

Corporate Communication and Worker Perceptions of Conflict Management and Justice

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Abstract

Organizations are well advised to develop a conflict culture promoting constructive conflict management and cooperation. But what does such a culture look like? Research from international and political relations has demonstrated that the level of integrative complexity (IC) as disseminated in political messages is an important factor in the context of conflict management. In our research, we hypothesize that, similar to political messages, corporate communication, which emphasizes a complex (i.e., differentiated and integrated) way of understanding multidimensional issues, is connected to cooperative conflict management and related variables like perceptions of organizational justice. Results of a multilevel field study support this proposition. Whereas the level of organizational IC was assessed by rating organizations' communication (specifically their vision or mission statements published on the Internet), perceptions of conflict management and justice were assessed by asking employees. The study emphasizes the utility of addressing organizational level variables in relation to organizational members' perceptions.

Conflict is inherent in organizations (Katz & Kahn, 1978; Pondy, 1967, 1992). Conflict indicates that individuals or groups perceive differences about interests, resources, opinions, values, or practices between themselves and others (De Dreu & Gelfand, 2008). Research on conflict in organizations draws an overall pessimistic conclusion: Conflict mostly has negative consequences with respect to important aspects like employees' performance, satisfaction, and well-being; only under particular circumstances conflict can have positive effects (for meta-analyses, see De Dreu & Weingart, 2003; De Wit, Greer, & Jehn, 2012). Research is challenged to identify conditions, that lessen the negative and promote the positive outcomes of conflict in organizations. There is manifold evidence that cooperative conflict management in comparison to competitive conflict management is such a condition (cf. Alper, Tjosvold, & Law, 2000; Brodbeck, Guillaume, & Lee, 2011; De Dreu, 2008; Guillaume, Brodbeck, & Riketta, 2012; Schulz-Hardt, Brodbeck, Mojzisch, Kerschreiter, & Frey, 2006; Somech, Desivilya, & Lidogoster, 2009; Tjosvold, 1998, 2008; Tjosvold, Hui, Ding, & Hu, 2003).

Conflict management describes a mode of handling conflict (Thomas, 1992): Cooperative conflict management, on the one hand, defines a mode in which the parties perceive their goals as positively linked (i.e., win-win), which leads to mutual support for effective action and openness to the other party.

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On the other hand, competitive conflict management specifies a mode in which parties perceive their goals as being negatively linked (i.e., win–lose), and thus parties act against each other as well as show closed-mindedness toward the other party (Deutsch, 1949, 1973; Tjosvold, 1998). Even though in most conflict situations cooperative and competitive modes are mixed (Deutsch, 1973), predominant ways of conflict management can be identified and measured on various levels (e.g., individuals, teams, or larger entities; De Dreu & Gelfand, 2008; Tjosvold, 1998, 2008).

Various strands of research have focused on conditions that foster cooperative conflict management in organizations on the individual and small group level, organizational level factors such as the organizations' communication or culture have been largely neglected (De Dreu & Gelfand, 2008; Gelfand, Leslie, Keller, & De Dreu, 2012). This gap asks to be bridged, as there is evidence that organizations develop conflict cultures that “define socially shared and normative ways to manage conflict” (Gelfand et al., 2012, p. 1131) beyond individual preferences for handling conflict.

This article contributes to this recent call by focusing on corporate communication, which organizations use to inform and express their culture (Lammers, 2011)—including their conflict culture. Corporate communication is explored with respect to its level of *integrative complexity* (IC; Suedfeld et al., 1992). IC specifies the degree to which a multidimensional issue is differentiated and integrated. For example, an organization's mission, as it is propagated in internal and external communications, which comprises basically one goal (e.g., rapid profit maximization), is rather one-dimensional and therefore low in IC. In contrast, an organization's mission that expresses several goals, which to some extent might be conflicting (e.g., profit, innovation, sustainability, and corporate governance), and integrates those different goals into an overall frame indicates higher levels of IC. Research on international relations consistently showed that political messages evidencing high levels of IC are strongly related to cooperative and peaceful international and national conflict strategies, whereas messages with low levels of IC are associated with competitive conflict strategies (cf. Suedfeld, 2010). Corporate communication and messages—similar to political messages—carry logics and define a shared understanding about how to perceive and deal with multidimensionality or diverse opinions and ultimately conflict.

We present a multilevel field study, which constitutes a preliminary exploration of the relationship between organizational IC, as expressed in corporate communication from the top level, and conflict management, as perceived by the employees in the ranks. In organizations, how conflict is managed, in turn, has consequences on important outcomes. Because it was shown that perceptions of organizational justice play an important mediating role in the relationship between cooperative conflict management and positive organizational outcomes like team effectiveness, innovation, or strategic advantage (Chen & Tjosvold, 2002; Tjosvold, Wong, & Wan, 2010), we also assess perceptions of justice. The study contributes by identifying conditions that support cooperative conflict management in organizations and its consequences like perceptions of organizational justice and transfers insights from research on political relations to organizational research.

