

# Effects of Organizational and Professional Identification on the Relationship Between Administrators' Social Influence and Professional Employees' Adoption of New Work Behavior

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Administrative social influence is a principal tool for motivating employee behavior. The authors argue that the compliance of professional employees (e.g., doctors) with administrative social influence will depend on the degree to which these employees identify with their profession and organization. Professional employees were found to be most receptive to administrator social influence to adopt new work behavior when they strongly identified with the organization and weakly identified with the profession. In contrast, administrator social influence was counterproductive when professional employees strongly identified with the profession and weakly identified with the organization.

*Keywords:* organizational identification, professional identification, social influence, professionals

Administrators' social influence is pivotal in encouraging employees to adopt organizationally prescribed work behavior (Katz & Kahn, 1978).<sup>1</sup> In line with this idea, studies have linked administrators' social influence to increased employee task commitment and to employees' acceptance of organizationally mandated work changes (Higgins, Judge, & Ferris, 2003; Yukl & Falbe, 1990; Yukl & Tracey, 1992). Moreover, administrative social influence tactics, such as normative pressure and monitoring employees for compliance, have been empirically associated with higher levels of technology adoption (Venkatesh & Davis, 2000).

However, professional employees have been shown to be particularly resistant to administrators' social influence attempts when it comes to their adoption of new work behavior (Callister & Wall, 2001; Scott, 1982; Starr, 1982; Zabusky & Barley, 1997). They appear especially prone to actively opposing being controlled by others (Callister & Wall, 2001; Scott, 1982; Zabusky & Barley, 1997). Research on professional employee resistance to administrative control is quite limited (see Ferlie, Fitzgerald, Wood, & Hawkins, 2005, for a notable exception). Yet, as professional employees become increasingly prevalent in many types of organizations (Wallace, 1995), understanding when influence tactics are effective with professional employees becomes more important.

In this article, we investigate the relationship between administrators' social influence and professional employee adoption of

organizationally prescribed work behavior from the perspective of social identity theory (Tajfel & Turner, 1979). We chose social identity theory as the conceptual lens because research on this topic indicates that a person's identification with a group increases the person's receptivity to social influence from other group members and decreases the person's receptivity to social influence from non-group members (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). One main way professional employees are distinguished from other types of employees is that professionals tend to maintain dual social identities, one associated with their organization and the other associated with their profession (Bamber & Iyer, 2002; Johnson, Morgeson, Ilgen, Meyer, & Lloyd, 2006; Lee, Carswell, & Allen, 2000; Settles, 2004; Wallace, 1995; Wang & Pratt, 2007). Professional employees typically view administrators as members of their organization but not as true members of their profession (Ferlie et al., 2005; Golden, Dukerich, & Fabian, 2000; Hoff, 2001; Van Maanen & Barley, 1984). Thus, we investigate how organizational and professional identification affect how professional employees relate to administrators and respond to administrators' attempts to influence their adoption of new work behavior. To our knowledge, the influence of organizational and professional identification on the effectiveness of administrative social influence has not previously been explored.

This article makes several other contributions. First, we advance research on employee social identification (e.g., Ashforth & Mael, 1989) and dual identification (Johnson et al., 2006; Wang & Pratt, 2007) by demonstrating how organizational and professional identification jointly influence professional employee responses to administrative social influence. We propose that because organi-

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<sup>1</sup> Following Mintzberg (1977), we define organizational administrators as authoritative members of the organization who are responsible for creating and maintaining conditions of employment. This group includes managers and others in charge of job descriptions, employee selection, performance management, and compensation.

zations and professions are rival groups in many important respects (Freidson, 2001; Starr, 1982; Van Maanen & Barley, 1984), the effects of professional and organizational identification interfere with each other (Pratt & Doucet, 2000; Pratt & Foreman, 2000; Wang & Pratt, 2007). The notion of interference implies an interaction between professional and organizational identification.

In addition, we extend research on organizational change (Armenakis & Bedeian, 1999; Coleman, Katz, & Menzel, 1966; Fox-Wolfgram, Boal, & Hunt, 1998; Herold, Fedor, & Caldwell, 2007; Herscovitch & Meyer, 2002; Rogers, 1995). Qualitative studies suggest that during periods of change, individuals rely on their social identities to guide them through difficult transition periods (Corley & Gioia, 2004; Fiol, 2002). Yet, quantitative field studies regarding organizational change have yet to incorporate employee social identification constructs.

