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Antecedents and Consequences of Envy

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Abstract:

The aim of this study was to examine the relationship between individual attributes and envy, and determine how envy may impact personal response variables in the workplace. To address these issues we apply Vecchio's theory on antecedents and consequences of envy (1995) as a theoretical framework. The present study relied on a cross-sectional measurement design. A total of 135 leaders and 772 followers employed in business organizations participated. SEM analysis shows that span of supervision serves as an important antecedent of envy, where span of supervision is significantly associated to envy via supportive leadership. Further more, envy seems to be indirectly and negatively related to self-esteem via distress and directly related to social loafing. The implications of these findings are discussed, and suggestions for future research are outlined.

Introduction

Envy has been recognized historically as a distinct and negative emotion with the capacity to profoundly affect human relationships (Konstan, 2005). Ancient oral and written traditions warn of the dangers of falling into this trap, including the Tenth Commandment, which states “Thou shalt not covet ...”. Given the gravity accorded this emotion, as well as its relatively high prevalence (Cohen-Charash, 2009), the present study aims to deepen our understanding by identifying determinants of envy, and how it may affect individuals in the work setting.

Envy can be defined as an unpleasant and often painful blend of emotions, characterized by feelings of inferiority, hostility, and resentment of one’s circumstances (Smith & Kim, 2007). Such feelings can occur when individuals compare themselves to others and see themselves as possessing inferior personal attributes, or find their own circumstances less desirable than those perceived to hold higher social rank. Although envy may act as a positive force to boost drive, foster friendly competition between colleagues, and motivate change, envy is most often regarded as a negative emotional state associated with undesirable consequences. Inherent to envy is some form of ill will, and this resentment can lead to a variety of outcomes such as *schadenfreude* - malicious pleasure taken when others experience misfortune - (Fiske, 2010), aggressive behaviors and conflicts in groups (Cohen-Charash & Mueller, 2007; Duffy et al., 2012), or bringing down the other, which also reflects envy’s threat-orientated action tendency (Tai et al., 2012). Furthermore, envy can motivate actions that reduce or remove another’s advantage, or it can engender a willingness to put at risk or even sacrifice one’s own situation in order to damage prospects for others (Parks, Rumble, & Posey, 2002).

According to Duffy, Scott, Shaw, Tepper, & Aquino, (2012), envy can be conceptualized in three related ways: (1) as a general envy of others in a work context, involving multiple comparators (Vecchio, 1995; Duffy & Shaw, 2000), (2) as dispositional, which refers to one's general tendency to feel envious of others and their good fortune across all situations (Smith & Kim, 2007) and (3) as an episodic or specific negative social comparison involving a specific individual as a referent (Cohen-Charash, 2009). In the present study we focus on envy at the level of the individual employee who makes unfavorable comparisons with colleagues. We build upon Vecchio (2005), who states that individuals in a work context recognize differences in social standing using multiple comparators concurrently. These comparisons may not refer to a specific episode, but rather to an existing state of multiple comparisons. Such a general approach is distinct from a dispositional or episodic approach to envy (see Duffy et al., 2012).

The importance of understanding envy goes beyond the unpleasantness associated with this emotion. Accordingly, social scientists have identified some contextual antecedents of envy. For example, organizational rules, which encourage differentiation among subordinates, can promote competition and even antagonism when individuals contend for a larger proportion of available resources or attention from a superior. This was demonstrated by Vecchio (2005), who found that competitive reward structures were associated with greater feelings of employee envy, and were likely to foster interpersonal distrust and hostility among members. Furthermore, social comparison, which is an integral part of organizational life (Greenberg, Aston-James, & Ashkanasy, 2007), may also enhance envy. Comparison with another colleague in an area important to that person's self-image can result in feelings of inferiority, and hence threaten that individual's self-esteem (see Cohen-Charash, 2000).

