2011

Virtuous creativity: The Effects of leader behavioural integrity on follower creative thinking and risk taking

Michael Palanski

Gretchen Vogelgesang

Follow this and additional works at: http://scholarworks.rit.edu/article

Virtuous Creativity: The Effects of Leader Behavioural Integrity on Follower Creative Thinking and Risk Taking

Michael E. Palanski*
Rochester Institute of Technology

Gretchen R. Vogelgesang
Federal Management Partners

Abstract
Despite the preponderance of research concerning creativity and ethical leadership, the possibility of why and how a leader's ethical behaviour may stimulate follower creativity has not been examined. Employing an online experimental design, we applied a virtue ethics framework to examine associations between subordinates' perceptions of their leader's integrity and their intention to think creatively and to engage in risk taking. Subordinates' perceptions of their leader's behavioural integrity positively predicted their sense of psychological safety. Moreover, psychological safety positively predicted followers' intention to think creatively and to take risks. Copyright © 2011 ASAC. Published by John Wiley & Sons, Ltd.

JEL Classification: M12

Keywords: virtues, behavioural integrity, creativity, psychological safety

Résumé
Malgré le grand nombre de recherches consacrées à la créativité et au leadership éthique, la question de savoir comment et pourquoi le comportement éthique du leader stimulerait la créativité de ceux qui le suivent n'a pas retenu l'attention des chercheurs. À partir d'une conception expérimentale en ligne, nous avons utilisé le cadre de la vertu éthique pour examiner le lien entre les perceptions que les subordonnés ont de l'intégrité de leur leader et leur intention de penser de façon critique et de prendre des risques. L'étude montre que les perceptions que les subordonnés ont de l'intégrité comportementale de leur leader prédisent positivement leur sens de sécurité psychologique. Par ailleurs, la sécurité psychologique prédit positivement les intentions des suiveurs de penser de façon critique et de prendre des risques. Copyright © 2011 ASAC. Published by John Wiley & Sons, Ltd.

Mots-clés : vertus, intégrité comportementale, leadership éthique, créativité, sécurité psychologique

Organizational leaders are seeking every means possible to create and sustain competitive advantage in today's dynamic global economy. As a result, companies need employees at every level to constantly engage in improving existing products and processes and in developing new ideas to drive outstanding performance. In such a milieu, it is not at all surprising that the importance of creativity has ascended to the fore of organizational issues. In particular, emphasis is being placed on fostering individual creativity, which forms the bedrock for organizational creativity and continuous performance improvement. This focus has inspired researchers and practitioners to search for a better understanding of the factors that encourage creativity. While past efforts have centered mainly on identifying the characteristics of creative individuals (e.g., Amabile, 1988), newer research addresses the social dynamics and social context of creativity (e.g., Shalley & Gilson, 2004).

At the same time, spurred by individual and organizational corruption in the public arena, both popular and academic interest in ethical leadership is very high. Leaders who can both drive innovation and create an ethical climate are the order of the day. Within organizations, leaders at multiple levels play an important role in developing and sustaining ethical cultures and ethical conduct (Grojean et al., 2004; Mendonca, 2001). Thus, it is no surprise that a great deal has been written about ethical leadership that is prescriptive, often in form of a philosophical discussion about what leaders ought to do. Virtually all the so-called "new wave" leadership theories, including transformational (Aronson, 2001; Bass, 1985), charismatic (Conger et al., 2000), authentic (Avolio & Gardner, 2005), ethical (Brown et al., 2005), and spiritual (Fry, 2003)

*Please address correspondence to: Michael E. Palanski, Saunders College of Business, Rochester Institute of Technology, Rochester, NY, USA. Email: mpalanski@saunders.rit.edu

leadership, discuss the ethical implications of leader behaviours.

Given the important roles that both creativity and ethical leadership hold in organizational research, it is somewhat surprising that, to our knowledge at least, no published study has examined how a leader's ethical behaviour might influence follower creativity. To be sure, there is a significant body of research that examines the important role leaders play in the creative process (e.g., Mumford, Scott, Gaddis, & Strange, 2002; Shalley & Gilson, 2004). However, much of this work has focused on in-role leader activities, such as providing rewards (Eisenberger & Armeli, 1997), expertise (Tierney et al., 1999), and supervisory support (Cangemi & Miller, 2007; Scott & Bruce, 1994), with little or no examination of leader ethical behaviour. One exception is research that has investigated servant leadership as an antecedent to a promotion regulatory focus, which in turn impacts both creative and helping behaviour (Neubert et al., 2008). Here, we go beyond this to examine the possibility that it may be the leader's word-deed alignment, or behavioural integrity, that impacts creativity.

Perhaps one reason for the relative lack of research in this area is related to the dominant approach for studying business ethics in general and ethical leadership in particular. Until recently, most research in applied business ethics has focused on the Kantian (rule-based) or utilitarian (cost/benefit) theoretical approaches (Chun, 2005), which both seek to answer the basic question: "What is the right thing to do?" Over the past decade, however, increasing attention has been devoted to a more virtue-based approach (Solomon, 2003), which seeks to answer the question: "What kind of persons ought we to be?" Most Kantian and utilitarian approaches tend to focus on making an optimal decision for a particular situation. In contrast, virtues-based approaches center on the dispositions that constitute good character (MacIntyre, 1984) and focus on positive patterns of behaviour across time and situations. This consistency of behaviour, as exemplified through the practice of virtues, may provide a key for understanding the relationship between ethical leader behaviour and follower creativity.

We investigated this relationship by using an experimental design to examine the impact of one type of virtuous leader behaviour—behavioural integrity—on two important facets of follower creativity: creative thinking and risk taking. We begin by briefly reviewing the literature concerning creativity and leader integrity. Next we consider a mechanism (follower psychological safety) whereby leader integrity might impact creative thinking and risk taking. Results of our online experiment are then presented. Finally, we conclude with a discussion of the results, limitations of the study, and ideas for future research.