Finally, we contribute to the research on technology adoption (for a review, see Venkatesh, Morris, Davis, & Davis, 2003). The new work behavior we examine involves the use of new technology. Prior technology adoption research has shown that employee resistance to technologies is primarily influenced by three factors: perceived ease of use, perceived usefulness of the technology, and perceived social influence to adopt the technology (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989; Venkatesh & Davis, 2000; Venkatesh et al., 2003). However, social identification research suggests that group membership plays a part in social influence (Turner et al., 1987). Understanding how professional employees respond differently than traditional employees to administrative social influence on the basis of their organizational and professional identification will help to improve the accuracy and generalizability of technology adoption models.

### Organizational and Professional Identification and Administrative Social Influence

#### *Organizational Identification*

Social identification refers to the extent to which an individual experiences a sense of oneness with a group, such as an organization (Ashforth & Mael, 1989; Turner, 1991). Social identification leads people to view themselves and other group members as possessing the values, goals, and attitudes considered standard for members of the group, rather than as possessing unique individual characteristics (Turner, 1984). People tend to perceive fellow group members as "like them" (i.e., as basically interchangeable with themselves). In-group members are seen as allies sharing a common fate (Kramer, Brewer, & Hanna, 1996; Kramer & Goldman, 1995). Thus, people are inclined to perceive fellow group members as "on their side." Therefore, organizational identification leads to the presumption of a common in-group perspective on the world and increased relational closeness among in-group members.

We propose that the identification of professional employees with the organization affects their response to administrative social influence by altering their perceived relationship with their organizational administrators. Administrators are generally perceived as organizational guardians (Freidson, 2001) and as prototypical organization members (Golden et al., 2000). Consequently, when organizational identification is high, professional employees' sense of self is tied closely to a group that includes administrators.

As a result, we contend, organizational identification leads professional employees to believe that organizational administrators are like them and on their side.

Administrator-mandated changes to work behavior may generate conflict with professional employees. However, as members identify more strongly with a group, they tend to become more receptive to influence attempts from fellow group members (Turner & Oakes, 1989). Fellow group members are taken to be part of one's social self-concept and are therefore understood as legitimate participants in the expression of the shared identity (Turner, 1991). Moreover, administrators ordinarily possess the normative authority to make organizational decisions (Mintzberg, 1979), and organizational identification increases members' adherence to group norms (Terry & Hogg, 1999). Thus, when organizational identification is high, professional employees are likely to be especially receptive to administrators' social influence.

#### *Professional Identification*

Professional identification refers to the extent to which a professional employee experiences a sense of oneness with the profession. Social identification not only shapes one's self-perception in relation to other group members but also shapes one's self-perception in relation to non-group members (Turner et al., 1987). Social identification leads one to see non-group members as less trustworthy, to evaluate them less positively, and to view them as dissimilar (Jetten, Spears, & Manstead, 1996). Identification with a group leads people to view non-group members, especially members of rival groups, as being unlike themselves and unsupportive of their interests (Brewer, 1979; Kramer et al., 1996; Turner, 1984).

Professional employees typically do not see administrators as true members of the profession, even when administrators have had professional training and experience (Golden et al., 2000). Further, organizations and professions tend to be rival groups in that the goals and values of organizations and professions often conflict, and administrators are seen as clearly emphasizing organizational concerns over professional ones (Freidson, 2001). For example, organizations tend to be primarily concerned with efficiency and profitability, whereas professions care mainly about providing the highest quality service (as defined by the profession), almost regardless of cost or revenue considerations (Freidson, 2001). Administrators are usually seen as promoting profitability at the expense of profession-defined quality (Freidson, 2001). In one notable study, practicing physicians viewed administrators with medical degrees (MDs) as "outsiders" to the medical profession because of what the physicians believed to be the administrators' undue emphasis on organizational goals (Hoff, 1999, p. 336). Practicing physicians viewed administrators with MDs more negatively than those without MDs because they thought the former had "betrayed" the medical profession by assuming administrative roles (Hoff, 1999, p. 344).

We maintain that professional identification alters professional employees' responses to administrative social influence in a manner opposite that of organizational identification. It decreases professional employees' relational closeness with those who do not belong to the profession, such as administrators. When one does not experience solidarity with another, the other is not considered to be a valid source of behavioral guidance (Turner, 1991).

As a consequence, influence from that person is more likely either to be ignored or to be interpreted as controlling and as a threat to freedom of identity expression (Turner, 1991). A possible result is reactance (Brehm, 1966; Brehm & Brehm, 1981; Wicklund, 1974). On this basis, professional identification leads professional employees to be less receptive to administrative influence and perhaps even to act against it.

