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How Organizational Identity Affects Team Functioning: The Identity Instrumentality Hypothesis

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How does organizational identity affect team functioning? We articulate and test an identity instrumentality hypothesis that suggests that organizational identity (1) directly predicts those aspects of team functioning that enable, and are instrumental in, employees' fulfillment of their identity with the organization; and (2) indirectly predicts other aspects of team functioning not instrumental to organizational identity fulfillment. Underlying this hypothesis is the idea that some aspects of team functioning, such as team performance and cooperative team behaviors, are important to individuals' fulfillment of their organizational identity because the implications of these behaviors extend beyond the immediacy of the team, whereas other aspects of team functioning (e.g., team affect) are not instrumental to organizational identity fulfillment because they are relevant mainly within the team context. We test the identity instrumentality hypothesis by using meta-analytic path analysis conducted on effect estimates obtained from 132 independent studies (total N = 28,024) of organizational and team identity. As hypothesized, we find that whereas team identity fully mediates the relationship between organizational identity and team affective constructs (i.e., aspects of team functioning not instrumental to the fulfillment of organizational identity), organizational identity uniquely and directly affects cooperative team behavior and team performance, which are those aspects of team functioning that are instrumental to the fulfillment of organizational identity.

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The psychological bonds employees form with their work teams and organizations have a profound effect on their experience of work (Mael & Ashforth, 2001; Mathieu & Zajac, 1990; Mowday, Porter, & Steers, 1982; Riketta, 2005). The central concept used to describe this psychological connection is identity. *Identity* is composed of "(1) feelings of solidarity with the [collective], (2) [affective and behavioral] support for the [collective], and (3) perception of shared characteristics with other [collective] members" (Patchen, 1970: 155) and has been defined as "that part of an individual's self-concept which derives from his knowledge of his membership in a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel, 1978: 63). Two identity foci, the team and the organization, are instrumental in shaping individuals' feelings and behavior at work (Riketta & van Dick, 2005). Once employees form a strong identity with their team or organization, their attitudes and behaviors toward that collective tend to be in accord, such that they will work toward fulfilling their identity (Ashforth, Rogers, & Corley, 2011; Riketta & van Dick; Van Knippenberg, 2000).

Prior research demonstrates that team identity shapes an employee's team-directed affect and behavior and that organizational identity affects organizationally focused outcomes, such as organizational satisfaction and intent to leave the organization (Riketta & van Dick, 2005). These results align with multilevel homology theory, which suggests constructs at the same level are more strongly related to one another than are constructs at different levels. Although the premise of multilevel homology accounts well for how team and organizational identity explain outcomes at their respective levels, it fails to explain the cross-level effects of organizational identity on team-level variables. Prior research suggests organizational identity influences those activities within an organization that serve to underscore the values of the organization (Ashforth, Harrison, & Corley, 2008; Riketta & van Dick), which include those team behaviors that accrue to benefit the broader organization. In general, organizational identity ought to affect teamwork because team success or failure has important implications for organizational success. By linking organizational identity to team constructs, we offer a mesoperspective to explain the different pathways through which organizational identity affects team functioning and performance.

Currently, we do not fully understand how and why organizational identity affects team-level constructs or how employees view their actions within the team as a way to fulfill their organizational identity. The multilevel homology perspective typically used in identity research does not account for the role of the contextual embeddedness of the team within the organization (Mathieu, Maynard, Taylor, Gilson, & Ruddy, 2007; Mathieu & Taylor, 2007; Tesluk, Vance, & Mathieu, 1999), and since the team is nested within the overall organization, identity foci likely have differential instrumentality in team functioning that does not align exactly with the homology of the team versus organizational level. In this study, we articulate the *identity instrumentality hypothesis* to explain the impact of organizational identity on teamwork. Understanding the impact of organizational identity on team functioning

takes an important step in learning how phenomena at macro- and microlevels are linked and, in particular, how the context of the broader organization affects how teams work (Ashforth et al., 2011; Mathieu et al.; Mathieu & Taylor; Tesluk et al.).

The Identity Instrumentality Hypothesis

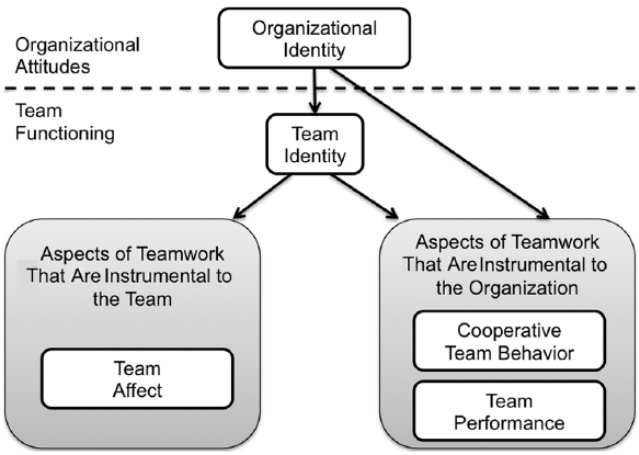
The identity instrumentality hypothesis suggests that organizational identity (1) directly predicts those aspects of team functioning that enable, and are instrumental to, employees' fulfillment of their identity with the organization; and (2) indirectly predicts other aspects of team functioning not instrumental to organizational identity fulfillment. Underlying this hypothesis is the idea that some aspects of team functioning, such as team performance and cooperative team behaviors, are important to individuals' fulfillment of their organizational identity because the implications of these behaviors extend beyond the locus of the team, whereas other aspects of team functioning (e.g., team affect) are not instrumental to organizational identity fulfillment because they are relevant mainly within the team context. In essence, different aspects of teamwork have different loci of instrumentality—some aspects of teamwork are instrumental in fulfilling team identity, whereas other aspects of teamwork are instrumental in fulfilling both team and organizational identity. The identity instrumentality hypothesis provides a lens for understanding how the loci of instrumentality determine relations between identity and teamwork.

