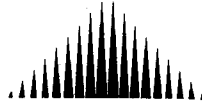


Making Sense of Organizational Actions with Virtue Frames and Its Links to Organizational Attachment



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This paper analyzes members' sensemaking of organizational actions using virtue frames and its effects on members' relationships with the organization in the context of the events of September 11th. We explore the use of three virtue frames to make sense of a university's response to the events of 9-11-01. We examine the effects of interpreted virtuousness of actions on members' identification with and attachment to the organization through members' emotions, their self-construals and overall images of the organization. Our study sheds light on how sensemaking about the virtuousness of organizational actions influences members' cognitive and emotional connection to the organization.

Keywords: *Virtue Frames, Sensemaking, Emotions, Self-construals, Organizational Identification, Organizational Attachment*

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Making sense of what an organization represents or cares about is never an easy task. Organizations are complex with rich histories and diverse activities that challenge members' capacity to make meaning out of what the organization does and why it matters. One way members infer what an organization stands for is by parsing and interpreting organizational actions in response to specific events (Weick, 1995). Despite an interest in sensemaking, researchers know little about how the interpretation of organizational actions shapes members' cognitive and emotional connection to the organization. This is our research focus.

September 11th, 2001, is a day etched in human history. A cluster of world events took place on that day, involving the crashes of U.S. commercial airplanes hijacked by a group of terrorists and flown into the World Trade Center, U.S. Pentagon, and a rural field in Pennsylvania. The scale and scope of this day's events called for actions of humanity, justice and courage on the part of members as well as organizations as means for healing physical and psychological wounds. What organizations did in this situation may have transformed the meaning of an organization for its members, affecting their affective and cognitive connection. This paper empirically explores this possibility.

Our research focused on sensemaking in a U.S. university context. More specifically, we investigated how members' interpretations of organizational actions in terms of virtuousness contributed to members' identification with and attachment to the organization. Our research assumes that social actors are actively involved in the sensemaking process by constructing and using frames (Gephart, 1993) to parse and interpret extracted cues (Weick, 1995). This positions our research with others interested in how members use sensemaking to understand their organization (e.g., Louis, 1980; Weick, 1995). In particular we explored the relative impact of the virtuousness of organizational action on members' emotions, self-conceptions and images of the organization. Thus, our study is designed to explore the mechanisms through which applications of virtue frames as sensemaking lenses affect members' relationships to their organization.

Virtue Frames

We assume that members interpret organizational actions based partly on their interpretation of the kind and degree of virtuousness of actions. We call the interpretive lens a virtue frame. A frame is "a generalized point of view that directs interpretations" (Cantril, 1941: 20 as cited in Weick, 1995: 4), which renders "what would otherwise be a meaningless aspect of the scene into something that is meaningful" (Goffman, 1974: 21). A virtue frame captures

people's attributed meanings of virtuousness applied to a particular cluster of acts or dispositional features of members or collectivities like organizations.

Virtue frames are meaningful sensemaking devices because people are socialized to detect and understand different forms of virtuous behavior (e.g., Stilwell, Galvin, Kopta, and Padgett, 1998). Young children learn to make sense of other people's behavior in interaction with parents, peers and teachers and they acquire a sense of whether a behavior is good or bad. As people grow, they internalize virtue principles through direct experience (e.g., Kochanska, 1995). A virtue frame is a shorthand way of capturing and communicating the level and type of virtuousness ascribed to a particular action or behavior. Virtue frames are particularly important in organizations as they are means that people use to convey their understanding that something (a person, an action, a unit) has a quality of moral goodness. Different virtue frames convey different forms of moral goodness — i.e., that action is courageous; that organization is wise; that person is compassionate. It is likely that virtue frames are particularly impactful when they are used to refer to actions that are ambiguous and the meaning of the actions is subject to differing interpretations.

We define "virtuous organizational action" as the perceived exercise of collective behavior that indicates the organization is following principles that lead to some form of moral or ethical betterment. At the level of individuals, virtues involve admirable qualities of one's character and conformity of one's conduct to moral and ethical principles of right (McCullough and Snyder, 2000; Park and Peterson, 2003), which makes oneself and society morally better and promotes well-being and the good life (Sandage and Hill, 2001). Cameron and colleagues (Cameron, 2003; Cameron, Bright, and Caza, 2004) note the rarity of consideration of organizational virtuousness, and argue that organizations vary in the virtuousness of their actions, and that these organizational qualities make a difference for financial performance. We complement their perspective by focusing on the micro process of how members discern action virtuousness, and how this affects their relationship with the organization.

Virtue Frames and Organizational Identification and Attachment

We assume that members interpret organizational actions using virtue frames, and that the meaning members apply to organizational actions has implications for cognitive and emotional connections to the organization, through both identification and attachment. There is evidence to suggest that members' identification with and attachment to their organization partly result

from perceived virtuousness of organizational actions. First, Solomon (1993) suggests that acts of caring and compassion provide a sense of belongingness for members. For example, members increased affective commitment when they perceived organizational practices to be motivated by management's genuine concern for their safety (Barling and Hutchinson, 2000). Second, members who perceived organizational practices (e.g., performance evaluation) as manifesting the virtue of justice were more likely to show organizational commitment (e.g. Cropanzano, Byrne, Bobocel, and Rupp, 2001). Third, witnessing a courageous incident transformed members' involvement in the organization's mission and goals (Worline, Wrzesniewski, and Rafaeli, 2002).

