, productive discussions of conflict difficult because disagreement threatens highly valued relationships (Tse, Francis, & Walls, 1994). Results of this study challenge this general proposition. Chinese people may value relationships and may prefer to avoid conflict. However, this study indicates that discussing anger openly develops

social support in teams. Disagreement itself may not alienate people and disrupt relationships in China, as Chinese people seem to be able to accept disagreement and still feel respected (Tjosvold & Sun, 2001). Discussion of opposing views open-mindedly can thus contribute to team affect, relationships, and productivity even in collectivist China. Results of this study do not indicate that constructive controversy is particularly likely or easy to develop in China, although the overall mean for this variable is high. Nevertheless, the evidence does though support applying the Western-developed idea of constructive controversy to understand the conditions that promote team support and productivity in China.

Traditional approaches of research of cross-cultural management attempt to compare samples from different cultures and further explore a cultural variable with an indigenous theory mostly grounded in the Western society. This study takes an alternative approach to identify conditions that impact organizational dynamics and outcomes in a particular society (such as China). This approach may be a viable addition to the traditional approaches, in that this research approach used in this study can both probe general theories and improve understanding of organizational dynamics in nonwestern cultures.

IMPLICATIONS AND LIMITATIONS

Teams have become increasingly important to help organizations deal with intensifying demands and complex problems. Results of this study suggest that teams can strengthen social support and productivity through structuring constructive controversy. For example, training sessions could orient the team towards constructive controversy and develop skills of expressing opposing views, taking the perspective and understanding other's positions, and incorporating ideas into mutually acceptable decisions (Kanfer, 1990; Naylor, Pritchard, & Ilgen 1980; Tjosvold, 2008). Managers and team members can publicly develop norms and procedures for how they should disagree and regularly refer to the norms to strengthen their constructive controversy. These norms encourage group members to dig into issues by expressing their opinions and inviting others to discuss theirs (Cannon & Edmondson, 2001).

Teams are important units within an organization for solving critical problems and getting important things done for the organization. A considerable amount of research has demonstrated that social support is a powerful tool for individual wellbeing and team development. This study confirms the relationship between social support and team productivity and extends this finding to Chinese organizations. As teams experience provocations, frustrations, and anger that threaten social support, this study identifies constructive controversy as an essential factor that teams can employ to discuss anger and strengthen social support. Even in a collectivist society such as China, the dynamics and outcomes of constructive controversy provide a realistic basis upon which team members believe that they care for each other and can support each other even when they disagree. These feelings and practices thus promote team productivity. For Western companies investing and operating in China, this study also provides a guideline for Western managers to properly build team work and manger teams.

This study also has a number of limitations. The data are self-reported and subject to biases, and may not accurately describe the relationships among variables. Team leaders and team members completed questionnaires with different measures. Developing different sources for these measures might reduce the possibilities of using the same source method as an alternative explanation of the results linking constructive controversy with social support and team productivity.

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