In the present study we aim to advance the theoretical and empirical literature in two ways. First, social comparison with one's colleagues is often a trigger for envy, and competition, promotions, and valued assignments are all potential catalysts for social comparison. However, this study focuses on a contextual determinant, that with one exception so far (Vecchio, 1999), has not been examined as a potential catalyst for envy: namely, 'span of supervision', which refers to the number of subordinates who are formally and directly supervised by a given manager (Schyns, Maslyn, & Weibler, 2010). We think this variable has become increasingly more relevant as current organizational structuring tends to increase the span of supervision through downsizing, decentralization, and empowerment (see Schyns et al., 2010). Hence the present study aims at identifying whether span of supervision is associated with envy. Second, envy may arise from an unfavourable comparative self-appraisal, and reflect an inability to influence the allocation of outcomes, such as the assignment of rewards (Vecchio, 1995). Envious people may therefore respond to this situation by limiting their contribution to their group or organization via social loafing (Duffy & Shaw, 2000). In the present study we focus on affective components that may explain why envious people choose social loafing as a dysfunctional behavioral response. To address these issues we apply Vecchio's theory on antecedents and consequences of envy (1995) as a framework. Vecchio's theory integrates existing organizational theories that relate to negative emotions such as envy, and identifies specific, testable hypotheses involving individual influences on envy, and how it is related to affective and behavioural variables.

Theoretical Model of Antecedents and Consequences of Envy.

Vecchio (1995) has developed a theory that identifies independent variables that influence envy, at the individual, work-unit, organizational and national cultural level. Specifically, envy is associated with three major sets of variables: (1) Individual Differences Attributes, such as gender, self-monitoring, in-group status, external locus, dependency and work ethic; (2) Work Unit Attributes, which comprise unit size, reward system, job rotation, supervisory considerateness, and supervisory differentiation of subordinates; (3) National Culture Attributes, such as employee participation norms, cooperative norms and collectivist norms. Moreover, envy is understood as being associated with a set of personal response dependent variables, which consist of affective and behavioral response variables. The magnitude of envy is directly related to the magnitude of affective response, which comprises anger and resentment (primary response), and job dissatisfaction, fear, sense of rejection, and distress (secondary response). Following from the secondary affective response, envious people experience a sense of reduced self-esteem and control, which compels them to make some form of behavioral response to reduce the threat to self, such as denial/avoidance, seeking support, or exhibiting other coping responses such as social loafing.

Based on Vecchio's theory, specific independent variables were selected for the present study. Within the category of work unit attributes, two variables can be identified as likely antecedents of envy; span of supervision, where it is assumed that in larger groups followers may feel a decreased sense of possessiveness, and a greater willingness to tolerate situational shortcomings or inequities, and may have less involvement in competitive circumstances. A reduction in

exposure to social competition should lead to a reduction of envy. The second variable is supervisor considerateness, which may tap sensitivity to fairness and equal treatment of followers, and may operate so as to reduce envy in the work setting. Finally, three likely personal response variables were identified from the theory; distress, which is an affective response to envy and may encourage an unfortunate focus on one's shortcomings, and lower self-esteem which follows from distress, where negative self-assessment may reduce a person's feelings of self-worth. And finally, social loafing, a behavioral withdrawal response to circumstances perceived by the individual as a threat to the self.

Antecedents of Envy.

Vecchio (1995) found that envy is associated with a large group of contextual factors in the workplace, such as unit size, reward system, and job rotation. In the present study, however, we limit our focus to span of supervision as the independent target variable associated with envy. Vecchio (1995) argued that employees might feel less possessiveness in larger unit settings because members of large units are more willing to tolerate situational shortcomings and inequities resulting from the size of the unit. In order to test this notion, Vecchio (1999) conducted an empirical study with 219 participants from a Midwestern U.S. private hospital. No support was obtained for his notion. We are not surprised about his finding. We assume that leaders in large groups have limited capacity to pay equal attention to all their followers. Under these circumstances leaders must differentiate among employees and choose which of their followers should receive more consideration. In the present study we therefore take the opposite stand, hypothesizing that span of supervision is indirectly and positively associated with envy.

We argue that leaders of large work groups most probably have more constraints on their time than do supervisors of smaller groups (Schriesheim, Castro, & Yammarino, 2000) and thus, due to time restrictions and limited capacity, leaders may experience difficulties adjusting to follower expectations and needs in larger groups than in smaller work groups (Henderson, Liden, Glibkowski, & Chaudhry, 2009). More specifically, a large span of supervision may limit the leader's ability to provide various types of support, such as emotional support (show trust to followers and respond positively when they experience setbacks), instrumental support (help and assistance), appraisal support (advice to overcome setbacks) and informational support (factual advice to help members solve problems) (see Mueller, 2012). This notion is confirmed by Rafferty and Griffin (2006), who found span of supervision to be negatively associated with supportive leadership, defined as emotional support involving the provision of sympathy, evidence of liking, caring, and listening. Finally, in a study of 212 individuals from three U.S. industries (chemical & pharmaceutical, high tech, and manufacturing), Mueller (2012) found evidence that follower support is less available as group size increases. Hence, we suggest the following hypothesis:

Hypothesis 1: Span of supervision is negatively associated with supportive leadership style.

