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Construed External Image and Organizational Identification in a Virtual Workplace

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Abstract

The current study presents a first step in investigating the relationship between organizational identification and its proposed antecedents: construed external image and perceived work-based social support, in a completely virtual setting. Additionally, the study examines work-based social support as a moderating variable of the relationship between construed external image and organizational identification. Using an electronic survey of 63 employees of an international virtual company, data showed the construed external image to be positively related to organizational identification. Work-based social support was not related to organizational identification, and it did not appear to moderate the relationship between organizational identification and construed external image. Because construed external image can be shaped organizationally and managerially, these findings suggest an important way in which organizational identification can be enhanced in virtual settings, thereby strengthening the virtual organization as a whole. The study provides a basis for future research in the field of virtual work through development and testing of the model of organizational identification antecedents, designed to explore and improve the growth and operations of exclusively virtual companies of the future.

Keywords: organizational identification, construed external image, work-based social support, virtual work

Construed External Image and Organizational Identification in a Virtual Workplace

Numerous factors related to organizations combine and interact to affect the organizational outcomes of interest (such as productivity, turnover, or job satisfaction). They tend to come together in specific ways, and can depend on a number of components, including the organizational setting, culture, and image. The present study primarily focuses on the relationship between two such factors: organizational identification and its hypothesized antecedent, construed external image, set in a virtual organization. While previous research addressed the concept of organizational identification and its theoretical antecedents, none has been conducted in organizations where the employees work exclusively virtually, which happens to be a growing trend around the world. Additionally, this study looks at the relationship between organizational identification and work-based social support in the virtual workplace, and explores the moderating effect of the factor of work-based social support on the relationship between organizational identification and construed external image. With basis in previous research, the present study posits that a previously established positive relationship between organizational identification and construed external image in a traditional setting will persist in a virtual setting. Furthermore, it argues that organizational identification will be positively related to perceived work-based social support among organization members. Finally, as a situational factor, perceived work-based social support in a virtual workplace will influence the relationship between organizational identification and construed external image by attenuating the strength of their positive relationship.

The virtual work

Virtual work, sometimes also referred to as telework, is a form of employment where job-related tasks are completed outside of traditional work offices (Raghuram, Garud, Wiesenfeld & Gupta, 2001). Working virtually means that employees perform their work duties from a remote location, on a full- or part-time basis, and may communicate with the conventional workplace by way of telecommunications or computer technology (Scott & Timmerman, 1999). Virtual work can take on many

different forms, such as working remotely from home, from a satellite center, or while travelling “on business” (Wiesenfeld, Raghuram, & Garud, 2001).

With the development of new technology, as well as with the rapidly shifting global economic trends, the phenomenon of virtual work has been on the rise around the world (Wiesenfeld et al., 2001). An ever-increasing number of companies are giving employees the option to work virtually (Goldsborough, 2000). Furthermore, the economic challenges sometimes result in the organizational switch to the virtual employment mode as a way to decrease the company expenses (Miles & Snow, 1986). Finally, virtual work is in many respects a fitting example of the fluidity of the modern definition of work and the workplace (Bailey & Kurland, 2002). As the phenomenon of virtual work expands, the body of scientific research exploring meaningful psychological concepts relevant to it also grows. However, as of yet, no such scientific research has been conducted in organizations that are purely and exclusively virtual in nature. Rather, the studies tend to assess virtual *programs* where *some* employees are given the *option* to *occasionally* work outside of the traditional offices.

Adequately defining the concept of *virtual teams* proved to be a challenge from early on, and complete consensus in the research community is yet to be reached (Bailey & Kurland, 2002; Fiol & O’Connor, 2005). Various definitions have been proposed, some considering the percent of time on the group task not spent face to face (Griffith & Neale, 2001), others looking at physical distance among members (Hinds & Bailey, 2003), and still others examining the level of technological support in the organization (Griffith & Neale, 2001). These definitional discrepancies are significant because each of the definitions put forward carries a set of different implications for the development of various psychological concepts associated with the virtual workplace. Fiol and O’Connor (2005) propose that a single defining feature of team virtualness is the amount of face-to-face interaction among members, and classify the teams into purely virtual (no face-to-face time), hybrid, and face-to-face teams. This study has adopted their classification, and has looked at purely virtual teams and team members.

With continual advances in the development of informational technologies, working virtually has never been easier than it is today. However, the very technologies that make it possible for the employees to work from the location and at the time of their

choosing, simultaneously take away from the shared work reality. The latter is important for the formation of stable work expectations and fostering of connectedness to the organization (Scott & Timmerman, 1999). Furthermore, spatial, and often temporal separation, threaten to over time weaken the relationship between the organization and its members (Wiesenfeld, Raghuram, & Garud, 1999). Research has shown that strong ties between the organization and its employees tend to positively affect the overall organizational performance (O'Reilly & Chatman, 1986). Therefore, weak ties between an organization and its members might pose challenges to the effectiveness outcome of the organization. The researchers are pressed to investigate ways in which geographically distributed employees can nurture their connection to the formal organization. Research addressing these issues in purely virtual teams is scarce at best, making the present study's focus on exclusively virtual teams an important contribution to the general field of inquiry.

Virtual work in reality

Moving from traditional to virtual work environment creates new challenges for employees and organizations alike (Golden, 2009; Raghuram et al., 2001). Bartel, Wrzesniewski, and Wiesenfeld (2012) suggest that the practice of virtual work introduces many novel components to the work environment, such as diminished "face time" and reduction in direct supervision. The consequence of this is that the employees tend to relate to each other and to the organization differently in virtual versus traditional work environments. In particular, the concept of organizational identification, defined as the "perception of oneness with or belongingness to" the organization (Ashforth & Mael, 1989, p. 34) is deconstructed under the umbrella of virtual work (Golden, 2009). It is jeopardized by physically *and* geographically separating individuals from the organization and other members. This separation can bring into question the individuals' perception of belonging and organizational identification, as interpersonal interactions with colleagues as well as the setup of work environment are altered (Bartel et al., 2012), and traditional and implicit ways of specifying and communicating the collective organizational identity to organization members (through rituals, ceremonies, symbols, and stories) are compromised.