Integrative Complexity and Conflict Management

Integrative complexity (IC) refers to the degree to which a potentially multidimensional cognitive space is differentiated and integrated (see Suedfeld, 2010; Suedfeld et al., 1992). The concept of IC is based on Kelly's (1955) personal construct theory, Bieri's (1966) cognitive orientation theory, Zajonc's (1960) categorizing theory, and Scott's (1969) early cognitive structure theory. High levels of IC imply differentiation (i.e., different points of view regarding an issue are seen and acknowledged) and integration (i.e., the different points of view are put in relation to each other and interpreted within an overall frame or world view). Whereas medium levels of IC are characterized by differentiation but little or no integration, low levels of IC represent no differentiation and no integration (i.e., a black-and-white thinking and reasoning, in which contradictions and ambiguities are neglected). Thus, the concept addresses the structure, not the content, of how information is processed and communicated (Suedfeld et al., 1992). Information

in the form of written or verbal expression can be analyzed with respect to its level of differentiation and integration and sheds light on the structure of information processing that is used or propagated.

Most empirical research connecting IC to conflict management has focused on political and international relations and has analyzed public statements expressed by political leaders or the media. Competitive strategies and escalations as well as international tensions, aggressive acts, and armed conflict are usually associated with or preceded by a decrease in IC, creating a spirit of black-and-white thinking. In contrast, mutually beneficial agreements and successful diplomatic communications are found to be related to higher levels of IC, fostering a differentiated and integrated perspective of multidimensional issues (e.g., Conway, Suedfeld, & Tetlock, 2001; Koo, Han, & Kim, 2002; Liht, Suedfeld, & Krawczyk, 2005; Satterfield, 1998; Suedfeld, 1992; Suedfeld & Bluck, 1988; Suedfeld & Jhangiani, 2009; Suedfeld & Leighton, 2002; Suedfeld, Tetlock, & Ramirez, 1977; Tetlock, 1985; Walker & Watson, 1994; Wallace, Suedfeld, & Thachuk, 1993; Winter, 2007; for a review, see Suedfeld, 2010). Even though research on IC has primarily focused on international relations, there is evidence for the relationship between high levels of IC and cooperative constructive conflict resolution in dyads (Kugler, Coleman, & Fuchs, 2011).

To the best of our knowledge, IC has not been empirically investigated with respect to corporate communication or conflict management in organizations. However, promising results have been found regarding the level of IC of teams as it relates to, for example, team decisions (e.g., Brodbeck, Kugler, Fischer, Heinze, & Fischer, 2011; Gruenfeld & Preston, 2000; Gruenfeld, Thomas-Hunt, & Kim, 1998) or corporate social performance (Wong, Ormiston, & Tetlock, 2011). Conceptually IC on an organizational level has been mentioned by Streufert and Swezey (1986), who state that "a... complex (multidimensional) organization would function on the basis of a number of more or less independent (differentiated) organizational purposes, goals, means and so forth... A conceptually less complex (more one-dimensional) organization would likely function on the basis of few or single (e.g., profit) orientations" (p. 18).

We link the research on IC and conflict management in the area of political relations with the notion of complexity of organizations and presume that the complexity is expressed in corporate messages (e.g., mission statements; Desmidt, Prinzie, & De Cramer, 2011). We will refer to the degree of IC in corporate messages, like mission statements, as *organizational IC*. Similar to political messages, corporate communication carries logics and is designed to inform the thoughts and actions of recipients (Lammers, 2011). Corporate messages inform and express the organizational culture (i.e., "the pattern of basic assumptions"; Schein, 1984, p. 3), which provide a context for interactions (Svyantek & Brown, 2000) such as the way conflict is managed (Gelfand et al., 2012; Olekalns, Putnam, Weingart, & Metcalf, 2008).

In our study, we focus on conflict management within organizations. We base our study on the idea that employees adjust to an organizational culture and thus learn how complex and contradicting information is usually processed. This habitual way of dealing with complexity, contradiction, and differences within an organization, which is part of an organization's culture, becomes especially important when conflict arises. Being in an environment in which different points of views are valued and encouraged makes cooperative conflict management more likely than when seeing the world in black-and-white terms. Thus, we measure organizational IC as expressed in corporate communication and assume that these messages are an aspect of the organizational culture, which influences the predominant way conflict is handled within the organization (De Dreu & Gelfand, 2008; Olekalns et al., 2008): When differences and contradictions are differentiated and integrated (i.e., high levels of organizational IC), more cooperation should be present on the one hand; when black-and-white thinking is encouraged (i.e., low levels of organizational IC), competition should be predominant on the other hand.

Hypothesis 1a: The level of organizational IC is positively related to worker perceptions of cooperative conflict management within the organization.

Hypothesis 1b: The level of organizational IC is negatively related to worker perceptions of competitive conflict management within the organization.

