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Organizational identification among virtual workers: the role of need for affiliation and perceived work-based social support

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Abstract

Organizational identification, which reflects how individuals define the self with respect to their organization, may be called into question in the context of virtual work. Virtual work increases employees’ isolation and independence, threatening to fragment the organization. This study finds that virtual workers’ need for affiliation and the work-based social support they experience are countervailing forces associated with stronger organizational identification. Furthermore, perceived work-based social support moderates the relationship between virtual workers’ need for affiliation and their strength of organizational identification. Thus, when work-based social support is high, even workers with lower need for affiliation may strongly identify with the organization. © 2001 Elsevier Science Inc. All rights reserved.

1. Introduction

Virtual work, whereby individuals work from home, “on the road,” or otherwise outside of traditional centralized offices, is an important and growing phenomenon. By recent estimates, nearly 18 million US workers currently spend at least a portion of their workweek in virtual mode (Work Week, 1999), and that number has increased by almost 100% since 1997. Furthermore, 51% of North American companies now have virtual work programs,
and almost two-thirds of Fortune 1000 companies offer employees an opportunity to work virtually (Goldsborough, 2000). Virtual work is important because of its increasing prevalence and also because virtual organizations and virtual workers may be the key factors in the “new economy.” They often represent highly skilled knowledge workers employed in dynamic, flexible, technology-enabled organizations.

Managing virtual work represents one of the key challenges of management in the information age. For example, the difficulty of coordinating and controlling autonomous knowledge workers is exacerbated when such individuals operate virtually (Olson, 1987; Wiesenfeld, Raghuram & Garud, 1999a). Virtual workers are often separated from coworkers, supervisors, and other organization members, leading to feelings of isolation, greater need for self-organization, and sometimes greater stress (e.g., Nilles, 1994; Dobrian, 1999). Their isolation and dispersion necessitates new communication systems, information systems, and sometimes even organizational culture change. In sum, virtual work may alter organizational structures and systems, individuals’ work roles and required skills, and even how individuals define themselves with respect to the organization.

The increasing number of virtual workers, their importance to the “new economy,” and the extraordinary challenges that they face suggest that we must understand the experience of virtual work and devise methods for managing this new and growing phenomenon. As an emergent phenomenon, however, virtual work has only begun to attract research attention recently. There is relatively little theory regarding the effects of virtual work and even less empirical research exploring this phenomenon (DeSanctis & Monge, 1999). Therefore, there is a need for exploratory research on virtual work to establish a basis for comprehensive evaluation of this novel, technology-enabled work form.

A central theoretical and practical issue in the context of virtual work is whether the distance and dispersion it creates will weaken the relationship between virtual employees and their organizations (Wiesenfeld et al., 1999a). Practitioner-oriented articles report uncertainty and concern about the emerging employee-organization relationship in the context of virtual work. Virtual workers repeatedly report concern about being ‘out of sight, out of mind’ from their organization (Alexander, 1999, 61; Watad & DiSanzo, 2000). Many virtual workers also admit that their employing organization is “out of sight, out of mind” to them. Theory and research bolster these anecdotal observations, suggesting that virtual work may lead to change or ambiguity in members’ perceptions of their relationship to their organization (DeSanctis & Monge, 1999; Wiesenfeld et al., 1999a).

Changes in members’ perception of the organization that result from virtual work may have important organizational implications. By its nature, virtual work diminishes emphasis on the visible, tangible dimensions of organizations (e.g., offices, colocated employees), instead relying primarily on psychological dimensions (e.g., the perceptions of employees and others) to represent an organization. If an organization is to have meaning to individuals in a virtual work context, it will be because members feel that they are a part of the organization. A construct that may be relevant in this regard is organizational identification, which has been defined as members’ perception of belonging to the organization (Ashforth & Mael, 1989). Especially in the information age when tangible dimensions of organizations may be less salient, organizational identification may be an important factor shaping employee behavior.
This paper explores the implications of the distance, dispersion and isolation associated with virtual work on the way individuals define themselves with respect to the organization. We examine the relationship between individual differences in need for affiliation and virtual workers’ organizational identification. We also assess the context with respect to perceived work-based social support, hypothesizing that the effects of work-based social support may moderate the relationship between need for affiliation and organizational identification among virtual workers.