The Research Context

The events of 9-11 produced an opportunity to study how members make sense of organizational actions, and how members' use of virtue frames as sensemaking lenses affects their relationship with the organization. First, organizational members exert more sensemaking efforts to understand organizational actions when uncertainty and change are present (Weick, 1995). The events of 9-11 were uncertain due to a lack of information, and disrupted "normal" life patterns, putting people into a more active, mindful state of trying to make sense of the organization, what it was doing, and what it meant (Louis and Sutton, 1991).

Second, we employed three virtue frames that had particular applicability to making sense of the events of 9-11: humanity, justice, and courage (e.g., Peterson and Seligman, 2004). An organizational action is humane when it involves helping and caring oriented toward organizational members or a larger society, through which they feel the worth of their existence (e.g., Post and McCullough, 2004). A justice frame implies just treatment of members with dignity and respect, based on moral and ethical reasoning (e.g., Berkowitz and Sherblom, 2004). Our definition concerns prosocial conceptions of justice such as "justice as respect for persons" (Roberts-Cady, 2003: 299) rather than retributive justice conceptions that entail an eye-for-an-eye approach (e.g. Karremans and Van Lange, 2005). Finally, a courageous organizational action is one voluntarily taken by the organization in pursuit of "what is right" regardless of the risks it faces (e.g., Worline et al., 2002). We selected these three virtue frames because they are salient in philosophical and psychological research and everyday experience (Peterson and Seligman, 2004), and are particularly appropriate to sensemaking of the events of 9-11. In the media and in everyday encounters, people expressed concern about hate crimes (justice), heralded kindness of volunteer workers, need for support and

compassion for each other (humanity), the acts of public servants, and the actions taken by institutions, such as the cancelling of classes by universities, that might have been criticized in ordinary situations (courage). These three virtue frames were part of the currency through which society seemed to make sense of the events and actions of 9-11.

Our research builds on sensemaking research in three ways. First, our focus on organizational actions as important cues for members in sensemaking of their organization complements perspectives that have focused on issues (e.g., Jackson and Dutton, 1988) and on managerial as opposed to member sensemaking (Gioia and Chittipeddi, 1991; Maitlis, 2005). Second, a focus on virtue frames as sensemaking lenses reveals how members discern the goodness or moral significance of what organizations do. These frames imbue organizations with a moral meaning that contrasts with views of organizations as economic and strategic institutions. Finally, this paper contributes to understanding how sensemaking builds or destroys identification and attachment through how it shapes the meaning of membership.

Our paper also contributes to work on organizational identification. First, we try to unpack the psychological process that links organizational actions and organizational identification (e.g., Pratt, 1998). Our approach complements research on organizational action (e.g., community outreach) as a context that evokes members' organizational identification process (Bartel, 2001). In addition, we assess the emotional as well as cognitive elements of organizational membership. Past research has focused primarily on cognitive processes (Dutton, Dukerich, and Harquail, 1994). We explore the emotional aspect of organizational membership in two ways: (1) through examining the influence of positive emotions on organizational identification, and (2) through exploring the association between organizational identification (cognitive aspect of organizational membership) and organizational attachment (emotional aspect of organizational membership).

Finally, our study contributes to research on virtues and organizations by heeding the call to deepen understanding of how virtuousness at the organizational level affects behavior at the individual level (Cameron, 2003; Park and Peterson, 2003). By focusing on virtue frames for action, identification and attachment, our study addresses the psychological mechanisms that explain these macro-level effects.

HYPOTHESES

We predict that the perceived virtuousness of organizational actions as humane, just, and courageous will lead to three member responses (i.e., greater positive emotions, virtuous self-construals, and virtuous images of the organization) that, in turn, increase organizational identification and attachment. Our general proposition is as follows: Interpretations of organizational actions as virtuous will influence members' responses, which in turn leads to their cognitive and emotional connection to the organization. We turn now to a development of specific hypotheses.

Member Responses to Virtuous Organizational Actions

Positive emotions. Positive emotions arise when an event is appraised to have positive meaning (Fredrickson, 2000) or to be related to realization of one's or others' goals and well-being (Ortony, Clore, and Collins, 1988). Organizational actions perceived as virtuous may have communicated messages that the organization was concerned about members' well-being and was committed to comforting and supporting members. It is likely that members' interpretations of organizational actions as virtuous triggered appraisals filled with positive meaning that elicited positive emotions. Hence, we hypothesize that interpreted virtuousness of organizational actions will increase members' positive emotions.

H1 Perceived virtuousness of organizational actions in response to tragedy increases members' positive emotions.

Virtuous self-construals. Interpretations of organizational actions as virtuous influence members' self-construals. Self-construals are qualities that members apply to themselves (Baumeister, 1999), which are malleable and fluid rather than stable (Zuricher, 1977). Organizational members actively interpret the images of organizations as partial reflections of themselves (Dutton and Dukerich, 1991). Social identity theory asserts that actions and attributes of groups become sources of information about group members' self-construals (Tajfel and Turner, 1979).

Cialdini and colleagues found that individuals tended to publicize their affiliation with a group especially when the group was successful, thus enhancing their personal image (Cialdini, Borden, Thorne, Walker, Freeman, and Sloan, 1976). Attractive organizational characteristics are more easily incorporated into members' self-construals. Thus, we expect virtuous characteristics of an organization will be adopted by members, contributing to the virtuousness of their self-construals.

H2 Perceived virtuousness of organizational actions in response to tragedy increases the virtuousness of members' self-construals.

Virtuous images of the organization. When members see their organization as acting virtuously, they are likely to infer that the organization is virtuous as well. Categorization-based theories of inference assume people use attributes of objects (i.e., characteristics of organizational actions in response to the events of 9-11) to infer enduring attributes of an overall category (i.e., the organization) (Rosch, 1978).