According to Vecchio's theory (1995), supportive leadership style is one supervisory attributes that can influence envy. Considerate supervisors may be better able to reduce subordinate envy, while supervisors who explicitly differentiate support among their subordinates may instigate more competitiveness and envy. Furthermore, perceived supervisor support can be considered a proxy for a high quality leader-member exchange (LMX) relationship (Lavelle, et al. 2007).

Accordingly, differentiation of support due to large span of supervision may negatively influence the relationship a leader shares with each follower. It is reasonable to believe that close and exclusive working relationships between a leader and some chosen followers can easily create tension and negative emotions among those not having been included. On the one hand, the leader may give preferential treatment, such as pay increases, choice job assignments, or promotions, to some followers (see Vecchio, 1995; 2000), while other followers learn what they receive is unfavorable compared to what others receive and envy may arise (Cohen-Charash & Mueller, 2007; Kim, O'Neill, & Cho, 2010). This counter-productive dynamic is as assumed to increase with a larger span of supervision. Hence, we suggest the following hypothesis:

Hypothesis 2: Span of supervision will be indirectly and positively related to envy via supportive leadership.

Impact of Envy.

Vecchio's theory (1995) suggests that envy is related to emotional responses such as anger and resentment (primary affective response), which can trigger strong outbursts and physical attacks. However, in most cases secondary affective responses follow anger and resentment, such as fear, sense of rejection, depression and distress. In the present study we examine the relationship between envy and distress as a secondary affective response to envy, and envy and lower self-esteem (one's feelings of self-worth), where the latter is assumed to follow from distress (Vecchio, 1995). Feelings of distress may encourage an unfortunate focus on personal shortcomings and make it difficult to see the positive or admirable qualities of oneself. This type

of negative self-assessment may reduce a person's feelings of self-worth. Hence, we suggest the following hypothesis:

Hypothesis 3: Envy will be indirectly associated to self-esteem via distress.

Furthermore, in accordance with Vecchio (1995), we assume that an envious protagonist with a sense of reduced self-worth will be compelled to make some form of response to rectify this threat to self. One strategy may be to limit personal effort and contribution to the firm through a process of social loafing, hiding information, giving bad advice, or providing misleading information (Fox, Spector, & Miles, 2001; Vecchio, 2007). We assume that envious people tend to engage in interpersonal counter-productive work behaviors directed at other co-workers when they perceive themselves in circumstances which represent a high level threat to self. Accordingly we have chosen the target variable of counter-productive work behaviour to be social loafing. Hence, we hypothesize the following:

Hypothesis 4: Envy will be positively associated to social loafing via distress and self-esteem.

The current investigation of antecedents and consequences of envy is conducted in two studies in context of work organizations. The first study consist of an empirical examination of hypotheses 1 and 2, where the purpose is to identify antecedents of envy. Study 2 examines hypotheses 3 and 4 focusing on consequences of envy.

Study 1

Method

Setting and Sample.

A total of 59 leaders and 358 followers from various industries, organizational levels, professions, and geographic regions of Norway contributed to the data. Leaders from different organizational levels (top, middle, and operational) participated in the survey. The response rate was nearly 79%. The leaders and the followers were predominantly male; 55.9% and 57.8% respectively. The average age of the leaders was 41.7 years, reporting an average education of 15.3 years. Follower average age and education were 13.9 and 42.0 years, respectively. Questionnaires were distributed to the respondents while at work. Data were collected electronically, where every respondent was given a unique link to the questionnaires where they could respond to each item.

Instruments.

All instruments used in the present study were originally developed in English. The translation into Norwegian was employed by using a back-translation conversion process to ensure equivalence of item meaning (Brislin, Lonner, & and Thorndike, 1973; Cavusgil & Das, 1997). In addition, pilot testing of the questionnaires with a focus group of five supervisors indicated that the instruments were relevant in a for-profit setting.