### *Organizational and Professional Identification*

We maintain that organizational and professional identification orient professional employees in fundamentally different ways in their relationships with administrators and exhibit essentially countermoderating effects on the degree to which professional employees comply with administrative social influence. Professional employees vary in the extent to which they identify with both the organization and the profession (Bamber & Iyer, 2002; Johnson et al., 2006; Lee et al., 2000; Wallace, 1995). Some professionals view themselves as professionals first and foremost and organization members second; others hold the opposite view; and still others see the profession and the organization as more or less equally self-defining (Johnson et al., 2006).

When employees possess similar levels of organizational and professional identification, they are likely to experience identity conflict. Identity conflict occurs when two aspects of self-concept, such as two types of social identification, direct individuals to engage in incompatible behaviors in a particular situation (Baumeister, 1999). Identity conflict is stressful (Kreiner, Hollensbe, & Sheep, 2006; Pratt, Rockman, & Kauffman, 2006) and can purportedly lead to erratic employee behavior toward the organization (Wang & Pratt, 2007).

We consider organizational and professional identification in combination when investigating employee compliance with administrative social influence because of their potential to generate identity conflict. The orienting effects of one type of identification interfere with those of the other. For professional employees, the belief stemming from organizational identification that administrators are similar to them and supportive of their interests is challenged by the belief stemming from professional identification that administrators are dissimilar to them and unsupportive of their interests. Thus, professional employee interpretations of administrative social influence are clear only when identification is high with one group is high and low with the other group. Otherwise the interpretations based on organizational or professional identification are contested and, thus, are less definitive as guides to thought and action.

When professional employees strongly identify with the organization and weakly identify with the profession, they will be most receptive to administrative social influence. Under such conditions, identity conflict is minimal, and professional employees experience a strong sense of relational closeness to administrators. However, when professional employees weakly identify with the organization and strongly identify with the profession, they will be least receptive to administrative social influence and may even behave counter to it. Under such conditions, identity conflict is minimal, and professional employees do not perceive themselves to be relationally close to administrators.

Because similar levels of organizational and professional identification generate identity conflict, under such conditions compli-

ance with administrative social influence will not be as strong as when organizational identification is high and professional identification is low or as weak as when organizational identification is low and professional identification is high. On the basis of this logic, we proposed a three-way interaction between administrators' social influence and professional employees' organizational and professional identification in their relationship to professional employees' adoption of new work behavior. Thus, we hypothesized that the association between perceived social influence from administrators to adopt new work behavior and professional employees' actual adoption of the new work behavior would be (a) most positive when organizational identification is high and professional identification is low and (b) least positive when organizational identification is low and professional identification is high.

## Method

### *Sample*

Our context is Healthcorp (a pseudonym), which is a large, not-for-profit health maintenance organization based in the Pacific Northwest region of the United States. Our initial sample consisted of all 249 Healthcorp primary-care professionals (i.e., family practitioners).<sup>2</sup> Using the Dillman (2000) survey distribution method, we sent a confidential survey to all professionals in our sample to assess our constructs of interest. Although poor response rates are regularly encountered when surveying physicians (Templeton, Deehan, Taylor, Drummond, & Strang, 1997), 198 professionals completed the survey for a response of 79.2%. Missing values reduced the number of usable observations to 193. Within our usable sample, the majority of the respondents had a medical degree (81.9%), and the remaining respondents were certified physician assistants.<sup>3</sup> None of the family practitioners were pediatricians.<sup>4</sup> Statistical comparisons between the sample and overall population yielded no significant differences in gender, age, tenure, highest degree earned, or new work behavior adoption.

### *Dependent Variable*

Healthcorp administrators introduced a change to medical professionals' jobs by launching a new Internet-mediated e-mail-based technology, called secure messaging. This technology was designed to reduce patient demand for office visits and thereby

<sup>2</sup> Two of the variables we used in this article were also used by Hekman, Bigley, Steensma, and Hereford (2009). Their article examined a different phenomenon (reciprocity), relied on different core variables (perceived organizational support and psychological contract violation), and built on a different literature (social exchange) than did the present research.

<sup>3</sup> Certified physician assistants have 2 or more years of advanced training followed by a board certification exam. Physician assistants work under the immediate supervision of doctors and provide direct patient care involving the interpretation of findings on the basis of general medical knowledge. Difficult cases are referred to doctors (Washington State Department of Personnel, 2003).

<sup>4</sup> At the time of this study, secure messaging, which is the new technology implemented by Healthcorp, was not compatible with federal confidentiality guidelines for minors. Thus, pediatricians were not allowed to use secure messaging and were not part of the sample.

lower Healthcorp expenses. Healthcorp medical professionals were expected to respond to secure messages from their patients within 24 hr, and information about nonresponding providers was shared with their colleagues. Administrators monitored the number of secure messages and the timeliness of response. Use of secure messaging partially supplanted traditional face-to-face consultation with a certified medical professional (Kleiner, Akers, Burke, & Werner, 2002; Liederman & Morefield, 2003). Physicians were not paid for using secure messaging. At the conclusion of this study, 83.4% of the professionals in the sample had sent at least one secure message to a patient.