In Dutton and Dukerich's (1991) study of the Port Authority, organizational members relied on the organization's treatment of homeless people to infer features of the enduring organizational identity. Organizations that act ethically in the wake of scandals or product recalls are often seen as being ethical at their core (e.g., Johnson & Johnson in Arguilar and Bhambri, 1983). While most studies focus on how actions threaten perceptions of an organization's identity (Elsbach and Kramer, 1996; Ginzel, Kramer, and Sutton, 1992), a study of virtuous organizational actions redirects attention to a more affirmative identity creation process. Thus, we hypothesize that interpreted virtuousness of organizational actions will enhance virtuous images of the organization.

H3 Perceived virtuousness of organizational actions in response to tragedy increases the level of virtuousness of organizational images.

Members' Cognitive and Emotional Connection to the Organization: Organizational Identification and Attachment

We define organizational identification as members' cognitive self-awareness of organizational membership (Bergami and Bagozzi, 2000). Organizational identification tells us about organizational members' cognitive state, that is what they think of themselves in terms of their organizational membership. By organizational attachment we refer to members' emotional involvement in or affective commitment to the organization (e.g., Allen and Meyer, 1990; Tsui, Egan, and O'Reilly, 1992), which captures the emotional dimensions of organizational membership. We propose that members' connection to the organization involves both cognitive and emotional aspects, captured by organizational identification and attachment.

Positive emotions. Past research shows that individuals are drawn to sources of positive emotions. Individuals tend to associate themselves with successful persons or groups that generate positive emotions (e.g., Cialdini et al., 1976). Positive emotions facilitate cohesiveness in relationships (Lawler and Thye, 1999) by expanding an individual's view of self, by which the individual

experiences an overlap of characteristics with close others (e.g., Waugh and Fredrickson, 2002) or with the organization in our case. Research suggests that members who feel positive emotions induced by virtuous organizational actions are drawn to see themselves as connected to the organizational source of these positive emotions, strengthening levels of identification.

H4 Positive emotions of organizational members derived from the perceptions of virtuousness of organizational actions increase members' level of identification with the organization.

Virtuous self-construals. Research on organizational identification suggests that members who perceive similarity between their self and organizational attributes identify with the organization (Dutton et al., 1994). Moreover, members can establish an even stronger positive self-image by identifying with an organization that possesses attractive and valuable attributes (i.e., virtuousness) (Tajfel, 1982). Thus, if members see themselves as virtuous they will more strongly identify with an organization that takes actions perceived as virtuous.

H5 Virtuous self-construals of organizational members derived from the perceptions of virtuousness of organizational actions increase members' level of identification with the organization.

Virtuous images of the organization. Past research shows that individuals like to be members of organizations with positive identities. When organizations have a negative identity, members act to separate their self-identities from the organization (Elsbach and Bhattacharya, 2001) or they redirect their attention to more positive identity features (Elsbach and Kramer, 1996).

Research on job search processes indicates that applicants are more likely to continue the application process with organizations with positive images (e.g., Richey, Bernardin, Tyler, and McKinney, 2001). Members' interpretations of an organizational image as caring and respectful increased their commitment to the organization (e.g., Barling and Hutchinson, 2000). Thus, virtuous images of organizations are likely to strengthen members' identification with the organization.

H6 Virtuous images of the organization derived from the perceptions of virtuousness of organizational actions increase members' level of identification with the organization.

Organizational identification and attachment. We propose that organizational identification precedes attachment to the organization. Bergami

and Bagozzi (2000) found that affective commitment was a motivational force that directly affected members' positive behaviors on behalf of the organization, whereas organizational identification indirectly affected those behaviors through affective commitment. Their finding suggests that early organizational membership is cognitive.

H7 Members' identification with the organization increases their attachment to the organization.

These general hypotheses test the effects of interpreted virtuousness of organizational actions on organizational identification and attachment, and how member responses (i.e., positive emotions, virtuous self-construals, and virtuous images of the organization) mediate these effects. Our empirical investigation tests specific instances of these general hypotheses.

METHODS

Participants and Procedure

We administered a survey in early December, 2001. We recruited participants through newspaper advertisements and fliers, and specifically sought out Midwestern University's staff and students. Of a total of 372 students and staff that registered to participate in the study, 214 responded to the survey (an overall response rate of 58%). Among the 214 respondents, 196 were students and 18 were staff. Due to the small staff sample size, we dropped their responses and used only the student sample. The sample was 59% female with a mean age of 20 years. Participants' enrollment time with the university ranged from 3 months to 6 years and 4 months with an average time of two years².

The questionnaire asked participants to think of three meaningful actions taken by the university (as a whole) in response to the events of 9-11. The data are based on the participants' retrospective thoughts of the events and their emotions, self-construals, and organizational images formed when they thought of a specific meaningful action they mentioned earlier in the questionnaire. Finally, the questionnaire measured organizational identification and attachment as well as demographic information and some control variables. More than half the participants mentioned two specific

² Although moral development continues across the lifespan (Armon and Dawson, 1997), researchers found that university-aged young adults showed highly developed notions of justice and fairness and balanced consideration of the needs of self and others (Pratt, Skoc, and Arnold, 2004). Thus, we assume that our sample of university students

meaningful actions: The candlelight vigil the university held (63% of the sample) and the university's cancelling of classes on 9-11 (58% of the sample). Because the participants' responses were action-specific, we tested the hypotheses for each action separately.

Measures

Virtuousness of organizational actions. We used three items to measure the degree of virtuousness for each action: 'Is this action humane (just, courageous)?' A 7-point scale was used: 1 = 'not at all', 7 = 'completely'.