Literature Review

Creativity

Creativity is often treated as the outcome of a process; specifically, it is "the production of new and useful ideas concerning products, services, processes, and procedures" (Shalley & Gilson, 2004, p. 34). Creativity is critical to performance for many firms and ultimately, to their survival (e.g., Nystrom, 1990). Much of the early research on creativity has focused on individual attributes (usually traits) of the creative individual (Amabile, 1988)—a logical starting point given popular romantic notions of the creative individual engaging in a solo creative act (e.g., the artist in her studio or the scientist in his laboratory). However, as Amabile (1988) pointed out, creativity is perhaps better conceptualized as a set of behaviours that result not only from individual traits and abilities, but also from social interactions. Accordingly, more recent research has focused on unit and/or enterprise-level social factors such as organizational climate and culture (Amabile et al., 1996).

We build on this line of inquiry that views creativity as a set of individual behaviours influenced by social environments, especially those created by leadership. Previous research has long focused on the importance of creative thinking skills such as generation of alternatives, divergent thinking, and analyzing complex situations (Amabile et al., 1988; Guilford, 1950), all of which have the effect of challenging entrenched viewpoints. This skill set may also include thinking conceptually to solve complex problems. Although most researchers have regarded creative thinking as an individual trait (Amabile, 1988), others have suggested that it may be learned (e.g., Basadur et al., 2000). If learning is involved, social influences, such as leadership, likely play a facilitating role.

We also suspect that leaders impact creativity by encouraging risk taking. As Mumford et al. (2002) pointed out, creativity is an inherently risky venture wherein the trial-and-error processes inevitably result in some failures (Shalley & Gilson, 2004). The propensity for an individual to take risks and become involved in projects that may fail is in part dispositional. For example, openness to experience is positively related to risk taking (McCrae, 1987). Still, research has also shown that organizational cultures affect employee risk taking (Nystrom, 1990). Leaders can play a significant role in fostering such a culture (Grojean et al., 2004).

In a recent study concerning the role that leadership plays in the creative process, Mumford et al. (2002) examined leader expertise, leadership style, and leader support. Shalley and Gilson (2004) investigated job- (e.g., sufficient resources) and team- (e.g., group composition) level factors subject to leader influence. Cangemi and Miller (2007) found that supportive leadership facilitated of subordinate creativity, especially when coupled with clarity

concerning acceptable work procedures. While these and other in-role activities are indeed important for creativity, we suggest that the virtuous behaviour of the leader also plays a role in fostering follower creativity (Neubert et al., 2008). Our focus is on leader behavioural integrity as a key component of leader character (Palanski & Yammarino, 2007) and facilitator of follower psychological safety, which should in turn positively impact follower creative thinking and risk taking.

Behavioural Integrity

Leader integrity is an enduring topic (e.g., Kirkpatrick & Locke, 1991; Parry & Proctor-Thomson, 2002) but much of this research lacks rigour. Palanski and Yammarino (2007) recently provided a clear definition of the construct and followed up with a multilevel theory of integrity and leadership (Palanski & Yammarino, 2009). In their review of over 30 studies, Palanski and Yammarino (2007) showed that research on integrity within the management and applied psychology literatures has included references to wholeness, authenticity, consistency in the face of adversity, consistency between words and actions, and moral/ethical behaviour. They defined integrity within a virtues framework as "the consistency of an acting entity's words and actions" (Palanski & Yammarino, 2007, p. 17). Conceptually, this definition is very similar to Simons' (2002, p. 19) concept of behavioural integrity: the "perceived pattern of alignment between an actor's words and deeds." Behavioural integrity includes two theoretical components: consistency between espoused and enacted values and explicit "promise-keeping."

Considering behavioural integrity within a framework of moral philosophy allows for more precise specification of its role vis-à-vis other constructs. Specifically, based on Audi and Murphy (2006), Palanski and Yammarino (2007) posited that integrity-as-consistency (i.e., behavioural integrity) should be classified as an adjunctive virtue. Adjunctive virtues (such as integrity, courage, and steadfastness) are neither morally good nor bad, but are nonetheless necessary for virtuous character (Audi & Murphy). In comparison, substantive virtues (such as honesty and compassion) are themselves morally good (Audi & Murphy). According to Audi and Murphy, both adjunctive and substantive virtues are necessary for good character, but neither type alone is sufficient. Further, although behavioural integrity is a discrete virtue, it, like all individual virtues, cannot foster the good by itself. Thus, as it does for any and all discrete virtues, the presence or absence of overall moral character provides the boundary condition for behavioural integrity such that its expected positive effects will be diminished when the substance of the words and actions of an actor are morally deficient (Palanski & Yammarino, 2007).

Behavioural integrity is an important component of ethical leadership (Dineen et al., 2006; Simons et al., 2007).

Leader behavioural integrity is positively associated with follower trust in the leader, organizational commitment, satisfaction with the leader (Palanski & Yammarino, in press; Simons et al., 2007), and organizational citizenship behaviours (OCBs; Dineen et al., 2006). Moreover, followers who perceive high behavioural integrity within their leader are more willing to offer criticism (Simons et al., 2007), which, when done constructively, usually aids creative problem solving (Shalley & Gilson, 2004). Palanski and Yammarino (2007) suggested that, as a virtue, perceived leader integrity is likely to foster subordinate achievements. Similarly, we suggest that followers of high integrity leaders will be best able to understand and forecast supportive leader behaviours (e.g., a leader high in behavioural integrity who touts the importance of failure on the path to success will not punish a follower who fails in an attempt to succeed). This leader predictability can be expected to foster risk-taking creative behaviours among subordinates.