Consequences of Cooperative Versus Competitive Conflict Management

The necessity to study conditions that support cooperative conflict management becomes apparent when considering the consequences of poorly managed conflicts. There is no doubt that conflict often has negative consequences for organizations. Conflict requires time and resources (e.g., De Dreu, 2008), can negatively affect performance as well as collaboration (Jehn, 1995; Jehn & Bendersky, 2003; for meta-analyses, see De Dreu & Weingart, 2003; De Wit et al., 2012), and can impair the satisfaction, well-being, and health of employees (for reviews, see De Dreu & Beersma, 2005; De Dreu, Van Dierendonck, & Dijkstra, 2004; Spector & Bruk-Lee, 2008). Regarding potential positive effects of conflict, the research results are less consistent (De Dreu, 2008; De Dreu & Weingart, 2003; De Wit et al., 2012). It is noted that under specific circumstances certain types of conflict can be beneficial. For example, dissent may enhance individual learning and performance (Brodbeck, Kugler, et al., 2011; Guillaume et al., 2011), preference heterogeneity can support group decision quality (e.g., Brodbeck, Kerschreiter, Mojzisch, Frey, & Schulz-Hardt, 2002; Brodbeck, Kerschreiter, Mojzisch, & Schulz-Hardt, 2007; for a review, see Schulz-Hardt, Mojzisch, & Vogelgesang, 2008), and exchange of dissenting information during group decision-making has the potential to help group members find the best solution (Schulz-Hardt et al., 2006). Because conflict in organizations cannot be avoided, it is pivotal for organizations to find ways to manage conflict constructively and foster the positive effects of conflict (e.g., Pondy, 1967, 1992; Tjosvold, 2008).

Generally, cooperative conflict management, in comparison to competitive conflict management, is likely to bring about the positive consequences of conflict or at least to lessen the negative effects (cf. De Dreu, 2008; Tjosvold, 1998, 2008). The positive effects of cooperation seem to be mediated by psychological variables like perceptions of organizational justice (Chen & Tjosvold, 2002; Tjosvold et al., 2010). The concept of organizational justice specifies perceptions of fair treatment in the workplace (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). Taking a cooperative approach to conflict (“we swim together or sink together”) creates an environment in which conflicting ideas can be expressed and integrated as well as supports solutions that are responsive to various aspects of the conflict and needs of the parties (Deutsch, 1973). This approach to conflict helps parties feel that they have been treated in a fair manner (Deutsch, 1985). Furthermore, research has demonstrated that fair treatment affects job attitudes (e.g., satisfaction and commitment), employees’ behavior (e.g., withdrawal), and work performance (Whitman, Caleo, Carpenter, Horner, & Bernerth, 2012). In addition, several studies directly showed the mediating role of justice between conflict management and desired outcomes like performance (Chen & Tjosvold, 2002) as well as innovation and strategic advantage (Tjosvold et al., 2010). Being an important variable in the interplay of conflict management and performance outcomes, perceived justice was included in our study. We propose that because organizational IC is positively related to cooperative conflict management and negatively related to competitive conflict management, organizational IC ultimately has positive effects on perceptions of organizational justice.

Hypothesis 2a: The level of organizational IC is positively related to perceptions of organizational justice. This relationship is mediated by perceptions of cooperative conflict management (i.e., the level of organizational IC is positively related to perceptions of cooperative conflict management, which in turn is positively related to perceptions of justice).

Hypothesis 2b: The level of organizational IC is positively related to perceptions of organizational justice. This relationship is mediated by perceptions of competitive conflict management (i.e., the level of organizational IC is negatively related to perceptions of competitive conflict management, which in turn is negatively related to perceptions of justice).

Methods

Design and Procedure

To test our hypotheses, we conducted an initial exploratory study. It is a multilevel field study using diverse methods. On the level of the individual (level 1), the study was administered with an online questionnaire, which was sent to a convenience sample consisting of employees from various organizations. The questionnaire assessed demographics and the name of the organization in which the individual was working as well as individual's perceptions of conflict management, justice, and task interdependence.

On the level of the organization (level 2), we assessed the level of IC as apparent in corporate communication for each organization that was represented by the employees in our sample. Document analysis of the descriptions of organizational goals, purposes, and means available on company's Web sites on the Internet was identified and coded for establishing IC levels (for measurement details see further below). We only included employees and the respective organizations if we received responses from at least three employees. In cases where we received responses from less than three employees, both the employees and organizations were not included in the data set. With at least three employees per organization, we were able to determine the agreement among the employees of each organization with respect to our variables (for more details, see Data Analysis).