A number of factors characteristic to the virtual work environment challenge the strength of organizational identification of an individual organization member. Since virtual workers are by definition locationally separated from the organization, they receive less exposure to the physical indicators of company identity, such as offices, logos, or emblems. Because of this, over time it is possible they will start to perceive themselves as *less* a part of the organization (Thatcher & Zhu, 2006, Wiesenfeld et al., 1998, 2001). Furthermore, the absence of face-to-face contact with fellow co-workers, coupled with the inherent limitations of electronic methods of communication mean that virtual employees also experience fewer socio-emotional cues when interacting with colleagues (Wiesenfeld et al., 1998). This too can result in organizational identification that is weaker than in a traditional workplace (Wiesenfeld et al., 1998, Golden, T.D., 2009). The issue of the strength of organizational identification is important because it is correlated with a number of work-based attitudes and behaviors (Riketta, 2004), and is considered a “key motivational resource” that helps keep the employees’ interests in alignment with those of the organization (Bartel et al., 2012). This is especially important when the option of direct supervision is limited, as is the case with physically separated virtual work environments. Extensive research has corroborated the effect of organizational identification on the well being of both the organizational members and the organization itself (Mael & Ashforth, 1992; Carmeli & Freund, 2009).

The Social Identity Theory

The concept of organizational identification developed as a specific form of social identification (Ashforth & Mael, 1989), with roots in Social Identity Theory (SIT) (Tajfel & Turner, 1985). According to SIT, individuals have the tendency to classify themselves and others into social categories (such as gender, religion, organizational membership, etc.), using prototypical characteristics derived from the category members. Ashforth and Mael (1989) argue that the purpose of such social classification is twofold: to order the social environment, providing the individual with a classification system, and to locate or define themselves in the social environment.

With respect to organizational identification, the main premise is that individuals’ sense of membership in an organization or another social aggregate shapes the self-

concept (Dutton et al., 1994). Self-concept encompasses all self-descriptions and self-assessments subjectively available to an individual (Dutton et al., 1994). SIT postulates that the self-concept is comprised of a *personal* (character, ability) and *social* identity, the latter including salient group classifications (political affiliation, religion). Therefore, social identification is the perception of being one with or belonging to some human aggregate, such as an organization. On a more basic level, social identification derives from the concept of group identification (Tolman, 1943). Members of an organization become psychologically attached to the organization once they adopt its characteristics as their own defining characteristics, sharing its common destiny in every aspect (Mael & Ashforth, 2001). Organizational identification happens when an individual's self-concept becomes linked to that individual's organizational membership, i.e. self-concept contains the same attributes as those ascribed to the organization (Dutton et al., 1994).

Organizational identification

Organizational identification is most often conceptualized as “incorporating the perception of oneself as a member of a particular organization into one's general self-definition” (Riketta, 2004, p. 360). It is a cognitively based identity shared by an individual and an organization and reflected in the congruence of their respective values (Fuller et al., 2006; Riketta, 2005). Some definitions of organizational identification also include the affective component of attraction and desire to maintain the emotionally pleasing, self-defining relationship with the object of identification (O'Reilly & Chatman, 1986). As such, organizational identification is seen as part of the individual's self-concept that combines the awareness of membership in a social organization or group with the meaning and emotional importance of that membership. Organizational identification is created when members include in their view of self the defining characteristics of the organization. Members differ in how much they identify with the organization. When the identification is strong, the same attributes that define the organization also define its members (Dutton, et al., 1994). The degree of organizational identification corresponds to the extent to which the content of the member's self-concept is tied to the organizational affiliation.

Organizational identification affects both the satisfaction of the individual and the effectiveness of the organization (Ashforth & Mael, 1989). It increases support for and commitment to the identifying aggregate or organization, and tends to lead to activities and practices that are consistent with the identity and are supportive of the institutions that personify the identity (Ashforth & Mael, 1989). Pratt (1998) argues that strengthening organizational identification should be one of the organizational priorities, since strong identification with an organization among its members is necessary for the organization to function effectively. Therefore, organization's ability to foster identification within the virtual workplace in particular has become even more important as 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" (Wiesenfeld et al., 2001, p. 215).

Enhancing organizational identification among organization members helps to ensure that they act in ways that are beneficial to the organization (Pratt, 1998; Thompkins & Cheney, 1985). Virtual organizations face a unique challenge in this regard, and strong organizational identification among members presents a potential solution (Wiesenfeld et al., 1999). In their research on communication technology use and workplace identification, Scott and Timmerman (1999) found that moderately virtual employees are more identified on average with their organizations than either less or more virtual workers. However, research is scarce regarding the factors that might influence individual's identification with a purely virtual organization (Fuller et al., 2006).

The antecedents of organizational identification

The field of research on organizational identification specifies a number of its presumed antecedents. These constructs are related to the organizational identification outcome in that their manipulation affects the strength of the organizational identification. The coming pages address two such presumed antecedents: construed external image and perceived work-based social support. Following individual theoretical summaries, hypotheses relating these antecedents to organizational identification are presented.

Construed external image. Previous research addressed a variety of theoretical antecedents that are connected to organizational identification in a traditional work setting, including group distinctiveness, group prestige, and out-group salience (Ashforth & Mael, 1989), communication climate (Smidts, Pruyn, & Van Riel, 2001), age (Riketta, 2005), positive affectivity (Kreiner & Ashforth, 1992), perceived organizational identity (Dutton et al., 1994), and others. Manipulating these antecedents is thought to affect the extent of organizational identification of an individual organization member. Some researchers argue that construed external image of the organization is one of the most influential antecedents of organizational identification (Dutton et al., 1994; Riordan, Gatewood, & Barnes Bill, (1997); Wan-Huggins et al., 1998). The concept of construed external image refers to the beliefs of a member about outsiders' perception of their organization, and, by extension, about themselves as members of the organization in question (Dutton et al., 1994).

Construed external image represents members' beliefs about how the individuals outside of the organization view their organization and, as a consequence, themselves as a result of their organizational affiliation. If the outsiders see the organization in a positive light, the members' perception of their organization is enhanced (Wan-Huggins et al., 1998). When the construed external image of an organization is judged as attractive, that is, the members believe that the image seen by others is positive, socially desirable, or socially valued, their organizational identification is strengthened (Dutton et al., 1994). This occurs because people strive to maintain a positive social identity (the perception of who they are based on their group membership). An attractive and valued construed external image contributes to creating a positive social identity through organizational affiliation (Tajfel & Turner, 1985). As a result, the level of overlap between individual's self-concept and organizational definition is increased, strengthening identification.