In their synthesis of leadership and creativity research, Mumford et al. (2002) identified at least two ideas that are consistent with the notion that leader behavioural integrity enables follower creativity. First, people are less willing to express themselves creatively when there is little perceived support for idea generation. Second, innate creative potential is related to creative output when people feel safe to make their ideas known and are encouraged to pursue new ones. Both of these arguments tie into the notion that leaders create conditions under which followers feel that they have the freedom and ability to pursue new ideas. Leader encouragement of idea creation through nourishing and an environment of psychological safety should enhance self-efficacy and perceived behavioural control on the part of followers by allowing freedom to try (and perhaps to fail at) new things (Shalley & Gilson, 2004)—each of which are robust antecedents of behavioural intent and behaviour (Ajzen, 1991). In this sense, psychological safety links leader behavioural integrity to follower creativity.

Psychological Safety

Psychological safety concerns the ability of individuals to freely offer their opinions and values without fear of derision from others (Edmondson, 1999; Kahn, 1990; May et al., 2004). While it is most commonly treated as a team-level construct (e.g., Edmondson, 1999), it has also been conceptualized and tested at the individual (e.g., Kark & Carmeli, 2009) and organizational (e.g., Baer & Frese, 2003; Brown & Leigh, 1996) level. We suggest that individual employees may first need to experience psychological safety to feel assured that their contributions will not be ridiculed. Psychological safety in a team environment is demonstrated when each team member expects other members will not react punitively when ideas are shared (Edmondson, 2003). However, individual perceptions of psychological safety

have been measured without reference to a specific team or climate (Baer & Frese, 2003; Brown & Leigh, 1996), and such perceptions are likely to be important predictors of individual performance outcomes and behaviours.

Psychological safety is present when well-defined standards for actions are understood by all (May et al. 2004) and is lacking when conditions are ambiguous, which leads to, among other things, uncertainty concerning the boundary between acceptable and unacceptable activities. Inconsistency in leader behaviour negatively affects an individual's willingness to try out new methods or ideas (Lee et al., 2004). We suggest that leader behavioural integrity encourages psychological safety by minimizing ambiguity, providing for leader behaviours that are consistent, transparent, and understandable to followers. Enhanced psychological safety can also be expected to develop over time as followers have the opportunity to make multiple observations and gain confidence estimating the leader reactions.

Even though behavioural integrity is an adjunctive virtue, one could argue that a leader might possess high behavioural integrity but nonetheless stifle creativity by espousing and enacting a value such as, "deviations from standard procedures will not be tolerated." While espousing and enacting procreativity values would certainly seem to be more effective than espousing and enacting anticreativity, we believe that sending an unclear message (i.e., by demonstrating low behavioural integrity) is even more detrimental. A low-behavioural integrity leader might reward an unconventional idea in one instance but punish a similarly creative idea in another, undermining follower psychological safety. For example, Tepper (2007) showed that leaders who displayed a mixture of both supportive and abusive styles (i.e., actions akin to low behavioural integrity) were more detrimental to followers than leaders who displayed an abusive style exclusively (i.e., actions akin to high behavioural integrity). Thus, as related to a feeling of psychological safety per se, a leader with high behavioural integrity centered on questionable values might be more desirable for followers (and less psychologically damaging) than one with low behavioural integrity.

Hypothesis 1: Leader behavioural integrity is positively related to follower psychological safety.

Psychological Safety, Creative Thinking, and Risk Taking

Baer and Frese (2003) argued that psychological safety fosters creativity at the organizational level. We extend their logic to the individual level of analysis. First, since creative acts in the context of business enterprises often require a high degree of interdependence among employees, a felt sense of safety involving interpersonal actions is likely important.

Further, psychological safety enables the "open atmosphere" necessary for communicating new ideas. When trepidation concerning failure is minimized, employees are much more likely to enact risk-taking ideas (Lee et al., 2004). Thus, undue concerns associated with the potential for failure must be removed for individual employees to engage in creative thinking and risk taking. Nevertheless, creative thinking involves refinement and/or rejection of some, if not most, of the original ideas, leaving those "unused" to be considered as "failures." Still, psychological safety can serve much the same function as the "no criticism/no comment" rule in brainstorming, where participants are asked to compile all possible solutions to a problem without criticism or even comment from other participants. The "no criticism/no comment" rule allows participants the freedom to think divergently without fear of derision from others. Once the most promising ideas are identified, the benefits of psychological safety should extend to the implementation stage.

To summarize, followers need to believe that thinking creatively and taking risks are valued by the leader. Experiencing psychological safety should help to reinforce these beliefs (Shalley & Gilson, 2004). Further, these beliefs should facilitate conditions under which self-efficacy and perceived behavioural control flourishes, which in turn should create a context conducive of creativity.

Hypothesis 2: Followers' perceptions of a psychologically safe work environment are positively related to their intentions to think creatively.

Hypothesis 3: Followers' perceptions of psychological safety are positively related to their intentions to take risks.

Method

Sample

Participants were adults with full-time work experience who were part of the Syracuse University Study Response Project (http://studyresponse.syr.edu). Approximately 900 people were invited via email to participate in the study; 138 responded affirmatively. The response rate of 15.3% is typical for the Study Response Project and other web-based research. Demographically, 63% were women and 19% were non-US residents; approximately 77% were Caucasian, 17% were of African descent, and 3% were either Asian/Pacific Islander or Hispanic. The average age was 35, and 28 occupation types were represented (e.g., banking, engineering, and retail).

Procedure

Written scenarios were used to portray variations in the behaviour of a fictional leader (cf. Avolio et al., 2009).

Preliminary versions of the scripts were evaluated for face validity by four doctoral students familiar with behavioural integrity and who were given specific instructions as to the nature and purpose of each scenario. The scenarios were further refined following an online pilot study (N=65). Participants were randomly assigned to one of three conditions: high, neutral, and low behavioural integrity (see Appendix for the scripts). They were instructed to read a scenario concerning a typical week in the life of a manager of a sales team and then respond to measures of psychological safety, intention to think creatively, and intention to take risks. All the data were collected online using survey software hosted by SurveyMonkey (www. surveymonkey.com).

