Authentic Leadership, Authentic Followership, Basic Need Satisfaction, and Work Role Performance: A Cross-Level Study

Hannes Leroy
KU Leuven, University of Calgary

Frederik Anseel
Ghent University

William L. Gardner
Texas Tech University

Luc Sels
KU Leuven

Authentic leadership occurs when individuals enact their true selves in their role as a leader. This article examines the role of authentic followership in the previously established relationship between authentic leadership and follower in-role and extrarole performance behaviors. Consideration of followers who enact their true selves is important to understand how authentic leadership fosters follower self-determined work motivation and thus work role performance. Using self-determination theory (SDT) as a guiding framework, the authors propose that authentic leadership, authentic followership, and their interplay are positively related to the satisfaction of followers' basic needs, which, in turn, are positively related to follower work role performance. The authors conducted a survey study of 30 leaders and 252 followers in 25 Belgian service companies. The results provide evidence of positive relationship for both authentic leadership and authentic followership with follower basic need satisfaction in a cross-level model where authentic leadership was aggregated to the group level of analysis. Cross-level interaction results indicated that authentic leadership strengthened the relationship

1

between authentic followership and follower basic need satisfaction. Follower basic need satisfaction was shown to mediate the relationship of authentic leadership and authentic followership with follower work role performance. A test of mediated moderation further demonstrated that basic need satisfaction mediates the interaction of authentic leadership and authentic followership on follower work role performance. The implications for leadership research and practice are explored.

The ethical and performance challenges inherent to the current, turbulent work environment have called for a new approach to leadership (Avolio & Gardner, 2005). Accordingly, both the practitioner (George, Sims, McLean, & Mayer, 2007) and academic (Avolio, Gardner, Walumbwa, Luthans, & May, 2004) literatures have highlighted the importance of authentic leadership or the degree to which leaders remain "true to the self." Authentic leadership in the workplace occurs when leaders enact their true selves and is manifest in behaviors such as being honest with oneself (e.g., admitting personal mistakes), being sincere with others (e.g., telling others the hard truth), and behaving in a way that reflects one's personal values (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008).

Avolio and Gardner (2005) posited that these authentic leader behaviors lead to follower performance outcomes that are sustainable in the current, unstable work environment. Previous research has confirmed that authentic leadership is related to follower performance and organizational citizenship behaviors (Walumbwa et al., 2008) through the mechanisms of follower identification with the supervisor or organization and follower feelings of empowerment (Leroy, Palanski, & Simons, 2012; Walumbwa, Wang, Wang, Schaubroeck, & Avolio, 2010). Furthermore, prior research has shown that authentic leadership relates to group performance and group organizational citizenship behaviors through the mechanisms of group trust and group positive psychological capital (Walumbwa, Luthans, Avey, & Oke, 2011), teamwork and team authenticity (Hannah, Walumbwa, & Fry, 2011), and team positive affective tone (Hmieleski, Cole, & Baron, 2011).

To date, however, research pertaining to authenticity in the workplace has been curiously one-sided (Algera & Lips-Wiersma, 2012), focusing primarily on leader authenticity, while devoting far less attention to follower authenticity (Avolio & Reichard, 2008). Although authentic leadership theory has recognized the importance of authentic followership from the outset (Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Ilies, Morgeson, & Nahrgang, 2005), no empirical research on authentic followership is available (Gardner, Cogliser, Davis, & Dickens, 2011). Consideration of authentic followership is important to understand how authentic leadership fosters followers' autonomous work motivation (Deci & Ryan, 2000): By enacting their true selves in the workplace, followers are more likely to experience that their work-related activities are self-endorsed. In turn, motivation that is rooted within contributes to those follower behaviors that reflect more sustainable performance in today's unstable work environment (Gagné & Deci, 2005; Griffin, Neal, & Parker, 2007).

This study uses self-determination theory (Deci & Ryan, 2000) to test the idea that authentic leadership and authentic followership coproduce follower satisfaction of the basic

psychological needs underlying autonomous work motivation and thus work role performance. Figure 1 depicts these relationships in a cross-level model where authentic leadership is aggregated to the group level of analysis. In its aggregated form, authentic leadership reflects behaviors that are enacted by the leader and observed by all followers (Hannah et al., 2011; Hmieleski et al., 2011; Walumbwa et al., 2010; Walumbwa et al., 2011). As a group-level variable, authentic leadership predicts between-group variation in basic need satisfaction and between-group variation in the strength of the relationship between authentic followership and basic need satisfaction. In turn, we posit that basic need satisfaction mediates the effect of authentic leadership, authentic followership, and their interaction on follower work role performance.