1.1. Organizational identification in a virtual context

Organizational identification is important in a virtual setting because it may replace or otherwise compensate for the loss of aspects of traditional organizations that facilitate cooperation, coordination and the long-term effort of employees. For example, when employees can work anytime and anywhere, it is difficult to rely upon mechanisms such as direct supervision as a means of coordination and control (DeSanctis & Monge, 1999). Instead, it may be left to the discretion of employees themselves to self-organize–being motivated to seek out and provide cooperative behaviors (e.g., organizational citizenship behaviors) that further task performance and organizational goals. Organizational identification, or the strength of members’ psychological link to the organization, has been associated with the degree to which employees are motivated to fulfill organizational needs and goals, their willingness to display organizational citizenship and other cooperative behaviors, and their tendency to remain with the organization (Dutton, Dukerich & Harquail, 1994; Kramer, 1993; Mael & Ashforth, 1995). Overall, our ability to manage the large and growing population of virtual employees may depend on identifying the factors that predict their organizational identification.

1.2. Predictors of organizational identification among virtual workers

Theory suggests that identification is caused by individuals categorizing themselves as part of an organization (Ashforth & Mael, 1989; Dutton et al., 1994). Thus, an important aspect of individual identification is cognitive and depends upon the salience of organizational membership to the individual. Organizational identification may also be motivated by dynamic self-processes, such as the desire for self-enhancement or self-consistency (e.g., Dutton et al., 1994).

Previous research exploring identification within organizations has specified several predictors of identification. These predictors include (a) the extent of contact between the individual and the organization, (b) the visibility of organizational membership, and (c) the attractiveness of the organizational identity (i.e., the extent to which it enhances members’ self-esteem, self-consistency, and self-distinctiveness; Ashforth & Mael, 1989; Battacharya, Rao & Glynn, 1995; Dutton et al., 1994; Mael & Ashforth, 1992). Moreover, a variety of organizational structures and processes trigger and reinforce individuals’ organizational identification, including artifacts and symbols (e.g., signs and logos over doorways and on coffee mugs, architecture, dress), as well as rituals and ceremonies (e.g., orientation programs, recognition ceremonies, customs; Dutton et al., 1994; Pratt, 1998).
The research exploring predictors of identification within organizations has focused on traditional (nonvirtual) employees. However, virtual work is likely to influence several of the predictors of organizational identification. Specifically, spatial distance between organizations and their members, a defining feature of virtual work, may reduce individuals’ contact with the organization, the visibility of their organizational membership, and their exposure to the organizational structures and processes that facilitate self-categorization as organization members. For example, some of the key markers of identification in traditional settings include organizational dress, totems and symbols (e.g., Pratt & Raphaeli, 1997). These may include everything from uniforms to the organization’s logo, slogans, and the design of corporate buildings and offices. All of these tangible markers of identification may be less available when people work at their kitchen tables in their pajamas or in clients’ offices dressed like those around them. Also, dispersed workers may not be included in many of the rituals and ceremonies that facilitate identification in traditional organizations (Gainey, Kelley & Hill, 1999). The rituals and ceremonies that virtual workers miss might include lunches with co-workers, celebrations of significant personal and corporate events, and periodic meetings or visits with top management or external constituencies. Articles and books written for a general audience consistently report that virtual workers feel saddened and left out by missing even seemingly inconsequential informal organizational rituals, such as gathering with co-workers near the water cooler (Goldsborough, 2000; Nilles, 1994).

While intense contact and exposure to strong organizational structures and processes may be less available to virtual workers, previous theory and research on identification in minimal groups (i.e., groups in which members have little or no contact with one another) suggests that people who are isolated from an organization may nevertheless exhibit identification (e.g., Brewer, 1979; Tajfel, 1982; Turner, 1984). Ashforth and Mael (1989) provide the example of an individual with a rare disease—the person may never meet another individual with the same disease, but nevertheless cognitively identifies with the group of people who have the disease. The fact that individuals identify even with groups they have had no direct contact with implies that attributes of individuals—such as their need to belong—may help drive identification in such instances (e.g., Baumeister & Leary, 1995; Glynn, 1998; Mael & Ashforth, 1992; Pratt, 1998). Individuals whose personal attributes lead them to desire organizational identification may be more likely to proactively “reach out” to the organization—keeping their organization membership salient despite the physical distance and lack of contact in a virtual work setting.