Analysis

Partial Least Squares (PLS) with *SmartPLS* (Ringle et al., 2005) was used to evaluate both the measurement model and the structural model. PLS is uniquely suited for exploratory data testing and has several advantages over other techniques (Chin & Newsted, 1999). It generates estimates of standardized path coefficients in path models, but does not require a multivariate normal distribution and is suitable for the analysis of small samples. Moreover, PLS can help reduce measurement error by differentially weighting the individual indicators of a multi-indicator variable. In contrast to covariance-based structural equation modelling (e.g., LISREL and AMOS), the focus of PLS is on prediction and practical significance (i.e., through variance explained) as opposed to model fit. Also, in PLS both the measurement model and theoretical models are evaluated simultaneously, which makes it preferable to alternatives based on multiple regressions in which the models must be tested independently. Finally, PLS has been used previously in experimental leadership studies (Sosik et al., 1999).

Measures

Behavioural integrity was assessed using an 8-item scale developed by Simons et al. (2007) that employs a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The items include, "(Manager's name) shows the same priorities he/she describes" and "(Manager's name) delivers on promises."

Psychological safety was measured using a 10-item scale developed by Edmonson (1999) that employs a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The items include, "If you make a mistake on this team, it would be held against you."

Creative thinking was assessed using four items from the International Personality Item Pool's (2001) adaption of the Abridged Big-Five Dimensional Circumplex creativity subscale. These four items were selected because they best reflected elements of creative thinking. All items employ a 5-point scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The items were modified slightly to reflect the intent to behave as opposed to past behaviour. For example, "I challenge others' points of view" was changed to "I would challenge others' points of view (if I was working for this manager)." Other items included, "I would like to solve complex problems," "I would likely know the answers to many questions," and "I would ask questions that nobody else does."

Risk taking was assessed using a 4-item scale adapted from Weber et al. (2002) that employs a 5-point scale ranging from 1 ("extremely unlikely") to 5 ("extremely likely"). Items include (How likely would you be) "To ask (your manager) for a raise," "To admit that your opinions are different from your coworkers," "To disagree with (your manager) on a major issue," and "To speak your mind about an unpopular issue?"

Results

Measurement Reliability and Discriminant Validity

Table 1 shows descriptive statistics for the study variables and Table 2 shows PLS indices reflecting scale reliabilities and validities.

The PLS test of the measurement model has three primary aspects: (a) individual item reliability, (b) internal consistency of the entire scale, and (c) discriminant validity. Individual item reliability was assessed by examining the factor loadings of each measure on its corresponding construct. Fornell and Larcker (1981) suggested accepting items with loadings of at least 70, though this standard has been relaxed (usually to .50 or greater) in exploratory research, especially when established scales are involved (Barclay et al., 1995). Since the loadings associated with each of the scales were all greater than .60 (see Table 2), individual item reliability was judged acceptable.

Table 1
Means, Standard Deviations, Reliabilities, and Correlations

Variables	Mean	S.D.	1	2	3	4
1 L Behavioural integrity	3.38	1.34	**.94**			
2 F Psych. safety	3.46	.92	.80**	**.81**		
3 F Risk taking	3.51	.75	.37**	.43**	**.75**	
4 F Creativity	3.63	.72	.17*	.38**	.40**	**.71**

n=138 L=Leader F=Follower
Note: Items in boldface on the diagonal represent the square root of the average variance extracted (AVE).
* $p < .05$ ** $p < .01$

Table 2

Factor and Cross-Factor Loadings, Average Variance Extracted, and Internal Consistency Reliabilities Extracted

Factors

Item	1	2	3	4
1. Leader behavioural integrity (AVE=.88; Consistency=.98)				
1	**.91**	.77	.18	.37
2	**.94**	.80	.21	.36
3	**.96**	.80	.17	.36
4	**.93**	.75	.20	.44
5	**.96**	.79	.24	.42
6	**.96**	.77	.21	.42
7	**.94**	.76	.16	.42
8	**.90**	.74	.16	.32
2. Follower psychological safety (AVE=.65; Consistency=.93)				
1	.68	**.80**	.30	.44
2	.56	**.79**	.33	.31
3	.80	**.82**	.21	.42
4	.74	**.82**	.21	.42
5	.63	**.73**	.19	.36
6	.75	**.72**	.79	.41
7	.47	**.68**	.38	.33
8	.62	**.81**	.30	.33
9	.37	**.65**	.32	.21
10	.35	**.62**	.37	.34
3. Follower creative thinking (AVE=.50; Consistency=.80)				
1	.29	.35	**.80**	.45
2	.16	.19	**.68**	.53
3	.01	.24	**.62**	.10
4	.08	.23	**.72**	.21
4. Follower risk taking (AVE=.56; Consistency=.84)				
1	.37	.42	.39	**.74**
2	.38	.47	.39	**.84**
3	.12	.15	.23	**.68**
4	.28	.30	.31	**.74**

Factor loadings are indicated in boldface. AVE=Average Variance Extracted.
Consistency=Internal Consistency Reliability

Construct internal consistency was assessed using composite internal scale reliability, which is similar to Cronbach's alpha. All four measures satisfy the Fornell and Larcker (1981) guideline of at least .70 for internal consistency (see Table 2). Internal consistency can also be evaluated using the Average Variance Extracted (AVE), which is a measure of variance accounted for by the underlying construct. All four scales had an AVE of at least .50, satisfying the Fornell and Larcker (1981) recommendation and providing further support for internal consistency (see Table 2).

Discriminant validity is assessed in two ways using PLS. First, each item should load most strongly on its target construct (Carmines & Zeller, 1979). Table 2 shows that all the items for each scale met this criterion. Second, each construct should share more variance with its items than with any other construct in the model (Barclay et al., 1995). This criterion is usually assessed in a manner similar to a multitrait/multimethod approach. Specifically, the square root of the AVE associated with a construct should be greater than its correlation with any other construct in the model. An examination of the square root of the AVE for each scale as shown in the diagonal of Table 1 reveals that this criterion was also met. Thus, all the measures exhibit acceptable levels of discriminant validity.