By examining the relationships depicted in Figure 1, this study makes three contributions to the emerging literature on authentic leadership. First, it adds to growing evidence regarding the performance implications of authentic leadership (Hannah et al., 2011; Hmieleski et al., 2011; Walumbwa et al., 2008; Walumbwa et al., 2010; Walumbwa et al., 2011) by identifying how such leadership enhances those performance behaviors that are important in the current, turbulent work environment (Griffin et al., 2007). Second, it suggests that the performance advantages that accrue from authentic leadership can be better understood by considering the satisfaction of basic needs as an explanatory and mediating mechanism. Third and finally, it seeks to address a gap in the extant authentic leadership literature that arises from a failure to consider the influence of the follower, and more specifically, authentic followership, on the assumed positive outcomes of authentic leadership (Algera & Lips-Wiersma, 2012; Avolio & Reichard, 2008; Gardner et al., 2011).

Thus, in contrast to the leader-centric focus that pervades much of the research into authentic leadership (Algera & Lips-Wiersma, 2012) and leadership in general (Meindl, 1990; Shamir, 2007), our perspective considers the role that both the leader and the follower can play in fostering follower motivation and behavior. Considering the active role of the follower is especially important to foster a better understanding of how leaders support follower autonomous work motivation and thus follower work role performance.

Theoretical Foundations

Authentic Functioning, Authentic Leadership, and Authentic Followership

Kernis (2003: 13) introduced the term *authentic functioning* to describe "the operation of one's core or true self in one's daily enterprise." The operation of one's true self can take many forms such as telling the truth (relational orientation), admitting personal mistakes (unbiased processing), being aware of what demotivates oneself (self-awareness), and staying true to personal values through behavior (authentic behavior). It is the combined set of these different behaviors that provides a holistic image of what it means to be authentic (Kernis & Goldman, 2006). For example, if one offers honest feedback to others about their behavior, such feedback is less likely to reflect authenticity if one is not also willing to divulge one's own personal weaknesses or if one does not practice what one preaches to others.

To further clarify the underlying principle behind these components of authenticity,

Figure 1
Hypothesized Model
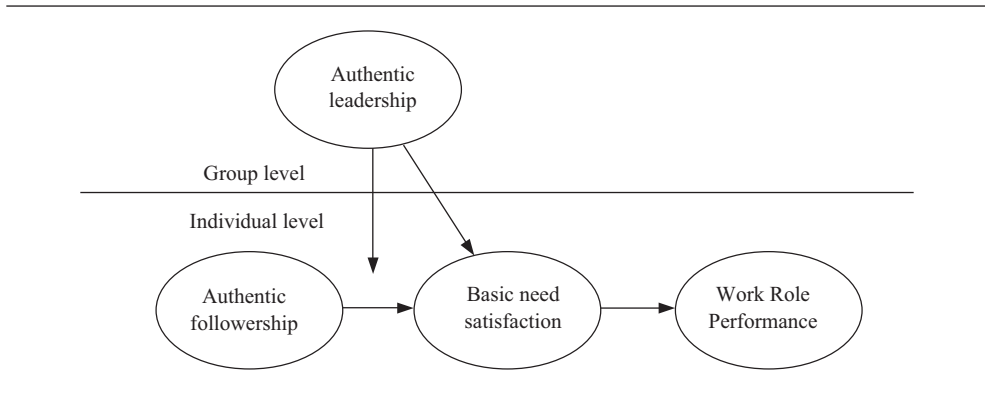
Kernis (2003) posited that authentic functioning originates from dispositional differences in self-esteem. Some individuals have feelings of self-worth that are contingent on the approval of others. In such cases, self-worth is described as fragile in that it crumbles when the ego is threatened by feedback from others. Persons with fragile self-esteem may engage in inauthentic behaviors that serve to protect their ego, such as rationalizing when they fail to live up to espoused values, or lying to foster a positive image. In other words, fragile feelings of self-worth foster ego-defensive behaviors that hinder personal growth. In contrast, persons who function authentically possess stable self-esteem and remain open and nondefensive to negative feedback. In support of this reasoning, prior research has found that self-ratings of authentic functioning are negatively related to other persons' ratings of verbal defensiveness (Kernis & Goldman, 2006; Lakey, Kernis, Heppner, & Lance, 2008).

