



Leaders' conceptions of followers: Implications for naturally occurring Pygmalion effects

Paul Whiteley ^{a,*}, Thomas Sy ^a, Stefanie K. Johnson ^{b,1}

^a University of California, Riverside, Department of Psychology, 900 University Ave., Riverside, CA 92521, USA

^b University of Colorado, Denver, School of Business, PO Box 173364, Campus Box 165, Denver, CO 80217-3364, USA

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ABSTRACT

We investigated the relationships between leaders' implicit followership theories (LIFTs) (conceptions of followers) and naturally occurring Pygmalion effects (leaders' high performance expectations that improve follower performance). Results based on 151 workplace leader–follower dyads supported a model of naturally occurring Pygmalion effects. Positive LIFTs led to higher performance expectations, liking, and relationship quality from leaders, which impacted follower performance. Supervisory experience moderated the relationship between positive LIFTs and leaders' performance expectations for their followers, such that the performance expectations of leaders with less supervisory experience were more strongly influenced by their conceptions of followers. Implications of the findings for improving follower performance are discussed. Suggestions for future research are offered: antecedents of LIFTs, negative LIFTs, Golem effects, and role reversed Pygmalion effects, among others.

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A recent meta-analysis of leadership interventions revealed that the Pygmalion effect had the largest impact on improving leadership and organizational outcomes, such as follower job performance (Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009). The Pygmalion effect is a special case of the self-fulfilling prophecy, whereby raising leaders' performance expectations for their followers improves follower performance (e.g., Rosenthal, 1993). Hundreds of studies and corresponding meta-analytic results demonstrate that the Pygmalion effect is a well-substantiated and important phenomenon (e.g., Eden, 1993; Harris & Rosenthal, 1985; Kierein & Gold, 2000; McNatt, 2000; Rosenthal, 2002; Rosenthal & Rubin, 1978). However, there is still much about the Pygmalion effect that is unknown (Rosenthal, 2002, 2006). Specifically, little is known about *naturally occurring* Pygmalion effects because the vast majority of Pygmalion studies involve the experimental manipulation of leaders' expectations for their followers' performance (e.g., Eden et al., 2000; Kierein & Gold, 2000; McNatt, 2000). Pygmalion experiments typically involve the artificial manipulation of leaders' high performance expectations for particular followers when, in actuality, these followers are randomly selected and are relatively equivalent to their "regular potential" peers (e.g., Rosenthal & Jacobson, 1968). In most work settings, however, leaders' expectations for their followers' performance occur naturally, without experimental manipulation. Although research on naturally occurring Pygmalion effects is clearly lacking (e.g., Eden et al., 2000; Kierein & Gold, 2000; McNatt, 2000), it is an important phenomenon that likely occurs routinely in organizations (D. Eden, personal communication, August 9, 2010). In the current study, we examine naturally occurring Pygmalion effects in work settings.

Beyond conceptual propositions, this research contributes to the literature as being among the first empirical investigations of naturally occurring Pygmalion effects in traditional organizational settings with established leader–follower relationships (McNatt & Judge, 2004; White & Locke, 2000). Thus, this research addresses historical criticisms that Pygmalion research and interventions do not reflect real-world social interactions because of the practical and ethical concerns of artificially manipulating leaders into having higher performance expectations for their followers (Jussim, 1990; Miller & Turnbull, 1986). Moreover, this

* Corresponding author.

E-mail addresses: pwhit002@ucr.edu (P. Whiteley), thomas.sy@ucr.edu (T. Sy), Stefanie.Johnson@ucdenver.edu (S.K. Johnson).

¹ Tel.: +1 303 315 8433.

study addresses an important question that awaits research by examining the antecedents of Pygmalion effects. Over two decades have passed since Eden (1990) called for research to explain the drivers of leaders' performance expectations that influence Pygmalion effects. Surprisingly, little research has been generated. We address this gap by investigating leaders' implicit followership theories (LIFTs), an emerging construct that has been implicated as a key driver of Pygmalion effects (Eden, 1990; Sy, 2010). Investigating naturally occurring Pygmalion effects and their antecedents provides insight into how this powerful social phenomenon operates, and how it might be applied to everyday work settings. Leaders naturally develop expectations for their followers' performance, and these expectations may be influenced by the conceptions, or mental representations that leaders hold of followers in general (Eden, 1990; Sy, 2010). Because LIFTs are relatively stable conceptions of followers, and performance expectations are likely to be heavily influenced by a particular situation or particular follower characteristics, LIFTs will help to explain how leaders come to hold performance expectations across situations and across followers. Thus, LIFTs should explain important variance in performance expectations.

Research has recently begun to describe the content and structure of leaders' conceptions of followers, or leaders' implicit followership theories. The extant research suggests that leaders hold both positive and negative conceptions of followers (e.g., followers may be productive in achieving task goals and yet insubordinate when responding to leaders; Sy, 2010; Uhl-Bien & Pillai, 2007). These positive and negative conceptions are relatively orthogonal, consistent with research showing that implicit theories of others may be both positive and negative (Fiske, 1993; Sy et al., 2010). In the present study, we focus on the positive dimensions of LIFTs because they align with the key tenets of Pygmalion theory, suggesting that positive beliefs enhance follower performance (in contrast, Golem effects posit that negative beliefs weaken follower performance; Babad, Inbar, & Rosenthal, 1982). Moreover, the notion of bandwidth-fidelity (Cronbach & Gleser, 1965) suggests that the nature of outcome variables (e.g., positive or negative) should dictate the choice of predictors (Hogan & Roberts, 1996; Ones & Viswesvaran, 1996). Given our focus on largely desirable outcomes (i.e., leader expectations, relationship quality, liking, and follower performance), we focus on positive LIFTs. Consistent with the Pygmalion effect, high positive LIFTs are expected to positively impact follower performance, while low positive LIFTs may result in an absence of Pygmalion effects (i.e., positive LIFTs may need to reach a certain level to induce Pygmalion effects). Leaders who naturally hold more positive conceptions of followers will have positive performance expectations for their own followers and, thereby, elicit better performance from their followers. Moreover, we contend that relationship quality and leaders' liking for followers mediate the expectation–performance relationship. A graphic representation of the study goals is illustrated in Fig. 1.