Manipulation Check and Hypothesis Testing

One purpose of using a scenario-based experimental design was to ensure the intended variability of behavioural integrity. Although most experiments are designed to examine the between-condition effects of the exogenous variable, we elected to examine behavioural integrity as a continuous variable because doing so allowed for increased sensitivity in the analysis. Nonetheless, for the purposes of a manipulation check, we dummy-coded behavioural integrity in each condition: high (N=54, m=4.25), neutral (N=43, m=3.82), and low (N=41, m=1.76) (see Appendix). We then used analysis of variance (ANOVA) to compare the means. The ANOVA results indicated that the manipulation worked as intended ($F_{(2)}$=117.2, $p < .01$).

Next we tested the measurement and structural model. Because all the variables were measured using a continuous scale, we used a path model. Table 3 shows that the first hypothesis, a positive effect of perceived leader behavioural integrity on follower psychological safety, was supported (b=.83, $p < .01$, r^2=.69). Hypotheses 2 and 3, which predicted positive effects of follower psychological safety on followers' intention to think creatively (b=.38, $p < .01$, r^2=.14) and to engage in risk taking (b=.50, $p < .01$, r^2=.25) were also supported.

Discussion

Summary

We believe this is the first study to explicitly link two popular and important topics—virtuous leader behaviour in the form of behavioural integrity and follower creativity. The findings from our experimental study suggest that leader behavioural integrity facilitates a sense of psychological safety on the part of followers. Moreover, followers' sense of psychological safety appears to positively predict followers' willingness to take risks and to think creatively.

Contributions to Scholarship

Our experimental findings suggest that consistency of leader words and actions help create a climate in which

Table 3

Partial Least Squares Analysis of Hypothesized Relationships

DV (r^2)[a]	H	Proposed path	b[b]	t-value[c]
F Psych. Safety (.69)				
	H1	L Behavioral Integrity → F Psych. Safety	.83	31.6**
F Creativite Thinking (.14)				
	H2	F Psych. Safety → F Creativite Thinking	.38	5.08**
F Risk Taking (.25)				
	H3	F Psych. Safety → F Risk Taking	.50	7.79**

L=Leader
F=Follower
[a]r^2 is total variance explained by path
[b]All b's are standardized path coefficients.
[c]All t-values are based on 499 *df*
**$p < .01$ (two-tailed)

creative endeavours and risk-taking behaviours are likely to be initiated. Moreover, with respect to the literature on leader ethics, we add creative thinking and risk taking to an expanding list of subordinate outcome variables that have been examined (e.g., beyond trust, satisfaction, and OCBs; cf. Dineen et al., 2006; Palanski & Yammarino, Simons et al., 2007).

Applied Implications

Our findings, though tentative, offer hope to leaders responsible for encouraging creativity and innovation in their organizations. Behavioural integrity of leaders is reflected in actions consistent with their espoused words and values. This integrity helps foster among subordinates a sense of psychological safety, conducive to thinking and acting in creative ways. This not only gives rise to a diversity of ideas and perspectives in the workplace, but also fosters employee involvement through building self-efficacy and a sense of control and influence, particularly where their creative ideas and actions have tangible positive impact and are acknowledged and rewarded.

Limitations and Future Research Directions

Our outcome variables assessed intentions to think creatively and to take risks, and not actual creative and/or risky behaviours. However, this limitation is mitigated to some extent by the strong evidence that demonstrates a robust link between intentions and behaviour (e.g., Ajzen, 1991). Second, although the behavioural integrity manipulation was valid as reflected by the findings of our manipulation check, research is needed to assess the potential contribution of

perceived leader integrity relative to other likely important dispositional and contextual predictors of subordinate creativity (cf. Mumford et al., 2002; Shalley & Gilson, 2004).

Another potential limitation lies in the fact that all data were collected from a common source, giving rise to common method bias. However, our discriminant analyses showed empirical distinction among our study constructs consistent with their conceptual definitions.

We recommend the study of intact teams working on tasks requiring creativity. Among other things, this would allow for exploring whether leader behavioural integrity and follower psychological safety are related at other levels of analysis. Of course, there is also the need to evaluate alternative and more complete structural models as eluded to above. Finally, more needs to be known about how leaders create virtuous environments that, for example, could foster enterprise-wide creativity.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*, 179–211.

Amabile, T.M. (1988). A model of creativity and innovation in organizations. In B. M. Staw, & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. *10*, pp. 123–167). Greenwich: JAI Press.

Amabile, T.M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, *39*, 1154–1184.

Amabile, T.M., Gronhaug, K., & Kaufmann, G. (1988). From individual creativity to organizational innovation. In K. Gronhaug (Ed.), *Innovation: A cross-disciplinary perspective* (pp. 139). Norway: Norwegian University Press.

Aronson, E. (2001). Integrating leadership styles and ethical perspectives. *Canadian Journal of Administrative Sciences*, *18*(4), 244.

Audi, R. and Murphy, P.E. (2006). The many faces of integrity. *Business Ethics Quarterly*, *16*, 3–21.

Avolio, B.J., & Gardner, W.L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*, *16*, 315–338.

Avolio, B.J., Mahtre, K., Norman, S.M., & Lester, P. (2009). The moderating effect of gender on leadership intervention impact. *Journal of Leadership & Organizational Studies*, *15*, 325–341.

Baer, M. & Frese, M. (2003). Innovation is not enough: Climates for initiative and psychological safety, process innovations, and firm performance. *Journal of Organizational Behavior*, *24*, 45–68.

Barclay, D., Higgins, C., & Thompson, R. (1995). The partial least squares (PLS) approach to causal modeling, personal computer adoption and use as an illustration. *Technology Studies*, *2*, 285–309.

Basadur, M., Runco, M.A., & Vega, L.A. (2000). Understanding how creative thinking skills, attitudes, and behaviors work together: A causal process model. *Journal of Creative Behavior 34*, 77–100.

Bass, B.M. (1985). *Leadership and performance beyond expectations*. New York: The Free Press.