Self-rating. Each follower completed a packet that contained the following five scales: LBDQ-XII (Stogdill, 1963) was used for measuring *supervisor supportiveness*. A four-item scale

composed of items taken from the LBDQ-XII instrument was employed - (sample item: “My supervisor’s relations with me can be described as friendly and approachable”; “My supervisor values my advice”; anchors: 1 = Never, 2 = Seldom, 3 = Occasionally, 4 = Often, 5 = Always). *Envy* was measured by five-items (Vecchio, 2005). The scale was used to reflect feelings of envy with respect to other group members. Sample items: “My supervisor values the efforts of others more than he/she values my efforts”; “Most of the other employees have it better than I do”; anchors: 1 = Never, 2 = Rarely, 3 = Seldom, 4 = Occasionally, 5 = Often).

Span of supervision. Leaders reported the number of their subordinates in each work group.

Results

Confirmatory factor analysis (CFA) was conducted using MPlus to test how well the predicted interrelationships between the variables matched the observed data. The results of CFA displayed the following results: (χ^2 [35] = 179.45, $p < 0.01$; RMSEA = 0.09; CFI = 0.95; NNFI/TLI = 0.94). When comparing the results with frequently used rules of thumb, CFA achieved acceptable model fit (Bollen, 1989; Fan et al., 1999). In addition, all factor loadings were statistically significant and ranged from .63 to .87, thus indicating a reliable measurement model.

Descriptive statistics and intercorrelations among the independent and the dependent variables are provided in table 1. The coefficient alpha estimates for the multi-item scales are listed on the primary diagonal of the intercorrelation matrix. The alpha coefficients were in an acceptable range for all the variables of interest (.77 - .86). As hypothesized, span of supervision was

negatively correlated to leader supportiveness ($r = -.29, p < .01$). Span of supervision was positively correlated to envy ($r = .16, p < .01$).

When the full model was tested, the structural equation model (SEM) provided acceptable fit with the data ($\chi^2 [33] = 102.22, p < 0.01$; RMSEA = 0.076; CFI = 0.98; NNFI/TLI = 0.97). The results of these analyses are shown in Figure 1.

Figure 1 presents the results of the path analysis regression for outcomes and shows these relationships in context. Span of supervision, as hypothesized (H1), was found to be negatively related to supportive leadership ($\beta = -.30, p < .001$). We used the delta method procedure in Mplus (using the Sobel test) to test the indirect effects of span of supervision on envy via supportive leadership. Consistent with hypothesis 2, Span of supervision was indirectly and positively associated to envy via supportive leadership style ($\beta = .17, p < .001$)

As a precaution and because our data were hierarchical in nature (i.e., individuals nested within groups) we performed supplemental analyses to confirm that the variables were at the individual level. In these analyses we estimated fully unconditional models (null models) for the dependent variables. Although the results of the unconditional models revealed statistically significant between-group variability in ratings of supportive leadership ($\tau_{00} = .11, p < .01$), they did not indicate significant between-group variability in envy. In addition, the intraclass correlation coefficient (Hofmann, Griffin & Gavin, 2000) of supportive leadership was relatively small in size (ICC = .18), suggesting that most of the variance in ratings of supportive leadership were at the individual level.

Study 2

Method

Setting and Sample.

The goal of study 2 was to examine hypotheses 3 and 4, which are focusing on consequences of envy. Study participants were 76 leaders and 414 followers from various industries, organizational levels, professions, and geographic regions of Norway who contributed to the data. The response rate was approximately 81%. All the participants were in full-time positions. The leaders were predominantly male; 78.9%. The average age was 41.7 years, reporting an average education of 15 years. The followers were predominantly male; 70% with average age and education were 13.9 and 43.7 years, respectively. Questionnaires were distributed to the respondents while at work. Data were collected electronically, where every respondent was given a unique link to the questionnaires where they could respond to each item.

Instruments

All instruments scales applied in the study have been translation into Norwegian by employing blind back-translation conversion process to ensure equivalence of item meaning (Brislin, Lonner, & and Thorndike, 1973; Cavusgil & Das, 1997). Further more, pilot testing of the questionnaires with a focus group of five supervisors indicated that the instruments were relevant in a for-profit setting.

Each supervisor provided an assessment of their followers on a *Social loafing scale* of four items adapted from Kidwell and Robie (2003). The measure examined the extent to which an

individual tended to do less than his or her share of work when other group members were available. Sample items: “This group member takes it easy if others are around to do the work”; “This group member gives less than 100 percent effort”; anchors: 1 = Very Inaccurate, 7 = Very Accurate.