The work team serves as employees' most immediate and proximal context and is a vehicle for establishing their own success as well as the organization's success. Employees promote their own success by demonstrating their competence and unique value, and they promote the organization by producing high quality products, services, and ideas. The feelings and motives directed at any given team are palpable and shape the meaning of daily work, yet they generally have little consequence for the employee's career given that many teams, and their dynamics, can be short lived. For this reason, the nature of these team-level attitudes is more directly relevant to fulfilling employees' team identity than their organizational identity. However, other aspects of what goes on in teams have extended consequences. For example, positive contributions in the form of cooperative behavior and contributions to team performance are instrumental to an employee's ascendancy and value to the broader organization as well as the organization's success. In this way, the feelings and motives toward the team have local consequences, whereas the behaviors and outcomes of the team have global consequences.

Figure 1 depicts the core relationships proposed in the identity instrumentality hypothesis and organizes these relationships according to their local, team impact versus more global, organizational relevance. In contrast to many studies of teams that consider the team outcome as "the end," these two loci of instrumentality underscore the idea that what happens in a team has implications for the team as well as the team members' standing within the larger organization. The impact of identity on team functioning can be linked to well-established models of team functioning by considering the differential instrumentality of team emergent states relative to team behavioral processes and outcomes.

Current models of team functioning are rooted in the input-process-outcome (IPO) framework originally developed by McGrath, Hackman, and their colleagues (Hackman, 1987; McGrath, 1984). This framework suggests *inputs*, such as composition, training, and leadership, influence

Figure 1
The Identity Instrumentality Hypothesis



team *outcomes* by shaping and enabling functional patterns of interaction (i.e., *processes*) among team members. The IPO model was extended by Ilgen, Hollenbeck, Johnson, and Jundt (2005) to distinguish mediators that are true behavioral processes (e.g., coordination) from those that are emergent states or psychological properties of the team (e.g., team cohesion). This distinction between processes and emergent states is central to the identity instrumentality hypothesis. Team properties (also called emergent states) contribute locally to team functioning; they are instrumental to the team. Conversely, team processes—overt behaviors that contribute to a team's objectives and coordinate activities with teammates—are instrumental to the organization.

Teamwork That Is Instrumental to the Team

The first way collective identity affects team functioning is to foster aspects of teamwork that are essential to the team. As individuals view the self as aligned with the team, their feelings of liking for the team increase (Turner & Reynolds, 2010). This is to say that team identity has a direct effect on team affective states, like cohesion and team satisfaction (Eisenbeiss & Otten, 2008; Kozlowski & Ilgen, 2006; Polzer, Milton, & Swann, 2002), as these states are instrumental in fulfilling and reinforcing the individual's team identity (Riketta & van Dick, 2005; Turner & Reynolds). In this way, team identity is instrumental to team functioning via its relationship with team emergent states (mediators) that shape more proximate team functioning than distal organizational functioning (e.g., Beal, Cohen, Burke, & McLendon, 2003; De Dreu & Weingart, 2003; C. R. Evans & Dion, 1991; N. J. Evans & Jarvis, 1986; Li, Li, & Wang, 2009). The idea that team identity fosters positive team states has been well established in the literature (Riketta & van Dick; Scott, 1997; van Dick, Wagner, Stellmacher, & Christ, 2004).

Whereas team identity directly affects team states, we would expect organizational identity to have little direct impact on team affective states because it is of little consequence to individuals in fulfilling their organizational identity (Van Knippenberg, 2000). For example,

individuals with a strong organizational identity can have positive or negative experiences in teams and still behave in ways consistent with their organizational identity by making positive contributions to the team (we consider these in our description of the organizationally instrumental teamwork below). Instead of a direct impact, organizational identity should play an indirect role in shaping the affective climate in a team through its relation to team identity. Ashforth et al. explain that "identities at higher levels of analysis constrain and enable the form and enactment of identities at lower levels" (2011: 1147). Due to the contextual embeddedness of the team within the organization, organizational identity ought to have a downward influence on team members' team identity and therefore shape team states indirectly through its effect on team identity.

Hypothesis 1: The effect of organizational identity on team affect is fully mediated by team identity.

Teamwork That Is Instrumental to the Organization

The second way collective identity affects team functioning is to foster aspects of teamwork that are essential to the organization. Individuals' cooperative team-directed behaviors (e.g., teamwork process and team backup behaviors; Beal et al., 2003; Organ, 1988; Podsakoff, Ahearne, & MacKenzie, 1997; Podsakoff & MacKenzie, 1994; Podsakoff, MacKenzie, Paine, & Bachrach, 2000) and contributions to team performance are both aspects of team functioning that have consequences extending beyond the team locus. Long after the team has disbanded, the outputs of the team (its success or failure) as well as how the employee promoted that success or failure through team-directed behaviors will accrue to both the employee's success as well as the organization's success.

Both team and organizational identity ought to uniquely affect team performance and cooperative team behaviors because these processes and outcomes are uniquely instrumental in fulfilling employee identity at each level. Team identity motivates cooperative team behaviors and contributions to team performance because individuals who identify with the team will behave in ways that will help the team succeed (Earley & Mosakowski, 2000; Eckel & Grossman, 2005; Glynn, Kazanjian, & Drazin, 2010; Van Knippenberg, 2000), and this behavior fulfills individuals' team identity. Indeed, the link between team identity and these outcomes has been well established (Olkkonen & Lipponen, 2006; Paulsen, Maldonado, Callan, & Ayoko, 2009; Riketta & van Dick, 2005).

There is also reason to expect a cross-level effect of organizational identity on cooperative team behaviors and team performance given the instrumentality of these outcomes to the broader organization. Beyond the impetus set by the individual's team identity, his or her organizational identity drives the individual to behave in ways that help the organization succeed, and behaving in these ways ultimately fulfills the individual's organizational identity. Team behavior and performance are building blocks of organizational success. Accordingly, employees' identification with the organization ought to play a uniquely important role in prompting cooperative team behavior and contributions to team performance apart from the role played by team identity.

Hypothesis 2: Accounting for team identity, organizational identity directly affects (a) cooperative team behavior and (b) team performance.