1. Leaders' implicit followership theories

While a large body of research has investigated the cognitive categories that people have for leaders, or implicit leadership theories (ILTs; e.g., Lord, Foti, & Phillips, 1982; Lord & Maher, 1991), there has been little research on the corresponding notion of leaders' implicit followership theories (LIFTs; Sy, 2010). LIFTs are cognitive categories that reflect the conceptions that leaders have about the traits and behaviors of followers (Sy, 2010). LIFTs build on and extend the ILTs literature (e.g., Engle & Lord, 1997; Epitropaki & Martin, 2004; Lord, Foti & de Vader, 1984; Offermann, Kennedy, & Wirtz, 1994) and address gaps in our understanding of leader–follower interpersonal dynamics by explaining how leaders' conceptions of followers shape their judgments of and behaviors toward their own followers (Sy, 2010; van Gils, van Quaquebeke, & van Knippenberg, 2010). Researchers have long agreed that categorizing other people is an inevitable economizing strategy to simplify the complexity of our daily interactions (e.g., Allport, 1954; Sherif, 1948; Tajfel, 1969). Exposure to other persons can automatically activate relevant social categories

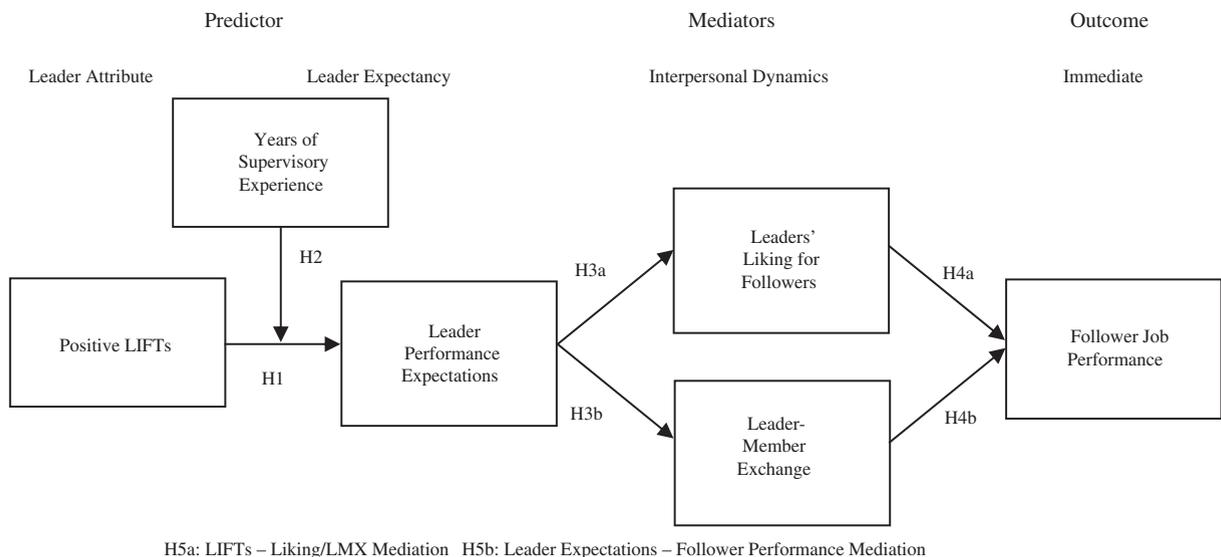


Fig. 1. Summary model of hypothesized relationships. H = hypothesis. LIFTs = leaders' implicit followership theories.

and corresponding knowledge structures, which can influence perceivers' cognitions, affect, and behavior (e.g., Macrae & Bodenhausen, 2000). Conceptual and empirical evidence on implicit theories point to the likelihood that LIFTs develop at an early age through socialization (Hunt, Boal, & Sorenson, 1990), and continue to be refined based on experiences with followers (Lord & Maher, 1991; Sy, 2010). Integral elements of LIFTs are prototypes, which are abstract, composite mental representations for particular cognitive categories (e.g., Rosch, 1978). Leaders' mental representations of followers may represent ideal (i.e., how followers should be), or central tendency prototypes (i.e., how followers typically are; for reviews, see Barsalou, 1985; Sy, 2010). In a large-scale study, Sy (2010) assessed and described LIFTs as being central tendency prototypes that consist of six dimensions: Industry, Enthusiasm, Good Citizen, Conformity, Insubordination, and Incompetence. These six dimensions can also be represented by an overall positive prototype of followers (Industry, Enthusiasm, Good Citizen) or an overall negative prototype of followers (Conformity, Insubordination, and Incompetence) (Sy, 2010). Positive and negative follower prototypes refer to the valence of follower attributes².

LIFTs serve the function of “sensemaking” (Weick, 1995) from which leaders interpret, understand, and respond to followers (Sy, 2010). Leaders may use their conceptions of followers to make inferences about their own followers (e.g., the degree of supervision they require), and such inferences may influence how leaders respond to followers (e.g., micromanagement behaviors). Over time leaders may internalize and endorse certain LIFTs that predispose leaders to judge and treat followers in consistent ways (Shondrick & Lord, 2010; Sy, 2010). The relationship between LIFTs and corresponding behaviors may be explained by the perception–behavior link (Bargh, Chen, & Burrows, 1996; Chen & Bargh, 1997). When LIFTs are activated, they trigger various types of associated conceptual representations (e.g., “good followers” activating the associated notion of “higher performers”) and behavioral patterns (e.g., set higher goals) that are consistent with the activated concepts (e.g., Bargh, 1997; Bargh et al., 1996). Thus, the perception or activation of conceptual representations (i.e., LIFTs) increases the tendency to behave in ways consistent with those cognitions. Decades of research in the social science literature have provided evidence for the perception–behavior link (Bargh & Williams, 2006). For example, activating the “professor” and “hooligan” concept increased and decreased participants' performance on cognitive tasks, respectively (Dijksterhuis & van Knippenberg, 1998). Moreover, research from the neuroscience literature (e.g., mirror neurons) provides evidence for the hard-wired nature of the perception–behavior link (Rizzolatti, Fogassi, & Gallese, 2001). For example, thinking about a behavior activates the same area of the anterior cingulate cortex that is activated by performing that behavior (Paus, Petrides, Evans, & Meyer, 1993).

2. Leaders' positive conceptions of followers and Pygmalion effects

Positive LIFTs are the conceptions that leaders have of followers, but are distinct from leaders' performance expectations for followers (Sy, 2010). However, the activation of positive LIFTs is likely to activate expectations relating to how followers will perform. On the basis of the perception–behavior link, positive LIFTs should positively influence leaders' expectations for their current group of followers (Sy, 2010), creating outcomes similar to Pygmalion effects (Chen & Bargh, 1997). Concepts relating to “how followers are” (i.e., LIFTs) are highly intertwined and coincide with informational units relating to “how well my followers will do” (i.e., performance expectations) (for reviews, see Foti, Knee, & Backert, 2008; Hanges, Lord, Godfrey, & Raver, 2001; Hogue & Lord, 2007; Lord, Brown, Harvey, & Hall, 2001; Sy et al., 2010). Accordingly, activating one concept is apt to activate related concepts because these associated concepts are likely encoded and stored in a similar fashion. Therefore, leaders who are predisposed to endorse more positive conceptions of followers are likely to have more positive performance expectations for their own followers. Indeed, research from the implicit leadership theories literature provides evidence for similar patterns of concept–expectation outcomes, as performance expectations for managers were biased by participants' conceptions of leadership (i.e., implicit leadership theories) (Lord, 1985), and manipulating the prototypicality of leader behavior biased participants' behavioral expectations for their leaders (Lord et al., 1984). Accordingly, we hypothesize:

H1. Positive leaders' implicit followership theories (LIFTs) will positively influence their performance expectations for their followers.