Our dependent variable is objectively measured, which is an improvement over previous measures of acceptance of new work behavior that are primarily limited to self-reports and third-party raters (e.g., Herscovitch & Meyer, 2002). Medical professionals had a great deal of control over how many secure messages they sent, for two reasons: (a) they could choose not to inform their patients about the secure messaging capability and (b) they could choose not to personally respond to their patients' secure messages. The 249 medical professionals sent a total of 16,063 secure messages over the study period, 13,943 (86.8%) of which were sent by those who filled out our survey. Professionals were expected to address only those issues that could be answered in 5 min or less; this limit constrained the variance in message quality and made secure message quantity an acceptable measure of new work behavior. The secure messaging system was rolled out gradually over the course of 1 year, so that on average each professional had access to the technology for 20 months. We calculated the number of secure messages sent per day, taking into account the number of full working days that the technology was available to each medical professional. Our dependent variable is each professional's total messages divided by the total days that the technology was available.

### Independent Variables

*Organizational and professional identification.* We measured the extent to which medical professionals identified with their organization and profession using five items from Mael and Ashforth's (1992) six-item scale. Respondents were asked to identify how strongly they agreed or disagreed with the statements (1 = *strongly disagree*; 7 = *strongly agree*). Because of low item reliability in a pilot survey we sent to a presample of physicians, we omitted the item "I am very interested in what others think about Healthcorp (doctors)" from our survey. All survey items are listed in Table 1. The composite reliability for organizational identification was .76 and for professional identification was .73. Composite reliability is generally considered superior to Cronbach's alpha because (a) it is not influenced by the number of items (higher number of items inflates Cronbach's alpha) and (b) it is appropriate for two-item measures, whereas Cronbach's alpha is not (Netemeyer, Boles, & McMurrian, 1996; Tabachnick & Fidell, 2006).

*Perceived administrator social influence.* Pressure and monitoring are critical aspects of social influence (Yukl & Tracey, 1992). Administrators sent many e-mails pressuring professionals to adopt secure messaging, and administrators also monitored their use of secure messaging for compliance with the initiative.<sup>5</sup> We measured the perceived administrator normative pressure that was

felt by the professional employees using Venkatesh and Davis's (2000) two-item measure. We modified Venkatesh and Davis's items to specifically target secure messaging. The composite reliability was .66, which is consistent with prior research (Venkatesh et al., 2003). We used Agarwal and Rodhain's (2002) measure of perceived monitoring. The composite reliability of our four-item measure was .85. For both measures, respondents were asked to identify how strongly they agreed or disagreed with the statements (1 = *strongly disagree*; 7 = *strongly agree*).

### Control Variables

*Clinic membership.* To account for any group-level effects on role adoption, we included 24 dummy variables to represent the 25 clinics in our sample.

*Days that secure messaging was available.* Professionals who had more time to become familiar with the technology may have used it more.

*Perceived usefulness of the technology to the organization.* Meta-analytic evidence shows that perceived usefulness is the best predictor of technology adoption (Legris, Ingham, & Colletette, 2003). We used Davis's (1989) four-item measure to measure the perceived usefulness of the technology to the organization. Respondents were asked to identify how strongly they agreed or disagreed with the statements (1 = *strongly disagree*; 7 = *strongly agree*).

*Number of patients in panel.* Professionals who have a larger number of patients for whom they are responsible (i.e., their panel) may have more patients who use secure messaging.

We originally had 15 other control variables in the analysis. As these nonsignificant control variables did not influence our results from the final analysis, we removed them to ensure an appropriate case-to-variable ratio (Tabachnick & Fidell, 2006).

## Results

### Measure Validity

We used confirmatory factor analysis with maximum likelihood estimation to assess the psychometric properties of the scaled items for constructs derived from the survey instrument. A satisfactory fit was achieved,  $\chi^2(322, N = 193) = 351.03, p < .01$ , root-mean-square error of approximation = .03, comparative fit index (CFI) = .98. The ratio of chi-square to degrees of freedom is 1.09; a value of less than 3 for the ratio indicates a good fit (Carmines & McIver, 1981). A CFI value of .90 or above is also considered an indication of good fit (Bentler & Bonett, 1980). All the items loaded onto their appropriate constructs at an acceptable level (Anderson & Gerbing, 1988). Table 1 shows that the com-

<sup>5</sup> One notable pressuring e-mail sent by administrators to all professionals was titled "The Top 10 Reasons Why You Should Encourage Your Patients to Use Secure Messaging." The primary reason was "It's the right thing to do! . . . Taking care of patients the way we want our families taken care of." Each week, the professionals in our sample were sent a monitoring e-mail with an attached Excel spreadsheet that listed all professionals and the number of patient secure messages that had not been responded to by their assigned medical professional within the organizationally prescribed 24-hr turnaround time.