The construct of authentic functioning has been argued to apply to the roles enacted by leaders (Avolio & Gardner, 2005) and followers (Gardner et al., 2005). That is, both leaders and followers can differ in the extent to which they allow their true selves to come to play at work (Gardner, Fischer, & Hunt, 2009). In this regard, authentic leadership reflects a context-specific (work-related) and role-specific (leader) manifestation of authentic functioning. Walumbwa et al. (2008: 94) go on to define authentic leadership as "a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development." Authentic leadership describes a form of leadership that originates from authentic functioning but, as a process of influence, is also aimed at the development of followers and, more specifically, serves to promote authentic followership (Gardner et al., 2005).

Gardner and colleagues (2005: 362) argued that the same components of authenticity that are present in authentic leaders are also present in authentic followers: that is, they "draw on the work of Kernis (2003) and Deci & Ryan (1995, 2000) in positing that authenticity among followers is characterized by self-awareness, internalized regulatory processes, balanced information processing, authentic behavior, and relational transparency." The word *followership*

further implies that the follower not only is a passive recipient of the leader's influence (Shamir, 2007), but instead takes an active role in the leader–follower relationship. In this regard, authentic followership describes the process by which followers approach their work-related tasks and relationships with a sense of ownership, openness, and nondefensiveness to foster more autonomous work motivation (Gardner et al., 2005).

Self-Determination Theory

Self-determination theory (SDT) is a general theory of human motivation that has been successfully applied to predict human behavior in different life domains such as sports, health, education, parenting, and work (for an overview, see Vansteenkiste, Niemec, & Soenens, 2010). To explain how SDT may help explicate the effects of authentic leadership and authentic followership, we provide an overview of the central mechanisms of this theory by specifying the (a) organismic, (b) dialectical, and (c) positive premises of this theory (Deci & Ryan, 2000).

First, SDT assumes that individuals have an innate, organismic tendency to integrate new experiences into an evolving, coherent sense of self (Ryan, 1995). More specifically, SDT posits that individuals are naturally inclined to be self-determined, but acknowledges that in certain contexts (e.g., a work context) their striving toward self-determination may come into conflict with environmental role demands (Gagné & Deci, 2005). Under these conditions, SDT suggests that individuals are active organisms who will attempt to integrate themselves into their larger social environment to make contextually required behaviors congruent with an existing self. Thus, within SDT, autonomous motivation refers to the extent to which extrinsic motivations have been successfully internalized. SDT further posits that this process of internalization requires fundamental nutriments: the satisfaction of the basic psychological needs of competence (feeling capable for work-related tasks), relatedness (feeling supported by the people one works with), and autonomy (feeling that one is the initiator of work-related actions). The principle underlying these fundamental needs is that their satisfaction provides a subjective feeling that one's work-related behavior resonates with one's true self. Consistent with this perspective, Greguras and Diefendorff (2009) found that employees who experienced a high level of fit with their work environment reported higher levels of basic need satisfaction.

Second, SDT posits that these integrative tendencies and the satisfaction of the basic needs are a function of both the active organism and his or her environment. On the one hand, SDT suggests that there are dispositional differences in the extent to which individuals are oriented toward self-determination and therefore future need satisfaction. On the other hand, SDT asserts that there are also differences in the extent to which the environment supports basic need satisfaction of the individual. For example, in a work setting both the follower and the leader can influence follower basic need satisfaction. SDT suggests that neither the follower nor the leader takes primacy in basic need satisfaction, but rather that there is a dialectic relationship between the leader and follower such that these parties operate to coproduce follower basic need satisfaction (Deci & Ryan, 2000).

Third, this theory has strong linkages with the literature on positive psychology (e.g., Ryan & Deci, 2001) and positive organizational behavior (e.g., Luthans & Youssef, 2007).