In addition, novice leaders, versus experienced leaders, may be more influenced by their LIFTs when forming performance expectations for their followers. Leaders who have extensive experience working with followers are more likely to have developed broader and more refined followership theories that can be utilized in their nuanced interpretation and prediction of follower behaviors (e.g., Borman, 1987). Novice leaders, on the other hand, are perhaps more influenced by their general conceptions of followers because of their limited experience supervising followers. Such limited experience likely translates into the development of fewer and less-well refined LIFTs. Thus, there should be a stronger relationship between novice leaders' positive LIFTs and their expectations for their own followers' performance, than that of experienced leaders.

H2. Years of supervisory experience will moderate the relationship between positive leaders' implicit followership theories (LIFTs) and their performance expectations for their followers, with a stronger relationship among leaders' with less supervisory experience.

When a leader has more positive performance expectations for a particular follower, he or she will like that follower more (Jussim, 1986; Rosenthal, 1993). Meta-analytic evidence suggests that the potentially infinite number of interpersonal dynamics

² The implicit leadership theories (ILTs) literature has referred to positive and negative prototypes in terms of both valence and prototypicality, or the degree to which traits fit within particular social categories. The present study uses the terms to describe the valence of follower attributes. That is, within the domain of prototypicality, follower attributes can be further categorized based on valence (for further discussion, see Sy, 2010).

that can mediate Pygmalion effects can be succinctly described by Rosenthal's (1989) affect/effort theory (previously the four-factor theory) (Harris & Rosenthal, 1985). As evidence of this, leaders with high expectations for their followers tend to provide them with various forms of increased positive affect (e.g., warmer socio emotional climate) and effort (e.g., more support and guidance), which reflects a greater liking for those followers (Jussim, 1986; Rosenthal, 1993).

The positive expectations–liking relationship can also be explained by the well-established finding that perceived similarity produces liking (Byrne, 1971). Leaders value good performance, much like leaders perceive high expectancy followers to value good performance. As a consequence, leaders' perceived similarity with high expectancy followers (viz. work performance values) influences greater liking for these followers (e.g., Byrne, 1971; Engle & Lord, 1997; Jussim, 1986), and leaders' perceived dissimilarity with lower expectancy followers (viz. work performance values) relates to less liking (e.g., Singh & Ho, 2000; Singh & Teoh, 1999). Finally, according to the perception–behavior link, activating high performance expectations for followers should result in a halo effect, such that leaders will come to perceive their followers as having a host of other positive and desirable characteristics, further enhancing leaders' liking for their followers.

H3a. Leaders' performance expectations for their followers will positively influence their liking for their followers.

Conceptual and empirical evidence suggest that leaders' performance expectations should positively influence their leader–member exchange (LMX) relationship quality (e.g., Bezuijen, van den Berg, van Dam, & Thierry, 2009; Eden, 1992; Liden, Wayne, & Stilwell, 1993). In particular, Rosenthal's (1989) affect/effort theory for the mediation of interpersonal expectancy effects suggests that the way leaders treat high expectancy followers is consistent with the tenets of LMX theory (e.g., Bezuijen et al., 2009; Eden, 1992). High-quality LMX relationships are characterized by greater respect, trust, and obligation between leaders and followers. Followers in these relationships generally receive greater support, guidance, and positive affect and are considered part of a leaders' in-group. Followers in low-quality LMX relationships generally receive little support and guidance and are considered part of a leaders' out-group. Relationships of this kind are considered very transactional and hierarchically formalized, whereas high-quality LMX relationships are more similar to peer-relationships (e.g., Graen & Uhl-Bien, 1995). Followers tend to benefit from high quality LMX relationships because they are usually provided with more support, challenging work tasks, and more opportunities for personal growth and learning, and consequently, they have higher levels of job satisfaction, loyalty, attendance, job performance, and lower levels of turnover (e.g., Gerstner & Day, 1997; Graen & Uhl-Bien, 1995). In addition, leaders' better treatment of high expectancy followers creates positive affect that should translate to higher quality LMX (Bezuijen et al., 2009; Dienesch & Liden, 1986; Liden & Maslyn, 1998). As such, we hypothesize:

H3b. Leaders' performance expectations for their followers will positively influence their LMX quality.

We propose that leaders' liking and LMX relationship quality should positively influence follower performance. We jointly develop the rationale for the effects of liking and LMX on performance because both are grounded in a reciprocation of social exchanges and are likely to impact performance in a similar fashion (e.g., Graen & Uhl-Bien, 1995; Wayne & Ferris, 1990). For example, in low (liking) quality LMX relationships, leaders provide few resources and little guidance and, in return, followers tend to be less competent and committed and have lower performance. Similarly, reciprocal trust, obligation, and respect are relatively absent in low (liking) quality LMX relationships (Gerstner & Day, 1997). In high (liking) quality LMX relationships, the reverse pattern is generally observed. There are high levels of reciprocal trust, obligation, and respect, and followers respond to the better treatment with increased levels of competence, performance, and commitment (e.g., Gerstner & Day, 1997; Graen & Uhl-Bien, 1995). Therefore, followers in high (liking) quality LMX relationships should feel compelled to reciprocate the good treatment with better performance (e.g., Gerstner & Day, 1997). In addition, followers in high (liking) quality LMX relationships should perform better because the increased resources and better treatment should give them the tools and confidence necessary to perform better than their low (liking) quality LMX counterparts (e.g., Liden et al., 1993; Wayne, Shore, & Liden, 1997). Indeed, meta-analyses and other studies support these relationships (e.g., Gerstner & Day, 1997; Wayne & Ferris, 1990). We therefore hypothesized that LMX and liking will positively influence follower performance.

H4a. Leaders' liking for their followers will positively influence follower performance.

H4b. LMX relationship quality will positively influence follower performance.