Brown, M.E., Trevino, L.K., & Harrison, D.A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes*, 97, 117–134.

Brown, S.P. & Leigh, T.W. (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of Applied Psychology*, 81, 358–368.

Cangemi, J., & Miller, R. (2007). Breaking-out-of-the-box in organizations: Structuring a positive climate for the development of creativity in the workplace. *The Journal of Management Development*, 26(5), 401–410.

Carmines, E.G., & Zeller, R.A. (1979). *Reliability and validity assessment*. Beverly Hills, CA: Sage.

Chin, W.W., & Newsted, P.R. (1999). Structural equation modeling analysis with small samples using partial least squares. In Rick Hoyle (Ed.), *Statistical strategies for small sample research* (pp. 307–341). Thousand Oaks, CA: Sage.

Chun, R (2005). Ethical character and virtue of organizations: An empirical assessment and strategic implications. *Journal of Business Ethics*, 57, 269–284.

Conger, J.A., Kunungo, R.N., & Menon, S.T. (2000). Charismatic leadership and follower effects. *Journal of Organizational Behavior*, 21, 747–767.

Dineen, B.R., Lewicki, R.J., & Tomlinson, E.C. (2006). Supervisory guidance and behavioral integrity: Relationships with employee citizenship and deviant behavior. *Journal of Applied Psychology*, 91(3), 622.

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350.

Edmondson, A.C. (2003). Speaking up in the operating room: How team leaders promote learning in interdisciplinary action teams. *Journal of Management Studies*, 40(6), 1419.

Eisenberger, R., & Armeli, S. (1997). Can salient reward increase creative performance without reducing intrinsic creative interest? *Journal of Personality and Social Psychology*, 72, 652–663.

Fornell, C., & Larcker, D.F. (1981). Evaluating structural equation models with unobserved variables and measurement error. *Journal of Marketing Research*, 18, 39–50.

Fry, L.W. (2003) Toward a theory of spiritual leadership. *The Leadership Quarterly*, 14, 693–727.

Grojean, M.W., Resick, C.J., Dickson, M.W., & Smith, D.B. (2004). Leaders, values, and organizational climate: Examining leadership strategies for establishing an organizational climate regarding ethics. *Journal of Business Ethics*, 55: 223–241.

Guilford, J.P. (1950). Creativity. *American Psychologist*, 5, 444–454.

International Personality Item Pool. (2001). A scientific collaboratory for the development of advanced measures of personality traits and other individual differences. Retrieved from International Personality Item Pool website: http://ipip.ori.org.

Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33, 692–724.

Kark, R., & Carmeli, A. (2009). Alive and creating: The mediating role of vitality and aliveness in the relationship between psychological safety and creative work involvement. *Journal of Organizational Behavior*, 30, 785–804.

Kirkpatrick, S.A., & Locke, E.A. (1991). Leadership: Do traits matter? *The Executive*, 5, 48–60.

Lee, F., Edmondson, A.C., Thomke, S., & Worline, M. (2004). The mixed effects of inconsistency on experimentation in organizations. *Organization Science*, 15(3), 310–326.

MacIntyre, A. (1984). *After virtue* (2nd ed.). Notre Dame, IN: University of Notre Dame Press.

May, D.R., Gilson, R.L., & Harter, L.M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology*, 77, 11–37.

McCrae, R. (1987). Creativity, divergent thinking, and openness to experience. *Journal of Personality and Social Psychology*, 52, 1258–1265.

Mendonca, M. (2001). Preparing for ethical leadership in organizations. *Canadian Journal of Administrative Sciences*, 18(4), 266–276.

Mumford, M.D., Scott, G.M., Gaddis, B. & Strange, J.M. (2002). Leading creative people: Orchestrating expertise and relationships. *The Leadership Quarterly 13*, 705–750.

Neubert, M.J., Carlson, D.S., Roberts, J.A., Kacmar, K.M., & Chonko, L.B. (2008). Regulatory focus as a mediator of the influence of initiating structure and servant leadership on employee behavior. *Journal of Applied Psychology*, 93(6), 1220–1233.

Nystrom, H. (1990). Organizational innovation. In M.S. West, & J.L. Farr (Eds.), *Innovation and creativity at work: Psychological and organizational strategies* (pp. 143–162). New York: Wiley.

Palanski, M.E. & Yammarino, F.J. (2007). Integrity and leadership: Clearing the conceptual confusion. *European Management Journal*, 25, 171–184.

Palanski, M.E. & Yammarino, F.J. (2009). Integrity and leadership: A multi-level conceptual framework. *The Leadership Quarterly*, 20, 405–420.

Palanski, M.E. & Yammarino, F.J. (in press). Effects of behavioral integrity on follower job performance: A three-study examination. *The Leadership Quarterly*, doi:10.1016/j.leaqua.2011.05.014

Parry, K.W., & Proctor-Thomson, S.B. (2002). Perceived integrity of transformational leaders in organisational settings. *Journal of Business Ethics*, 35, 75–96.

Ringle, C.M., Wende, S., & Will, A. (2005). Smart PLS 2.0. Hamburg, Germany: University of Hamburg. http://www.smartpls.de.

Scott, S.G., & Bruce, R.A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, 37, 580–607.

Shalley, C.E. & Gilson, L.L. (2004). What leaders need to know: A review of social and contextual factors that foster or inhibit creativity. *The Leadership Quarterly*, 15, 33–53.

Simons, T.L. (2002). Behavioral integrity: The perceived alignment between managers' words and deeds as a research focus. *Organization Science*, 13, 18–35.

Simons, T., Friedman, R., Liu, L.A., & McLean Parks, J. (2007). Racial differences in sensitivity to behavioral integrity: Attitudinal consequences, in-group effects, and "trickle

down" among black and non-black employees. *Journal of Applied Psychology*, *92*, 650–665.

Solomon, RC (2003). Victim of circumstances? A defense of virtue ethics in business. *Business Ethics Quarterly*, *13*, 43–62.