This positive approach to human beings seeks to identify those human strengths that reflect more optimal human functioning. In this respect, the three needs for competence, relatedness, and autonomy are considered to be basic and beneficial for every human being. Furthermore, in accordance with its organismic-dialectic premises, SDT assumes that optimal functioning occurs when the individual has effectively integrated himself or herself into the larger social environment. In the workplace, more optimal functioning would reflect not only high levels of energy and perseverance in performing standard tasks, but also the extent to which the individual is able to adapt to changes in the workplace and is proactive in introducing modifications to that workplace (Gagné & Deci, 2005). Griffin and colleagues (2007) argue that overall superior performance in the current, unstable work environment is reflected by a combination of these proficient, adaptive, and proactive work behaviors.

Authentic Followership and Basic Need Satisfaction

SDT posits that individuals can differ in their orientation toward self-determination (Deci & Ryan, 2000). Consistent with its organismic premises, SDT further asserts that this self-regulatory style does not imply that these individuals distance themselves from environmental demands. To the contrary, SDT suggests that individuals who are oriented toward self-determination interact with others and process information with a sense of openness and tolerance (Hodgins & Knee, 2002), such that they are more likely to internalize external role demands. This internalized self-regulatory and nondefensive interaction style (Deci & Ryan, 2000) is reflected in the concept of authentic functioning (Kernis & Goldman, 2006).

Authentic followership describes the process whereby followers come to experience autonomous motivation. If followers can enact their true selves at work, they are more likely to experience work-related activities as autonomously motivated (Kahn, 1990). The expression of one's authentic self, however, may also highlight a tension with those work-related demands that do not align with one's abilities, identities, or values. Under these conditions, the individual may attempt to alter the situation or perhaps leave the work setting. Authentic followers, however, are more likely to internalize these existing role demands into their existing self-concept through basic need satisfaction. As growth-oriented individuals, authentic followers possess an open and nondefensive attitude toward role demands that challenge their capacities, identities, or values. In other words, authentic followers do not feel the need to protect a fragile ego and are less likely to experience need frustration. Because their needs are satisfied, followers are more likely to experience that work-related actions are in line with and emanate from oneself.

Hypothesis 1: Authentic followership is positively related to basic need satisfaction.

Authentic Leadership and Basic Need Satisfaction

SDT suggests that basic needs are more likely to be satisfied when the environment provides people with autonomy support (Deci & Ryan, 2000). Leaders in particular have been shown to play an important role in supporting follower autonomy (Deci, Connell, &

Ryan, 1989). More specifically, when leaders acknowledge the subordinate's perspective, provide meaningful feedback to followers in a nonmanipulative manner, and encourage the self-initiation of behaviors, followers are more likely to have their basic needs satisfied (Deci et al., 2001).

We view authentic leadership as a process whereby authentic leaders facilitate follower autonomous motivation. Because authentic leaders are not compelled to protect a fragile ego or their status, they do not feel threatened by followers and are more likely to allow room for follower autonomy. This does not mean that authentic leaders hide inconvenient truths to spare a follower's fragile ego. For example, authentic leaders seek to provide followers with honest task-related feedback. However, because these leaders are also willing to practice what they preach and acknowledge personal problems in doing so (Gardner et al., 2005; Ilies et al., 2005), their feedback is aimed at follower growth and supportive of follower need satisfaction.

When the focus on authentic leadership is at the group level, as in this study, it reflects the extent to which followers agree that their leader interacts with them in an authentic fashion. This manifestation of authentic leadership at the group level is in contrast to idiosyncratic follower perceptions of whether the leader is real or authentic. Therefore, we expect that authentic leadership will benefit all followers in a work unit in a similar fashion and that authentic leadership is positively related to the average need satisfaction in the team.

Hypothesis 2: Authentic leadership is positively related to basic need satisfaction.

Interaction Effect on Basic Need Satisfaction

SDT describes the dialectic interplay between an individual agent and the environment, where both coproduce the individual's motivation and ultimately behavior (Deci & Ryan, 2000). This perspective is consistent with a person-situation interactionist framework (Endler & Magnusson, 1976) where individual agents and their environment positively reinforce one another (Grizzle, Zablah, Brown, Mowen, & Lee, 2009) such that their interaction is synergistic (Grizzle et al., 2009; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004).