Method

Database

We used meta-analysis to test the identity instrumentality hypothesis by using the existing literature on team and organizational identity. We conducted a comprehensive search of the extant literature and built a database consisting of 132 independent studies (total $N = 28{,}024$) reported in 106 manuscripts. Of these studies, 57 examined organizational identity (total $N = 15{,}030$) and 110 examined team identity (total $N = 21{,}645$). We used a multifaceted approach to ensure that our database was as complete as possible. Our search included (1) a computerized search of the PsycInfo, Business Source Premier, Web of Science, and Google Scholar databases by using relevant keywords or phrases (e.g., identity AND team, group, collective, organization); (2) a manual search for references cited in studies included in this meta-analysis; (3) a search for unpublished manuscripts, including recent conference presentations (e.g., Society for Industrial and Organizational Psychology, Academy of Management, INGroup); and (4) a reverse citation search of and review of references within foundational articles on collective identity (e.g., Brewer & Gardner, 1996; Edwards, 2005; Hogg & Terry, 2000; Mael & Ashforth, 1992; Tajfel & Turner, 1979; Tsui, Egan, & O'Reilly, 1992).

To be included in the database, a study must have reported a correlation (or sufficient effect information to permit the calculation of a correlation) between team or organizational identity and at least one construct relevant to the notion of identity instrumentality (i.e., team affect, cooperative team behavior, or team performance). When studies contained multiple samples and reported effect sizes separately for each sample, those correlations were analyzed independently. When the authors reported multiple estimates of the same relationship from the same sample (e.g., identity and more than one indicator of performance), we computed an average correlation to maintain independence in the meta-analytic database (Hunter & Schmidt, 2004). The studies included in the meta-analytic database are provided in an appendix in the online supplemental material.

Coding Procedure and Coder Reliability

Each study meeting criteria for inclusion in the meta-analysis was coded by at least two of this study's authors to ensure coding consistency and construct validity. Studies were coded for (1) sample size, (2) correlations between team or organizational identity and relevant correlates, and (3) reliability estimates for the identity and correlate constructs, when available. Intercoder agreement was initially very high (98%), likely due to the objective nature of the constructs coded, and any disagreements were resolved by consensus.

Team and organizational identity. *Team identity* is defined as an individual's identification with a group or team. Sample items used to assess team identity include, "I am a person who feels strong ties with the group" (Brown, Condor, Mathews, Wade, & Williams, 1986: 276), "I identify myself as a member of (this collective)," and "When someone criticizes (my group), it feels like a personal insult" (Mael & Ashforth, 1992: 122). *Organizational identity*, defined as an individual's identification with his or her organization (Ashforth & Mael, 1989), was also assessed using scales such as that by Mael and Ashforth. Sample items used to assess organizational identity in the primary studies include, "When someone criticizes (my organization), it feels like a personal insult" and "The organization's success are my successes."

In total, there were 49 different measures of team and organizational identity cited in the primary studies. The most popular measures were derived from Mael and Ashforth (1992; cited 35 times), Brown et al. (1986; cited 13 times), Hinkle, Taylor, Fox-Cardamone, and Crook (1989; cited 8 times), Doosje, Ellemers, and Spears (1995; cited 5 times), Allen and Meyer (1990; cited 5 times), and Mael and Tetrick (1992; cited 5 times). Some studies used the measure as reported in the primary study, whereas others included reworded items. Forty-three other measures were reported across the primary studies. These measures either were created for the focal study or were various recombinations of existing scales. At least 12 studies developed a new measure, 2 studies manipulated identity, and 3 studies did not report a source. Given the variability in measures of collective identity used in the primary studies, we were not able to test identity measure as a moderator of the focal relationships, though this is an interesting question for future research.

Team affect. Team affect (an emergent state mediator within the IPO and input-mediator-output-input, or IMOI, models; Hackman, 1987; Ilgen et al., 2005) is defined as the extent to which members are emotionally engaged with the collective (Kozlowski & Ilgen, 2006) and is measured with scales like those found in Scott, in which team members were asked to rate the extent to which members "(1) are likely to defend each other from criticism by outsiders; (2) help each other while working on the project; (3) get along well with each other; and (4) stick together" (1997: 510). Consistent with the literature, the following constructs were coded as team affective states: team cohesion, attraction to or liking for the group, perceived social support, in-group bias, satisfaction with the team, team climate, and team trust.

Cooperative team behaviors. Cooperative team behaviors (a process mediator within the IMOI model; Ilgen et al., 2005) refer to employee actions that benefit or are intended to benefit the team and that go beyond existing role expectations (Hakonen & Lipponen, 2007). Cooperative team behaviors include a variety of constructs that capture individuals' positive contributions to the team, including cooperation, team backup behavior, workload sharing, team-directed organizational citizenship behaviors, team action processes, and willingness to participate/contribute. An example of an item measuring cooperative team behavior is "I have volunteered to help others in my work unit when they have a heavy workload" (Olkkonen & Lipponen, 2006: 208). A second example from Blader and Tyler is "How often does this employee voluntarily assist you without being asked to do so?" (2009: 463).

Team performance. Team performance (an output within the IMOI model; Ilgen et al., 2005) describes the extent to which a team accomplishes its goals. Team performance in the primary studies could have been team rated (Mortensen & Hinds, 2001), supervisor rated (Polzer et al., 2002), or objectively measured (Millward & Postmes, 2010). Examples of performance outcomes measured in primary studies include team effectiveness, team awards, decision quality, creative performance, new product competitive advantage, and innovation.