March and Simon (1958) argue that individuals are more likely to identify with a social aggregate when they believe that it is held in high esteem by the outsiders. The organization members tend to use "identification as means of gaining personal status" (March & Simon, 1958, p. 75). An organization's construed external image is viewed as attractive when it meets basic self-enhancement needs and fosters individual's self-

continuity (sense of self), self-distinctiveness (sense of individuality or uniqueness), and self-enhancement (Dutton et al., 1994; Fuller, 2006). According to this idea, the reason organizational external image is appealing to the individual lies, to an extent, in its similarity to the individual's self-concept. The more of an overlap there is between how the members see themselves and how they believe others see their organization, the more construed external image of an organization assists the individual in maintaining a consistent and coherent sense of identity. Additionally, the attractiveness of the organization's image lies in the extent to which it leads the outsiders to view the organization as distinct and unique in some sense. This helps the members to categorize their organization and themselves in relation to their organization (which is also consistent with the postulates of SIT). Finally, an organization's image is seen as attractive when it assists an organizational member in maintaining a positive view of self. Therefore, the strength of the relationship between construed external image and organizational identification lies also in the extent to which the former meets member's basic self-enhancement needs (Dutton et al., 1994; Fuller, 2006).

Strong organizational identification is among the desired characteristics of any organization, since it is linked to preferred outcomes such as member intraorganizational cooperation and citizenship behavior (Dutton et al., 1994). Virtual organizations in particular seem to face an uphill battle in this regard, as the specific features of the virtual environment raise novel and unique challenges for virtual companies in maintaining organizational identification. Since there is an insufficient body of data exploring these constructs in a virtual setting, this study investigates whether the relationship between organizational identification and construed external image persists in the purely virtual environment. The findings could potentially be utilized toward enhancing organizational identification with virtual organizations in practice. The expectation was to replicate Riketta's (2006) comprehensive meta-analysis finding of a positive relationship between organizational identification and construed external image.

Hypothesis 1: Organization members' construed external image will be positively related to organizational identification in a virtual setting.

Work-based social support. Work-based social support is defined as the extent to which individuals perceive that they have positive social relationships with their work colleagues (Aspinwall & Taylor, 1992; Wiesenfeld et al., 2001). It is relevant to the concept of organizational identification because work-based social support presumably can act as a substitute to belongingness cues typically found in traditional work contexts, which are believed to strengthen organizational identification (Wiesenfeld et al., 2001). Employees in *nonvirtual* work settings experience multiple cues which suggest that they are members of the organization. These cues often come in the form of artifacts, symbols, and company rituals, all of which are positively related to the strength of an individual's organizational identification (Dutton et al., 1994; Wiesenfeld et al., 2001). In virtual settings, there is an absence of such cues; however, other cues, such as those derived from work-based social support, may act in place of the traditional cues, and suggest to the individuals that they are members of the organization, reinforcing in turn their organizational identification.

When virtual workers believe they are socially integrated with their colleagues at the organization, they are likely to assume that others view them as members of the organization. This, in turn, makes them more likely to view themselves as organization members also (Wiesenfeld et al., 2001). Scott and Timmerman (1999) argue that there is a need for stronger understanding of socialization into an organizational culture. They posit that if organizational identification is an outcome of successful socialization practices, then the role of socialization comes to be very important for virtual workers in particular, since they are at risk of feeling less as members of the organization due to the geographical displacement and other factors.

Wiesenfeld et al. (2001) conducted a field study of an obligatory virtual work program at the sales division of a technology-oriented organization. They surveyed 250 participants of a virtual work program that was put in place around six months before the beginning of the study. The purpose of the study was to look at the relationship between organizational identification and need for affiliation, examining also the moderating influence of work-based social support. Their findings supported the positive correlation between organizational identification and need for affiliation in traditional organizational settings. They also found that organizational identification is positively related to

individuals' perception of work-based social support. Wiesenfeld (2001) study explored the aforementioned issues in a company that switched from traditional to partially virtual mode (employees were still allowed to occasionally use their old offices), whereas the participants in the current study represent a sample of purely virtual employees without access to shared offices of any sort. As such, this study sheds light on a previously unexplored social group at a time when virtual ways of organizing are becoming ever more present in the business arena. It more specifically considers the effects of social support in the unique environment of a virtual organization.

The more work-based social support that virtual workers receive, the stronger social cues regarding their relationship with the organization will likely be. This might in turn make it more probable that they will identify with the organization. Furthermore, when individuals perceive that their colleagues (co-workers, supervisors, managers, etc.) provide social support, they also perceive that they themselves are valued and included within the organization. This might make their organizational involvement seem attractive and self-enhancing, giving them an additional, personal incentive for a more profound organizational identification (Wiesenfeld et al., 2001). The higher the perceived social support from colleagues and superiors, the stronger the social cues suggesting that the individuals are members of the organization. As expressed in the second hypothesis, the context of strong social support might make it more likely for the individuals to identify with the organization they formally belong to.

Hypothesis 2: Organization members' perception of work-based social support will be positively related to organizational identification in a virtual setting.

The interaction. The relationship between theoretical antecedents of organizational identification and organizational identification itself is often attenuated or enhanced by third variables. In their study on construed external image, Fuller et al. (2006) surveyed 194 employees of a health services company in the United States. The participants were presented with a survey questionnaire assessing concepts of organizational identification, construed external image, and need for esteem as a moderating variable. They found that construed external image was strongly positively related to organizational identification. For those participants with low need for self-esteem, the association between organizational identification and construed external

image was less pronounced than for individuals with high need for self-esteem. As a result, they argue that construed external image might be one of the most influential factors that impact organizational identification, but that further exploration into the effects of third variables on this relationship is needed. Fuller et al. (2006) research set theoretical grounds for exploring the moderating influence of third variables on the relationship between organizational identification and construed external image.

Studies show that situation and person effects often combine or interact to influence outcomes (Mischel, 1977). According to Ashforth and Mael (1989) four broad categories of antecedents of organizational identification exist: the categorization of individuals, group distinctiveness and prestige, out-group salience, and group formation factors. The latter encompasses a set of concepts, including interpersonal interaction (social relationships). Wiesenfeld et al. (2001) argue that work-based social support is a type of antecedent that is less internal to virtual members, and as such reflects in part the situational factors that can moderate outcomes. The effect of social support in workplace is such that it leads the individuals to feel important and valued, which in turn fosters organizational identification.

Attractive organizational image motivates individual's sense of self, self-distinctiveness, and self-enhancement (Fink et al., 2002). However, in the absence of cues that highlight the company image, a condition not foreign to the virtual companies and geographically displaced workers, work-based social support may serve as an important reference point strengthening the virtual employees' organizational identification by highlighting group membership. If the perceived work-based social support is high, it might result in overriding the personal effects of individual differences in the perception of attractive organizational image, by fostering organizational identification even among those individuals who do not perceive a particularly favorable or do not possess a clearly defined construed external image. The current study explores whether the amount of perceived work-based social support can foster organizational identification in cases where construed external image is perceived as less favorable or is ambiguous due to less salient organizational image cues, as the positive climate within the company makes up for the less appealing or less distinct conditions on the outside.