1.2.1. Attributes of the individual: need for affiliation. What are the individual attributes associated with organizational identification in a virtual setting? According to previous theory, individuals identify with organizations as a way of “expressing the personality characteristics they think they have and which they value” (Dutton et al., 1994, 245). Need for affiliation is a personality attribute corresponding to individuals’ desire for social contact or belongingness (Veroff & Veroff, 1980) and is associated with tendencies to receive social gratification (rewards) from harmonious relationships and from a sense of communion with others (Murray, 1938). Need for affiliation is consistent with Markus and Kitayama’s (1991) notion that individuals differ with regard to the degree to which their self-construal is interdependent (vs. independent). Specifically, Markus and Kitayama posit that individuals
vary in the degree to which they construe themselves as separate from or connected to other people or groups. Research suggests that individuals’ self-construal shapes their needs and values, strongly influencing their motivations, cognitions and emotions in social settings (Markus & Kitayama, 1991).

By implication, we suggest that organizational identification is more self-consistent for those virtual workers who value and are oriented toward group memberships and relationships with others (thus reflecting a high need for affiliation) because organizational identification involves perceiving oneself as belonging to the organization (e.g., Glynn, 1998; Mael & Ashforth, 1992; Pratt, 1998). Said differently, organizational identification may be strong for individuals with higher need for affiliation because such individuals need and want to belong (Markus & Kitayama, 1991; Veroff & Veroff, 1980), and identification provides such individuals with the opportunity to express and satisfy this desire (Glynn, 1998). In contrast, individuals with low need for affiliation have less intrinsic need to belong and are likely to view themselves as independent from others. They may perceive fewer benefits from organizational identification because defining themselves with respect to their organizational membership will not offer them an opportunity to express and satisfy their personality characteristics.

Empirical support for the expected relationship between need for affiliation and organizational identification may be drawn from a study utilizing biodata to examine organizational identification in the military (Mael & Ashforth, 1995). Those findings suggest that the strength of recruits’ identification with their organization was significantly predicted by their history of voluntary group memberships. Specifically, individuals who had more voluntary group memberships at earlier stages in their lives (demonstrating the high value they placed on belonging) were more likely to identify with the army. Although the relationship between need for affiliation and organizational identification has not yet been tested directly, Mael and Ashforth’s findings suggest that a positive relationship is likely. Thus, we expect:

Hypothesis 1: Need for affiliation will be positively related to strength of organizational identification.

1.2.2. Attributes of the relationship: perceived work-based social support. While individual differences in members’ need for affiliation may be an important predictor of their organizational identification, identification may also be related to factors that are less internal to virtual workers. In particular, identification may relate to individuals’ exposure to cues suggesting that they are members of the organization. Research in traditional (i.e., nonvirtual) work contexts suggests that contact with the organization and exposure to organizational artifacts, symbols, rituals, and ceremonies are positively related to the strength of individuals’ identification within organizations (e.g., Dutton et al., 1994; Pratt, 1998). These factors may trigger and reinforce organizational identification by providing contextual cues suggesting that an individual is a member of (belongs to) the organization. While virtual workers may have less exposure to these specific features of organizational life, there may be other cues that virtual workers are exposed to that suggest they are part of the organization, such as work-based social support.
Perceived work-based social support, which refers to the degree to which individuals perceive that they have positive social relationships with others in the workplace (e.g., Aspinwall & Taylor, 1992; Dormann & Zapf, 1999; Lim, 1997; Wanberg & Banas, 2000), provides virtual employees with important information about their relationship with the organization. Virtual workers who perceive that they are socially integrated with other organization members are likely to assume that others view them as organization members, and they therefore may be more likely to view themselves as organization members. Thus, in the absence of frequent contact with the organization and other tangible markers of identification, work-based social support may serve as an important cue triggering and reinforcing virtual employees’ organizational identification.