Analyses

We conducted two sets of analyses for this study. First, we used meta-analytic methodology to estimate the effect sizes for the relationships needed to test the identity instrumentality hypothesis. Then, we used path analysis on the meta-analytically derived correlation matrix

Table 1
Correlation Matrix for the Meta-Analytic Path Analysis

Variable	1	2	3	4	5
1. Team Identity	—				
2. Organizational Identity	.51[a] (8,020)	—			
3. Team Affect	.49[a] (9,473)	.29[a] (6,627)	—		
4. Cooperative Team Behavior	.30[a] (8,347)	.35[a] (2,559)	.29[b] (658)	—	
5. Team Performance	.31[a] (5,618)	.30[a] (1,079)	.35[c] (2,946)	.30[b] (1,891)	—

Note: Total N = 2,280 (harmonic mean); numbers for each of the relationships are included in parentheses under each effect.
[a]Source: Current study.
[b]Source: LePine, Piccolo, Jackson, Mathieu, & Saul (2008).
[c]Source: Chiocchio & Essiembre (2009).

to provide direct tests of our two focal hypotheses. Meta-analyses were conducted using the meta-analytic methodology outlined in Hunter and Schmidt (2004) by using the R package "psychometric" (Fletcher, 2014). Corrections were made for sampling error and measure reliability. We used artifact distribution meta-analysis to correct for measure reliability, as reliability estimates were not consistently reported in primary studies. Meta-analytic path analysis was then used to determine the direct and indirect impact of team and organizational identity on the focal constructs. Meta-analytic path analysis is a technique used to answer questions that are beyond the scope of simple meta-analytic correlations (Viswesvaran & Ones, 1995). Following a similar procedure employed in previous research (Colquitt, LePine, & Noe, 2000), we filled empty cells in our correlation matrix with correlations available from the extant literature. In all cases, we were able to use previous meta-analyses to obtain a relationship between constructs, for example, team affect and performance (Chiocchio & Essiembre, 2009) and team affect and cooperative team behavior and cooperative team behavior and performance (LePine, Piccolo, Jackson, Mathieu, & Saul, 2008). Table 1 provides the correlation matrix and sources for all relationships; we computed the harmonic mean for the sample size associated with the correlation matrix by using procedures elaborated by Stajkovic, Lee, and Nyberg (2009).

We conducted the meta-analytic path analyses by using the R package "lavaan" (Rosseel, 2012) to test the two hypotheses associated with the identity instrumentality hypothesis. In order to rule out alternatives to the identity instrumentality hypothesis, we compared our hypothesized model with four potential alternative explanations: (a) full mediation (Alternative Model 1), (b) saturated partial mediation (Alternative Model 2), (c) correlated predictor (Alternative Model 3), and (d) reverse causality models (Alternative Model 4). In the hypothesized model, team identity fully mediates the relationship between organizational identity and team affect (Hypothesis 1). Additionally, we included direct paths from team identity as well as organizational identity to behavior and performance to represent the direct relationship between organizational identity and behavior and performance accounting for team identity (Hypothesis 2). A full mediation model (Alternative Model 1) tests an alternative theory that organizational identity does not directly affect team outcomes (i.e., affect, behavior, and performance) but, instead, is completely mediated by team identity. Another potential alternative to our identity instrumentality hypothesis is that team identity mediates only partially organizational identity's role in team outcomes (i.e., affect,

Table 2
Impact of Organizational and Team Identity on Team Affect, Cooperative Team Behavior, and Team Performance

Meta-Analysis	*k*	*N*	*r*	SD_r	ρ	SD_ρ	80% CV	90% CI	%ARTV
Organizational Identity									
Team Identity	34	8,020	.44	.20	.51	.23	.22/.80	.44/.58	8.01
Team Affect	22	6,627	.24	.18	.29	.20	.04/.55	.21/.37	10.77
Cooperative Team Behavior	10	2,559	.28	.07	.35	.02	.32/.38	.30/.40	93.20
Team Performance	7	1,079	.26	.21	.30	.23	.01/.59	.15/.45	13.34
Team Identity									
Team Affect	49	9,473	.41	.18	.49	.20	.24/.74	.44/.54	13.54
Cooperative Team Behavior	29	8,347	.25	.14	.30	.15	.11/.50	.25/.35	19.06
Team Performance	39	5,618	.26	.16	.31	.16	.10/.52	.26/.36	24.50

Note: *k* = number of correlations meta-analyzed; *N* = total number of individuals; *r* = sample size weighted mean observed correlation; SD_r = sample size weighted standard deviation of the observed correlations; ρ = sample size weighted mean observed correlation corrected for unreliability in both measures; SD_ρ = standard deviation of rho; 80% CV = 80% credibility interval around rho; 90% CI = 90% confidence interval around rho; %ARTV = percent variance due to all corrected artifacts.

behavior, and performance). In this saturated partial mediation model (Alternative Model 2), we included a direct path between organizational identity and all outcomes (including team affect). A third alternative to the identity instrumentality hypothesis is that team and organizational identity are simultaneously related to team affect, behavior, and performance as correlated predictors. Alternative Model 3 tests this correlated predictor model. Finally, we test a reverse causality model (Alternative Model 4) wherein we explore the potential that the data better fit a model wherein collective identity is predicted by team outcomes. Here, we reversed the direction of the paths so that team identity is predicted by team affect, behavior, and performance and organizational identity is predicted by behavior and performance. In this reverse causality model, team and organizational identity were allowed to correlate given that each is a different facet of the same construct.

Results

Meta-Analytic Correlations

Table 2 presents the meta-analyses conducted to estimate relationships between team and organizational identity with affect, cooperative team behavior, and performance. In this table, we report the total number of independent studies included in each meta-analysis (*k*), the total sample size (*N*), the sample size weighted mean observed correlation (*r*), the sample size weighted standard deviation of observed correlations (SD_r), the sample size weighted mean observed correlation corrected for unreliability in both measures (ρ), the standard deviation of rho (SD_ρ), the 80% credibility interval around rho (80% CV), the 90% confidence interval around rho (90% CI), and the percent variance due to all corrected artifacts (%ARTV). CVs were used to draw conclusions about generalizability/statistical significance of rho within each meta-analysis (the reliability-corrected mean correlation; Hunter & Schmidt,

2004; Whitener, 1990). The CV provides an estimate of the variability of rho across studies; wide CVs and those that include zero suggest the presence of a moderator, whereas CVs that do not include zero indicate that effects generalize across studies (Bobko & Roth, 2008; Kisamore, 2008; Kisamore & Brannick, 2008). In general, effects may be interpreted to generalize across contexts when the 80% CV does not include zero.