Participants and Organizations

We sent the link to our online questionnaire to a convenience sample of employees working in Germany. In total, 175 participants answered the questionnaire. First, 37 participants were excluded, because they had not entered the name of the organization in which they were working. Second, we dropped the organizations where we had received the answers of only one or two employees. After those participants were excluded, $N = 98$ employees, who worked in 20 different organizations ($M = 4.85$ employees per organization, $SD = 3.65$, $Min = 3$, $Max = 19$), remained in the final data set. Those 20 organizations varied in size: two organizations had fewer than 100 employees; four organizations had 100–1,000 employees, and 14 organizations had more than 1,000 employees. Half of the organizations ($n = 10$) belonged to the profit sector in the following areas: finance, automotive industry, telecommunication, energy, and aerospace. The other half ($n = 10$) were nonprofit organizations from the following areas: education and research, health care, government, and arts and culture. Nineteen organizations had their headquarters in Germany; the headquarter of one organization, which had a large subsidiary in Germany, was located in another country of the European Union. The employees were diverse regarding their sex (47% female), age ($M = 35.55$ years, $SD = 10.77$ years), seniority in the organization ($M = 8.18$ years, $SD = 9.33$ years), and position (20% with managerial responsibilities).

Even though we asked to enter the name of the organization, in which they worked, the participants remained anonymous for the purpose of the study. Solely for the purpose of rewarding participants for their participation (three participants were drawn, and each won 50 €), they had the opportunity to enter an e-mail address. The e-mail addresses were saved separate from the data and were deleted immediately after notifying participants about the lottery. This procedure was in accordance with the ethical standards of the German Research Foundation.

Instruments and Measurement

Organizational Integrative Complexity

Organizational integrative complexity (IC) refers to the level of IC of corporate communications, describing the organizations' purposes, goals, and means. Seven levels of IC can be distinguished

(Baker-Brown et al., 1992; Suedfeld et al., 1992), which are shown in Table 1. In this study, an organization with high IC would have differentiating messages among purposes, goals, and means, and would generate outcomes on the basis of interactive weights of those conceptualizations (i.e., differentiation and integration). An organization with low IC would communicate having only one goal and purpose underlying its actions and outcomes (i.e., no differentiation and no integration). Every organization included in the study was looked up on the Internet, and respective self-descriptions were searched (e.g., “mission statement” or “about us”). Each statement ($M = 554$ words, $SD = 335$ words) was coded by two independent coders (the interrater reliability was between $ICC = .72$ and $ICC = .89$); in case of a discrepancy, a third coder was consulted. This process led to an agreement in all cases. The length of the organizations’ self-descriptions and their level of IC was unrelated ($r = .07$, $p = .769$). Therefore, we did not further attend to the notable differences in length of the organizations’ self-descriptions.

Individual Perceptions of Conflict Management

We were interested in assessing participants’ perceptions of the predominant conflict management style within the organizations in which they worked. Focusing on perceptions is a common way of measuring conflict and conflict management in the context of organizations, for example, conflict within teams (e.g., Jehn & Mannix, 2001), conflict management within and between teams (e.g., Hempel, Zhang, & Tjosvold, 2009), or conflict management styles (e.g., De Dreu, Evers, Beersma, Kluwer, & Nauta, 2001). The perceptions are essential as they shape behavior (Thomas, 1992).

In this study, we assessed conflict management with two subscales (Alper et al., 2000; Hempel et al., 2009; the scales were translated and back-translated from English to German by individuals fluent in both languages): cooperative conflict management ($\alpha = .92$, five items) and competitive conflict management ($\alpha = .70$, four items). The subscales were adapted for the purpose of this study to the effect that they referred to the general conflict management style within the organization (the original items refer to the within-team conflict management style). To assess participants’ broad and general perceptions of conflict management within their organizations, we did not specify particular parties that might be involved in the conflict. An example item for cooperative conflict management is “Generally, in my organization conflicts are treated as a mutual problem to solve”; an example item for competitive conflict management is “Generally in my organization conflicts are treated as win-lose contests.”

Table 1
Description of the Seven Levels of Integrative Complexity (IC)

IC Level	Core components of IC	
	Differentiation: Recognition of different perspectives or dimensions	Integration: Delineation of the relationship and interaction between the different perspectives or dimensions
1	No differentiation	No integration
2	Emergent differentiation	No integration
3	Full differentiation	No integration
4	Full differentiation	Emergent integration
5	Full differentiation	Full integration but without an overarching viewpoint
6	Full differentiation	Full integration with an emergent overarching viewpoint
7	Full differentiation	Full integration with an overarching viewpoint

Notes. The description of the levels follows the manual by Baker-Brown et al. (1992).

Individual Perceptions of Justice

Participants' perceptions of justice were assessed with two subscales of the organizational justice scale by Colquitt (2001; translated into German by Maier, Streicher, Jonas, & Woschée, 2007): interpersonal ($\alpha = .80$, four items) and informational ($\alpha = .85$, five items) justice. The two subscales, which normally refer to one authority figure, were slightly adapted. In our study, participants were asked to reflect on their "everyday work experiences." An example item for interpersonal justice from our questionnaire is "Are you generally treated in a polite manner at work?" An example item for informational justice is "Generally at work, are procedures explained thoroughly?"