The assumption is that work-based social support, as a strong and relevant factor, moderates the effect of construed external image on organizational identification.

Hypothesis 3: High level of work-based social support will attenuate the relationship between construed external image and organizational identification.

Study goals

The current research attempts to extend the understanding of the relationship between construed external image and organizational identification that is particular to a virtual setting. The exploration of the factors influencing the concept of organizational identification is particularly relevant at the given moment. This is because, with the lifestyle transformations and discarding of the traditional values, the rising increase of distrust in political and religious institutions, and many other challenges that come with rapidly changing environments of the present moment, organizational identification is coming to represent a major component of individual's sense of self (Mael & Ashforth, 1990). Scott and Timmerman (1999) refer to the present times as those of changing organizational forms, where it is ever more important to try to understand how the trends of virtual work, communication technology use, and organizational identification relate to each other. The rapid growth of virtual teams, the likely significance and benefit of organizational identification for such teams and their organizations, and incomplete research on the topic indicates the need for a more profound understanding of organizational identification in the virtual context.

In their study, Kanawattanachai and Yoo (2002) predict that while the percentage of professional work force employed virtually will continue to increase, about half of such organizations will not succeed in meeting their strategic or operational objectives, because they will not be prepared to manage the distributed work teams. The present study endeavors to alleviate concerns and challenges facing those who are attempting to maneuver the world of virtual work, by shedding light on the variables involved in the identification development. In their review of telework research, Bailey and Kurland (2002) suggest that social identity theory be explored further with regard to identification patterns of individuals working remotely, given multiple benefits of strong organizational identification. Along similar lines, Hinds and Mortensen (2005) argue that conflicts are

more prevalent in geographically distributed teams, which endangers their ability to perform satisfactorily and effectively. They propose that shared identity moderates the effect of conflict, and given its usefulness urge for more research on identification dynamics in virtual organizations. The present research is motivated by multiple research findings that highlight the importance of organizational identification in attaining successful organizational performance.

Methods

Study design

The study used a cross-sectional internet survey directed at employees of a large, international, virtual organization. An email including the participation invitation and informed consent form, as well as the link to a Google Documents survey, was sent to randomly selected sample of 100 employees. The sample was selected using online randomization software (randomizer.org) by utilizing designated employee numbers from the company's human resources department, and work email addresses attached to them. As part of the informed consent, the employees were informed that participation in the study was voluntary and anonymous, in compliance with the Helsinki Declaration, and that the top company management supported the research.

The email sent to the participants contained the consent form, study description, and the link to the Google documents survey. The participants were instructed to click on the link and answer the questions on the screen. By answering the questions in the survey, the participants consented to participation in the study. The responses to the questions were fed directly into the Google Drive Excel spreadsheet. The responses were not attached to the emails the survey was sent to, so it was impossible for the researcher to match the answers to the participants, thus ensuring their anonymity.

Participants

Survey participants included employees and contractors of a large, international, virtual social media moderation company located in North America. The definition of virtual workers as used in this research involved individuals who work exclusively from their homes and are employed on at least a part-time basis. Out of over 300 employees,

the survey was distributed to a total of 100 employees, and 63 fully completed responses were received, leading to a 63% response rate. Of all respondents $n=47$ (75%) were women and $n=16$ (25%) men, reflecting the distribution in the company records. Employees were geographically distributed around the world, with majority coming from the United States (41.9%), Mexico (22.6%) and Canada (11.3%). The occupations included from within the organization were content specialist (74.2%), team leader, client services manager, community manager, and human resources coordinator. Most participants hold a bachelor degree (33.9%), some have a master degree (21%), and some have college credit (24.2%). Most have spent between two and four years with the organization (38.8%), and majority have 2 to 3 years total of virtual work experience (19.4%). In terms of age distribution, 9.8 % of participants are between the ages 18 and 24, 42.6% are between 25 and 34, 26.2% between 35 and 44, 6.6% between 45 and 54, 11.5% between 55 and 64, and 3.3% are older than 65. These demographic data manifest correspondence between the sample profile and company statistical records, where available.

Measurement

Survey instrument was a 21-item questionnaire devised by combining empirically tested scales that reflected the constructs of interest, as well as questions pertaining to the general demographics. All scale items are available in the Appendix A.

Organizational identification. The dependent variable for the study was organizational identification. It was measured with a five-item scale developed by Mael and Ashforth (1992), and empirically validated by Mael and Tetrick (1992). Response endpoints were “strongly disagree” (1) to “strongly agree” (5). Coefficient alpha for this scale was .89. The items included, “When someone criticizes (insert company name), it feels like a personal insult” and “If a story in the media criticized the (insert company name), I would feel embarrassed.” Mael and Ashforth’s (1992) scale was chosen as measurement because it is the most frequently used organizational identification scale. Furthermore, Riketta’s (2004) meta-analysis showed that Mael and Ashforth’s (1992) scale is the most representative measure of organizational identification with respect to its

empirical outcomes. The scale is relatively brief and easy to administer, with many studies demonstrating its construct and discriminant validity (Ricketta, 2004).

Construed external image. The independent variable for the study was construed external image. It was measured using a six-item scale excerpted from Riordan, Gatewood, and Bill's (1997) construed external image scale. Items included, "Generally, I think (insert company name) is known as a good place to work and "Generally, I think (insert company name) has a good reputation in the community." Endpoints were "strongly disagree" (1) to "strongly agree" (5). Coefficient alpha for the construed external image scale was .92.

Work-based social support. The scale assessing the level of perceived work-based social support was adapted from previous research (Aspinwall & Taylor, 1992; Lim, 1997; Wiesenfeld et al., 2001). Respondents were asked to indicate the perception of work-based support received from their peers, their direct supervisor, and their superiors (upper management). Responses ranged from "completely unsupportive" (1) to "completely supportive" (5). Following former research practice, these items were summed across the three targets and then divided by the number of items within the scale, to create an index. Cronbach's alpha for this scale was .68. This alpha coefficient was lower than the .7 value, which is used as cutoff for scale reliability. An alpha value of .69 is the highest value possible to be obtained from this scale when the item "Please rate how much friendship and support you currently receive from your superiors (upper management, excluding your direct supervisor)" is deleted. Removing this item only slightly improves Cronbach's alpha. At the same time, to remove it permanently would leave only two items of the scale assessing the social support concept, jeopardizing the scale's content validity. Hair et al. (2006) argue that Cronbach's alpha value between .60 and .69 can be acceptable for scales with few items, which is the case here. Therefore, this study accepted the obtained alpha value and retained the original scale for the final analysis.