Positive emotions. We used eight items, six from positive emotion categories (joyous, happy, excited, content, proud, hopeful) by Shaver, Schwartz, Kirson, and O'Connor (1987), one from Izard (1977) (interested), and one from Haidt (2000) (elevated). These emotions are highly likely to occur when people observe or experience virtuous actions. We employed 5-point response alternatives: 1 = 'very slightly or not at all', 5 = 'extremely'.

Virtuous self-construals. From Anderson's (1968) 555 personality-trait words, we selected 9 based on their relevance to individual virtuousness. Participants rated themselves on a 5-point scale anchored by two words that have opposite meaning to each other: selfish-unselfish, cold-hearted-warm-hearted, dishonest-honest, immoral-moral, unforgiving-forgiving, unethical-ethical, cowardly-courageous, tightfisted-generous, unfeeling-sympathetic.

Virtuous images of the organization. We used a count of virtue words mentioned in response to an open-ended question: 'When you think of the meaningful action taken by the university, what characteristics do you associate with the university?' Because most responses were four or fewer words, we used a 4-point scale: 0 = 'no virtue related words', 3 = 'more than three virtue related words'. Samples of virtue related words are: humanity (caring, concerned, nurturing), justice (fair, justness, equal), and courage (courageous, perseverance). Two raters coded the responses and the interrater reliability was .92 for the candlelight vigil case and .90 for the cancelling of classes case.

Organizational identification. We used a scale developed by Bergami and Bagozzi (2000) which includes two items, a visual measure that assesses the felt degree of overlap between one's own identity and the organization's identity, and a verbal report of organizational identification stating: "Please indicate to what degree your self-image overlaps with the university's image." The responses were anchored by 8 graduations of overlap and by 1 (not at all) and 7 (completely), respectively. The correlation coefficients between the two items were .70 for the candlelight vigil and .73 for the cancelling of classes.

Organizational attachment. We used the 7-item scale developed by Allen and Meyer (1990). We used five response alternatives in a disagree-agree format with 5 indicating 'strongly agree'. Alphas were .85 for the candlelight vigil case and .90 for the cancelling of classes case.

Control variables. We measured three control variables: the length of the period that participants have been enrolled at the university (1 item), the extent to which participants were affected by the events of 9-11 (1 item, 7-point scale) and the frequency that participants thought or talked about the events (3 items, 7-point scale). Alphas were .82 for the candlelight vigil case and .85 for the cancelling of classes case.

Analysis

We used structural equations modelling (SEM) with AMOS 4.0 and confirmatory factor analysis with SPSS 10.0 to analyze the structural model. Factor loadings and correlation coefficients of positive emotions and virtuous self-construals measurement items indicated that they were composed of two constructs. Positive emotions items included two constructs: (1) present happiness positive emotions (i.e., joyous, excited, content, happy) capturing good feelings about something current and (2) forward-looking positive emotions (i.e., proud, hopeful) capturing emotions that involve expecting a future good to happen (e.g., Shaver et al., 1987). Virtuous self-construals contained two constructs: (1) moral self-construals (i.e., ethical, moral, honest) and sympathetic self-construals (i.e., warm-hearted, sympathetic, generous). For the constructs with more than three items, we created composite indicators for the latent constructs by taking means of pairs or triplets of items.

RESULTS

Descriptive Statistics and Correlations

Table 1 presents the means, standard deviations, and correlations between the variables in both holding a candlelight vigil and cancelling classes cases. The correlations among the factors of each conceptual variable and between the conceptual variables suggest that the measures achieve good convergent and discriminant validity, respectively.

Structural Equations Modelling Results

Confirmatory factor analyses using AMOS 4.0 revealed that organizational identification and attachment were two distinct factors as shown in past research (Bergami and Bagozzi, 2000). Figures 1a and 1b report the results of

Table 1: Means, Standard Deviations, and Correlations: University's Holding a Candlelight Vigil^a and Cancelling of Classes^b Cases