The original scale by Colquitt (2001) contains four subscales: distributive, procedural, informational, and interpersonal justice. Only two subscales—informational and interpersonal justice—were used for two reasons. First, distributive and procedural justice are conceptualized and measured by Colquitt (2001) with respect to specific procedures and outcomes and cannot be reasonably used in a general manner. In our study, we were interested in general perceptions of justice and not in justice perceptions of specific procedures or outcomes. Second, and more importantly, informational and interpersonal justice were considered most important for this study: conflicts being interpersonal, and information exchange being central to conflicts (Olekalns et al., 2008). Thus, our study focuses on the perceptions of justice in interactions. In the following, we will therefore combine the two subscales, which are highly correlated ($r = .63$, $p < .001$) and refer to them as perceptions of *interactional justice*. The reliability of the combined scale for interactional justice was $\alpha = .89$.

Control Variables

We included control variables related to the individual (managerial experience, tenure in the organization) and related to the organization (perceived task interdependence within the organization as well as size and type of the organization).

All control variables related to the individual were assessed on the level of the individual, and the respective questions were included in the online questionnaire. We included managerial experience as a control variable, as conflict management itself is a major task of managers (Wayne, 2005, argued that managers spend between 25% and 40% of their time at work managing conflicts), whereas it is not part of most supervisees' duties. Managerial experience was assessed by asking participants whether they have managerial responsibilities, which could be answered with "yes" or "no." In addition, we were interested in participants' tenure in their organization, as employees' perceptions and attitudes at work change during phases of organizational socialization as well as throughout their time working in an organization (e.g., Bentein, Vandenberg, Vandenberghe, & Stinglhamber, 2005; Boswell, Boudreau, & Tichy, 2005). We measured tenure in the organization by asking participants how long (in years) they have been working in this particular organization.

We also included several control variables related to the organization: perceived task interdependence, which was assessed by asking employees respective questions in the online questionnaire and was thus measured on the individual level, as well as type and size of the organization, which was assessed on the level of the organization by looking up the respective information in the Internet. Perceived task interdependence within the organization was assessed with a scale by Bishop and Scott (2000; five items; $\alpha = .86$; the scale was translated and back-translated from English to German by individuals fluent in both languages). Perceived task interdependence (i.e., "the extent to which employees perceive that their tasks depend on interactions with others and on others' tasks being completed"; Bishop & Scott, 2000, p. 440) was included because task interdependence creates opportunities for conflict especially when incompatibilities arise (e.g., Jehn, 1995; Saavedra, Earley, & Van Dyne, 1993; Somech et al., 2009) but also can create an incentive for collaboration and cooperation (Lam & Chin, 2004). The type of an organization (e.g., profit vs. nonprofit) was included, as research has shown that it relates to perceptions of conflict. For example, managers of public organizations—in comparison to managers of private organizations—were found to perceive conflicts as an opportunity to make higher quality decisions and to

emphasize decisions that meet the needs of diverse groups rather than decisions that maximize financial performance (Schwenk, 1990). We controlled for size of the organization, as research has shown that the structure of the organization, including its size, has an impact on perceptions of justice (e.g., Schminke, Cropanzano, Rupp, 2002), which is one of our dependent variables and related to perceptions of conflict management.

Data Analysis

The data analysis presents results of an exploratory study that tests our hypotheses. The design of the study has some specific characteristics that will be briefly discussed. Due to the cross-sectional design, we focus on the hypothesized relationships between our variables without drawing causal conclusions. Testing the hypotheses with this specific design results in the fact that the main variables, organizational IC on the one hand and perceived conflict management as well as perceptions of justice on the other hand, are very distal. Nevertheless, it is likely that there are intermediate variables as well as other variables influencing perceptions of conflict management and justice. In this exploratory study, we focus on this distal relationship.

Furthermore, our data were gathered on two levels (individual level = level 1; organizational level = level 2). To test the cross-level effects, which are specified in our hypotheses, we used hierarchical linear modeling (HLM 6 by Raudenbush, Bryk, & Congdon, 2000). For the level 1 variables—those that were gathered on the level of the individual with the online questionnaire—we calculated ICC(1), ICC (2), and $r_{WG(J)}$ values (see Table 2). The ICC(1) and the ICC(2) are both based on an ANOVA (Bliese, 2000): whereas the ICC(1) indicates the proportion of variance that can be explained by level 2 variables (i.e., organizational level variables), the ICC(2) expresses the reliability of the organizations’ means. The $r_{WG(J)}$ offers an index for the agreement among employees of each organization (Bliese, 2000). We were interested in the percentage of variance between the employees’ ratings between the organizations (i.e., the variance that can be potentially explained by level 2 variables) as well as the homogeneity among the employees within each organization. The latter was not needed to justify an aggregation (in our study, no variable was aggregated) but rather to determine whether the microlevel measures represent more macrolevel constructs (Cohen, Doveh, & Eick, 2001).