Perceived work-based social support may also function to reassure virtual workers that their organizational identification will be self-enhancing, thus providing a personal incentive for stronger organizational identification. Specifically, when individuals perceive that key constituents in the workplace (e.g., co-workers, supervisors, top management) are socially supportive, they may be more likely to perceive that they are central, included, valued and respected within the organization, which will lead them to perceive their organizational involvement as self-enhancing and attractive (Luhtanen & Crocker, 1992). Individuals who perceive their organizational involvement as more self-enhancing will be more motivated to identify with the organization (Dutton et al., 1994). Furthermore, the principle of reciprocity suggests that individuals who receive high levels of work-based social support may be motivated to reciprocate (Gouldner, 1960), which may be manifested in stronger organizational identification.

Previous empirical research suggests that high levels of perceived social support may have an important influence on individuals’ relationship with the organization, especially among peripheral workers. For example, perceived social support (which may be a predictor of employees’ perception of organizational support) may be associated with organizational attachment among layoff victims (Naumann, Bennett, Bies & Martin, 1998), temporary workers (McClurg, 1999), and volunteers (Farmer & Fedor, 1999). These are classes of individuals who may be similar to virtual workers with respect to perceiving themselves to be relatively peripheral organization members.

Work-based social support is generally communicated by proximal individuals (e.g., Aspinwall & Taylor, 1992; Dormann & Zapf, 1999; Lim, 1997). Virtual workers’ physical distance and lack of contact with the organization as a whole suggests that fellow organization members with whom virtual employees are in regular contact (e.g., supervisors, co-workers) may come to personify the organization to them (Raghuram, Garud & Wiesenfeld, 1998; Sproull & Kiesler, 1991). Therefore, these individuals may be the key source of cues regarding virtual workers’ organizational membership. The level of social support virtual workers receive from key constituencies such as co-workers and supervisors may be variable even within the same organization because of differences in colleagues’ and supervisors’ attitudes toward virtual work. For example, some supervisors feel threatened by a perceived loss of status, power and control when their subordinates work virtually, while others view virtual work as an excellent means by which higher quality work can be completed and real estate cost savings realized (Wiesenfeld et al., 1999b). Co-workers of some virtual employees may resent their absence, while others may have co-workers that are
enthusiastic supporters (Nilles, 1994). The more social support virtual workers receive across organizational constituencies, the more powerful the social cues regarding their relationship with the organization will be, and the more likely they are to identify with the organization.

Hypothesis 2: Perceived work-based social support will be positively related to organizational identification.

1.2.3. Interaction between need for affiliation and perceived work-based social support. The effects of perceived work-based social support may vary across individuals. Research suggests that person and situation effects interactively combine to influence outcomes (Lewin, 1935; Mischel, 1977). We suggest that work-based social support moderates the effects of need for affiliation. In particular, for individuals with low need for affiliation who may be less intrinsically motivated to self-categorize themselves as belonging to the organization, it may be especially crucial to their organizational identification to receive cues that others in the organization consider them to be in-group members. Work-based social support provides important cues regarding organizational membership and motivates organizational identification by leading people to feel personally valued and important. Thus, high levels of work-based social support may function as a ‘strong situation’ (i.e., providing highly influential cues regarding appropriate attitudes and behaviors), and therefore may override individual tendencies especially among individuals who are not cognitively or motivationally predisposed to identify (Lewin, 1935; Mischel, 1977).

In the absence of work-based social support, however, virtual workers with low need for affiliation may feel increasingly separate, autonomous and distant from the organization. They may come to view their membership in the organization as less relevant or important because they do not have the internal drive to belong. In contrast, individuals who have relatively high need for affiliation and therefore possess a strong intrinsic need to identify themselves with the organization may be less responsive to social cues regarding their membership in the organization.

In sum, we expect that perceived work-based social support may moderate the relationship between need for affiliation and organizational identification—maintaining the salience of organizational identification even among individuals whose need for affiliation is relatively low.

Hypothesis 3: High levels of perceived work-based social support will attenuate the relationship between need for affiliation and organizational identification.

2. Method

This study is part of an ongoing investigation of virtual work initiated by the authors several years ago. We began our inquiry by conducting field studies of virtual work practices. These studies included a benchmark study and semistructured interviews of virtual workers, their co-workers and their managers (the interview questions are available in the appendix). Simultaneously, we began conducting a comprehensive survey of the literature relevant to virtual work. Based on the inputs from these two initiatives, we generated a survey instru-
ment that we pilot tested, first with a small group of virtual workers and their managers in a division of one organization, and then with a slightly larger group of 100 virtual workers at a different organization. At each stage of the process, we modified and refined our survey to insure reliability and context relevance. The final version of our survey was used in the present study.