Table 1  
Coefficients, Z Statistics, and Reliability Values for the Latent Variables

Construct/item	Standardized coefficient	Estimate/SE	Reliability <sup>a</sup>
Perceived usefulness to organization: Secure messaging will . . .			
make the organization more efficient.	0.88	15.49	0.90
Increase the organization's quality of health care delivery.	0.89	15.78	
Enhance the organization's reputation in the community.	0.81	13.70	
Contribute to the organization's financial well-being.	0.77	12.66	
Professional identification			
In general, when someone praises doctors, it feels like a personal compliment.	0.77	11.79	0.73
In general, when someone criticizes doctors, it feels like a personal insult.	0.33	4.39	
When I talk about doctors, I usually say "we" rather than "they."	0.53	7.38	
Medicine's successes are my successes.	0.79	12.23	
If a story in the media criticized doctors, I would feel embarrassed.	0.52	7.25	
Organizational identification			
When someone praises the organization, it feels like a personal compliment.	0.81	12.78	0.76
When someone criticizes the organization, it feels like a personal insult.	0.56	8.04	
When I talk about the organization, I usually say "we" rather than "they."	0.53	7.48	
The organization's successes are my successes.	0.75	11.66	
If a story in the media criticized the organization, I would feel embarrassed.	0.46	6.39	
Perceived administrator normative pressure			
Administrators think that I should use secure messaging.	0.81	9.40	0.66
I feel pressure from administrators to use secure messaging.	0.58	7.34	
Perceived monitoring			
The extent to which I use secure messaging will be monitored.	0.70	10.79	0.85
No one will know if I use secure messaging or not (r).	0.65	9.74	
Those who assess my patient care will be aware of the extent to which I use secure messaging.	0.78	12.47	
My use of secure messaging will be tracked.	0.91	15.44	

Note. (r) = reverse coded.

<sup>a</sup> Denotes composite reliability.

posite reliabilities for the constructs are all above the .60 cutoff suggested by Bagozzi and Yi (1988).

We assessed discriminant validity among the five constructs measured with multiple items by comparing our target measurement model with various nested models, moving from a highly restricted single-factor structure (all items linked to one construct) to our proposed five-factor structure (perceived usefulness to the organization, organizational identification, professional identification, perceived monitoring, and perceived administrator normative pressure; see Table 2). Chi-square difference tests for the nested models were consistently large and significant; this showed that large improvements in fit were gained as we moved from one to five factors.

### Analyses

The means, standard deviations, and correlation coefficients between the dependent, independent, and control variables are reported in Table 3. Because the dependent variable (use of secure messaging) is constrained and a number of observations have a value of zero, we used Tobit, which is designed explicitly to account for left-censored dependent variables (Amemiya, 1973;

Tobin, 1958). We centered all variables involved in the interaction terms (Aiken & West, 1991). Results of the analysis are presented in Table 4.

We predicted that the association between perceived social influence from administrators to adopt a new work behavior and professional employees' actual adoption of the new work behavior would be (a) most positive when employees' level of organizational identification was high and level of professional identification was low and (b) least positive when employees' level of organizational identification was low and level of professional identification was high. On the basis of Model 3, the coefficients for both three-way interaction terms are significant ( $p < .05$ ). To gain further insight into the nature of the interaction effects, we plotted them based on one standard deviation above and below the mean level of each variable (see Figures 1 and 2). Given the significance of the simple slopes (Aiken & West, 1991), we found that perceived administrative social influence (both pressure and monitoring) was most positively related to professional employee adoption of new work behavior when organizational identification was high and professional identification was low. We also found that perceived administrative social influence (both pressure and

Table 2  
*Analysis of Discriminant Validity of Predictor Variables*

Model	RMSEA	CFI	$\Delta$ CFI from Model 1	$\chi^2$	$\Delta\chi^2$ from Model 1
1. Five-factor model (professional identification, organizational identification, perceived usefulness to the organization, perceived monitoring, perceived administrator normative pressure)	.03	.98		351.03	
2. One-factor model	.20	.72	.26	3,126.25	2,775.22***
3. Two-factor model (identification, perceived social influence/perceived usefulness to the organization)	.18	.77	.21	2,346.56	1,995.53***
4. Three-factor model (perceived usefulness to the organization, identification, perceived social influence)	.14	.86	.12	1,755.43	1,404.40***
5. Four-factor model (organizational and professional identification combined)	.10	.90	.08	1,027.78	676.75***
6. Four-factor model (administrator social influence types combined)	.09	.91	.07	1,011.46	660.43***

Note. RMSEA = root-mean-square error of approximation; CFI = comparative fit index.