Potential confounding variables (control variables). Tenure in the organization (in months), age, job level, and gender were entered as control variables in the analysis. Looking into the effects of demographic variables on employee attitudes and behaviors has been a tradition in organizational behavior research (Wan-Huggins et al., 1998).

Specifically, it was demonstrated repeatedly that variables such as tenure, gender, and job level are related to the concept of organizational identification. Since previous research showed that certain personal characteristics might influence individual's identification with an organization, this study controlled for the effects of several demographic variables in the analyses. Wan-Huggins et al. (1998) proposed that, as variables such as gender have not been analyzed for their effect on organizational identification in the past, the time has come when, with an increasing attention given to workforce equality and diversity, it seems pertinent for their effects to be considered. Furthermore, gender is an individual difference variable that has the power to affect individual's self-image but cannot be controlled by the organization. Therefore, it seemed important to include it as a control variable in the analysis. Tenure, in particular, has been considered for its effects on organizational identification, as it appears natural that number of years spent in one workplace will be related to the extent to which an individual relates to that workplace. Extensive research has supported this finding (Hall et al., 1970). On the contrary, research on job level and organizational identification yielded mixed results in past research. However, since these inquiries are ongoing, we considered it most prudent to control for job level as well.

Data management

Organizational identification and work-based social support variables were not normally distributed. Following Tabachnick and Fidell (2001), to correct the distribution the outliers were identified and their value changed, by reducing them to one unit higher than the second largest value overall. However, negative skewness remained. Standard transformations and the Box Cox test were attempted with only minor improvements in normality. The best value of Kolmogorov-Smirnov statistic was obtained after the square root and reflection transformation. Variables transformed in such a way were retained for the regression analysis.

With regard to distribution of scores, dependent variable (organizational identification), and two independent variables (construed external image and work-based social support) showed negative skewness and positive kurtosis. The inspection of outliers indicated that a single participant was an outlier on all three variables. This

outlier was deleted from the data set, as this participant selected extreme scores on all items. Removing the outlier improved normality, although the Kolmogorov-Smirnov statistic remained significant. An additional outlier was discovered on the work-based social support variable. Removing this outlier also improved normality.

The decision to accept the imperfect variables came from the recommendation by Tabachnik and Fidell (2001), that conventional but conservative alpha levels (.01 or .001) are to be used to evaluate the significance of skewness and kurtosis with small to moderate samples such as this one. They also suggest considering the shape of the distribution, as visual appearance of data is a strong representation of normality. Histograms for the two variables resembled a fairly normal distribution, with no extreme tails, something Tabachnik and Fidell would call a near-normal distribution. The analysis also took into account the inherent nature of variables, as some violations of normalcy are expected in the real world.

An index score was created for the dependent variable and two independent variables. The control variable of tenure was the only one with missing data, in particular missing two responses. Little's MCAR test showed that the data was missing randomly, so it was imputed via expectation maximization method.

Tabachnik and Fidell (2001) recommendation regarding the number of cases needed for hierarchical regression was not met in this study. Following their calculation, 68 complete cases are needed when considering only the two main independent variables (more when control variables are included). This study contained 63 cases (61 with the removal of outliers). The researcher argued to be allowed to survey all 300 employees of the company, but the management was vary as this was the first time they have allowed for an external survey. However, it is the researcher's belief that the findings of this study can be useful, at the very least as explorative in the field.

Regarding the assumptions of hierarchical regression analysis, inspection of correlations showed that the primary independent variables (construed external image and work-based social support) are strongly and positively related to the dependent variable (organizational identification), $r = .640$ and $r = .601$, respectively. The relationship between the independent variables alone was not higher than the Tabachnik and Fidell

(2001) recommended cutoff of .7 even though it approached it ($r = .694$). Therefore, both variables were retained. Multicollinearity assumption was not violated.

Statistical Analysis

The hypotheses were tested using moderated hierarchical regression, as suggested by previous research (Fuller et al., 2006; Wiesenfeld et al., 2001). This type of analysis is useful in examining the proportion of variance in the dependent variable explained by the control variables, as well as by the independent variables and potential interaction terms. It can isolate the unique contribution of each of the independent variables and assess the significant value of the proposed explanatory model. The values of p equal to or below 0.05 were considered statistically significant (two-tailed). This approach is very useful when attempting to isolate the antecedent contributors to a dependent variable. The variables were entered into the analysis in three steps. In the first step, the control variables were entered, followed by the main effect variables (construed external image and perceived work-based social support) in the second step, and the interaction term in the final step. Both main effect variables were zero-centered before creating the interaction term to reduce potential effects of unnecessary ill conditioning, in accord with Aiken and West's (1991) method. Dummy variables were created for the categorical control variables of age, gender, and job position. All statistical analyses were conducted using IBM SPSS version 21 software.

Results

Hierarchical regression was used to determine if addition of information regarding construed external image, work-based social support, and an interaction of those two variables improved prediction of organizational identification beyond that afforded by the differences in demographic variables of age, gender, tenure, and work position. Table 1 shows the descriptive statistics for untransformed variables of interest.

Table 1

Means and Standard Deviations of Organizational Identification, Construed External Image and Work-Based Social Support

	<i>n</i>	<i>M</i>	<i>SD</i>
OI	63	3.81	.85
CEI	63	4.79	.79
SS	63	3.35	.47

Note. The maximum score is 5.

Table 2 displays the correlations between the variables, the unstandardized regression coefficients and intercept (B), the standardized regression coefficients (β), the semipartial correlations (sr_1^2), and R , R^2 , and adjusted R^2 after entry of all independent variables. After step 1, with control variables in the equation, $R^2 = .14$, $F(9,50) = .88$, $p < .554$. The R^2 values observed after entering the control variables indicate that those variables account for 13.6% of the variance in organizational identification.

Table 2

Hierarchical Regression of Independent Variables on Organizational Identification

Variables	OI (sq. root)	CEI	SS (sq. root)	Interaction term (sq. root)	SE B	β	sr^2 (incremental)
Construed External Image	.64			.18**	.05	.52	.14
Work-based Social Support	.60	.69		.48	.27	.26	.41**
Interaction term	.12	.28	.24	.17	.27	.07	.00
Intercept				1.6	1.7		
Means	1.44	4.81	1.23	.08			
Standard deviation	.28	.78	.15	.11			
							$R^2 = .55$
							Adjusted $R^2 =$
							.43
							$R = .74^{**}$

* $p < .05$.