We tested our hypotheses in a field study of a mandatory virtual work program in the sales division of a large technology organization. Program participants included managers, salespeople, and a variety of sales support staff. The program was initiated approximately 6 months prior to our study, and was primarily designed to reduce real estate costs and to enhance customer service. As a result of the program, virtual workers did not have any dedicated space in company offices, although they could sign up for a limited amount of cubicle and conference room space on a temporary basis. Most virtual workers worked primarily at home and on the road, with some time in company offices. Our survey was distributed to a total of 325 program participants during various mandatory organizational meetings, and 250 fully-completed responses were received (responses were either returned to the researchers immediately or mailed back to us at a university address).

2.1. Dependent variable: organizational identification

Organizational identification was measured with the five-item scale developed by Mael and Ashforth (1992) and empirically validated by Mael and Tetrick (1992). The specific items are available in the appendix. Responses ranged from “strongly disagree” (1) to “strongly agree” (7). Coefficient alpha was 0.86.

2.2. Independent variables: need for affiliation

Need for affiliation was measured with a five-item scale excerpted from Hill (1987). Items include “I think being close to others, listening to them, and relating to them is one of my favorite and most satisfying pastimes,” and “I would find it very satisfying to be able to form new friendships with whomever I liked.” Endpoints were “strongly disagree” (1) and “strongly agree” (7). Coefficient alpha for the need for affiliation scale was 0.84.

2.3. Level of perceived work-based social support

Our index assessing level of perceived work-based social support was adapted from previous research (e.g., Aspinwall & Taylor, 1992; Dormann & Zapf, 1999; Lim, 1997); specifically, we rephrased the items slightly based on our preliminary interviews and pretests. Respondents were asked to report their “perception of how much friendship and support (they) currently receive from” each of three types of people: peers, superiors (which, in this organization, refers to upper management), and their direct supervisor. Endpoints of each response scale were “unsupportive” (1) and “supportive” (7). Each individual component of the index represents only one portion of the total work-based social support that an individual perceives. Thus, each of these components is a supplementary aspect of the overall construct. Therefore, we summed responses across the three targets to create the index.
Table 1
Means, standard deviations, and intercorrelations for all variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Need for affiliation</td>
<td>4.33</td>
<td>1.07</td>
<td>.17**</td>
</tr>
<tr>
<td>2. Perceived work-based social support</td>
<td>13.07</td>
<td>3.15</td>
<td>.25**</td>
</tr>
<tr>
<td>3. Strength of organizational identification</td>
<td>5.23</td>
<td>1.13</td>
<td>.32**</td>
</tr>
</tbody>
</table>

Table 2
Regression results for organizational identification as a function of need for affiliation and perceived work-based social support

<table>
<thead>
<tr>
<th></th>
<th>B*</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need for affiliation</td>
<td>.20</td>
<td>3.30</td>
<td>.001</td>
</tr>
<tr>
<td>Perceived work-based social support</td>
<td>.28</td>
<td>4.59</td>
<td>.001</td>
</tr>
<tr>
<td>overall F (2,248) = 19.02, p &lt; .001; total R² = .13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need for affiliation × social support</td>
<td>-.17</td>
<td>2.78</td>
<td>.01</td>
</tr>
<tr>
<td>overall F (3,247) = 15.59, p &lt; .001; total R² = .16</td>
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</table>

* Standardized regression coefficients are reported.

3. Results

Descriptive statistics may be found in Table 1. Organizational identification was analyzed with a hierarchical multiple regression. The main effects of need for affiliation and perceived level of work-based social support were entered in the first step, and the interaction between the two variables was added in the second step. In all analyses, the variables were zero-centered following the methodology recommended by Aiken and West (1991).

We expected that organizational identification should be stronger among individuals with relatively higher need for affiliation. As can be seen in Table 2, Step 1, need for affiliation was significantly and positively related to virtual workers’ organizational identification. This finding is consistent with themes that emerged in our interviews with virtual workers. For example, one virtual worker indicated, “Feeling connected is important to me.” In the interviews, individuals who recognized their personal need to feel a part of the organization also reported significant efforts to keep their organizational membership salient. For example, one virtual employee said, “I keep dropping by the office.” Others said they maintained contact by increasing emails, phone calls, and even creating a “telecommuter support group to maintain the feeling that we are part of the organization.”