\*\*\*  $p < .001$ .

monitoring) was least positively related to adoption of new work behavior when organizational identification was low and professional identification was high. Indeed, our results provide some evidence that the relationship between social influence and the adoption of new work behavior is negative when professional identification is high and organizational identification is low. However, when professional and organizational identification were relatively equivalent, the simple slopes for the perceived administrative social influence variables (i.e., pressure and monitoring) were not significant. Thus, our hypotheses are supported.

### Discussion

We set out to understand when administrative social influence is most effective for motivating professional employees to adopt new work behavior. Administrator social influence was the principal means by which professional employees were encouraged to perform the new work behavior we studied. We found that the combination of organizational and professional identification was a significant factor in determining whether professional employees would comply with administrative social influence. For professional employees with high levels of organizational identification and low levels of professional identification, administrators social influence was positively associated with adoption of new work behavior. In contrast, for professional employees with low levels

of organizational identification and high levels of professional identification, administrator social influence was negatively associated with adoption of new work behavior. Our study advances research in the areas of social influence, social identification, organizational change, and technology adoption by suggesting how organizational and professional identification jointly influence employee responses to administrative social influence by altering the perceived relationship between employees and administrators.

### Supplementary Analysis

After analyzing our survey data, and in the spirit of recent calls for richer data in organizational research (Rynes, 2007; Weick, 2007), we used a supplementary qualitative analysis to assess how social identification influenced professional employee behavior. We conducted four interviews with professionals who (a) gave written permission in their survey response for us to contact them and (b) either were strongly identified with the organization and weakly identified with the profession (two interviews) or were strongly identified with the profession and weakly identified with the organization (two interviews). Each interview was recorded and transcribed and lasted approximately 60–90 min. In these interviews, we found that the highly organizationally identified and weakly professional identified physicians tended to view their

Table 3  
*Means, Standard Deviations, and Correlations Among Variables*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Average daily secure messages	0.11	0.14	—							
2. Organizational identification	25.03	5.01	.10	—						
3. Professional identification	22.74	5.04	-.16	.61	—					
4. Perceived administrator normative pressure	12.32	1.93	.14	.16	.09	—				
5. Perceived monitoring	22.62	4.41	.23	.02	-.05	.36	—			
6. Full-time	0.82	0.19	-.21	.15	.21	-.13	.03	—		
7. No. patients in panel	1,445.51	716.95	.21	.00	-.15	.00	.01	.17	—	
8. Days secure messaging was available	576.57	121.84	.09	-.04	-.07	-.05	.05	.02	-.04	—
9. Perceived usefulness to organization	18.92	4.96	.29	.23	.08	-.09	-.08	.02	.01	.15

Note.  $N = 193$ . All correlations larger than .15 are significant at  $p < .05$  (two-tailed); all correlations larger than .19 are significant at  $p < .01$ .

Table 4  
*Hierarchical Analysis Examining Moderating Effects of Identification and Administrator Social Influence on Acceptance of Secure Messaging*

Variable	Model 1	Model 2	Model 2
<b>Controls</b>			
24 clinic dummies	.***	.***	.***
Full-time status	-.23***	-.22***	-.19***
No. patients in panel	.29***	.29***	.31***
Days secure messaging was available	-.17**	-.15*	-.18**
Perceived usefulness to organization	.19***	.20***	.25***
<b>Main effects</b>			
Organizational identification	.18***	.16**	.14**
Professional identification	-.19***	-.12*	-.10*
Perceived administrator normative pressure	-.12**	-.04	-.06
Perceived monitoring	.20***	.23***	.26***
<b>Two-way interactions</b>			
Professional Identification × Pressure From Administrators		-.08†	-.15*
Organizational Identification × Pressure From Administrators		.06†	.11*
Professional Identification × Monitoring		-.11	-.08
Organizational Identification × Monitoring		.07	.07
Organizational × Professional		-.05	-.09
Pressure × Monitoring		.03	.18*
<b>Three-way interactions</b>			
Organizational × Professional × Monitoring			-.12*
Organizational × Professional × Pressure			-.33**
<b>Log likelihood</b>			
Log likelihood	129.87	130.26	140.65
-2[L( $\beta_{\text{previous}}$ ) - L( $\beta_{\text{full}}$ )]		0.78	20.78***

Note.  $N = 193$ . To enhance ease of interpretation, we report standardized coefficients. Tobit regression does not provide an  $R$ -squared statistic.