As a whole, our model for naturally occurring Pygmalion effects (see Fig. 1) and the above hypotheses imply two main mediation effects. First, consistent with our prior propositions and the perception–behavior link, positive LIFTs should activate and influence performance expectations, which should then influence liking and LMX quality. Performance expectations should be a partial mediator between positive LIFTs and liking and LMX quality, meaning that positive LIFTs should also have direct effects on liking and LMX (e.g., Cohen, Cohen, West, & Aiken, 2003). The direct effects of positive LIFTs on liking and LMX quality can be explained by the perception–behavior link discussed above. That is, the activation of different conceptions of followers influences differential judgment of and treatment toward followers. Accordingly, leaders who have more positive conceptions of followers are likely to judge and treat them more favorably which should result in greater liking and LMX quality (Sy, 2010). Secondly, performance expectations should influence liking and LMX quality, which should then influence job performance. Liking and LMX quality should fully account for the relationship between leaders' performance expectations and follower performance, meaning that there should be no direct effects of performance expectations on follower performance (e.g., Cohen, Cohen, West, & Aiken, 2003). This is because leaders' performance expectations cannot influence follower performance unless

the expectations are somehow communicated to followers (e.g., as reflected by liking/LMX quality) (e.g., Harris & Rosenthal, 1985). Accordingly, we hypothesize:

H5a. Leaders' performance expectations will partially mediate the relationship between positive leaders' implicit followership theories (LIFTs) and their liking and LMX quality with their followers.

H5b. Leaders' liking and LMX quality will fully mediate the relationship between their performance expectation and their followers' job performance.

3. Method

3.1. Sample and data collection procedures

A team of trained undergraduate research assistants received course credit for recruiting workgroups across southern California to participate in this study. All workgroups consisted of one leader and 2–5 of their direct followers. Research assistants gained access to the workgroups through one or more workgroup members who were part of the research assistants' social networks. Research assistant training consisted of a one-hour training session followed by three 30-minute follow-up sessions during the eight-week study. Training sessions were led by the first author and included discussions regarding the purpose of the study, ethical guidelines for recruiting participants (e.g., no coercion), participant qualifications (e.g., English proficient working adults), survey administration procedures (e.g., paper and pencil), and recruiting feedback (e.g., pros and cons of different approaches).

The workgroup leaders were provided with a different survey format than the workgroup followers. The leadership variables (e.g., positive LIFTs, leaders' performance expectations, leaders' liking for their followers, etc.) were self-reported by leaders. Leaders' self-reporting of these variables is appropriate because these variables represent intrapsychic phenomena (e.g., Harris & Rosenthal, 1985; Sy, 2010). Therefore, it would be more valid to ask leaders about their own cognitions and perceptions of these constructs than external observers, who may have less accurate appraisals. For example, meta-analyses indicate that leaders and followers significantly disagree on their perceptions of LMX quality (correlations range from .29 to .37) (Gerstner & Day, 1997; Sin, Nahrgang, & Morgeson, 2009), suggesting that followers may not be fully attuned to leaders' intrapsychic processes (van Gils et al., 2010). However, this approach raises concern of common method bias, which will be addressed below. By contrast, we decided to use peer performance appraisals rather than leaders' performance appraisals for two reasons. First, leaders' expectations for their followers' performance are likely based on leaders' past and present performance appraisals of them. Thus, leaders' performance expectations would have likely biased and confounded their performance appraisals (e.g., Kierein & Gold, 2000). Second, we wanted to avoid biases stemming from same source ratings (for one discussion on common method bias see Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Nevertheless, research suggests that there is good agreement between leader and peer appraisals (e.g., Harris & Shaubroeck, 1988; Vance, MacCallum, Coovert, & Hedge, 1988). Therefore, one of the workgroup followers was randomly selected by the researchers to be a *target follower* and the other was randomly selected to rate the performance of the target follower (i.e., peer performance appraisals).

About 9% of the original 614 cases were deleted because they did not properly identify the co-workers being rated (e.g., no names or names of workers who did not participate in the study) or they were part of invalid workgroups (e.g., incomplete groups). Our final sample consisted of 453 participants: 151 workgroup leaders and 302 workgroup followers (151 were the target followers and 151 rated the target followers). Regarding the leaders, 58.1% were female and 41.9% were male with an average age of 37.39 years ($SD = 13.03$). Leaders were ethnically diverse, including: Whites (39.2%), Latinos (22.3%), Asians (20.9%), Blacks (8.1%), Native Hawaiian/Pacific Islanders (4.1%), and others (5.4%). Leaders had diverse levels of educational attainment, including: Bachelor's degrees (31.1%), some college but did not graduate (29.7%), Master's degrees (16.2%), Associate's degrees (8.8%), high school graduates (6.1%), Doctorates or PhD's (5.4%), professional (i.e., law, medicine) degrees (2.0%), and did not graduate from high school (.7%). Leaders reported having an average of 8.56 ($SD = 7.97$) years of supervisory experience and worked in a variety of managerial levels, including: first-line supervisors (33.2%), middle management (27.1%), upper-middle management (20.2%), and senior-level management (19.5%). Leaders reported an average of 15.98 years ($SD = 10.97$) of work experience, an organizational tenure of 7.72 years ($SD = 7.13$), and a 42.61-hour ($SD = 12.04$) workweek.

Regarding the workgroup followers ($n = 302$), which included the target followers ($n = 151$) and their peers who rated them ($n = 151$), 61.4% were female and 38.6% were male with an average age of 27.72 years ($SD = 10.42$). Followers were ethnically diverse, including: Latinos (30.5%), Asians (25.8%), Whites (24.4%), Blacks (7.5%), Native Hawaiian/Pacific Islanders (2.7%), and others (9.2%). Followers had diverse levels of educational attainment, including: some college but did not graduate (43.2%), Bachelor's degrees (24%), high school graduates (19.3%), Associate's degrees (8.4%), Master's degrees (3.7%), professional (i.e., law, medicine) degrees (.7%), and did not graduate from high school (.7%). Followers reported an average of 7.62 years ($SD = 7.88$) of work experience, an organizational tenure of 3.67 years ($SD = 4.35$), and a 30.45-hour ($SD = 14.03$) workweek.

Followers were randomly selected to either be the target followers or to rate the target followers; as expected, independent samples *t* tests and chi-square tests suggest that there were no significant differences in the above demographic and work variables between the two groups ($p > .10$). However, workgroup leaders were older, more educated, worked more hours per week, and had more work experience and longer organizational tenure ($p < .05$). These differences were expected because leaders (in comparison to followers) tend to have greater responsibilities that require more education, experience, and longer workweeks, which usually is commensurate with age and tenure.