Results also supported our prediction (Hypothesis 2) that organizational identification would be positively related to individuals’ perception of work-based social support. As can be seen in Table 2, Step 1, the main effect of perceived work-based social support was a significant predictor of virtual workers’ strength of organizational identification. This finding is also consistent with themes that emerged in our interviews. For example, one virtual
worker credited supervisory support for his positive attitude: “The management style in my department makes telecommuting possible. The style is very participative, there is a concern for the personal aspect of work life. . . if the style turned toward being more centralized and hands-on, then it will not be possible to telecommute.” Employees who did not receive as much work-based social support indicated lower levels of organizational identification. For example, one virtual worker reported “(my co-workers) think of me differently since I began telecommuting,” and in response she redefined her relationship with the organization: “I feel like a contractor for (the organization)”.

The interaction of need for affiliation and perceived work-based social support was also significant ($p < .01$). To illustrate the nature of the interaction, we plotted it following the procedures recommended by Aiken and West (1991), which suggests using the regression results to plot a series of points ranging from one standard deviation below the mean to one standard deviation above the mean on the independent variables. As can be seen in Fig. 1, the nature of the interaction followed the form predicted in Hypothesis 3. Among virtual workers who were relatively high in need for affiliation, organizational identification remained fairly high even when perceived work-based social support was low. However, among virtual workers who had lower need for affiliation, the relationship between perceived level of work-based social support and strength of organizational identification was much stronger and positive.

4. Discussion

Our study draws upon the notion that organizational identification may be crucial to managing virtual workers in the information age, where traditional management approaches (e.g., direct supervision) may be less practical and effective. Our findings suggest that virtual workers’ need for affiliation and the work-based social support they receive are both critical
predictors of organizational identification. Moreover, these two factors interactively combine to influence virtual workers’ organizational identification. The results suggest that managers may strengthen identification among virtual employees who may not be intrinsically motivated to identify with the organization (i.e., those with relatively low need for affiliation) by providing social support. Also, the results indicate that when perceived work-based social support is relatively high, individual differences in need for affiliation are less impactful. These results have important implications for virtual workers, their managers, and organizational researchers.

4.1. Implications for research on organizational identification

Virtual work may be an ideal context in which to study organizational identification for a variety of reasons. Notably, the physical distance virtual employees experience may make their psychological connection to the organization more central. Additionally, there may be few alternative means of achieving the outcomes associated with high organizational identification (e.g., cooperation, organizational citizenship, and control) in a virtual context because, for example, virtual employees are not under the watchful eyes of supervisors and co-workers. Some early writings regarding organizational identification theorized that identification is a cognitive categorization which does not require direct contact between the individual and the social unit or organization (e.g., Ashforth & Mael, 1989). The context of virtual work may be ideal for the examination of organizational identification because of the physical distance that it creates between individuals and organizations, which allows us to examine the phenomenon of identification with low levels of direct contact between the individual and the social unit.

The present findings have important implications for research on individual differences as predictors of strength of organizational identification (e.g., Glynn, 1998). While some theory and research is available regarding contextual factors predicting organizational identification, the effect of individual differences has been relatively neglected in the organizational identification research to date. Moreover, we are unaware of any published studies relating individual differences to strength of organizational identification among virtual workers. Our results indicate that need for affiliation is positively related to strength of organizational identification among virtual employees. These results suggest that individual differences may be one important predictor of organizational identification in a virtual context. Our findings thus support the conceptual arguments made by Glynn (1998) regarding the role of individual needs as a predictor of organizational identification for workers in general. The findings are also consistent with the relationship between organizational identification and biodata patterns found by Mael and Ashforth’s (1995) study of nonvirtual workers. This study simultaneously extends this stream of research into the domain of virtual work, suggesting that the relationships proposed to operate in a traditional context may also emerge among virtual workers.