Each follower completed a packet that contained the following three scales: *Envy* was measured by five-items (Vecchio, 2005). The scale was used to reflect feelings of envy with respect to other group members. Sample items: “My supervisor values the efforts of others more than he/she values my efforts”; “Most of the other employees have it better than I do”; anchors: 1 = Never, 2 = Rarely, 3 = Seldom, 4 = Occasionally, 5 = Often).

A twelve-item measure was used to assess *distress* (Gatz & Hurwicz, 1990) with a four-point response scale for each item - (sample items “I felt depressed”; “I had trouble keeping my mind on what I was doing”; anchors: 1 = Rarely or not at all, 2 = Some or a little of the time, 3 = Occasionally or a moderate amount of time, 4 = Often or all the time). Finally, a ten-item measure of *self-esteem* (Blascovich & Tomaka, 1991; Rosenberg, 1979) was employed to measure the individual’s sense of being valued at work - (sample items “On the whole I am satisfied with myself”; “I feel that I am a person of worth, at least on an equal basis with others”; anchors: 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree.

Results

Confirmatory factor analysis (CFA) was conducted using MPlus to test how well the predicted interrelationships between the variables matched the observed data. The results of CFA

displayed the following results: (χ^2 [428] = 934.27, $p < 0.01$; RMSEA = 0.05; CFI = 0.95; NNFI/TLI = 0.94). When comparing the results with frequently used rules of thumb, CFA achieved good model fit ((e.g., Bollen, 1989; Fan et al., 1999)

According to Cohen-Charash (2009), the distance between the feeling component of envy and emotional reactions to envy is small, and may jeopardize the discriminant validity of the feeling component of envy. CFA was therefore conducted for the variables envy and distress. The analysis revealed that the hypothesized two-factor model obtained a better fit than a parsimonious model, where envy and distress were set to load on one single factor ($\Delta\chi^2_{[3]} = 86.08$, $p < 0.01$); Likewise, CFA was also conducted for distress and self-esteem. Again, the results indicated that the hypothesized two-factor model should be preferred over the one single factor ($\Delta\chi^2_{[3]} = 142.66$, $p < 0.01$). Accordingly, we obtained support for the independence of our constructs.

As seen in table 2, envy was positively correlated with distress and negatively with self-esteem ($r_s = .44$, and $-.40$, respectively, all $p < .01$). Finally, envy was positively correlated with social loafing ($r = .17$, $p < .01$) while distress was negatively correlated to self-esteem ($r = -.50$, $p < .01$). The alpha coefficients were in an acceptable range for all the variables of interest (.77 - .86).

When the full model was tested, the structural equation model (SEM) provided good fit with the data (χ^2 [429] = 915.79, $p < 0.01$; RMSEA = 0.05; CFI = 0.95; NNFI/TLI = 0.95). The results of these analyses are shown in Figure 2.

Figure 2 presents the results of the path analysis regression for outcomes and shows these relationships in context. We used the delta method procedure in Mplus (using the Sobel test) to test the indirect effects of envy. Hypothesis 3 predicted envy to be indirectly and negatively associated to self-esteem via distress. In this regard, the results revealed a significant positive association between envy and distress ($\beta = .55, p < .001$), and a negative association between distress and self esteem ($\beta = -.43, p < .001$). Furthermore, the Sobel test revealed a significant indirect negative association between envy and self-esteem via distress (standardized effect = $-.24, p < .001$). In addition, the results revealed a significant direct negative association between envy and self esteem. Accordingly, the results suggest that distress partially mediates the association between envy and self esteem. Hypothesis 3 was partially supported. Finally, Hypothesis 4 predicted envy to be indirectly and positively related to social loafing via distress and self-esteem. Although there was a significant association between envy and distress, and between distress and self esteem, the association between self esteem and social loafing was not statistically significant. Accordingly, Hypothesis 4 was not supported. However, the results did indeed reveal a significant direct association between envy and social loading ($\beta = .26, p < .001$).

As in Study 1, we performed supplemental analyses to confirm that the variables were at the individual level. The results of these unconditional models did not indicate significant between-group variability in envy, distress, or self esteem. Furthermore, although the results revealed significant between-group variability in social loafing ($\tau_{00} = 29, p < .01$), the ICC of social loafing (ICC = .15), suggested that only a small proportion of the variability in social loafing is attributable to between-group variability.