** $p < .01$.

Hypothesis 1: An organization members' construed external image will be positively related to organizational identification.

R was significantly different from zero at the end of second step only. After step 2, with construed external image and square root of work-based social support added, $R^2 = .55$, $F(2,48) = 5.22$, $p < .001$. As can be seen in Table 3, Step 2, construed external image was significantly and positively related to virtual workers' organizational identification, lending support to Hypothesis 1.

Table 3

Regression Results for Organizational Identification as a Function of Construed External Image and Perceived Work-Based Social Support

	<i>B</i> *	<i>t</i>	<i>p</i>
Step 2:			
CEI	.51	3.35	.002
SS	.25	1.71	.094
	overall $F(2,48) = 5.22, p < .001$; total $R^2 = .55$		
Step 3			
CEI * SS	.07	.65	.520
	overall $F(1,47) = 4.77, p < .520$; total $R^2 = .55$		

*Standardized regression coefficients are reported.

Hypothesis 2: An organization members' perception of work-based social support in a virtual setting will be positively related to organizational identification.

The results did not support Hypothesis 2, which stated that organizational identification would be positively related to individuals' perception of work-based social support. The adjusted R^2 value of .44 indicated that little less than half of the variability in organizational identification is predicted by the independent variables, excluding the interaction term. Once the major independent variables were entered, the R^2 value jumped to .55, indicating that the model explained 54.5% of the variance.

Hypothesis 3: High level of work-based social support will attenuate the relationship between construed external image and organizational identification.

The interaction of construed external image and perceived work-based social support was not significant. After the final step, with all independent variables in the equation, $R^2 = .55, F(1,47) = 4.77, p < .520$. Therefore, Hypothesis 3 was not supported in this study. After including the interaction between the main independent variables, the variance explained improved only slightly, to .55 (55%). To better understand the nature of the interaction, researcher created the interaction plot. As can be seen in Figure 1, among virtual employees who held relatively favorable construed external image, organizational identification was lower when work-based social support was low. Organizational identification tended to increase as the construed image of organization became more positive, regardless of the level of perceived work-based social support.

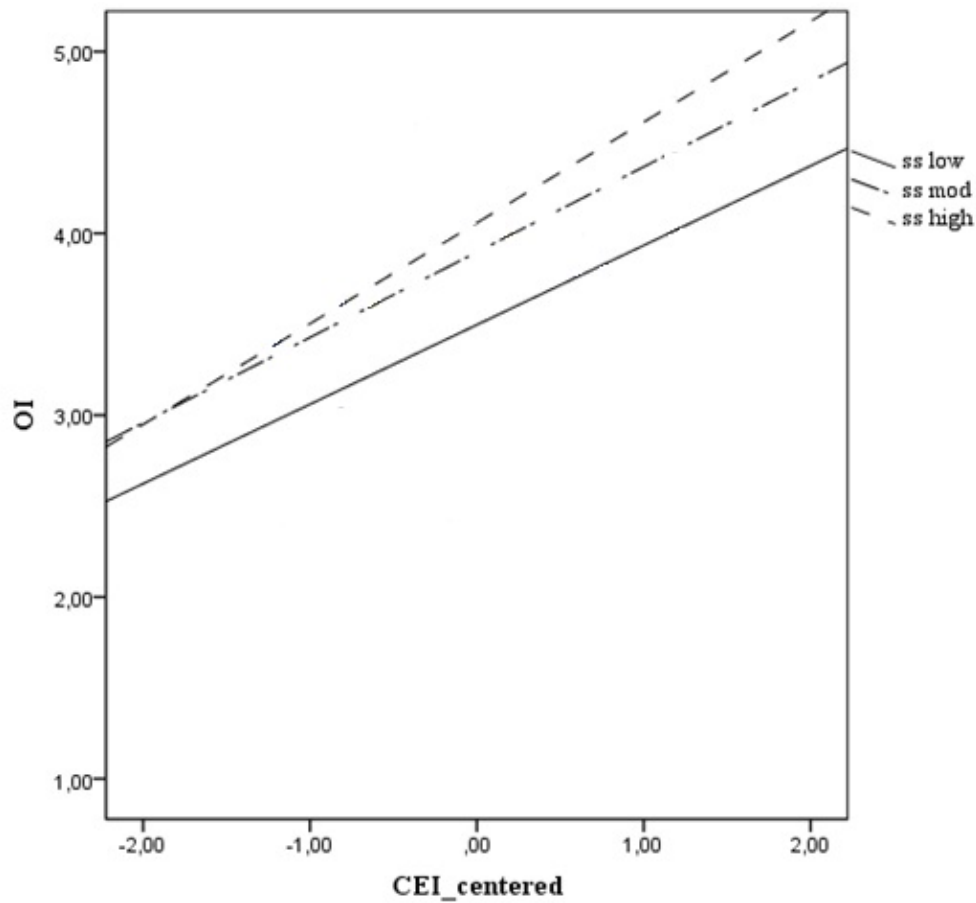


Figure 1. Organizational Identification (OI) as a Function of Construed External Image (CEI_centered) and Level of Perceived Work-Based Social Support

Once the variables of age, gender, job position and tenure are controlled for, this is a statistically significant contribution, as indicated by the Sig. F change value, $F(2,48) = 5.22, p < .001$. The ANOVA table indicated that the model as a whole is significant, $F(1,47) = 4.77, p < .001$. Additional data inspection showed that there is in fact only one variable that makes a statistically significant contribution ($p < .05$), the construed external image variable, with a β value of .52. Work-based social support, as evaluated in this study, did not appear to make a significant contribution to organizational identification on its own, and neither did the interaction term.

Discussion

Study findings

The present study developed and tested a model of organizational identification and its antecedents in a virtual work setting. The results suggest that organizational identification is influenced by construed external image, but not by work-based social support. In other words, construed external image stands out as one of the antecedents of organizational identification. Work-based social support on the other hand did not show to be a related antecedent of organizational identification. Additionally, it appears that the relationship between organizational identification and construed external image is not affected by the changes in the amount of perceived work-based social support.