The ICC(1) values indicated that, depending on the variable, 16–39% of the variance resided between organizations. This proportion of variance can be considered medium to large (cf. LeBreton & Senter, 2008) and is the portion of variance that can potentially be explained by organizational level variables (organizational IC in our study). The ICC(2), as well as the mean and median of the $r_{WG(J)}$, showed that the employees of each organization had a homogenous view on their organization. Exploring the $r_{WG(J)}$ in more detail, we found that for the scales cooperative conflict management and interactional justice the employees within each organization showed a strong or very strong agreement ($r_{WG(J)} > .70$), following the standards for interpreting interrater agreement estimates suggested by LeBreton and Senter (2008).

Table 2
ICC(1), ICC(2), and $r_{WG(J)}$ for Variables Assessed on the Individual Level (Level 1)

Measure	ICC(1)	ICC(2)	F(df)	p	η^2	$r_{WG(J)}$ (mean)	$r_{WG(J)}$ (median)
Cooperative CM	.39	.76	4.17 (19,78)	.00	.50	.90	.92
Competitive CM	.34	.72	3.55 (19,78)	.00	.46	.80	.87
Interactional justice	.38	.75	4.06 (19,78)	.00	.50	.96	.97
Task interdependence	.16	.49	1.97 (19,78)	.02	.32	.92	.96

Notes. CM, conflict management.
N = 98 on level 1. N = 20 on level 2.

Regarding the scale task interdependence, the employees of 19 organizations showed strong or very strong agreement ($r_{WG(j)} > .70$) and the employees of one organization showed moderate agreement ($.50 < r_{WG(j)} \leq .70$). When exploring the scale for competitive conflict management, the following was found: The employees of 15 organizations showed strong or very strong agreement ($r_{WG(j)} > .70$); the employees of two organizations showed moderate agreement ($.50 < r_{WG(j)} \leq .70$); and the employees of three organizations showed weak agreement ($.30 < r_{WG(j)} \leq .50$). The general pattern across all scales indicates a strong or very strong agreement in more than 90% of the cases. Due to the mostly strong to very strong agreement, we conclude that our microlevel measures (individual level measures) represent macrolevel constructs (i.e., are indicative of a general pattern within the respective organization). Given the consistency among employees of each organization, we proceed with our analysis, even though the number of employees per organization was very small in our study and thus not representative of the entire body of employees within an organization.

Results

The means, standard deviations, and correlations for all variables are shown in Table 3.

Organizational Integrative Complexity and Conflict Management

To test our first two hypotheses (Hypothesis 1a and Hypothesis 1b), we conducted regression analyses (see Table 4), which fully support those hypotheses: The level of organizational IC was positively related to individual perceptions of cooperative conflict management (cf. Hypothesis 1a) and negatively related to individual perceptions of competitive conflict management (cf. Hypothesis 1b). Employees' tenure in the organization and leadership experience, as well as the perceived task interdependence within the organization and the size and type of the organization, were considered as control variables in the analyses.

Thus, in organizations that communicate their messages (in our study, we focused on organizations' descriptions of their goals, purposes, and means) in a way that differentiates different points of views or diverse aspects and integrates those, conflict management is perceived as being more cooperative. On the other hand, in organizations that convey messages in simple black-and-white terms, conflict manage-

Table 3
Means (M), Standard Deviations (SD), Correlation Coefficients, and Alphas

Measure	M	SD	1	2	3	4	5	6	7	8
1. Tenure	8.18	9.33	–							
2. Leadership experience	1.19	0.39	.49**	–						
3. Interactional justice	3.57	0.61	–.18	–.18	(.89)					
4. Cooperative CM	3.85	1.29	–.10	–.09	.64**	(.92)				
5. Competitive CM	4.29	1.16	.03	–.02	–.54**	–.60**	(.70)			
6. Task interdependence	5.12	0.79	–.03	–.03	–.08	.03	.06	(.86)		
7. Size of organization	1.57	0.52	–.07	–.20	.08	–.04	.12	.26**	–	
8. Type of organization	2.65	0.67	–.06	–.07	.32**	.24*	–.32**	–.31**	–.12	–
9. Organizational IC	4.65	1.42	.04	.23*	.44**	.39**	–.38**	–.20	.11	.49**

Notes. CM, conflict management; IC, integrative complexity.

Alphas are presented in parentheses along the diagonal. Tenure: years; task interdependence: 6-point scale; interactional justice: 5-point scale; cooperative-competitive conflict management: 7-point scale; organizational IC: 7-point scale; type of organization: 1 = profit, 2 = public-nonprofit.

* $p < .05$. ** $p < .01$. $N = 98$.

Table 4
Hierarchical Linear Modeling (HLM) Results

Levels and measures	Cooperative CM		Competitive CM	
	Model 1	Model 2	Model 1	Model 2
Intercept	3.47 (1.19)*	2.63 (1.01)*	5.02 (0.94)**	5.66 (0.83)**
Level 1 variables (individual level)				
Tenure	0.01 (0.01)	0.01 (0.01)	-0.00 (0.01)	-0.00 (0.01)
Leadership experience	-0.19 (0.41)	-0.58 (0.41)	0.05 (0.36)	0.40 (0.36)
Task interdependence	0.29 (0.15)	0.30 (0.15)	-0.15 (0.14)	-0.17 (0.14)
Level 2 variables (organizational level)				
Size of organization	-0.15 (0.34)	-0.36 (0.29)	0.12 (0.27)	0.32 (0.24)
Type of organization	0.42 (0.44)	-0.02 (0.40)	-0.65 (0.35)	-0.25 (0.33)
Organizational IC		0.45 (0.15)**		-0.39 (0.13)**

Notes. IC, integrative complexity; CM, conflict Management.