General Discussion

The first study focuses on the *antecedents of envy*. Hypothesis 1 suggested that span of supervision should be negatively associated with supportive leadership style. Evidence for this assumption was found in the current study. The dynamics behind this finding seem to be that as the number of followers reporting directly to a leader increases, the more difficult it is for the leader to provide each follower with support and care. A large span of supervision may limit the leader's ability to provide various types of support, such as emotional support, instrumental support, appraisal support and informational support (Mueller, 2012). One explanation for this change in leader behavior might be that increased span of supervision through downsizing or decentralization exposes leaders to increased pressure and greater performance expectations (see also Thompson & Li, 2010). Due to increasing task pressure (e.g. shorter deadlines, more responsibility), leaders may concentrate on getting the job done at the cost of supportive leadership behaviours, such as providing followers with positive emotional support when needed. Hence, our study did not find support for Vecchio's assumption that in larger groups followers may feel a decreased sense of possessiveness, and a greater willingness to tolerate situational shortcomings, and may have less involvement in competitive circumstances. A reduction in exposure to social competition should lead to a reduction of envy.

Hypothesis 2 suggests that span of supervision would be indirectly and positively related to envy via supportive leadership. The Sobel test supported this hypothesis by showing that span of supervision was indirectly and positively associated with envy via supportive leadership style. Increased span of supervision, therefore, seems to foster a less supportive leadership style due to

limited time and resources. The consequence seems to be preferential treatment of followers, where some enjoy the benefit of leaders supportive style and the others experience envy which result from social comparison with preferred colleagues. They quickly learn which peers receive leader support that may help them to achieve better results/rewards. Feelings of envy can result from social comparisons, which highlight individual deficiencies, especially when favored colleagues actually do receive more benefits. One detrimental consequence of such follower discrimination is that the intensity of envy may grow even stronger with increasing levels of equity sensitivity in the group (Nandedkar & Deshpande, 2012).

The second study focuses on the *impact of envy* on personal response variables. Hypothesis 3 suggests that envy would be indirectly associated with self-esteem via distress. The path diagram (figure 2) showed that envy was positively associated with distress, indicating that the emotional reaction to envy may create a negative mood, a feeling of isolation and sadness. Furthermore, the Sobel test showed envy to be indirectly and negatively related to self-esteem via distress. Here we believe that envy may create a feeling of isolation and sadness in the subject, and encourage an unfortunate focus on personal shortcomings, which in turn may reduce the individual's feeling of worthiness. As a consequence of low self-esteem, followers may be even more vulnerable to envy and experience stronger feelings of isolation and sadness. Victims of this dysfunctional dynamic develop a sense of failure, uselessness and diminished self-respect, which can harm their performance significantly. Regrettably, a vicious cycle may thus be established. However, a direct effect was also identified from envy to self-esteem. This finding limit the validity of dysfunctional dynamics between envy, distress and self-esteem, as suggested by Vecchio.

Finally, hypothesis 4 suggested that envy would be positively associated to social loafing via distress and self-esteem. It was assumed that feelings of distress may encourage an unfortunate focus on personal shortcomings and reduce a person's feelings of self-worth. When experiencing such a sense of reduced self-worth, one will be compelled to make some form of response to rectify this threat, such as limiting personal effort and contribution to the firm. The Sobel test did not supported this hypothesis. However, the results did indeed reveal a significant *direct* association between envy and social loading. A plausible explanation for this link is that envious protagonists make some form of behavioural response to rectify for the unfavorable comparisons with colleagues and one such dysfunctional or counter-productive response may be to limit their contribution. By applying social loafing, envious people are willing to sacrifice outcomes that may benefit themselves in order to diminish the envied person's advantage. As such, envy may trigger irrational behaviour, and can thus become a critical cause of detrimental conflict in the workplace.

In summary, the present study has made progress in examining the antecedents and consequences of envy in a work context, using data from business settings. The findings clearly indicate that span of supervision serves as an important antecedent of envy. To our knowledge this is the first empirical test examining span of supervision as an antecedent of envy whilst showing that span of supervision is significantly related to envy via supportive leadership. This approach represents an extension of Vecchio's theory (1995), and as such makes a contribution to the field. Furthermore, this study has shown that envy at work has dysfunctional or counter-productive consequences such as limiting contribution to the organization. Hence the present study poses a question to the presumed effectiveness of many organizational change processes of

today which involve flattening the hierarchical organizational pyramid by increasing the span of supervision for leaders. Finally, two likely personal response variables were identified from the theory; distress, which is an affective response to envy and may encourage an unfortunate focus on one's shortcomings, and lower self-esteem which follows from distress, where negative self-assessment may reduce a person's feelings of self-worth.