As can be seen in Table 2, both team identity ($\rho = .49$, $k = 49$) and organizational identity ($\rho = .29$, $k = 22$) are positively correlated with team affect. Both team identity ($\rho = .30$, $k = 29$) and organizational identity ($\rho = .35$, $k = 10$) are positively correlated with team-directed cooperative behaviors. And both team identity ($\rho = .31$, $k = 39$) and organizational identity ($\rho = .30$, $k = 7$) are positively correlated with team performance.

Meta-Analytic Path Analysis

Meta-analytic path analyses were conducted to test the two hypotheses associated with the identity instrumentality hypothesis. Hypothesis 1 posited that team identity fully mediates the relationship between organizational identity and team affect. Hypothesis 2 posited that organizational identity uniquely and directly affects cooperative team behavior and team performance. We report the chi-square statistic along with a set of fit indices, including the comparative fit index (CFI), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA), to determine the model fit and misspecification (Bentler, 2007). The criteria for evaluating model fit were as follows: .95 for CFI, .06 for RMSEA, and .08 for SRMR (Hu & Bentler, 1999). We set the p value to a conservative value ($< .01$) because the total sample size (N) of 2,280 used for the path analysis far exceeded the recommended ratio of sample size to free parameters, that is, 5:1 (Bentler & Chou, 1987) and 20:1 (Tanaka, 1987).

Figure 2 illustrates the hypothesized model, standardized path coefficients, and associated R^2 values. Results of the hypothesized model are depicted in Figure 2, and alternative model comparisons are reported in Table 3.

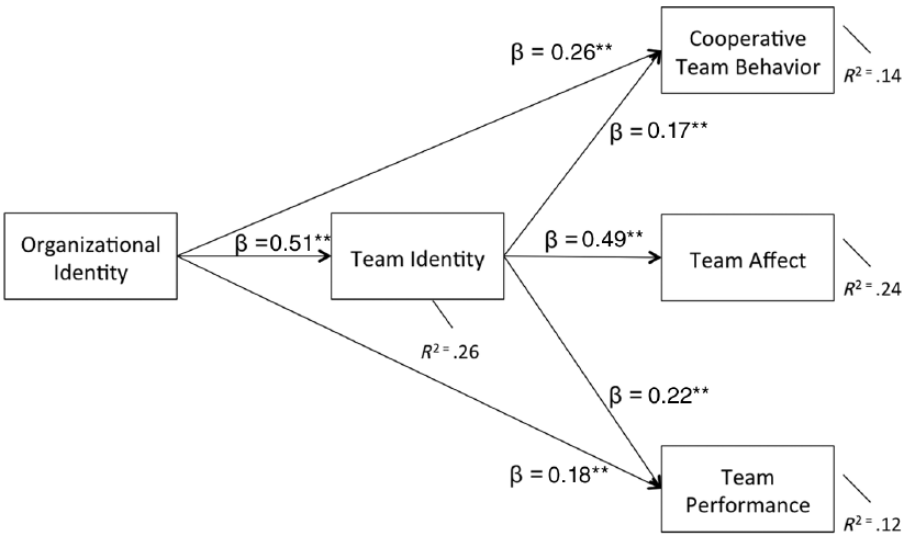
Hypothesis 1 posited the relationship between organizational identity and team affect would be fully mediated by team identity. In support of Hypothesis 1, the paths linking organizational identity to team identity ($\beta = 0.51$, $p < .001$) and team identity to team affect ($\beta = 0.49$, $p < .001$) were both positive and significant.

Hypothesis 2 posited organizational identity would have a direct effect on cooperative team behavior (Hypothesis 2a) and team performance (Hypothesis 2b). Consistent with Hypothesis 2 and the proposed organizational instrumentality of team behavior and performance, results show that the direct effects of organizational identity on cooperative team behavior ($\beta = 0.26$, $p < .001$) and team performance ($\beta = 0.18$, $p < .001$) were positive and significant. As hypothesized, accounting for the role of team identity, findings indicate that organizational identity uniquely and directly affects cooperative behavior (supporting Hypothesis 2a) and team performance (supporting Hypothesis 2b). Furthermore, the fit indices show this hypothesized model fit the data well: $\chi^2(1, N = 2{,}280) = 6.53$, n.s.; CFI = 1.00, RMSEA = .05, SRMR = .01.

Analyses of Potential Alternatives to the Hypothesized Model

To rule out alternative explanations, we compared the fit of the hypothesized model to four alternative models (see Table 3). First, we compared the hypothesized model to a more

Figure 2
Proposed Mediation Model, Standardized Path Coefficients, and R^2 Values



Note: $\chi^2(1, N = 2{,}280) = 6.53$, n.s.; comparative fit index = 1.00; root mean square error of approximation = .05; standardized root mean square residual = .01.
**$p < .001$.

Table 3
Chi-Square Fit Indices and Comparison Tests

Model number	χ^2	*df*	$\Delta\chi^2$	Δdf	CFI	RMSEA	SRMR
Hypothesized Model – Mixed Mediation	6.53	1	161.41**	2	1.00	.05	.01
Alternative Model 1 – Full Mediation	171.63**	3			.92	.16	.06
Alternative Model 2 – Partial Mediation	0.00**	0	6.53	1	1.00	.00	.00
Alternative Model 3 – Correlated Predictors	0.00**	0	6.53	1	1.00	.00	.00
Alternative Model 4 – Reversed Causality	68.53**	1			.96	.17	.04

Note: The hypothesized model has a direct path from organizational identity to extrarole behavior and team performance; Alternative Model 1 is the more parsimonious full mediation model; Alternative Model 2 is the saturated partial mediation model; Alternative Model 3 is the correlated predictor model; Alternative Model 4 is a reverse causality model in which team attitudes predict team identity and behavior and performance predict team and organizational identity. Alternative Models 1, 2, and 3 were compared to the hypothesized model. Alternative Model 4 is not a nested model and therefore was not compared with a chi-square difference test. CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual.
**$p < .001$.

parsimonious model (Alternative Model 1) where the effects of organizational identity on cooperative behavior and team performance are fully mediated by team identity. A model comparison between the hypothesized model and the full mediation model (Alternative Model 1) led to a significant chi-square difference, $\Delta\chi^2(2) = 171.63$, $p < .001$, indicating that the hypothesized model fits the data better than the more parsimonious model, thus further supporting Hypothesis 2.