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Humane action	6.16 (5.41)	1.20 (1.60)													
2. Just action	5.23 (5.39)	1.63 (1.24)	.44**												
3. Courageous action	4.55 (3.46)	1.82 (1.90)	.17 (.26*)	.43** (.35**)											
Positive emotions 1: Present happiness	2.37	1.21	.16	.01	.26*										
4. Factor 1: Joy, Excited	(2.88)	(1.16)	(.11)	(.08)	(.20*)										
5. Factor 2: Content, Happy	2.94	1.18	.24	.04	.14	.76** (.77**)									
Positive emotions 2: Forward-looking	(2.80)	(1.18)	(.12)	(.16)	(.22*)										
6. Factor 1: Proud	4.20	1.07	.14	.13	.15	.36** (.15)									
7. Factor 2: Hopeful	(2.99)	(1.42)	(.19*)	(.14)	(.27*)	(.15)	.56** (.41**)								
8. Moral Self-construal: Ethical, Moral, Honest	3.96	1.01	.19*	.06	.22*	.50** (.36**)	.15	.10	.13	.19*					
9. Sympathetic Self-construal: Warm-hearted, Sympathetic, Generous	(2.46)	(1.50)	(.26*)	(.21*)	(.36**)	(.06)	(.06)	(.07)	(.10)	(.14)	.19*				
10. Virtuous Organizational Images	4.21	.53	.03	.08	.17	.08	.15	.10	.13	.17	.07	.17			
11. Factor 1	(4.25)	(.52)	(.03)	(.08)	(.13)	(.02)	(.05)	(.07)	(.10)	(.14)	(.07)	(.08)	.01		
12. Factor 2	4.16	.63	.23*	.28*	.14	-.07	-.07	.04	.24*	.08	-.04	.14	.01	.01	
13. Factor 1	(4.66)	(.64)	(.33**)	(.27*)	(.21*)	(.02)	(.05)	(.07)	(.10)	(.14)	(.07)	(.08)	(.08)	(.07**)	.70**
14. Factor 2	1.40	.94	.20*	.08	-.08	.08	.08	.08	.22*	.17	-.07	.17	.05	.72**	.63**
Organizational Attachment	(1.29)	(.93)	(.17)	(.03)	(.13)	(.00)	(.06)	(.07)	(.10)	(.14)	(.07)	(.08)	(.08)	(.07**)	.62**
Organizational Identification	3.76	.83	.08	.11	.08	.13	.10	.14	.08	.08	.04	.14	.01	.01	.73**
	(3.63)	(.95)	(.26*)	(.15)	(.09)	(.14)	(.19*)	(.10)	(.20*)	(.00)	(.29*)	(.00)	(.04)	(.08)	(.67**)
	3.81	.77	.00	.00	.11	.15	.14	.17	.11	.09	.10	.05	.05	.57**	.62**
	(3.71)	(.90)	(.14)	(.04)	(.00)	(.05)	(.07)	(.13)	(.13)	(.09)	(.21*)	(.10)	(.08)	(.53**)	(.73**)
	4.44	1.39	.15	.07	.13	.14	.09	.13	.10	.13	.09	.07	.07	.63**	.70**
	(4.32)	(1.56)	(.20*)	(.17)	(.18)	(.00)	(.11)	(.10)	(.18)	(.11)	(.14)	(.08)	(.08)	(.67**)	.70**
	3.64	1.08	.10	-.02	.19*	.27*	.22*	.22*	.11	-.19*	-.03	.00	.57**	.62**	.70**
	(3.61)	(1.16)	(.10)	(.11)	(.10)	(.13)	(.20*)	(.18)	(.19*)	(.12)	(.02)	(.10)	(.33**)	(.53**)	(.73**)

^a N = 123, ^b N = 114 (The means, standard deviations, and correlations for the cancelling of classes case are in parentheses.)

* p < .10

** p < .05

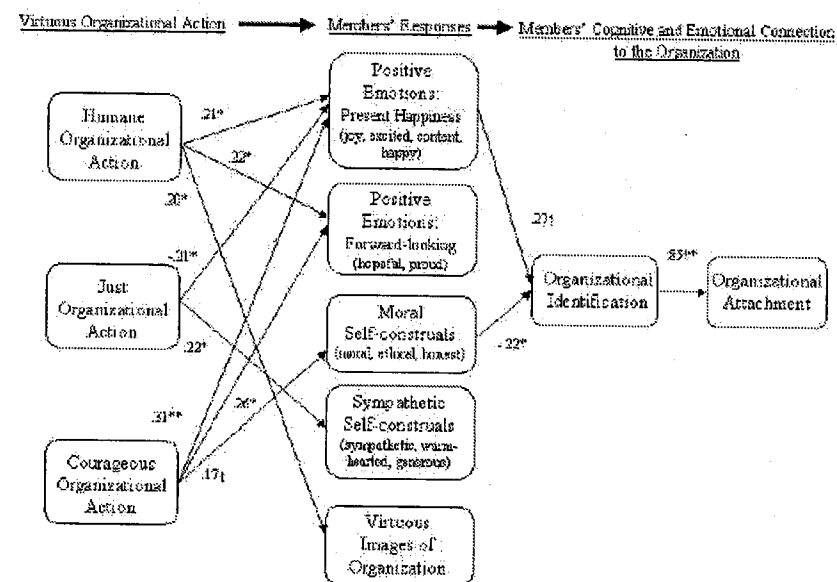
*** p < .01

the SEM analyses including the standardized path coefficients. By convention, RMSEA of .05 or less, RMR of .07 or less, NNFI and CFI of greater than .95 indicate a close fit of the model to the data.

University's action of holding a candlelight vigil. The model for the university's action of holding a candlelight vigil showed a good fit (RMSEA = .04, RMR = .06, NNFI = .97, CFI = .99, χ^2 (49) = 56.77, $p \leq .21$). The hypotheses received mixed support (See Figure 1a). Members who interpreted the university's action as humane and courageous experienced both (1) present happiness ($\beta = .21$, $p \leq .05$; $\beta = .31$, $p \leq 0.01$) and (2) forward-looking positive emotions ($\beta = .22$, $p \leq .05$; $\beta = .26$, $p \leq .05$). However, when members interpreted the university's action as just, they experienced less present happiness ($\beta = -.21$, $p \leq .05$). Thus, hypothesis 1 was partially supported. Hypothesis 2 was also partially supported. When members interpreted the university's action as courageous, they evaluated themselves as moral persons, with marginal significance ($\beta = .17$, $p \leq .10$), and sympathetic persons when they interpreted the university's action as just ($\beta = .22$, $p \leq .05$). Members' interpretations of the university's action as humane, but not just or courageous (i.e., $\beta = .06$, $\beta = -.14$), contributed to virtuous images of the university ($\beta = .20$, $p \leq .05$). Thus, hypothesis 3 was partially supported. Overall, the proposed general relationship was modestly supported that interpretations of the university's action as virtuous led to members' positive emotions, virtuous self-construals, and virtuous images of the university. However, because not all paths were statistically significant, the results provide only partial support for our hypotheses.