Limitations, Strengths, and Implications for Future Research.

The present study has applied data from business settings in order to examine whether Vecchio's theory (1995) is valid in a for-profit setting. However, data from other contexts as well, such as public organizations, could also be examined to see whether the findings in our study hold across various contexts. On the other hand, data mined from one single context can eliminate alternative sources of error variance, as mixing samples from different types of organization can create problems when combining results across firms. Nevertheless, future research should gather data from other contexts in order to test the validity of the model.

Another limitation is that our examination of Vecchio's theory is far from comprehensive, as other variables, such as competitive reward structures, or personality traits, which are included in Vecchio's theory, can be considered relevant variables when examining the antecedents and impact of envy. However, attempts have been made to further our understanding of what causes envy and how it influences leaders' and followers' emotions and behaviour, and we believe the research model makes a significant contribution to the extant literature.

Self-reporting by followers was applied for all measures, except for social loafing and span of supervision. Despite the potential inflation, unreliability, and bias when using self-reporting, we believe this approach can be justified by the nature of the variables under examination. Envy and distress are internal emotional states with both a hidden affective side and a more obvious behavioral expression. Feelings of envy and distress not reported by the person experiencing them may therefore be invalidated (Cohen-Charash & Mueller, 2007). Furthermore, we collected data on supportive leadership, and self-esteem via self-reports, and there is a possibility of common method bias in using this approach. However, the dependent variable, social loafing, was collected from a separate source (leader), and objective information from leaders was applied to measure span of supervision. By using three sources in this study we reduced the threat of common method variance (Podsakoff et al., 2012).

Finally, even though most of us experience envy once in a while, it is unusual to admit feeling envious or be open about what may cause such a feeling (Cohen-Charash, 2009). When collecting data on envy, respondents may therefore invoke self-defense mechanisms when responding to questions that pertain to self-worth. There is always the possibility of falsification of responses when measuring envy because those studied may become defensive (Vecchio, 2000) or are affected by social desirability (Beretvas, Meyers, & Leite, 2002). Future research should explore in more detail how to assess self-defensive responses in the area of envy. While respondent dissembling is always a possibility, there are administrative steps which can be taken to help reduce this concern to some degree, such as informing respondents that envy is a normal and quite prevalent emotion, as well as minimizing incentives for defensive responding by emphasizing confidentiality and anonymity.

Practical Implications.

Duffy and Shaw (2000) raise the question as to what kind of managerial style would reduce the level of envy. In the present study, evidence has shown that a supportive leadership style is negatively associated with envy (table 1), indicating this type of leadership style would limit the likelihood of envy occurring. This point suggests that fostering open communication and supportiveness may counteract envy, as could the creation of subgroups within the larger group (Hackman, 2002). The narrow span of supervision in subgroups may benefit by providing greater opportunities for leaders to support followers and help them increase their competence through coaching and feedback.

But how can leaders support followers in *large* groups in order to reduce the level of envy? If reducing the span of supervision is not an option, then a suggestion from Mueller (2012) might represent an alternative. She suggests leaders should assign formal roles to a range of followers who should provide different kinds of support to co-members in the group, such as advice to overcome setbacks and help members to solve problems. This approach could increase the performance of followers and would also decrease the level of envy because followers who needed support would receive it. However, as performance improves, more followers become suitable for comparison, and the risk of competition and rivalry arises once again (Cohen-Charash, 2000). Another option would be to have leaders involve followers more in the decision-making role, increasing awareness of how decisions are made and dispelling the belief they are based on favoritism (Dogan & Vecchio, 2001). This approach creates unity and togetherness, increases the formation of social bonds, and satisfies the fundamental human need to belong. It

reduces feelings of isolation and being assigned to the out-group with low status by recognition of the contribution of each individual and inclusion in the decision-making process with its associated feeling of control and ownership of the outcome. Yet another avenue for combating envy involves esteem-raising tactics. Bolstering enables individuals to raise their own self-esteem by focusing on personal strengths and positive attributes, and can ameliorate feelings of envy by encouraging followers to focus on self-improvement and goal attainment instead of indulging in negativity and resentment. Finally, as suggested by Vecchio (1997), coping strategies that give followers a feeling of inclusivity may be effective, such as praise and recognition, taking care to ensure they are not perceived merely as manipulative gestures.