Unstandardized regression coefficients and (standard errors) of random slopes models calculated with HLM 6 (Raudenbush et al., 2000) are shown. As suggested by Enders and Tofighi (2007), level 1 covariates were centered at the grand mean.

* $p < .05$. ** $p < .01$. Level 1: $N = 98$ on level 1. $N = 20$ on level 2.

ment is perceived as being more competitive. This effect is significant above and beyond the influence of control variables related to the organization (perceived task interdependence within the organization as well as size and type of the organization) and the individual (tenure in the organization and managerial experience).

Organizational Integrative Complexity, Conflict Management, and Organizational Justice

We further predicted that organizational IC is related to perceptions of justice (measured by interactional justice in our study) and that this effect is mediated by perceptions of cooperative (Hypothesis 2a) and competitive (Hypothesis 2b) conflict management. This cross-level indirect effect and the results of our analysis are visualized in Figure 1. In all these analyses, we included control variables related to the organization (task interdependence as well as size and type of the organization) and to the individual (managerial experience and tenure). A regression analysis showed that organizational IC was positively related to perceived interactional justice (see path c in Figure 1). For testing the indirect effect, a Monte Carlo method for assessing mediation with 2,000 replications (cf. Selig & Preacher, 2008) was conducted. Supporting Hypothesis 2a, it was shown that cooperative conflict management mediated the relationship between organizational IC and perceptions of interactional justice (indirect effect: $t[16] = 1.93$, $p = .07$, 95% bias-corrected bootstrap CI [0.036, 0.202]). Analogous we found that competitive conflict management mediated the relationship between organizational IC and perceptions of interactional justice as well (indirect effect: $t[16] = 1.85$, $p = .08$, 95% bias-corrected bootstrap CI [0.029, 0.173]).

In sum, our analyses show that organizational IC is positively related to cooperative conflict management (cf. Hypothesis 1a; see Table 4 and path a for cooperative conflict management in Figure 1) and negatively related to competitive conflict management (cf. Hypothesis 1b; see Table 4 and path a for competitive conflict management in Figure 1). Those two variables in turn influence perceptions of interactional justice: cooperative conflict management being positively related to perceptions of interactional justice (see path b for cooperative conflict management in Figure 1), and competitive conflict management being negatively related to perceptions of interactional justice (see path b for competitive conflict management in Figure 1). Thus, cooperative conflict management (cf. Hypothesis 2a, see path c' for cooperative conflict management in Figure 1) and competitive conflict management (cf. Hypothesis 2b, see path c' for competitive conflict management in Figure 1) mediate the generally positive relationship between organizational IC and perceptions of justice (see path c in Figure 1).

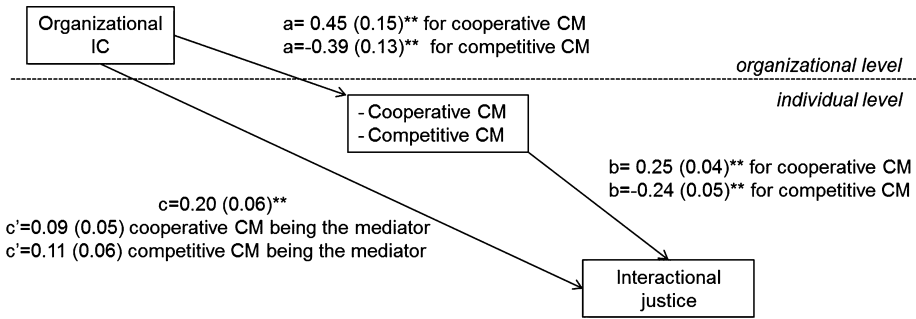


Figure 1. Visualization of the mediation analysis. The figure shows the unstandardized coefficients and (standard errors) of a random slopes model calculated with HLM 6 (Raudenbush et al., 2000). Control variables (see Table 3) were included in all calculations. As suggested by Enders and Tofighi (2007), level 1 covariates were centered at the grand mean. * $p < .05$, ** $p < .01$. CM, conflict management; IC, integrative complexity.