The current analysis showed that virtual employees' construed external image is a critical predictor of organizational identification in a virtual organization, lending support to the Dutton et al. (1994) findings. The more positively organization members perceive that outsiders evaluate their virtual organization, the more they identify with it. This suggests that managers can strengthen organizational identification among virtual employees by carefully managing the components relevant in establishing a positive construed external image. Such findings are also in line with Wan-Huggins et al. (1998) argument that virtual organizations should attempt to manage their external image, as that will have positive effects not only on outsiders (consumers, stockholders, etc.), but also on the organization members by virtue of stronger organizational identification. As such, the findings of this study have important consequences for virtual employees and virtual organizations alike, because they begin to establish the scientific groundwork for more applied practices in the field of virtual organization management.

The model of organizational identification as illustrated in the present study predicted that a positive relationship exists between perceived work-based social support and organizational identification. The more social support organization members receive from their colleagues, the more they are expected to be organizationally identified. Preliminary correlation analyses lent support to this prediction, as the two variables are indeed positively correlated. This positive correlation echoed the findings in the Wiesenfeld et al. (2001) field study conducted in a partially virtual organizational setting. However, contrary to prediction, further analyses showed that the main effect of

perceived work-based social support on its own was not a significant predictor of virtual employees' strength of organizational identification. Furthermore, the interaction of construed external image and perceived work-based social support was also not significant. Work-based social support did not appear to moderate the relationship between construed external image and organizational identification. The initial presence of a positive relationship between organizational identification and work-based social support however suggests that there is a need for better understanding of the role of socialization in the organizational culture (Scott & Timmerman, 1999). These researchers argue that this need is particularly relevant when it comes to the virtual environment. Other methods of assessment of this relationship could be explored in order to outline a clearer picture of the relationship, some of which are suggested in the following pages.

Study limitations

The sample size raises issues with regard to the specific requirements of the chosen method of analysis, making it perhaps the gravest limitation of the current study. Hierarchical multiple regression is sensitive to small samples, and any analyses on small samples call into question the validity of the resulting findings (due to risks of normality violations, multicollinearity, etc.). However, arguments exist as to why even the smaller size studies should be conducted, with exploratory relevance and contribution to future meta-studies listed as benefits of such practices (Tabachnik & Fidell, 2001). Another limitation of the current study lies in the potential for common-methods variance due to the cross-sectional study design that does not allow for disentangling of causes from effects. Future studies may incorporate longitudinal observations in their design to combat this issue.

Since earlier studies (Ridgeway, 1991; Mael & Ashforth, 1992; Bartel, et al. (2012)) have shown that some personal characteristics may affect an individual's identification with an organization, we controlled for the effects of several of those variables in the present study. More specifically, tenure in the organization (in months), age, job level, and gender, were included in the study as control variables. However, the present study did not uncover any effects of these variables. None of the variables made a unique contribution to organizational identification, nor was the combined model of

control variables statistically significant. Perhaps most unexpected was the lack of a significant finding regarding the variable of tenure, the length of which has in the past been linked to the organizational identification. However, tenure in virtual organizations carries different implications compared to tenure in the traditional ones. More often than not, virtual organizations have existed for fewer years than most of the traditional ones, and by extension their employees have been with the company for a shorter time on average. This carries important implications for the relevance of the tenure variable in the virtual context. Additionally, the sample used for the present study consisted mostly of the group of employees with highest turnover, which further questions the length of tenure as a factor, and limits the ecological validity of the data obtained. This shows that the characteristics and practices of virtual organizations have unique features that should be carefully considered and differentiated from their traditional counterparts.

An unexpected lack of observable significant relationship between work-based social support and organizational identification can have several potential explanations. To begin, the concept of perceived work-based social support was measured by a three-item scale with one of the items turning up problematic in post-data collection analyses for issues with reliability. It was retained in the analysis in spite of having a slightly lower than desired Cronbach's alpha value, because the scale as a whole would suffer from losing one of its sole three items, and overall further analysis would potentially be compromised. To preempt similar problems, the scale used for this concept could be expanded in future studies to include more of the relevant items (even though this one was recommended for use as such by Aspinwall & Taylor (1992), Lim (1997), and Wiesenfeld et al. (2001)).

Additional improvements of the perceived work-based social support scale also seem warranted. For example, the scale addresses only the dimension of the extent to which the three categories of colleagues (peers, direct supervisor, and upper management) are perceived as supportive of an individual employee. As such, it appears vague and ignores the distinction between quantitative (frequency of behaviors judged as socially supportive) and qualitative aspect (the nature of behaviors thought to be socially supportive) of work-based social support. Distinguishing between format, frequency, and other particulars of socially supportive behaviors could result in a more comprehensive

and sensitive measurement scale for this construct, thereby enhancing the scale's construct validity. Of importance also is that majority of the sample consisted of content specialists – the most widely geographically dispersed employees who are, by the nature of their work responsibilities (basic) less likely than upper management to be identified with the organization (Wan-Huggins, et al., 1998). A larger, more diverse sample would undoubtedly enhance the generalizability of the findings, while an improved scale is needed to shed a more distinctive light on the role of work-based social support in organizational identification.

The aforementioned problems with the work-based social support variable spill over into the issues with assessing the statistical effect of the interaction term created for this study. The study predicted that the relationship between organizational identification and construed external image would be moderated by the perceived work-based social support. This finding was not confirmed in the analysis, and part of the reason for it may lie in the strength and adequacy of the scale used to measure the concept of social support. Additionally, it is possible that external as well as internal contextual factors, which were not addressed by the study design, exist and affect an individual's assessment of the work-based social support. Factors such as receptiveness to social support, readiness to not only receive but to play an active part and give social support to others, and the general individualized understanding of the concept of social support all might have overridden the effects and the understanding of the support received. These are additional components that could be incorporated in the creation of future construct measurement scales.

Finally, data analysis within the study was conducted using non-normally distributed variables, which challenges the validity of the chosen statistical analyses. However, following the lead of Tabachnik and Fidell (2001), the smaller than needed sample size was treated differently than a more sizable one would, by adopting more conservative alpha levels (.01 or .001) approach to evaluate the significance of skewness and kurtosis with small to moderate samples such as this one. Also, the decision to use the sample in the analysis was corroborated by the presence of a near-normal distribution, with no extreme tails evident in the histograms of the variables in question. Visual appearance of data was used as a guide in determining the normality of data. The analysis

also took into account the inherent nature of variables, as some deviations from the normal distribution are to be found in the real world as well.

Study implications and further research

The present study made some relevant contributions to the organizational identification literature. Most of previous research on organizational identification used non-work samples. Such findings face the issue of limited generalizability, especially with regard to full-time employees currently working within a virtual organization. This study used a sample of virtual employees at a client services oriented company, which provides a test of the generalizability of organizational identification and its antecedents in a work setting.