Hypothesis 4 was also partially supported. Members' positive emotions of present happiness, but not forward-looking positive emotions (i.e., $\beta = .01$, n.s.), were positively related to their identification with the university with marginal significance ($\beta = .27$, $p \leq .10$). Contrary to our hypothesis, members with a moral self were associated with reduced identification with the university ($\beta = -.22$, $p \leq .05$). The path coefficient from members' sympathetic self-construals to organizational identification (i.e., $\beta = .13$, n.s.) was not significantly different from zero, thus rejecting hypothesis 5. Virtuous images of the university were not significantly related to members' organizational identification (i.e., $\beta = -.02$, n.s.), rejecting hypothesis 6. Thus, only the relation between members' positive emotions and their cognitive and emotional connection to the organization was positive and marginally significant. Finally, hypothesis 7 was supported in that members' identification with the university was associated with greater attachment to the university ($\beta = .85$, $p \leq .01$).

Figure 1a: Structural Equations Modeling Results: Candlelight Vigil^a



^a Only statistically significant paths are shown.

† $p < .10$

* $p < .05$

** $p < .01$

University's action of cancelling of classes. Although the chi-square for the structural model was significant (χ^2 (49) = 76.56, $p \leq .01$), the other fit indexes in general indicated that the model fits the data well (RMSEA = .07, RMR = .06, NNFI = .91, CFI = .95). The hypotheses received mixed support (See Figure 1b). Overall, the hypotheses related to the university's action here received weaker support than that of holding a candlelight vigil. Interpretation of the university's action as humane was related to forward-looking positive emotions with marginal significance ($\beta = .19$, $p \leq .10$). Members who interpreted the university's action as courageous felt positive emotions of both present happiness ($\beta = .21$, $p \leq .10$) and forward-looking ($\beta = .35$, $p \leq .01$). Thus, hypothesis 1 was partially supported. Hypothesis 2 was also partially supported. Members' interpretations of the university's action as humane were associated with thinking of themselves as sympathetic ($\beta = .30$, $p \leq .01$).

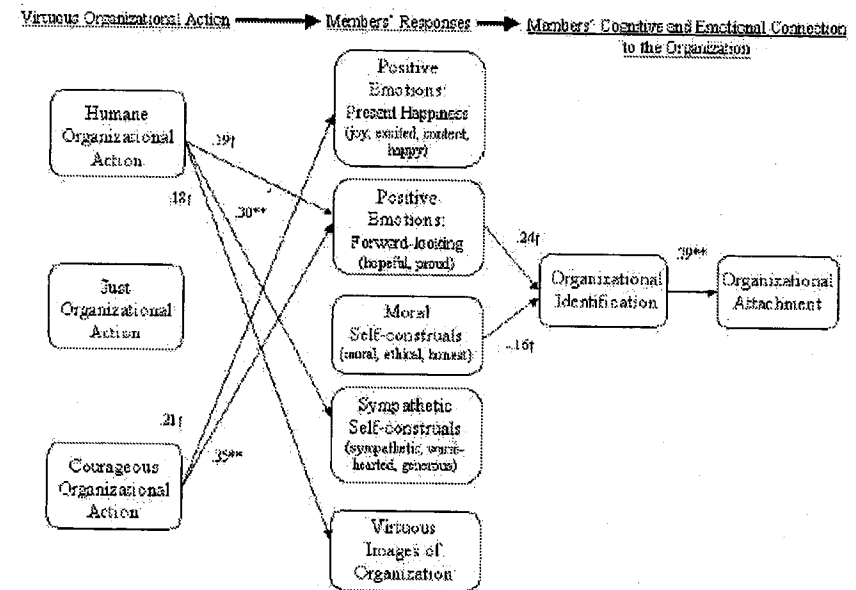
but not moral (i.e., $\beta = -.10$, n.s.). Members' interpretations of the university's action as humane, but not just or courageous (i.e., $\beta = -.13$, n.s.; $\beta = .13$, n.s.), were related to virtuous images of the university with marginal significance ($\beta = .18$, $p \leq .10$). Thus, hypothesis 3 was partially supported. Overall, the results are not strong, but provide some support to the general proposition that members' interpretations of university actions as virtuous influence members' responses.

Hypothesis 4 was also partially supported. Members' forward-looking positive emotions, but not positive emotions of present happiness (i.e., $\beta = .01$, n.s.), were positively related to their organizational identification ($\beta = .24$, $p \leq .10$). Hypothesis 5 was not supported. Members' sympathetic self-construals were not significantly related to identification with the university (i.e., $\beta = .16$, n.s.). And contrary to our hypothesis, moral self-construals of members reduced their level of identification with the university but with marginal significance ($\beta = -.16$, $p \leq .10$). The path coefficient from virtuous images of the university to organizational identification was not significantly different from zero (i.e., $\beta = -.04$, n.s.). Thus, hypothesis 6 was not supported. Overall, members' positive emotions were the only aspect of members' responses that was positively related to their cognitive and emotional connection to the organization with marginal significance. Hypothesis 7 was supported. When members cognitively identified with the university, their level of attachment to the university increased ($\beta = .79$, $p \leq .01$).

Causal Mediation Test Results

To verify the mediation effects and compensate for the limitations of cross-sectional design of the focal study, we compared the chi-square value of the final model (Figures 1a and 1b) with those of several models that involve additional direct paths from the antecedent variables to the outcome variables (Baron and Kenny, 1986; Bergami and Bagozzi, 2000). Table 2 reports the findings. Overall, the proposed general relationships in the model were supported: interpreted virtuousness of organizational actions $\rightarrow$ members' responses $\rightarrow$ organizational identification $\rightarrow$ organizational attachment. The findings also show that non-hypothesized paths, other than the ones in the final model, were not significant.