Sosik, J.J., Kahai, S.S., & Avolio, B.J. (1999). Leadership style, anonymity, and creativity in group decision support systems: The mediating role of optimal flow. *Journal of Creative Behavior*, *4*, 227–255.

Tepper, B.J. (2007). Abusive supervision in work organizations: Review, synthesis, and research agenda. *Journal of Management*, *33*, 261–289.

Tierney, P., Farmer, S.M., & Graen, G.B. (1999). An examination of leadership and employee creativity: the relevance of traits and relationships. *Personnel Psychology*, *52*, 591–620.

Weber, E.U., Blais, A., & Betz, N.E. (2002). A domain-specific risk-attitude scale: Measuring risk perceptions and risk-behaviors. *Journal of Behavioral Decision Making*, *15*, 263–290.

Appendix
Behavioural Integrity Scenario Scripts

1 - High Behavioural Integrity

The following paragraphs describe a typical week in the life of a manager. Please read through this information carefully, and then answer the questions about this material as directed.

Background information:

Pat Smith is the team manager for a sales team in an office supply company. Although Pat does receive some direction from the vice-president of sales, Pat has a significant amount of control over the team. For instance, Pat is able to set sales goals, assign tasks, and decide the amount of sales bonuses.

The team consists of Pat Smith and four other sales persons (Elizabeth, Bob, Steve, and Susan), all of whom have worked for Pat for at least six months.

Monday:

Like usual, Pat presides over the Monday morning meeting with the team. Here are some selected quotes that Pat made during the meeting:

"You all know that we need to meet our sales goals this month, but I want to say once again that we must not inflate our sales by promising things that we can't deliver. We never compromise our values here."

"Elizabeth, I know that you have been having a hard time trying to convince the new manager at Main Street Tax Services to buy from us. Email me after the meeting – I promise that I will clear some time on my schedule this week to set up a meeting with them."

"It's much easier to keep a current customer happy than to find a new customer, so I want to make sure that all of you are spending at least two mornings each week talking to our existing customers. Two mornings, OK? That includes me."

"I really want to encourage you to try new and innovative ideas to generate sales. Think outside the box, OK? I'll support you. And it is just fine to disagree with me. I am not the expert."

Tuesday:

Team member Elizabeth sends the following email to Pat: "Pat, as you mentioned in yesterday's meeting, we need to set up a time to talk to Main Street Tax Services about buying from us. Their manager can only meet at 9 AM on Thursday – is that OK? This is really important."

Pat responds with this email: "Elizabeth, Thursday is very busy for me, but I will make time for the meeting. See you then."

Wednesday:

Pat spends the entire morning calling on existing customers.

Just after lunch, Bob, another team member, walks into Pat's office and asks, "Pat, I listened to your encouragement to try some new and innovative ideas, so I took a group of potential customers to a baseball game. And guess what? I've got a great chance to get some new business. Sandy, the office manager at the local college, just called and would like to purchase all of the office supplies for the entire college from us! This could really make my sales goals for the year. The only thing is, she needs the supplies within two weeks. I told her that it would take at least four weeks, but she insisted that they need them in two weeks. Can we make an exception to our policies just this one time? This is important."

Pat answers Bob's question, saying, "First of all, great idea about the baseball game! I am glad that you feel comfortable doing things differently. Bob, this is a great opportunity. Now, I would like to fill the order, but I know that we can't deliver that much merchandise in two weeks. In order to do it, we'd have to shortchange every other customer. Please call Sandy back and tell her that we will work as quickly as possible, but that a two-week delivery isn't going to happen." Bob asks, "But what if we lose the sale?"

Pat replies, "We can't do it. Even if we lose the sale, we must not promise something we can't deliver."

Thursday:

Pat wakes up on Thursday morning and checks email. Pat's boss, the VP of sales, has asked Pat to prepare a brief summary about Pat's leadership of the sales team for the board of directors. Specifically, the board wants to understand how Pat goes about leading the team. Pat knows that this project could be a convenient excuse for skipping the meeting with Elizabeth and Main Street Tax Services.

Pat calls Elizabeth on her cell phone, saying, "Elizabeth, I am on my way. I had a request from my boss to do some work, but I will do it tonight. This meeting is a priority and I made a promise to you."

After she hangs up, Elizabeth calls Steve, another member of the team. Elizabeth says, "Steve, can you believe it? Pat had something come up, but is still coming to the meeting. This always happens."

Steve responds, "Yes, that's pretty typical for Pat. No doubt about it – Pat Smith keeps commitments."

After the meeting, Pat spends all afternoon and most of the evening finishing the summaries for the board.

Friday:

Pat drags into the office and would give anything to avoid calling existing customers. Still, Pat knows calling on existing customers is a priority for the team, and spends the rest of the morning on the phone with existing customers.

Pat spends Friday afternoon analyzing sales information and preparing for next Monday's meeting.

2 - Low Behavioural Integrity

The following paragraphs describe a typical week in the life of a manager. Please read through this information carefully, and then answer the questions about this material as directed.

Background information:

Pat Smith is the team manager for a sales team in an office supply company. Although Pat does receive some direction from the vice-president of sales, Pat has a significant amount of control over the team. For instance, Pat is able to set sales goals, assign tasks, and decide the amount of sales bonuses.

The team consists of Pat Smith and four other sales persons (Elizabeth, Bob, Steve, and Susan), all of whom have worked for Pat for at least six months.

Monday:

Like usual, Pat presides over the Monday morning meeting with the team. Here are some selected quotes that Pat made during the meeting:

"You all know that we need to meet our sales goals this month, but I want to say once again that we must not inflate our sales by promising things that we can't deliver. We never compromise our values here."

"Elizabeth, I know that you have been having a hard time trying to convince the new manager at Main Street Tax Services to buy from us. Email me after the meeting – I promise that I will clear some time on my schedule this week to set up a meeting with them."