Furthermore, whereas many of the previous studies often confounded organizational identification construct with other related ones, this study used Mael (1988) measure, which treats organizational identification as a conceptually different construct, and was validated in meta analyses as best organizational identification measure available at the moment (Riketta, 2005). Perhaps most importantly, there have been no studies to date that addressed organizational identification in purely virtual work setting, as is the case in the present study. In fact, Wiesenfeld et al. (2001) argue that virtual work is potentially an ideal context in which to study the construct of organizational identification. This is because the geographical displacement that virtual employees experience centralizes their psychological connection to the organization.

This research was conducted within the context of presumed willingness or desire to identify with the organization on behalf of the organization members. Future research might more finely distinguish between the differences in the extent to which the individuals want to identify, as well as their potential desire to disidentify with their respective social aggregate. Since some polarity in this regard is expected among the organization members, it is potentially useful to examine the ways in which such antecedent conditions are related to the process of identification and the moderating variables involved.

As pure virtual team members rely exclusively on various modes of virtual communication, it is worth exploring further the forms of communication most frequently

utilized, and their role and effectiveness in creating favorable construed external image of the organization as well as building the social relationships within the organization.

Depending on the nature of business conducted, we can expect to observe differences in the extent to which different modes of communication are used among the organizational members, and consequently different outcomes with respect to organizational characteristics. In addition to differing modes and their effects, future research could also focus on issues such as frequency of interaction, parties involved in interaction, and interaction content as they reflect on social support and, indirectly, on organizational identification. Finally, it would be useful to explore whether communication processes that demand more group collaboration and virtual face-to-face communication (for example via software such as Skype, Viber, Google hangouts, etc.) affect team member relationships in the form of social support received.

Fiol and O'Connor (2005) argue that in pure virtual teams, the individuals may believe that their self-enhancement needs are less likely to be met, compared to hybrid or face-to-face settings, because of the presumed less visible nature of pure virtual teams. In that sense, it is worth exploring the manner in which virtual organizations express their identity, as well as measuring the relationship between the salience of cues relating to the organization's nature and the extent to which the individual self-enhancement needs are met. This should help identify particular challenges facing virtual companies with respect to manifesting attractive external image, which then can be addressed practically.

In large, international companies, such as the one featured in this research, managers are bound to tackle the various effects of diversity of the teams. Fiol and O'Connor (2005) propose three dimensions of diversity: informational, value, and demographic. Diversity, they argue, gets in the way of team member identification, as members often divide into groups along the lines of distinction. The questions about the potential for such categorizations within organizations should be addressed, as they could directly affect identification and work-based social support.

Given the worldwide trends in business, scholars should expand the research lens to include organizations that are operating exclusively virtually, and this study but scratches the surface in the field. Some researchers still wonder whether there is a fundamental difference between collocated and geographically distributed teams in the

first place. This begs the question whether existing research and theory in the field can be generalized and applied from traditional to virtual settings, or the latter call for a set of own theories. Hence, future research is needed to evaluate and expand the broader theoretical framework within the virtual environment.

Conclusion

Around the world, with the rapidly developing information technology, virtual work is becoming an increasingly more present form of work. Over time, more varied insights regarding the factors that influence the virtual work environment will be needed. The present study makes a contribution to the scientific field by examining the relationships between organizationally relevant variables in an exclusively virtual setting. Studying the entirely virtual organizational environment is a unique contribution of the present study, as it has given attention to behavior of organization members that are physically completely isolated from one another, and is the first one of its kind to date.

The proposed model points to the significance of construed external image in fortifying organizational identification. These findings suggest that organizations should devote resources to manage their external image, as doing so can have positive effects on both the employees and the organization. The research in the field of organizational identification antecedents is young, and future research could continue exploring in virtual settings those antecedents that have been found to be useful in traditional settings. This includes perceived work-based social support, the analysis of which could be approached with more finesse and variety. The current research presented the notion that organizational identification might be the strategy by which to manage purely virtual teams, since, by their inherent nature, virtual teams do not lend themselves to traditional managerial practices of direct supervision. As such, the field of organizational identification in virtual organizations invites further scrutiny and wider attention of the scientific community.

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Appendix A

Demographics, Organizational Identification, Construed External Image, and Work-based
Social Support Scale Items**1.** Your gender

Female
Male

2. Your age

18 to 24 years old
25 to 34 years old
35 to 44 years old
45 to 54 years old
55 to 64 years old
65 years old or older

3. Your highest educational level obtained

Some high school, no diploma
High school graduate, diploma or the equivalent (for example: GED)
Some college credit, no degree
Trade/technical/vocational training
Associate degree
Bachelor's degree
Master's degree
Professional degree
Doctorate degree
Other

4. When I talk about (Company), I usually say 'we' rather than 'they'.

1 - Strongly disagree
2 - Disagree
3 - Neither agree nor disagree
4 - Agree
5 - Strongly agree

5. I am very interested in what others think about (Company).**6.** (Company)'s successes are my successes.**7.** When someone praises (Company), it feels like a personal compliment.**8.** If a story in the media criticized (Company), I would feel embarrassed.**9.** Generally I think (Company) has a good reputation in the community.

10. Generally I think (Company) has a good reputation in the industry.
11. Generally I think (Company) is actively involved in the community.
12. Generally I think (Company) has a good overall image.
13. Generally I think (Company) is known as a good place to work.
14. Generally I think (Company) has a good reputation among its customers.
15. Please rate how much friendship and support you currently receive from your PEERS at work:

- 1 - Completely unsupportive
- 2 - Unsupportive
- 3 - Neither supportive nor unsupportive
- 4 - Supportive
- 5 - Completely supportive

16. Please rate how much friendship and support you currently receive from your DIRECT SUPERVISOR:
17. Please rate how much friendship and support you currently receive from your SUPERIORS (upper management, excluding your direct supervisor):
18. What position do you currently hold at (Company)?

Content Specialist
Team Lead
Client Services Manager/Senior CSM
Assistant Operations Manager/Operations Manager
Other:

19. What country do you currently live in?
Please type the country name in the space below.

20. How long have you worked at (Company)?

Please write the number of years and months rounded off to the nearest month in the space below.

21. How much experience OVERALL do you have working for any virtual company (including your time at (Company)?

Please write the number of years and months rounded off to the nearest month in the space below.

THANK YOU FOR PARTICIPATING! If you have any additional comments, please write them in the box below.