3.2. Measures

3.2.1. Leaders' implicit followership theories (LIFTs)

Leaders' positive conceptions of followers were measured with the nine positive attributes from the LIFTs scale (Sy, 2010). Leaders were asked to indicate on a ten-point scale how characteristic each item was for followers. The LIFTs scale consisted of three dimensions with three items each, including Industry (hardworking, productive, goes above and beyond), Enthusiasm (excited, outgoing, happy), and Good Citizen (loyal, reliable, team player). Cronbach's alphas for the three LIFTs sub-scales were .92, .88, and .90, respectively.

3.2.2. Performance expectations

Leaders' performance expectations for their workgroup followers were measured with six items from an adapted measure of leader performance expectations for followers (Engle & Lord, 1997; Wernimont, 1971). Leaders were asked to rate on a five-point scale the extent to which each item was expected of their workgroup followers. Example items included, punctual in meeting deadlines, gives suggestions, and follows through on tasks. Cronbach's alpha for the scale was .85.

3.2.3. Leader–member exchange quality (LMX)

The quality of relationships that workgroup leaders had with their followers was measured with the LMX(1) scale from Paglis and Green (2002). Workgroup leaders were asked to respond to seven items on a 10-point scale regarding the target followers (by name). Example items included, "This employee understands my job problems and needs," and "I would characterize my working relationship with this employee as extremely effective." A meta-analysis showed that the seven-item LMX scale, which was slightly modified into the LMX(1) scale, was psychometrically superior to other LMX instruments tested (Gerstner & Day, 1997). Cronbach's alpha for the LMX(1) was .95.

3.2.4. Liking

Workgroup leaders' liking for their followers was measured with three items on a seven-point scale that were adapted from Wayne et al. (1997). Items included, "I think my workgroup followers would make good friends," and "I like my workgroup followers very much." Cronbach's alpha for the scale was .89.

3.2.5. Follower performance

One peer member from the same workgroup rated the performance of the target follower (by name), by responding to three items on a 10-point scale that were adapted from Wayne et al. (1997). Items included, "In my estimation, this employee gets his or her work done very effectively," and "This employee has performed his/her job well." Cronbach's alpha for the performance scale was .92.

3.3. Discriminant and convergent validity

We assessed a measurement model that maps the observed measures onto their posited theoretical construct. A confirmatory factor analysis was conducted on the leader and follower variables from the hypothesized model (LIFTs, performance expectations, liking, LMX quality, and follower performance), which were free to intercorrelate. The latent variables, or constructs, in the measurement model had three indicators each. The indicators for the LIFTs construct were created from the three aggregated LIFTs sub-scales (Industry, Enthusiasm, Good Citizen), and liking and follower performance were indicated by each of their three respective scale items. The indicators were created for LMX quality and performance expectations by aggregating three randomly selected parcels that consist of all scale items for each construct. Model fit indices were interpreted following standards cited by Hu and Bentler (1999): $\chi^2 =$ non significant, comparative-fit index (CFI) $\geq .96$; root mean square of approximation (RMSEA) $\leq .06$; and standardized root mean square residual (SRMR) $\leq .10$. The measurement model demonstrated good fit to the data, suggesting that it is a valid means of data description: $\chi^2(N = 151, 80) = 79.72, p = .488$; CFI = 1.00; RMSEA < .01 ($CI_{.90} = .00, .05$); SRMR = .03; AIC (Akaike information criterion) = 5827.97.

We also followed methods described by Anderson and Gerbing (1988) (p. 416) to assess further convergent and discriminant validity among the study variables. Convergent validity was assessed from the measurement model by determining whether each indicator's factor loading on its posited underlying construct was significant (Anderson & Gerbing, 1988). All factor loadings were significant ($p < .001$; $\beta = .68$ to $\beta = .95$), providing evidence for convergent validity among the hypothesized constructs. Discriminant validity was assessed between all of the pairs of constructs in the measurement model. There were significant differences ($p < .001$) between the correlation values of each pair of constructs that were constrained to 1.0, and the unconstrained values of the same pairs of constructs (Anderson & Gerbing, 1988; Bagozzi & Phillips, 1982; Joreskog, 1971). Analogously, none of the 99% confidence intervals around each correlation estimate included 1.0 (Anderson & Gerbing, 1988). Therefore, the constructs are not perfectly correlated and discriminant validity has been achieved (Bagozzi & Phillips, 1982). In sum, these analyses provide tenable evidence for convergent and discriminant validity among the hypothesized constructs.

3.4. Common method variance

We took several precautions toward making sure that common method variance (CMV) (i.e., variance resulting from the measurement method, rather than the measured constructs) did not significantly bias the results in the present study (e.g., Podsakoff et al., 2003). As noted above, we used peer performance appraisals rather than leaders' performance appraisals to avoid biases from same source ratings. However, it may have been that CMV biased the remaining variables that were measured from the leaders' perspective. Therefore, we conducted three different analyses to assess the degree to which the leadership variables (i.e., positive LIFTs, expectations, LMX, liking) were biased by CMV. First, we performed Harman's one-factor test with confirmatory factor analysis, which assesses whether the majority of variance in the study variables can be better explained by one general latent factor. CMV may not be considered a significant bias if the one-factor model is significantly worse fitting than the hypothesized model (e.g., Podsakoff et al., 2003). The results suggest that a one-factor model with leaders' same-source ratings as indicators was significantly worse fitting than that of the hypothesized model ($\Delta\chi^2(N=151, 3) = 11.41, p = .001$), suggesting that CMV may not have significantly biased the results.

Second, we used a partial correlation procedure described by Lindell and Whitney (2001), which determine whether the correlations between the hypothesized variables remain significant after the estimated effects of CMV have been controlled. If these partial correlations remain significant, then it is likely that CMV did not contaminate the observed relationships. As an estimate and control of CMV, we used the smallest observed correlation among the leadership variables to partial out of the remaining correlations (Lindell & Brandt, 2000; Lindell & Whitney, 2001). This was the correlation between the LIFTs sub-scale of Enthusiasm and LMX, $r(149) = .19, p = .02$. It should be noted that this estimate and test of CMV is more conservative than an alternative procedure that partials out a marker variable that is theoretically and statistically unrelated to the study variables (Lindell & Whitney, 2001). This is because partialing out the effects of a marker variable that is statistically unrelated to the study variables will yield larger partial correlations among study variables (denoting a lesser presence of CMV) than partialing out the effects of the smallest, but significant observed correlation (i.e., the correlation between LIFTs–Enthusiasm and LMX). Results suggest that all partial correlations between the leadership variables remained significant while controlling for the estimated effects of CMV, suggesting that it was unlikely that CMV significantly inflated the hypothesized relationships.