As an additional test of Hypothesis 1, we compared the hypothesized model to a saturated partial mediation model (Alternative Model 2) where a direct path was added from organizational identity to team affect, making team identity only a partial mediator between organizational identity and all outcomes. The comparison between the hypothesized model and the saturated partial mediation model (Alternative Model 2) favored the hypothesized model, $\Delta\chi^2(1) = 6.53$, n.s. Furthermore, in the saturated partial mediation model, organizational identity was unrelated to team affect ($\beta = 0.05$, n.s.). This eliminates an alternative to Hypothesis 1 that organizational identity may have a direct relationship to team affect.

Third, we tested a model with no mediation, in which team and organizational identity are directly related to the focal outcomes as correlated predictors (Alternative Model 3). The comparison between the hypothesized model and this correlated predictor model (Alternative Model 3) led to a negligible chi-square difference, $\Delta\chi^2(1) = 6.53$, n.s., indicating that the predicted model has better fit to the data. Organizational identity was also unrelated to team affect in this model ($\beta = 0.05$, n.s.). Taken together, the comparisons between the hypothesized model with Alternative Models 3 and 4 are consistent with the theory underlying the identity foci instrumentality elaborated in the identity instrumentality hypothesis and support Hypothesis 1.

As a final comparison, we tested the fit of a model in which we reversed the direction of the arrows so that the team outcomes predict team and organizational identity. Because the reverse causality model (Alternative Model 4) is not a nested model, we could not directly compare it with the hypothesized model via a chi-square difference test. However, the fit criteria indicate that the reverse causality model did not fit the data well, $\chi^2(1, N = 2{,}280) = 68.53$, $p < .001$; CFI = .96, RMSEA = .17, SRMR = .04, providing further support for the hypothesized model and the proffered identity instrumentality hypothesis.

Supplemental Moderator Analyses

To explore the extent to which the focal relationships are moderated, we coded two conceptual moderators—team interdependence (high vs. low) and team type (action vs. knowledge teams)—and three methodological moderators: level of analysis (team vs. organizational level), study setting (lab vs. field), and source of performance ratings (team, supervisor, objective). We used the CI to estimate the accuracy of the reported rho (Whitener, 1990); rhos may be interpreted to be meaningfully different from one another when one rho estimate is not included in the CI band of the comparison rho estimate. Table 4 reports supplemental analyses testing conceptual (i.e., task type and interdependence) and methodological moderators (e.g., level of analysis) of our focal relationships.

The team identity–team affect relationship is somewhat stronger in action teams rather than knowledge teams ($\rho = .50$ vs. .41; the effect estimates for action and knowledge teams

Table 4
Moderators of Team and Organizational Identity Relationships With Team-Directed Attitudes, Behaviors, and Outcomes

Meta-Analysis		*k*	*N*	*r*	SD_r	ρ	SD_ρ	80% CV	90% CI	%ARTV
Team Identity – Team Affect										
Conceptual Moderators										
Interdependence	Low	11	3,114	.43	.20	.51	.23	.21/.80	.39/.63	6.41
	High	26	4,633	.38	.15	.45	.15	.25/.65	.39/.51	22.24
Team Type	Action	24	5,350	.42	.17	.50	.18	.27/.73	.43/.57	14.84
	Knowledge	21	3,102	.35	.18	.41	.20	.16/.67	.33/.49	16.74
Methodological Moderators										
Level of Analysis	Individual	32	8,292	.41	.18	.48	.20	.22/.74	.42/.54	10.25
	Team	17	1,181	.45	.17	.54	.15	.34/.73	.46/.62	37.33
Study Setting	Lab	7	425	.33	.18	.40	.17	.18/.61	.26/.54	40.89
	Field	41	8,808	.41	.18	.49	.20	.24/.74	.43/.55	12.60
Organizational Identity – Team Affect										
Conceptual Moderators										
Interdependence	Low	6	1,432	.37	.16	.45	.18	.23/.68	.32/.58	15.62
	High	5	3,457	.14	.10	.17	.10	.03/.30	.08/.26	16.23
Team Type	Action	12	5,111	.20	.16	.25	.18	.02/.48	.16/.34	10.19
	Knowledge	4	313	.19	.16	.23	.15	.04/.43	.07/.39	45.17
Team Identity – Cooperative Team Behavior										
Conceptual Moderators										
Interdependence	Low	6	1,690	.27	.22	.35	.27	.01/.70	.16/.54	7.82
	High	19	5,753	.24	.11	.28	.11	.14/.42	.23/.33	28.10
Team Type	Action	18	6,394	.27	.10	.28	.10	.14/.41	.24/.32	30.55
	Knowledge	10	1,787	.37	.16	.44	.18	.21/.67	.34/.54	17.41
Methodological Moderators										
Level of Analysis	Individual	24	7,877	.24	.14	.30	.15	.10/.50	.24/.36	17.23
	Team	5	470	.33	.10	.40	.03	.35/.44	.31/.49	91.47
Organizational Identity – Cooperative Team Behavior										
Conceptual Moderators										
Interdependence	Low	5	1,463	.30	.06	.38	.00	.38/.38	.32/.44	102.33
	High	3	676	.24	.06	.29	.01	.28/.29	.22/.36	99.49
Team Identity – Team Performance										
Conceptual Moderators										
Team Type	Action	19	3,923	.24	.15	.29	.15	.10/.48	.22/.36	22.13
	Knowledge	18	1,614	.33	.18	.38	.18	.14/.61	.30/.46	27.87
Methodological Moderators										
Level of Analysis	Individual	16	4,167	.26	.15	.31	.16	.10/.52	.24/.38	17.63
	Team	23	1,451	.28	.20	.32	.18	.09/.55	.24/.40	36.10
Study Setting	Lab	7	423	.46	.17	.52	.15	.33/.72	.40/.64	37.53
	Field	32	5,195	.25	.15	.29	.15	.10/.49	.24/.34	25.53
Rater	Team	13	1,296	.29	.24	.35	.26	.02/.69	.22/.48	16.01
	Supervisor	15	1,673	.23	.12	.26	.10	.14/.39	.20/.32	53.47
	Objective	7	1,933	.26	.08	.30	.00	.30/.30	.24/.36	N/A