†  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

jobs in terms of how much they were costing the organization and empathized with administrators. For example, one told us,

I think a lot of physicians who work here have more of a private practice mentality and don't feel the same way that I do. The private practice guys just hand out really expensive treatments and MRIs when patients don't really need them. So, I think administrators here have a tough time persuading physicians to stop wasting so many medical resources.

In contrast, those whose self-concepts were strongly tied to the profession and weakly tied to the organization viewed administrators as rivals. For example, one told us,

The administrators sent an e-mail telling all of us physicians to clean our desks because some group of medical administrators from Korea was taking a tour of our building that day. For some reason, that e-mail made me so angry. Actually, my desk was clean when I read the e-mail, but as soon as I read it, I picked up my recycling bin and dumped it all over my desk. I couldn't believe they were telling us to clean up our desks—like we were little children or something.

On the basis of these interviews, we have some confidence in our arguments that professional and organizational identification jointly influence professional employees' perceptions of relational closeness to organizational administrators.

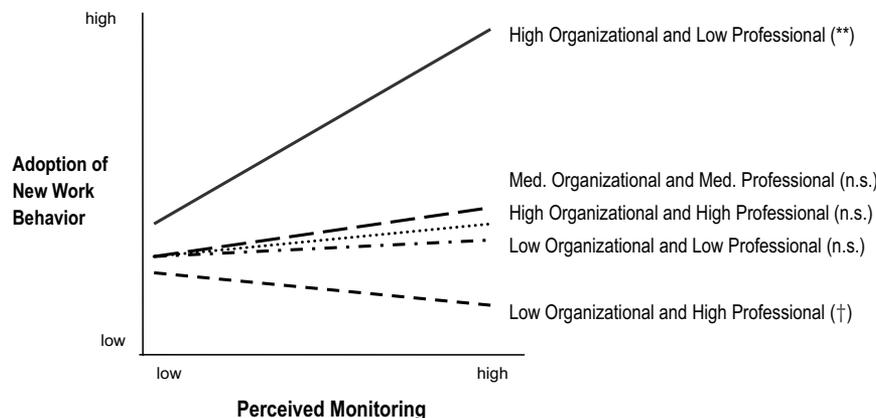


Figure 1. The effects of social identification and perceived monitoring on adoption of new work behavior. ns = nonsignificant. †  $p < .10$ . \*\*  $p < .01$ .

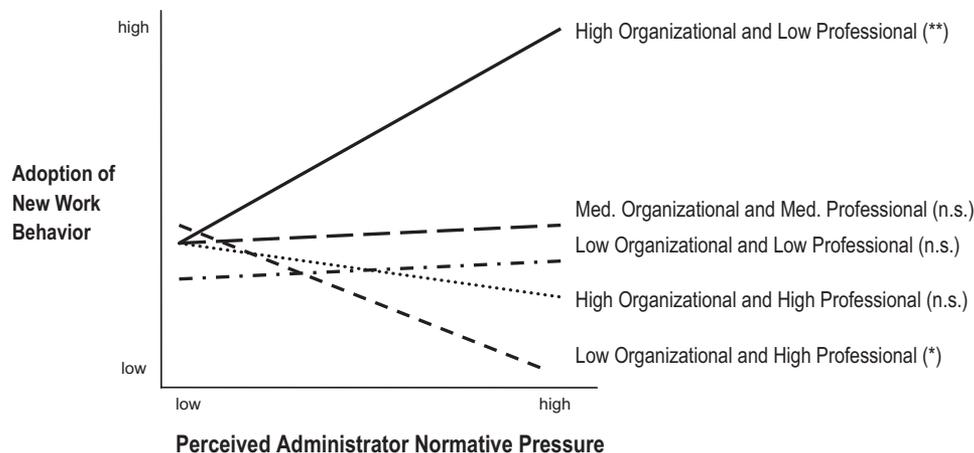


Figure 2. The effects of social identification and perceived pressure from administrators on adoption of new work behavior. ns = nonsignificant. \*  $p < .05$ . \*\*  $p < .01$ .