Third, we directly measured the influence that leaders' job related affective well-being and job satisfaction had on the leaders' same-source ratings. Both constructs may tap into leaders' overall feelings toward their work environments and could therefore explain a substantial proportion of variance among the hypothesized relationships. If the hypothesized parameter coefficients and corresponding significance levels remain stable with the inclusion of job related affective well-being and job satisfaction, then it is likely that CMV did not pose a large threat to the results (e.g., Podsakoff et al., 2003). Job related affective well-being was measured with 12 items ($\alpha = .89$) (Warr, 1990) and job satisfaction was measured with four ($\alpha = .88$) (Quinn & Shepard, 1974). Results suggest that the hypothesized parameter coefficients and corresponding significance levels remained stable (i.e., they did not change much) when all of the leaders' ratings loaded onto job related affective well-being and job satisfaction (both together and separately), suggesting that it is unlikely that CMV contaminated the hypothesized relationships.

In sum, we established discriminant validity among our study variables, and attempted to control bias due to CMV in our study design by collecting data from multiple sources (leaders and followers). Furthermore, we conducted three tests among the intrapsychic leadership variables to assess the degree of CMV. While the results suggest that it is unlikely that CMV posed a large threat to the observed relationships in the present study, we fully acknowledge that the influence of CMV cannot be completely ruled out.

4. Results

4.1. Model testing

Means, standard deviations, correlations, and reliabilities of the study variables are presented in Table 1. The hypothesized model was assessed using structural equation modeling (SEM) with *Mplus* version 5.21. In addition, maximum-likelihood robust (MLR) estimation was used to account for the slight non-normality of the study variables (e.g., Muthen & Muthen, 1998–2007;

Table 1
Means, standard deviations, correlations, and reliability coefficients among study variables^a.

Variables	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.	8.
1. Industry	6.70	2.36	.92							
2. Enthusiasm	6.37	2.11	.78	.88						
3. Good citizen	7.41	2.10	.80	.74	.90					
4. Positive LIFTs	6.83	2.02	.93	.90	.89	.95				
5. LMX	8.18	1.51	.33	.19	.30	.26	.95			
6. Liking	5.83	.99	.36	.39	.40	.38	.30	.89		
7. Performance expectations	3.91	.73	.47	.46	.48	.51	.34	.50	.85	
8. Employee performance	8.82	1.30	.09	.12	.07	.11	.26	.21	.18	.92

Note. Italicized figures on the diagonal are reliability coefficients.

^a $n = 151$; $r > .16, p < .05$; $r > .21, p < .01$; $r > .27, p < .001$ (2-tailed).

Raykov & Marcoulides, 2006). In addition to assessing the hypothesized model, we contrasted the model with a series of theoretically based alternative models, because other models may have fit the data as well or better than the hypothesized model (e.g., Raykov & Marcoulides, 2006). To meet this end, mean-adjusted chi-square difference tests were performed between the hypothesized model and four alternative models. Mean-adjusted chi-square difference test values were used instead of regular chi-square values because the latter does not follow a chi-square distribution when MLR estimation is utilized (e.g., Muthen & Muthen, 1998–2007; Raykov & Marcoulides, 2006; Satorra, 2000).

The first alternative model that we tested is a reverse causality model, which assesses whether follower performance positively influences the Pygmalion mediators (i.e., performance expectations, LMX, liking), which ultimately influence positive LIFTs. Consistent with prior theorizing (Pygmalion effects, Eden, 1992; inference-based processes, Lord & Maher, 1991), it is possible that leaders tend to judge and respond to their followers in ways that are commensurate with their followers' performance, and these judgments and behaviors are central for forming their positive LIFTs. The second alternative model tests the notion of naturally occurring Pygmalion effects by restricting the paths emanating in and out of performance expectations to zero. By far, performance expectations have historically been the central component for producing Pygmalion effects; indeed, the Pygmalion effect paradigm is non-existent without them (e.g., Kierein & Gold, 2000; McNatt, 2000; Rosenthal & Rubin, 1978). It is possible that LIFTs have a direct influence on liking and LMX quality that then impact follower performance. Indeed, our earlier arguments based on the perception–behavior link (Bargh et al., 1996; Chen & Bargh, 1997) suggest that LIFTs may trigger associated cognitions and behaviors that result in a direct influence on liking and LMX quality. Alternative model three tests whether LMX quality and liking are integral for producing naturally occurring Pygmalion effects. Although LMX quality and liking have been theorized to approximate Rosenthal's (1989) affect/effort theory for the mediation of Pygmalion effects (e.g., Bezuijen et al., 2009; Jussim, 1986), there may be other cognitive and behavioral mediators not encompassed by these constructs that are more important for enhancing follower performance. Therefore, in alternative model three, the paths emanating in and out of LMX quality and liking are restricted to zero, to test their importance for naturally occurring Pygmalion effects. Lastly, alternative model four is the baseline model, which did not posit interrelationships between the hypothesized variables because they may not be significantly related in producing Pygmalion effects. The chi-square difference tests between the hypothesized and four alternative models, as well as the models' fit indices are presented in Table 2.

As Fig. 2 suggests, the hypothesized path-analytic model had a good fit to the data and all parameter coefficients were significant ($p < .05$) except two that were marginally significant ($p < .09$): $\chi^2(N = 151, 11) = 7.75, p = .735$; CFI = 1.00; RMSEA < .01 ($CI_{.90} = .00, .06$); SRMR = .03; AIC = 1,156.11. Chi-square difference tests (see Table 2) suggest that there were significant decrements in model fit when moving from the hypothesized model to the nested alternative models 1–4 (i.e., significant chi-square difference test values). The Akaike information criterion (AIC) values for the hypothesized and alternative models are also useful indices for the purpose of model comparison, with smaller values denoting models with better data description capabilities (e.g., Akaike, 1987). The hypothesized model has the lowest such value (AIC = 1,156.11). Taken together, the SEM results suggest that the hypothesized model is a good and reasonable means of data description and is statistically and theoretically more plausible than the other four alternative models that were tested.