Figure 1b: Structural Equations Modelling Results: Cancelling of Classes^a



^a Only statistically significant paths are shown.

† $p < .10$

* $p < .05$

** $p < .01$

DISCUSSION

Our research provides initial support for the general proposition that virtuousness of organizational actions influences members' responses, which lead to organizational identification and attachment. We found that members can use virtue frames in interpreting organizational actions, and that these interpretations affected members' emotions, the way they interpreted themselves and their images of the organization. In both holding a candlelight vigil and cancelling classes cases, members' positive emotions and virtuous self-construals mediated the effects of interpreted virtuousness of organizational actions on members' organizational identification. The results suggest that organizational identification involves both cognitive and emotional aspects. Consistent with past research (Bergami and Bagozzi, 2000), organizational identification predicted organizational attachment but not the reverse.

Our hypotheses received more support from the university's holding a candlelight vigil than from the cancelling of classes. This may be due to greater involvement of social processes in making sense of this event (e.g., Weick's intersubjective sensemaking process), which strengthens the link between individual interpretations, reactions and connections to the organization. A candlelight vigil is a rare but strong emotional and spiritual experience with the university community coming altogether for a common purpose. In comparison, the cancelling of classes is a more routine university action than holding a candlelight vigil, and may have been experienced more as an individual than group benefit. Although participants mentioned both actions as meaningful, what these actions meant to members may be different.

Two paths in the structural model showed signs opposite to our hypotheses. First, the more members thought of themselves to be moral, ethical and honest, the less they defined themselves in terms of their membership in the organization. Three reasons may explain this finding. First, to define oneself as moral assumes independence, involving a sense of duty to follow moral law (Statman, 1997). People who see themselves this way may be relatively independent from social organizations. Second, individuals tend to view themselves as more ethical than others, including the organizations they belong to (Reynolds, 2003). Thus, members with strong moral self-construals may perceive less overlap between their self-images and the images of the organization. Finally, seeing oneself as moral might be associated with a more conservative political ideology and values. Given a large public university research site with a reputation of liberalism, this may have diminished the

Table 2: Tests of Causal Mediation in Figure 1a (Candlelight Vigil) and 1b (Cancelling of Classes)

Model	Candlelight vigil: Goodness-of-fit and Test of causal mediation	Cancelling of Classes: Goodness-of-fit and Test of causal mediation	Conclusion
M1 Baseline (Figures 1a and 1b)	$\chi^2(49) = 56.77, p = .21$ RMSEA = .04 RMR = .06 NNFI = .97 CFI = .99	$\chi^2(49) = 76.56, p = .01$ RMSEA = .07 RMR = .06 NNFI = .91 CFI = .93	
M2 Reciprocal causality between organizational identification and organizational attachment	$\chi^2(49) = 56.11, p = .20$ M2 - M1: $\chi^2(1) = .66, p = .42$	$\chi^2(48) = 73.12, p = .01$ M2 - M1: $\chi^2(1) = 3.44, p = .06$	Organizational identification influences organizational attachment, not vice versa.
M3 Added paths from virtuous organizational actions to organizational attachment	$\chi^2(46) = 53.88, p = .20$ M3 - M1: $\chi^2(3) = 2.88, p = .41$	$\chi^2(46) = 72.21, p = .01$ M3 - M1: $\chi^2(3) = 4.35, p = .23$	Member responses and organizational identification mediate the effects of virtuous organizational actions on organizational attachment.
M4 Added paths from member responses to organizational attachment	$\chi^2(44) = 53.28, p = .16$ M4 - M1: $\chi^2(5) = 3.48, p = .63$	$\chi^2(44) = 66.75, p = .02$ M4 - M1: $\chi^2(5) = 9.81, p = .08$	Organizational identification mediates the effects of member responses on organizational attachment.
M5 Added paths from virtuous organizational actions to organizational identification	$\chi^2(46) = 53.89, p = .20$ M5 - M1: $\chi^2(3) = 2.87, p = .41$	$\chi^2(46) = 75.08, p = .00$ M5 - M1: $\chi^2(3) = 1.48, p = .69$	Member responses mediate the effects of virtuous organizational actions on organizational identification.

desire of members who see themselves as moral so as to identify with the organization. Future research will need to explore this possible explanation.

Second, the more members interpreted the university's holding a candlelight vigil to be just, the less they felt joyous, excited, content or happy. Judgments on justice usually accompany a comparison with injustice (Solomon, 1993). When members used a virtue frame of justness to interpret the organization's action, they may have been tuned into both justice and injustice. In our case, the candlelight vigil was a gathering of the whole university community with different religions and value perspectives all represented, and a few speakers even made remarks about anti-hate crime issues. At that moment, positive emotions of happiness may have diminished, replaced by a more complex set of emotional reactions to these implications of the action, including negative feelings. Alternatively, because justice is a virtue that is supposed to hold on the basis of reason and not be subject to emotional concerns, it may be that the more people hold to or judge something to be just, the less they wish to associate emotion with it.

As discussed above, justice is a complex concept. General literature on justice uses broader justice conceptions such as fair treatment with respect for persons (e.g., Roberts-Cady, 2003; Van den Bos and Lind, 2001), whereas the forgiveness literature focuses on retributive justice that entails motivation to sanction the offender (Exline, Worthington, Hill and McCullough, 2003; Karremans and Van Lange, 2005). While our study uses the broader definition of justice, a retributive, eye-for-an-eye approach may give a different picture. From the retribution perspective, organizational members may not interpret holding a candlelight vigil or canceling classes as just actions by the organization because these actions do not serve retributive purposes. Even when members interpret the organizational actions as just, they may experience negative emotions associated with retributive impulses rather than positive emotions. A single virtue can be conceptualized in different ways, and different conceptions may influence outcomes differently.