"It's much easier to keep a current customer happy than to find a new customer, so I want to make sure that all of you are spending at least two mornings each week talking to our existing customers. Two mornings, OK? That includes me."

"I really want to encourage you to try new and innovative ideas to generate sales. Think outside the box, OK? I'll support you. And it is just fine to disagree with me. I am not the expert."

Tuesday:

Team member Elizabeth sends the following email to Pat: "Pat, as you mentioned in yesterday's meeting, we need to set up a time to talk to Main Street Tax Services about buying from us. Their manager can only meet at 9 AM on Thursday – is that OK? This is really important."

Pat responds with this email: "Elizabeth, Thursday is very busy for me, but I will make time for the meeting. See you then."

Wednesday:

Pat begins the morning by calling on existing customers, but after 30 minutes, an old co-worker stops in the office. They spend the next two hours chatting about old times. It is very apparent to the rest of the team that Pat is not calling on existing customers.

Just after lunch, Bob, another team member, walks into Pat's office and asks, "Pat, I listened to your encouragement to try some new and innovative ideas, so I took a group of potential customers to a baseball game. And guess what? I've got a great chance to get some new business. Sandy, the office manager at the local college, just called and would like to purchase all of the office supplies for the entire college from us! This could really make my sales goals for the year. The only thing is, she needs the supplies within two weeks. I told her that it would take at least four weeks, but she insisted that they need them in two weeks. Can we make an exception to our policies just this one time? This is important."

Pat answers Bob's question, saying, "Bob, first of all, why are you wasting money taking people to baseball games? If you disagree with the way I run things here, you can quit. Just do your job from now on, OK? Now, despite your trip to the baseball game on company money, this is a good opportunity to make some money. I would like to fill the order, but I know that we really can't deliver that much merchandise in two weeks. In order to do it, we'd have to shortchange every other customer. But…we could really use the increased sales."

Bob asks, "So what should I tell her?"

Pat replies, "We are really promising something we can't deliver, but so what? We really need this sale. I'll pull a few strings with a friend down in Distribution. We'll just tell our other customers that we had some shipping problems and that their orders will be a few weeks late. We really need to keep up the appearance of acting honestly, though – so let's just keep this little deal between us, OK?"

Thursday:

Pat wakes up on Thursday morning and checks email. Pat's boss, the VP of sales, has asked Pat to prepare a brief summary about Pat's leadership of the sales team for the board of directors. Specifically, the board wants to understand how Pat goes about leading the team. Pat knows that this project could be a convenient excuse for skipping the meeting with Elizabeth and Main Street Tax Services.

Pat calls Elizabeth on her cell phone, saying, "Elizabeth, I am sorry to break my promise, but something just came up and I can't make the meeting."

After she hangs up, Elizabeth calls Steve, another member of the team. Elizabeth says, "Steve, can you believe it? Pat isn't coming to the meeting. This always happens."

Steve responds, "Yes, that's pretty typical for Pat. No doubt about it – Pat Smith can't keep commitments."

Pat spends all morning working on the summary, but is still able to go home early.

Friday:

Pat drags into the office and would give anything to avoid calling existing customers, even though it is a team priority. Pat then mutters, "Hey, I'm the boss. Status does have its privileges," and then heads out to the local coffee shop to read the newspaper.

Pat spends Friday afternoon analyzing sales information and preparing for next Monday's meeting.

3 - Neutral Behavioral Integrity

Background information:

Pat Smith is the team manager for a sales team in an office supply company. Although Pat does receive some direction from the vice-president of sales, Pat has a significant amount of control over the team. For instance, Pat is able to set sales goals, assign tasks, and decide the amount of sales bonuses.

The team consists of Pat Smith and four other sales persons (Elizabeth, Bob, Steve, and Susan), all of whom have worked for Pat for at least six months.

Monday:

Like usual, Pat presides over the Monday morning meeting with the team. Here are some selected quotes that Pat made during the meeting:

"You all know that we need to meet our sales goals this month, and I want to say again what I say at every meeting: do your best."

"I also want to say once again that we must not inflate our sales by promising things that we can't deliver."

"Elizabeth, I know that you have been having a hard time trying to convince the new manager at Main Street Tax Services to buy from us, but keep trying."

"It's important and exciting when we keep our customers happy, so I want to make sure that all of us are spending at least two mornings each week talking to our existing customers. Two mornings, OK?"

"I really want to encourage you to try new and innovative ideas to generate sales. Think outside the box, OK?"

Tuesday:

Team member Elizabeth sends the following email to Pat: "Pat, as you mentioned, I need to set up a time to talk to Main Street Tax Services about buying from us. I am really worried that the recent downturn in the economy is going to hurt our chances with them, though."

Pat responds with this email: "Elizabeth, I understand your concern. Hang in there and give it your best shot."

Wednesday:

Pat spends the entire morning calling on existing customers.

Just after lunch, Bob, another team member, walks into Pat's office and asks, "Pat, I listened to your encouragement to try some new and innovative ideas, so I took a group of potential customers to a baseball game. And guess what? I've got a great chance to get some new business. Sandy, the office manager at the local college, just called and would like to purchase all of the office supplies for the entire college from us! This could really make my sales goals for the year. The only thing is, she needs the supplies within two weeks. I told her that it would take at least four weeks, but she insisted that they need them in two weeks. Can we make an exception to our policies just this one time? This is important."

Pat answers Bob's question, saying, "Bob, this is a nice opportunity. I would like to fill the order, but I am not sure that we can deliver that much merchandise in two weeks. Please call Sandy back and tell her that we will work on it."

Thursday:

Pat wakes up on Thursday morning and checks email. Pat's boss, the VP of sales, has asked Pat to prepare a brief summary about Pat's leadership of the sales team for the board of directors. Specifically, the board wants to understand how Pat goes about leading the team.

Pat types the reply: "OK."

Friday:

Pat reviews the sales numbers from the week and sees that they are pretty good. Pat calls the sales team into the conference room for a brief meeting.

Pat says, "I want to say that you have all done a good job this week."