However, our results also suggest that in virtual work settings, the relationship between need for affiliation and strength of organizational identification is attenuated when level of perceived work-based social support is relatively high. Thus, while individuals may differ in their tendency to become identified with an organization (due to differences in need for
affiliation), situational factors may overcome these differences. This result may be especially important with respect to the management of organizational identification. Specifically, while it appears that individual attributes (that managers influence relatively little, and primarily through means such as selection) play a role in predicting organizational identification, the importance of these attributes may be attenuated by factors that managers may be better able to influence, such as work-based social support.

Our findings suggest that certain factors that are expected to predict organizational identification in traditional settings (i.e., need for affiliation and perceived work-based social support) may also be important in a virtual context. On the other hand, we have also suggested that many other predictors of organizational identification found in previous research may not be available to virtual workers (e.g., organizational dress and artifacts). Future research may be usefully directed at comparing virtual and traditional employees to evaluate whether and how the predictors of organizational identification vary by virtual status.

4.2. Implications for managing in the information age

The challenge of managing virtual work and virtual workers may be one of the key issues impacting management in the information age. The present paper contributes to the small but growing body of research investigating the phenomenon of virtual work. While the initial impetus for virtual work came from advances in information technology, the implications of this transformation are broad and far-reaching. By facilitating physical dispersion, virtual work may give rise to a variety of centrifugal forces that threaten to tear employees from organizations. Our findings suggest that individuals’ need for affiliation and high levels of work-based social support may serve as countervailing centripetal forces that may be associated with organizational identification in virtual work settings.

Our paper draws attention to organizational identification—a construct that is particularly relevant and useful in the virtual work context. Specifically, organizational identification is primarily cognitive (Ashforth & Mael, 1989; Pratt, 1998), and therefore may be one of the best descriptors of individual/organizational linkages in the information age—when direct contact between the individual and the social unit is diminished.

The finding that perceived work-based social support increases organizational identification among individuals low in need for affiliation may have important implications for organizations’ ability to manage the broad range of employees who could potentially participate in virtual work programs. Specifically, whereas need for affiliation is an internal and relatively fixed characteristic of an individual, perceived work-based social support is a factor that managers and other organization members can influence. If organizational identification is desirable in a virtual context, but it is likely to be less strong among individuals with lower need for affiliation, organizational representatives must devise means of maintaining the organizational identification of those employees with low need for affiliation.

This issue may be critical because individuals with relatively low need for affiliation may be disproportionately represented among virtual workers because they are less discouraged by the isolation experienced in a virtual context (e.g., Dobrian, 1999; Nilles, 1994; Schilling, 1999). Also, managers may perceive that employees with lower need for affiliation would be
better able to cope with feelings of isolation in a virtual context, and may therefore be more likely to nominate such individuals for virtual work. In fact, articles and guides published to help organizations institute virtual work programs contain the prescription that people who need and like personal contact should be discouraged from working virtually (e.g., Dobrian, 1999; Nilles, 1994; Schilling, 1999). In our interviews, one manager succinctly stated a common stereotype, “For it [telecommuting] to work, it requires people who are able to work independently.”

However, our results suggest that a policy of discouraging individuals from participating in virtual work programs if they seem to enjoy personal contact (i.e., are high in need for affiliation) may be misguided on two counts. First, our results suggest that need for affiliation is positively related to strength of organizational identification among virtual workers. Thus, individuals high in need for affiliation may be appropriate candidates for virtual work programs because they may be more likely to remain cooperative and exhibit organizational citizenship behaviors after going virtual due to their stronger organizational identification (e.g., Dutton et al., 1994; Kramer, 1993). Second, our results suggest that perceived level of work-based social support attenuates the relationship between need for affiliation and identification. Thus, we suggest that managers and program administrators may be better served by supporting all virtual workers than by selecting only a subset of employees as potential candidates for virtual work.

To insure the organizational identification of even those virtual workers who are low in need for affiliation, our results suggest that managers at all levels should find ways to support virtual employees and to create a culture in which co-workers support virtual workers. A variety of tactics may be helpful in this regard. In the organization that we studied, virtual workers were offered training sessions preparing them and their supervisors for the social realities of virtual work. The head of the division delivered an address at each of these training sessions expressing his support for virtual work and explaining the strategic importance of the program to the organization. He further reinforced his support by publicly sharing his own virtual work experiences and making an effort to work virtually as much as possible. Some supervisors in the organization that we studied used weekly meetings with all subordinates as an opportunity to convey social support for virtual workers, encourage them to share their experiences and their learnings with one another, and provide a means for keeping virtual workers “in the loop”.