### Implications and Future Research

Preliminary theorizing in the area of social identification on the topic of identity conflict has pointed to the possibility of a joint effect of organizational and professional identification in predicting a variety of attitudinal and behavioral outcomes (Pratt & Doucet, 2000; Pratt & Foreman, 2000; Wang & Pratt, 2007). However, organization science research has yet to wholly explain or empirically confirm the nature of this effect (Pratt & Foreman, 2000). Our study contributed to this research stream with the argument that organizational and professional identification together shape the perceived relationship of professional employees with their administrators. Administrator influence was significant only when one type of identification was relatively high and the other was relatively low. We maintain that when levels of organizational and professional identification are similarly high, the oppositional orienting effects of the two identification types “interfere” with each other (Settles, 2004). An interesting avenue for future research would be to examine more closely the psychological nature of this type of interference. Perhaps, equivalent levels of organizational and professional identification give rise to a state of psychological ambivalence toward administrators that leads to inconsistent or unstable professional employee behavior (Wang & Pratt, 2007).

Our research also contributes to a better understanding of professional employee reactance to organizationally prescribed work behaviors (Blau & Scott, 1962; Hall, 1968; Kerr & Slocum, 1981; Kerr, Von Glinow, & Schriesheim, 1977; Snizek, 1972). For medical professionals, at least, social identification appears to be an important concept for explaining reactance. We found that the major “push back” often associated with reactance occurred when organizational identification was low and professional identification was high. In this case, administrators’ influence was negatively associated with professional employees’ adoption of organizationally prescribed new work behavior. Conversely, high organizational and low professional identification seemed to reverse the reactance effect. Professional employees readily adopted new work behavior in response to administrator influence when their social self concept was tied mainly to the organization (and

not to the profession). We believe our model is generalizable to other professional employee contexts, but future research should explore the boundary conditions of this model in terms of different types of professionals (e.g., lawyers, architects), influence (e.g., explicit coercion), or behaviors (e.g., eliminating rather than adding behavior).

In addition, our study extends research on technology adoption in organizations (Davis, 1989; Davis et al., 1989; Venkatesh & Davis, 2000; Venkatesh et al., 2003). Technology adoption models do not include employee self-perceptions (e.g., professional and organizational identification) that may influence the relationship between employee perceptions of the technology and employee technology adoption behavior (Taylor & Todd, 1995). Perhaps it is not surprising that even the best technology adoption model, which includes the top 22 predictor variables, leaves 64% of the variance in actual technology adoption behavior unexplained (Venkatesh et al., 2003). Our study highlights the potential usefulness of incorporating employee social identification variables in models predicting employee adoption of new technology.

Finally, our findings provide insight into the organizational change literature (e.g., Armenakis & Bedeian, 1999). A growing body of research examines why professional employees, in particular physicians, often are so resistant to role changes (Coleman et al., 1966; Ferlie et al., 2005; Rogers, 1995). This prior research shows that physician resistance is influenced by professional peers (Coleman et al., 1966; Robertson, Swan, & Newell, 1996), features of the new role (Chau & Hu, 2002; Rogers, 1995), and norms within organizational departments (Van de Ven, Polley, Garud, & Venkatraman, 1999). However, employee social identification has not been included in these models.

### Limitations and Strengths

The implications of this study should be considered in light of its limitations. A main limitation is that causal direction cannot be substantiated because we used a cross-sectional design. However, the relationships we hypothesized are consistent with findings of longitudinal studies that social influence predicts employee behavior (Burkhardt, 1994; Venkatesh & Davis, 2000). In addition, our

theoretical model consists of complex interaction effects that minimize the probability of drawing incorrect conclusions (Bowen & Wiersema, 1999). Also, reverse causality does not appear theoretically plausible. For example, it seems less plausible that professionals would perceive high administrator pressure as a function of both adopting (when organizational identification is high and professional identification is low) and resisting (when organizational identification is low and professional identification is high) the new work behavior.

Other important strengths of our study should be noted. Even when we included 15 additional control variables that have been shown to influence the adoption of new work behavior to help account for alternative explanations to our theory, our results were unchanged. The nonsignificant control variables that we added and then struck from our analysis because they were not significantly associated with adoption of new work behavior were (a) physician versus physician assistant dummy, (b) perceived usefulness to patients, (c) perceived usefulness to self, (d) perceived ease of use, (e) perceived colleague normative pressure, (f) perceived patient normative pressure, (g) hours spent in training learning the system, (h) number of training modules completed (as professional employees could skip any of the modules), (i) score on a multiple choice posttraining test, (j) average sickness of patients in panel, (k) computer self-efficacy (Compeau & Higgins, 1995), as well as (l) professional employee age, (m) tenure, (n) full-time status, and (o) gender. Other strengths are that our supplementary interviews corroborate our theoretical arguments, hypotheses, and quantitative results. Furthermore, our dependent variable was objectively measured. These strengths provide confidence that the influence of administrator social influence on employee behavior depends on employees' levels of professional and organizational identification.

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