4.2. Hypothesis testing

An examination of the parameter coefficients of the hypothesized model shown in Fig. 2 provides support for Hypothesis 1; that is, positive LIFTs positively influenced leaders' performance expectations for their followers ($\beta = .53, p < .001$). For Hypothesis 2, we sought to determine whether years of supervisory experience moderated the above relationship, with a stronger relationship among relatively inexperienced leaders. To this end, the parameter coefficient of the interaction was examined for significance (i.e., the product of the observed variable years of supervisory experience and the latent positive LIFTs variable). This resulted in a significant moderation effect ($B = -.09, p = .011$). We also wanted to determine whether this effect held while controlling the possible confound of leaders' age. To this end, the three positive LIFTs indicators were first averaged into one reliable scale ($\alpha = .95$). Second, to reduce nonessential multicollinearity (Cohen et al., 2003), positive LIFTs, years of supervisory experience, and leaders' age were centered before a product term was created. Third, we regressed these four variables on performance expectations, which also resulted in a significant interaction effect ($\beta = -.20, p = .006$). In order to come to clearer conclusions of the interaction effect, we assessed the zero-order correlations between positive LIFTs and leaders' performance

Table 2

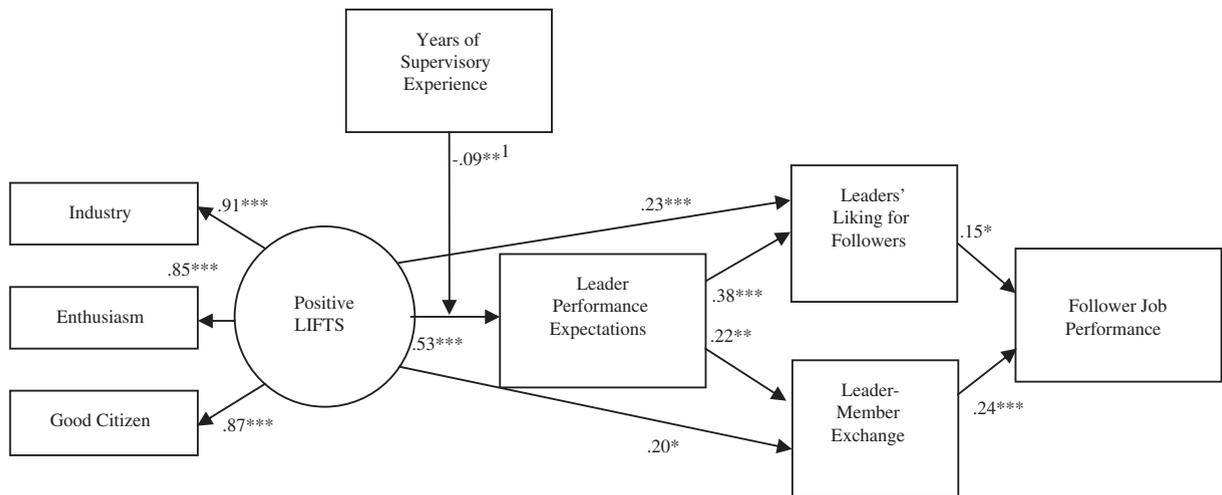
Fit indices and difference tests for structural equation models.

Model	$\chi^2(N = 151)$	<i>df</i>	$\Delta\chi^2$	Δdf	CFI	RMSEA ($CI_{.90}$)	SRMR	AIC
Hypothesized model	7.75	11			1.00	.00 (.00, .06)	.03	1,156.11
Alternative model 1	45.91*	12	22.21*	1	.90	.14 (.10, .18)	.24	1,198.87
Alternative model 2	66.65*	14	51.89*	3	.84	.16 (.12, .20)	.18	1,222.49
Alternative model 3	71.01*	16	61.86*	5	.84	.15 (.12, .19)	.19	1,221.42
Alternative model 4	359.93*	21	338.18*	10	.00	.33 (.30, .36)	.33	1,567.33

Note. $\Delta\chi^2$ = Mean-adjusted chi-square difference test value; Δdf = chi-square difference test degrees of freedom; CFI = comparative-fit index; RMSEA = root mean square of approximation; $CI_{.90}$ = 90% confidence interval; SRMR = standardized root mean square residual; AIC = Akaike information criterion.

Chi-square difference tests are between the hypothesized model and each of the four alternative models.

* $p < .001$.



*** $p < .01$, ** $p < .05$, * $p < .09$, ¹Unstandardized coefficient (all others are standardized)

$\chi^2(N = 151, 11) = 7.75, p = .735$; CFI = 1.00; RMSEA < .01 ($CI_{90} = .00, .06$); SRMR = .03; AIC = 1,156.11

Fig. 2. Hypothesized path-analytic model. LIFTS = leaders' implicit followership theories.

expectations for their own followers among (1) all leaders in the sample ($r = .51, p < .001; n = 151$), (2) the bottom 25% of the least experienced leaders ($r = .64, p < .001; n = 37$), and (3) the top 25% of the most experienced leaders ($r = .23, p = .173; n = 38$). As can be seen from the above results, the significant relationship among the least experienced leaders dropped to a non-significant value among the most experienced leaders. Furthermore, there was a significantly stronger relationship between positive LIFTS and leaders' performance expectations among the least experienced leaders (bottom 25%) versus the most experienced leaders (top 25%; $z = 2.18, p = .029$), providing support for [Hypothesis 2](#).

[Hypotheses 3a and 3b](#) were also supported. Leaders' performance expectations for their workgroup followers positively influenced liking for these followers ($\beta = .38, p < .001$) and LMX quality with the target follower ($\beta = .22, p = .044$). In addition, [Hypotheses 4a and 4b](#) were supported, as leaders' liking ($\beta = .15, p = .081$) and LMX relationship quality ($\beta = .24, p = .007$) positively influenced the target followers' performance.

Bootstrap analyses for estimating indirect effects provided support for [Hypotheses 5a and 5b](#). This method is beneficial over more traditional regression methods (e.g., [Baron & Kenny, 1986](#); [Sobel, 1982](#)), because the latter often produces standard errors and corresponding confidence intervals for indirect estimates that are not normally distributed (e.g., [Shrout & Bolger, 2002](#)). The significant standardized indirect effects from positive LIFTS to LMX quality ($M = .12, p = .044, CI_{95\%} = .01, .23$) and liking ($M = .20, p < .001, CI_{95\%} = .10, .30$) provided support for [Hypothesis 5a](#). Lastly, the significant sum of the standardized indirect effects from performance expectations to follower performance ($M = .11, p = .019, CI_{95\%} = .02, .20$) provided support for [Hypothesis 5b](#). In sum, the hypothesized naturally occurring Pygmalion effects model and all accompanying hypotheses in the present study were supported.

5. Discussion

The present study provides evidence for a model delineating the relationships between positive LIFTS and naturally occurring Pygmalion effects. This can occur because LIFTS may act as sensemaking mechanisms ([Weick, 1995](#)) that may influence leaders' affect, cognitions, and behaviors toward followers (e.g., [Fiske, 1993](#)). Therefore, LIFTS may serve as lenses that "color" leaders' expectations for their followers, influencing follower performance in a manner consistent with the Pygmalion effect. The study results provide support for the plausibility of a model in which positive LIFTS positively influenced leaders' performance expectations for their followers, which influenced their liking and LMX quality with their followers. In line with Pygmalion theory, these positive communication variables (i.e., liking and LMX) positively influenced follower performance. In addition, we found that leaders' supervisory experience impacted the extent to which positive LIFTS were related to leaders' expectations for their followers' performance. There was a stronger relationship between positive LIFTS and leaders' expectations for their specific followers when leaders had relatively less leadership experience. These findings highlight the potential for LIFTS to be incorporated into intervention strategies that result in Pygmalion effects and positive follower outcomes.