The research literature offers ideas and speculation as to how to cope with workplace envy. However, existing guidelines for reducing interpersonal counterproductive behavior are mostly untested and fairly rudimentary. Much more research is needed to develop practical methods to address envy in work settings (see also Smith & Kim, 2007).

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Table 1 Means, standard deviations, reliabilities and intercorrelations

	<u>M</u>	<u>SD</u>	<u>1</u>	<u>2</u>	<u>3</u>
1. Span of supervision	14.60	10.31			
2. Supportive leadership	3.92	.77	-.29**	(77)	
3. Envy	1.72	.70	.16**	.46**	(86)

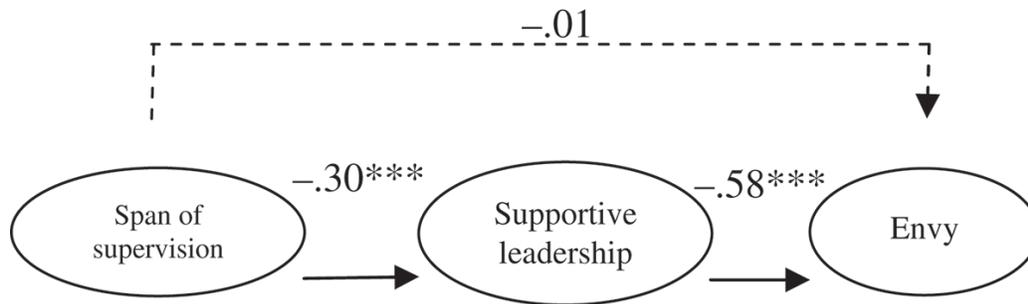
N = 358. Cronbach alphas on primary diagonal; * $p < .05$; ** $p < .01$.

Table 2 Means, standard deviations, reliabilities and intercorrelations

	<u>M</u>	<u>SD</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
1. Envy	1.64	.66	(.77)			
2. Distress	1.44	.41		(.80)		
			.44**			
3. Self-esteem	4.17	.50	-	-	(.85)	
			.40**	.50**		
4. Social loafing	2.47	1.38			-.08	(.86)
			.17**	.14**		

N = 414. Cronbach alphas on primary diagonal; * $p < .05$; ** $p < .01$.

Figure 1 Path Diagram for Study 1



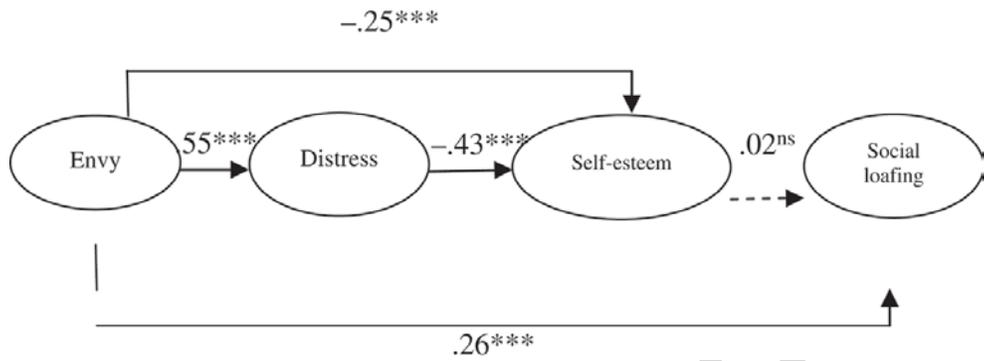
Fit indices: $\chi^2 [33] = 102.22, p < 0.01$; RMSEA = 0.076; CFI = 0.98; NNFI/TLI = 0.97.

The indirect relationship from span of supervision to envy was statistically significant

(standardized effect = .17, $p < .001$).

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Figure 2 Path Diagram for Study 2



Fit indices: $\chi^2 [429] = 915.79, p < 0.01$; RMSEA = 0.05; CFI = 0.95; NNFI/TLI = 0.95. The

indirect relationship from envy to self esteem via distress was statistically significant (standardized effect = $-.24, p < .001$). The indirect relationship from envy to social loafing via distress and self esteem was not statistically significant (standardized effect = $-.004, ns$).