Discussion

Cooperative conflict management in comparison to competitive conflict management has been found to decrease the probability of negative consequences and even to bring about positive consequences of conflict for organizations (De Dreu, 2008; Tjosvold, 1998, 2008). Whereas conditions supporting cooperative conflict management in organizations have been studied extensively on the level of individuals or small groups, organizational level variables such as corporate culture and communication have been neglected (De Dreu & Gelfand, 2008; Gelfand et al., 2012). This multilevel field study offers initial evidence that the way how organizations communicate at the top is related to perceptions of conflict management among employees. More precisely, the results show that the level of organizational IC (the degree of differentiation and integration of multidimensional issues in corporate messages) was positively related to perceptions of cooperative conflict management and negatively related to perceptions of competitive conflict management. The level of organizational IC was assessed by coding written documents published on the Internet, in which organizations described their purposes, goals, and means; perceptions of cooperative-competitive conflict management were measured by asking the employees of the respective organizations. The positive-negative relationship between IC and cooperative-competitive conflict management has been repeatedly found in the area of political relations (Suedfeld, 2010). However, to our knowledge, this study is the first study transferring the results to the area of corporate communication. Like political leaders, organizations' communication can vary from a simple black-and-white perspective to a highly differentiated and integrated understanding of complex issues, thereby creating a culture or normative way to view differences and conflict.

In addition, we showed a positive relationship between the level of organizational IC and perceptions of organizational justice (in our study, we focused on interactional justice), which was fully mediated by perceptions of cooperative as well as competitive conflict management. The importance of investigating perceptions of justice stems from the fact that organizational justice in turn is a mediator between conflict management and desirable outcomes for organizations like innovation, strategic advantage, and team performance (Chen & Tjosvold, 2002; Tjosvold et al., 2010).

This study adds to the small body of research exploring organizational level variables on conflict management and other variables like organizational justice in organizations. By connecting research on organizational conflict management and research on IC, this study expands both the area of IC in conflict situations, which has mainly focused on international relations (Suedfeld, 2010), as well as the research on conflict management in organizations, which can benefit from integrating the concept of IC.

The results suggest that organizations can support a cooperative conflict culture beyond approaching individuals in the organizations with, for example, trainings or personnel development programs. Through an increasing understanding of organizational level variables that are related to, express, and influence the conflict culture, organizations are given new tools to foster cooperative conflict management among employees. These attempts are likely to have influences on other desired outcomes like perceptions of fair treatment. Our study suggests that organizations should carefully reflect how they communicate and thus shape their culture. This can include the communications of top management and leadership on all levels of the organization. The management could take an active role in modeling a complex understanding of differences, multidimensional issues, and ultimately conflict. Furthermore, the results suggest that it is worth diagnosing the corporate communication and corporate messages with respect to the level of organizational IC, as it is related to perceptions of psychological variables of employees.

This study was a first exploration of the relationship between the level of IC in corporate communication and conflict management within the organization. The exploratory nature bares its limitation but more importantly offers opportunities for future research. This study showed that the elaboration of the organizational IC and perceptions of organizational conflict management as well as organizational justice is indeed worthy of further investigation. Additionally, more research is necessary to identify mediating variables between the way organizations communicate and perceptions of conflict management and justice. Organizational IC on the one hand and perceptions of conflict management and justice on the other hand are very distal variables, and it is of theoretical and practical relevance to identify the psychological mechanisms underlying the relationships reported here. These mechanisms need to be elaborated on different levels—on the individual and team level as well as on the level of the entire organization and the management. Due to its correlational design, the study prohibits drawing causal conclusions, a limitation that asks for further research in order to be able to derive concrete recommendations for organizations about how to support cooperative conflict management and subsequently organizational justice perceptions (for an experimental design regarding IC in dyads and groups, see Brodbeck, Guillaume, et al., 2011; Brodbeck, Kugler, et al., 2011 and Kugler et al., 2011). Does the corporate communication reflect or shape the conflict culture justice perceptions or both? In addition, future research might explore relations between organizational IC beyond perceptions of conflict management and organizational justice, investigating more tangible variables like performance, satisfaction, turnover, and so forth. It would be of great interest not only to organizational researchers but also for the development of conflict management interventions in practice.

We measured organizational IC by analyzing descriptions of organizational goals, purposes, and means available in the Internet. However, the analysis should be broadened to different aspects and measurement methods of organizational culture (e.g., vision, strategy, and role descriptions, norms, policies and procedures, leadership practices and prototypes) and various levels of analysis (e.g., team, unit, department level). Can the level of IC as propagated in mission statements be found in other artifacts of the organizational culture? Furthermore, in our study, we gathered information regarding perceptions of conflict management and organizational justice from a few employees per organization only. To confirm and generalize the effects that we found in our study, it is necessary to include more representative employee samples per organization in future studies.

Taken together, our approach to analyze corporate communication with respect to its level of IC and thus the manner in which organizations relate to their employees via communication—rather than the content of communication propagated top down—has the potential to enrich the theoretical and practical scope of the field of organizational science. Supporting a cooperative conflict culture on all levels—including the largely neglected level of the organization—will help organizations to gain a competitive advantage as they spend fewer resources on dysfunctional conflict. Last but not least, the research shows that it is worth expanding the concept of IC beyond the realm of international relations as IC relates to

conflict management in groups and organizations—which is likely to enrich both the research on IC as well organizational research in general.

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