Note: *k* = number of correlations meta-analyzed; *N* = total number of individuals; *r* = sample size weighted mean observed correlation; SD_r = sample size weighted standard deviation of the observed correlations; ρ = sample size weighted mean observed correlation corrected for unreliability in both measures; SD_ρ = standard deviation of rho; 80% CV = 80% credibility interval around rho; 90% CI = 90% confidence interval around rho; %ARTV = percent variance due to all corrected artifacts.

do not fall within the CI of the compared effect) and in field rather than lab studies (ρ = .49 vs. .40; the effect estimates for lab and field studies do not fall within the CI of the compared effect). The relationship between team identity and cooperative team behaviors is stronger in teams that are less interdependent (ρ = .35 vs. .28; the effect estimate for high interdependence teams does not fall within the CI of the effect estimate for low interdependence teams), in knowledge rather than action teams (ρ = .44 vs. .28; the effect estimates for action and knowledge teams do not fall within the CI of the compared effect), and when analyses are conducted at the team rather than individual level of analysis (ρ = .40 vs. .30; the effect estimates for individual- and team-level samples do not fall within the CI of the compared effect). Finally, the team identity–team performance relationship is stronger in knowledge rather than action teams (ρ = .38 vs. .29; the effect estimates for action and knowledge teams do not fall within the CI of the compared effect) and in lab rather than field studies (ρ = .52 vs. .29; the effect estimates for lab and field teams do not fall within the CI of the compared effect).

The organizational identity–team affect relationship is stronger in teams lower in interdependence (ρ = .45 vs. .17; the effect estimates for low and high interdependence teams do not fall within the CI of the compared effect). Similarly, the organizational identity–team cooperative behavior relationship is stronger in teams lower in interdependence (ρ = .38 vs. .29; the effect estimates for low and high interdependence teams do not fall within the CI of the compared effect). Importantly, although several key relationships met criteria for moderation, the effect sizes were similar and in the same direction across levels of each moderator, suggesting generalizability of our conclusions across our hypotheses.

Discussion

Taken together, these findings explain how organizational identity affects team functioning. In detailing the nature of the cross-level relationships through which organizational identity affects team functioning, the identity instrumentality hypothesis contributes to mesotheory and details how context affects the team (Ashforth et al., 2011; Mathieu et al., 2007). Central to the identity instrumentality hypothesis is the notion that organizational identity has differential instrumentality to the team and to the organization. In particular, the instrumentality of organizational identity is indirect (via team identity) for those emergent states that affect the team and direct (and unique) for those processes and outcomes that affect the organization. While team identity has important implications for the affective emergent states within the team, organizational identity's instrumentality in promoting team affect is weaker. Organizational identity may reinforce team identity but does not dictate how employees feel about their team. Furthermore, team affect is more important to employees' fulfillment of their team identity than their organizational identity. However, organizational identity is very instrumental to processes and outcomes that extend beyond the immediacy of the team context and accrue to affect the broader organization (i.e., team performance and cooperative team behaviors). Indeed, an employee's efforts toward promoting team success go beyond helping the team to benefiting the whole organization and therefore are instrumental in fulfilling the employee's organizational identity.

These findings highlight the importance of the broader organizational context to team dynamics and shed light on circumstances wherein organizational-level constructs may

directly affect the team. Although researchers have long acknowledged the importance of organizational context to team dynamics (Gladstein, 1984; Mathieu et al., 2007), common research applications of the IPO model of team effectiveness often neglect its role (Kozlowski & Bell, 2003). Our results suggest individuals' positive contributions to their teams depend in part on their connection to the larger organization.

Practical Implications

A practical implication of this study is that the broader organizational context may affect what we do and how we perform in our team but not how we feel about it. In other words, strong organizational identity does not guarantee positive team affect (e.g., cohesion, team satisfaction) if employees do not also identify strongly with the team. We may strongly identify with our organization but not feel the same kinship with our team. On the other hand, a key implication of organizational identity's instrumentality on cooperative behavior and performance is that organizational efforts at promoting employee identification with the organization will benefit performance at all levels—individual, team, and organizational. When employees identify with their organization, they will work for it (e.g., engage in cooperative behaviors and contribute in ways to ensure team performance) even if they do not identify with the team with which they work. Importantly, our results confirm that organizational and team identity directly and uniquely affect contributions to team performance and cooperative behaviors, underscoring the importance of employee identification at both the team and the organizational level. The results of our supplemental moderator analyses suggest the role of team and organizational identity in affect, cooperative behavior, and team performance may be even stronger when team interdependence is low because when interdependence is low, individuals have more discretion in choosing how to contribute to the team than they do when interdependence is high.

Another practical implication of the identity instrumentality hypothesis is that it makes clear under which circumstances identification with one collective may be more advantageous than identification with another. For example, if long-term team viability is valued above team performance (e.g., when the goal of the team is long-run cohesion or when performance is so routinized that no further intervention is required), a focus on the link between team identity and team affect is of greater relevance. However, in other situations, perhaps wherein teams are ad hoc and not expected to work together long term (e.g., short-term project teams, All-Stars sports teams who play only a few games together, surgical teams), team performance may outweigh long-term team viability; in such cases, organizational and team identity are uniquely and directly relevant to team performance.

Limitations

Although the current study makes an important contribution to the study of identity, it has several important limitations. The first limitation of our research relates to the inherently correlational nature of much of the data we cumulated. The majority of studies included in the meta-analytic database were cross-sectional, and most did not provide sufficient information to draw conclusions about temporal separation. To address this limitation, we tested a path model reversing the directionality of focal relationships. Although this reverse causality

model did not fit the data well, future research is needed to further explore the nature of causality and reciprocity of these relationships.