Virtuous images of the organization did not mediate the effects of interpreted virtuousness of organizational actions on members' organizational identification. We surmise that many people could not easily or spontaneously generate instances of virtuousness when asked to give "organizational characteristics" in an open-ended format.

General Discussion

The results suggest that members engage in parsing and interpreting organizational actions in terms of how virtuous they are, which in turn relates

to members' connection to the organization through their feelings and thoughts of themselves and of the organization. Our research has implications for understanding sensemaking in organizations, especially the promise of virtue as a sensemaking frame, and for research on organizational identification and attachment.

First, our study improves understanding of how organizational members make sense of organizational actions in times of trauma or stress. Members may be most attentive to organizational actions when there have been major interruptions in "normal" life patterns (Weick, 1995) such as when unexpected events of tragic proportions impact a wide universe of institutions and individuals. Our findings affirm that organizations publicly convey actions in times of trauma and these actions acquire different meanings for members in the light of how virtuous they are. Organizations act and members make meaning of these actions as a normal part of trying to discern what the organization is, what it stands for, and what it is likely to do in the future.

Second, our research builds on the literature on organizational virtue by introducing virtue frames as sensemaking lenses. Understanding an organization in terms of its general virtuousness has not been given much attention in organizational research. This gap exists despite the recent debate about the moral and ethical foundation of business practices. While public awareness and attention seem to be on the absence of virtuous conduct by certain organizations, we believe that people inside and outside attend also to the positive end of the virtue spectrum. People learn and internalize virtue principles from early childhood and use virtue frames throughout their lives in detecting and understanding virtuous behaviors in daily encounters. Virtue frames may become more salient in times of tragedy as the situation calls for virtuous actions that reveal the goodness of the society and humankind. By focusing on virtue frames and their application to organization actions, we see how sensemaking is an ongoing process through which members respond emotionally and cognitively, shaping their identification with and attachment to the organization but most likely other behaviors as well. For example, interpreting organizational actions as virtuous may increase organizational citizenship behavior, willingness to cooperate, and intention to stay longer in the organization. More research on the importance of virtue frames is warranted.

Organizations might not display virtuous actions every day. But small actions seen as virtuous in certain situations may transform the meaning of an organization to its members. Following the events of 9-11, there have been numerous accounts of the significance of small moves that organizations have

made to provide comfort and care to members (Dutton, Frost, Worline, Lilius, and Kanov, 2002). To the degree that these actions are seen as the "true heart and soul" of a workplace, the actions may transform the bases and strength of organizational membership. Similarly, in a negative way, small actions seen as explicitly unvirtuous (e.g., inhumane, unjust, cowardly) may do lasting damage to the foundation needed for bonding members to the organization as a whole.

Not all virtuous actions affect organizational members the same way. The types and degrees of virtuousness that members attributed to organizational actions were different for different actions. Also, the effects of interpreted virtuousness of organizational actions were different for different types of virtues. While different virtues share common ground by being admirable and socially valued, their association with organizational actions may unlock different psychological reactions. For example, the humaneness of organizational action may have been a more central and fitting filter for understanding what an organizational action meant in the context of the events of 9-11. Our results suggest that a more customized virtue-specific link to outcomes may be warranted, representing an exciting future research opportunity. While organizational research has focused on justice as a frame for interpreting practices of organizations and people (e.g., Cropanzano et al., 2001), our research encourages consideration of underexplored virtue frames such as humanity and courage (Peterson and Seligman, 2004)

Third, our research contributes to work on the meanings of organizational membership. Our research addresses how positive meanings about organizational actions contribute to members' cognitive and emotional connection to the organization. While there is growing interest in how the positive meaning of work affects organizational members (e.g., Wrzesniewski, 2003), we see real promise in extending this interest to the consequences of positive meaning-making about organizational actions. While our results were mixed, the few significant paths, particularly between positive emotion and organizational identification, and from organizational identification to organizational attachment, provide some support for the processes of positive connection to the organization. The focus on meaning as a mechanism for organizational identification and attachment complements perspectives that emphasize how material rewards (e.g., Schaubroeck, 1996) and organizational practices (e.g., Tsui et al., 1992) contribute to or detract from members' bonds with the organization. By unpacking the black box between meanings of virtuous actions and organizational identification and attachment, we understand how virtuous behaviors create vital assets of positive connection to the organization.

Limitations

The present findings need to be considered in light of the research's limitations. First, respondents to our questionnaire might have been those who were affected by the events of 9-11 more than others, producing a biased distribution of acts and interpretations of those acts. Second, we have looked at sensemaking as a single snapshot and not as a process (Weick, 1995). The survey was administered three months after the target events implying that the data rely on participants' retrospective thoughts on the events. Third, we captured the degree of virtuousness for each action using single-item measures. Future research should work to develop more reliable and valid multiple time measures. Finally, generalizability is limited by the sample, the event, the actions and the subset of virtues studied.

CONCLUSION

Overall our research invites deeper exploration into the theoretical and empirical links between organizational actions and members' cognitive and emotional connections to the organization. The trauma and scale of the events of September 11th, 2001 are rare and unique. However, the process of members' sensemaking of organizational actions is common and relatively routine. Our hope is that by applying the frame of virtuousness to how members make sense, we uncover a significant and useful path for understanding members' meaning-making and its consequences. Further, by unpacking the mechanisms that explain how virtue frames shape members' positive connection to the organization, we see the potentially important role played by positive emotions and self-construals in the process of identification in organizations.

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