Work-based social support often is conveyed through communication, but when employees are virtual, such communication may require a sophisticated technological infrastructure. Our findings suggest that investment in such technology may be worthwhile. The organization that we studied invested in the technology, in technical support to keep the technology operational, and in efforts to change the culture so that electronic communication could be used to convey social support. Consistent with these arguments, previous findings suggest that electronic communication is especially important as a predictor of organizational identification among workers who spend a great deal of time outside of centralized office space (Wiesenfeld et al., 1999a).

Managers also should encourage other in-office employees to support virtual workers. To do so, managers may need to seek out and reward the activities that people who do not work virtually must perform to make up for the absence of their virtual colleagues. In our
interviews, some virtual workers were dismayed by the resentment they experienced on the part of their in-office co-workers (many of whom had to do extra work to make up for the absence of their virtual colleagues).

Work-based social support may also be conveyed when managers eliminate those activities that convey a lack of support for their virtual employees. For example, some of the virtual workers that we interviewed complained about the perception that their managers called frequently to “check up” on them, and some virtual workers experienced pressure from managers and co-workers to come into the office more frequently. Nonvirtual organization members may play a critical role in virtual workers’ success. To manage this effectively, we suggest that virtual work programs should devote resources to training and assisting the employees that virtual workers leave behind in the office.

4.3. Limitations and future directions

As with any other study, our findings must be interpreted within the boundaries of the research methodology we utilized. In calling attention to these boundaries, we simultaneously suggest directions for future research.

Perhaps most importantly, the findings may be affected by common methods bias because all variables were measured in the same survey at the same point in time. While this concern cannot be eliminated entirely, common methods bias is unlikely to be responsible for the key interaction results that we obtained. In particular, common methods bias should affect all respondents equally. Thus, it is not clear why the relationship between need for affiliation and organizational identification would be stronger for some respondents (e.g., those who perceive that the level of work-based social support they receive is relatively low) than for others.

The correlational design of our study allows us to conduct an initial exploration of the associations between need for affiliation, level of work-based social support and organizational identification among virtual workers. However, this design does not permit us to draw any causal linkages. Thus, this research may be most appropriately viewed as an initial, exploratory investigation of the new phenomenon of virtual work. Longitudinal research is necessary to investigate the causal relationships among the variables included in our study, and such longitudinal research may be facilitated in the future when mandatory virtual work programs remain in place over an extended period of time.

It is also important to note that our study may be best viewed as a study of the transition to virtual work, and thus is a study of organizational change. In fact, virtual work itself is evolving and adapting as technology, organizational structure and social norms are changing. At some point in the future, virtual work may become the norm, and employees may never experience what we now consider “traditional” (i.e., nonvirtual) employment relationships. The present study is most relevant to organizations and employees for whom virtual work represents a form of organizational change. Our results may be less relevant to the world of the future where virtual work may be the norm.
5. Conclusion

In sum, the present study explores the relationships between need for affiliation, work-based social support, and the organizational identification of virtual workers. We find that need for affiliation is positively related to organizational identification, but that relationship is attenuated when the level of perceived work-based social support is high. Our results have implications for the selection of virtual work program participants and the management of virtual organizations as well as for the study of organizational identification and management in the information age.

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Appendix

Semi-structured interview questions
1. Has your job changed since you started telecommuting? How?
2. Has your relationship with your manager changed? How?
3. Has your relationship with your coworkers changed? How?
4. Do you feel that you received all the support you needed to telecommute?
5. Do you think that your department or (the organization) views you differently since you began telecommuting?
6. Do you view (the organization) differently now than you did before you began telecommuting?
7. What do you see as the prime benefits of telecommuting?
8. What are the biggest drawbacks of telecommuting?

Organizational identification scale items (Mael and Ashforth, 1992)
1. When I talk about (organization name), I usually say ‘we’ rather than ‘they’.
2. (Organization name)’s successes are my successes.
3. I am very interested in what others think about (organization name).
4. When someone praises (organization name), it feels like a personal compliment.
5. If a story in the media criticized (organization name), I would feel embarrassed.

References