5.1. Intervention strategies

A key goal for intervention strategies is to increase positive LIFTS. Organizations could facilitate these efforts by creating norms for positive leader and follower interactions through frequent team building exercises. This would enable leaders to experience

first hand, the positive qualities of their followers and the benefits of having frequent positive interactions with them (e.g., greater cohesion, trust, and likelihood of followers adhering to their directives). Further, research on positive psychology interventions offers some insight in to how LIFTs may be changed to be more positive (e.g., Lyubomirsky, 2008; Lyubomirsky, Sheldon, & Schkade, 2005). Leaders may focus on the positive qualities of their followers by regularly writing letters of appreciation to them. Similarly, leaders can express gratitude for their followers by regularly reflecting on the positive characteristics and behaviors of their followers. Lastly, organizations could institute protocols that positively reinforce leaders for emphasizing the positive aspects of their followers in their performance reviews, beyond traditional norms of focusing on negative aspects (e.g., identifying followers' weaknesses and areas for improvements) (Buckingham & Clifton, 2001). Similarly, followers could reciprocate by providing feedback about the positive aspects about leaders (e.g., in 360 feedback). Overall, consistent application of such interventions could make LIFTs more positive by allowing leaders to make explicit and implicit connections between their positive thoughts and behaviors toward their own followers, and their conceptualizations of followers in general.

5.2. Limitations

This study, like virtually all studies, is not without its limitations. First, as mentioned earlier, structural equation models of this kind are correlational, therefore, causality was not unequivocally demonstrated. However, using a correlational model was necessary for us to assess naturally occurring (i.e., without experimental manipulation) Pygmalion effects. In addition, there have been numerous externally valid, experimentally manipulated demonstrations of the Pygmalion effect (e.g., Harris & Rosenthal, 1985; Kierein & Gold, 2000; McNatt, 2000; Rosenthal & Rubin, 1978), which adds credence to the putative causal relationships among the study variables. Second, the paths in the hypothesized model are undoubtedly more complex in the population. Similar to other models of interpersonal expectancy effects (e.g., Rosenthal, 1981), the paths in the present study, and perhaps the paths in most structural equation models of this kind, are bi-directional and continually changing. Third, the present study assessed leaders' performance expectations and liking for their workgroup followers, while the assessment of LMX and employee performance targeted a specific focal employee (i.e., target followers). This was done because LIFTs represent broad conceptions of followers that are likely to guide global leadership judgments and interpersonal dynamics, such that they have a relatively equal impact on all follower outcomes. This also had the added benefit of substantially reducing the length of the surveys, and potential survey fatigue and response bias. As such, we deemed it appropriate to assess leaders' expectations and liking for their workgroup, rather than requiring leader responses for each of their individual group members.

5.3. Future research

Future research should examine the causal impact of LIFTs on Pygmalion effects and follower outcomes. For example, studies could experimentally induce LIFTs through one of several priming methods (for one review, see Bargh & Chartrand, 2000) and assess their impact on Pygmalion effects, including leader expectations, leader behavior toward followers (e.g., affect and effort; Rosenthal, 1993), and follower performance. In addition, research might explore the antecedents and causes of LIFTs, such as trait affect, which is known to bias how people perceive their environments (e.g., Schwarz & Clore, 2007). Trait affect may influence naturally occurring Pygmalion effects because leaders who are high in trait positive affect tend to have more positive LIFTs and performance expectations (Kruse & Sy, 2011), which may ultimately influence greater follower performance.

Whereas this research has focused on the relationships between positive LIFTs and Pygmalion effects, future research should investigate the relationships between negative LIFTs and Golem effects (Babad et al., 1982). Consistent with the literature of self-fulfilling prophecies (Eden, 1992), leaders who tend to have negative conceptions of followers (i.e., negative LIFTs) may be inclined to have low expectations for their followers and treat their followers in ways that inhibit follower performance. Research on Golem effects has been limited to date, mainly due to the ethical concerns of experimentally inducing harsh leader behavior and negative follower outcomes, such as poor performance and lowered self-efficacy (Oz & Eden, 1994). However, investigating Golem effects via negative LIFTs, which are naturally occurring, would alleviate these ethical concerns because the outcomes of negative LIFTs can be observed without experimental manipulation. For example, researchers could use self-report and observational data to examine the relationships between negative LIFTs, leaders' low performance expectations, and negative leader judgments and behaviors (e.g., punitive leadership) toward followers that result in poor performance in followers. In a similar vein, future research could investigate the possibility that positive LIFTs may induce performance expectations that negatively impact follower outcomes because such expectations may be beyond follower capabilities. For example, leaders with high performance expectations may delegate duties that are beyond follower capabilities while providing them with little guidance or training because high expectations may lead leaders to believe that followers already have the abilities to perform. Such scenarios may set followers up for failure. Thus, there may be interaction effects between leader performance expectations and follower capabilities.

Lastly, little research has examined naturally occurring "role reversed Pygmalion effects," or instances when follower expectations for their leaders can influence follower judgments and behaviors (e.g., followership behaviors that support leaders) in ways that improve leader performance. Indeed, researchers have begun investigating such possibilities (Hezkiau-Ludwig & Eden, 2011). Although initial results were largely unsupported, the intriguing possibilities are ripe for future research. Similarly, future research could fill the literature gap by focusing on naturally occurring "role reversed Golem effects," where low follower expectations worsen follower judgments of and behavior toward their leaders, which ultimately lowers leader performance. Similar to the way LIFTs influenced naturally occurring Pygmalion effects in the present study, implicit leadership theories (ILTs) may

influence role reversed Pygmalion and Golem effects. That is, ILTs may bias followers' expectations, judgments, and behavior toward leaders, which may ultimately influence leader performance.

5.4. Closing

Naturally occurring Pygmalion effects may be crucially important for organizations that wish to improve their followers' performance in order to gain a competitive edge. This may be particularly true given the recent meta-analytic evidence suggesting that Pygmalion interventions had the largest effects on intended outcomes (Avolio et al., 2009). There is much more to be learned about naturally occurring Pygmalion effects (e.g., Rosenthal, 2002), and the role that LIFTs play in facilitating them. Ultimately, insights from LIFTs research may offer practical interventions for lifting employee performance.

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