Second, the current study explores the role of organizational identity on shaping team-level identity and outcomes. However, theory on nested identities suggests that team and organizational identities may be reciprocally related (Ashforth et al., 2011); while organizational identity "constrains and enables the form and enactment" of team identity, team identity similarly "constrains and enables" organizational identity (Ashforth et al.: 1145). An interesting avenue for future mesowork on teams in organizations is to explore how individuals' experiences in their teams affect their attitudes and behavior toward the organization.

Third, there has been extensive variability in the scales used to assess identity in the extant literature. As a result of the large number of scales used to measure identity, we were unable to conduct a subgroup analysis of the focal relationships separated by the type of identity measure. Future research is needed to explore the extent to which the operationalization of identity moderates observed relationships.

Fourth, since organizational identity is shaped so directly by contextual features of the organization, our study permitted some insight into the role organizational context may play in team behavior and outcomes (Mael & Ashforth, 1992). However, the design of our study does not permit us to identify whether certain organizational context features are more/less relevant predictors of organizational identity formation or its subsequent role in team functioning. Disentangling these contextual features is an important direction for future research.

Finally, as in any meta-analysis, we were limited by the availability of reported effect size estimates. Some of the relationships reported in the current study had little data available, requiring us to meta-analyze a small number of primary studies. Although we know of no minimum number of studies required to conduct meta-analysis, we recognize the validity of small-*k* meta-analyses is threatened by second-order sampling bias (Hunter & Schmidt, 2004) and recommend additional research be conducted to confirm the generalizability of our conclusions.

Directions for Future Research

Future research should consider the role of time in identity instrumentality. First, time may play a role in the relative importance placed on membership in the team relative to membership in the organization. If a team is together for only a short period of time (e.g., a committee assembles to complete a single task), contributions to the team are short lived within the team but will go on to contribute to the success of the organization. Thus, emphasis on contributions to the team that benefit the organization is warranted. However, contributions to the team may also extend long term, beyond the organization. For example, consider a team that plans to start a spin-off company. In this case, team performance is important in the long run, whereas contributions to the organization are important only in the short run.

Second, time plays a role in the development of identity. Thus, an important direction for future research is to examine the development of collective identity over time, as well as the contextual features that affect identity at various points in time and for various affective states, behaviors, and outcomes. Similarly, future research might investigate how collective identity can be developed swiftly within employees. Although prior research has suggested that certain demographic characteristics, like age and tenure, affect employee readiness to

identify with work-related collectives (Barker & Tompkins, 1994; Blader, 2007; Joensson, 2008; Sass & Canary, 1991), team and organizational contextual variables also play a role in identity formation.

Another interesting direction for future research is to explore scenarios where team task or contextual scenarios limit the relevance of organizational identity to team functioning. For example, Navy SEALs and Army Special Operations Forces teams are often trained to work in complete isolation from the broader organization and under norms that are unique to their teams. These teams' assignments are often so specialized as to be practically independent from the broader organization. In these cases, it may be that team member identification with the broader organization is less relevant (or even irrelevant) to team functioning (Obringer, 2006). Furthermore, team identity may actually play a more causal (rather than reciprocal) role in organizational identity formation.

Another important direction is to consider the role of organizational identity in fostering additional aspects of teamwork, particularly team cognition, which has been found to be a central aspect of team functioning (DeChurch & Mesmer-Magnus, 2010). Future research is needed to explore the extent to which the identity instrumentality hypothesis can be applied to collective identity's role in team cognition. The identity instrumentality hypothesis would suggest team cognition is instrumental to the team and would therefore suggest organizational identity's role in its development would be fully mediated by team identity. We were not able to test the identity instrumentality idea in relation to team cognition in this study because studies examining these effects were not available in the extant literature.

Another question for future research relates to the implications of instrumentality within different team types. For example, our moderator analyses suggested team identity plays a stronger role in team behavior within knowledge teams but a stronger role in team affect within action teams. It would be useful to identify factors that could be readily addressed by organizational leaders to prompt strong and swift collective identity within various team types, as well as the conditions under which identity instrumentality is the strongest.

Additionally, as mentioned above, future research would benefit from a more fine-tuned investigation into the process by which organizational features shape identity perceptions and the mechanisms by which they affect team functioning. For example, to what extent do recent changes in organizational context have implications for the strength of the identity relationships? Similarly, in the case of mergers/acquisitions, for instance, employees' status as part of a work group may actually precede their membership in the organization. Do the stronger organizational identity relationships identified in this study carry over into situations where team membership (and identity) precedes organizational membership?

Lastly, given the variety of collectives identified in the Mathieu et al. (2007) meta-theory nesting organizational entities, another avenue for future research would be to explore employee identification with other work-related collectives. At this point, the vast majority of research on collective identity in the workplace has focused on employees' identification with their organization or work team (van Dick et al., 2004). However, there are potentially other relevant workplace collectives that may have implications for workplace functioning (e.g., unit, department, union, multiteam system). Our results also suggest that it would be important to consider the differential importance and interplay of the various identity foci on workplace functioning and the role of the broader context in identity within each successive nesting.

Conclusion

For decades, teams research has sought to identify the predictors of effective team functioning in order to propose actionable insights for improving real-world teams (Klein, Ziegert, Knight, & Xiao, 2006). Central to this research impetus has been the need to understand when and why cross-level effects occur (Rousseau, 1985) whereby the team context affects its functioning. We proposed and tested the identity instrumentality hypothesis to explain how organizational identity affects different aspects of team functioning. Key to this hypothesis is the idea that organizational identity's instrumentality on team functioning differs, and this differential instrumentality explains when and how organizational identity will affect team functioning. Our results unify the apparently contradictory theories associated with (1) multilevel homology (Chen, Kanfer, DeShon, Mathieu, & Kozlowski, 2009) and compatibility of foci with correlate (Ajzen, 2005) and (2) nesting of teams within the broader organization and the pervasive role of higher-level collectives on functioning of lower-level collectives (Ashforth et al., 2011; Mathieu et al., 2007). Our findings suggest that the extent to which team members identify with their organization indirectly shapes their team affect through team identity, but team members' cooperative behaviors and performance are directly and uniquely affected by the extent to which they identify with both their team and the broader organization.

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