Applied to our study, this perspective suggests that authentic leadership will further enhance the positive effects of authentic followership on basic need satisfaction. By expressing their own true selves in the workplace, authentic leaders signal to followers that their work environment positively values authentic behavior from followers. Furthermore, their willingness to be vulnerable is more likely to foster a psychologically safe work environment (Edmondson, 1999). In a psychologically safe work environment, authentic conduct by followers such as admitting mistakes, speaking up, and living by core values are more likely to produce feelings of competence, relatedness, and autonomy (i.e., basic need satisfaction). Within our cross-level model, this interaction does not reflect an exchange between individual leaders and followers, but instead reflects the influence of authentic leadership on between-group variation in the strength of the relationship between authentic followership and basic need satisfaction. More specifically, we expect that the positive relationship between authentic followership and basic need satisfaction will be stronger for high as opposed to low levels of authentic leadership.

Hypothesis 3: Authentic leadership strengthens the relationship between authentic followership and basic need satisfaction.

Mediation Effect on Follower Work Role Performance

SDT posits that the satisfaction of basic needs has important behavioral consequences. When individuals' needs are satisfied, their work-related activities are driven more by a sense that such behavior resonates with who they are as a person and less by the potential attainment of some external reward. Because this motivation is rooted within the self, these individuals are likely to display personal pride in completing tasks. Furthermore, because autonomous motivation does not reflect an opposition to one's environment, but rather an internalization of extrinsic motivation, persons whose basic needs are satisfied are more likely to engage in extrarole behaviors such as initiating and adapting to change (Deci & Ryan, 2000).

Basic need satisfaction can help explain why authentic followership (Gardner et al., 2005) relates to follower behaviors that are particularly important in today's work environment: proficiency, adaptivity, and proactivity (Griffin et al., 2007). Authentic followers are more likely to be proficient because they feel personally responsible for the behavior. Furthermore, because authentic followers are active but nondefensive individuals, they are more likely to internalize external role demands and display proactive and adaptive behaviors.

Hypothesis 4: Basic need satisfaction mediates the positive relationship of authentic followership with follower work role performance.

Similarly, we expect that authentic leadership will enhance average follower work role performance in the team (Avolio & Gardner, 2005). Because authentic leadership fosters a work context that supports basic need satisfaction, followers are more likely to experience autonomous motivation to perform at high levels. More specifically, as reflected by our cross-level model, we expect that basic need satisfaction mediates the between-group effects of authentic leadership on follower work role performance.

Hypothesis 5: Basic need satisfaction mediates the positive relationship of authentic leadership with follower work role performance.

Mediated Moderation Effects on Follower Work Role Performance

Hypothesis 3 posited an interaction between authentic leadership and authentic followership on follower basic need satisfaction. Hypotheses 4 and 5 posited that basic need satisfaction mediates the effects of authentic followership and authentic leadership on follower work role performance. As a logical extension of Hypotheses 3, 4, and 5, we also predict that basic need satisfaction will mediate the interactive effects of authentic leadership and authentic followership on follower work role performance. This hypothesis is consistent with the basic tenets of SDT in that the dialectic between the individual and the environment coproduces not only basic need satisfaction but also optimal functioning. It

suggests that the performance benefits of authentic followership that are accrued through basic need satisfaction will be greater when such followership occurs within a context shaped by authentic leadership. That is, we expect that the indirect effect of authentic followership on work role performance via basic need satisfaction will be more pronounced for high versus low levels of authentic leadership.

> *Hypothesis 6*: Authentic leadership moderates the indirect effect of authentic followership on follower work role performance via follower basic need satisfaction.

Method

Participants and Procedure

We collected data in 25 Belgian organizations within service industries. Participating companies were small- to medium-sized firms. Within the chosen organizations, our sampling design further focused on selecting followers and leaders from established teams. We considered a team to be composed of one team leader and a minimum of four team members who reported directly to the leader. Human resource representatives provided the e-mail addresses of 345 followers and 49 team leaders to the researchers and informed the team leaders and team members about the study.

We contacted respondents through e-mail, asked them to complete a web-based survey, and followed up with a reminder after two weeks. To enable us to match the data of followers with that of their leaders, respondents were sent unique Internet addresses that were linked to their e-mail addresses. Respondents were informed of this procedure but assured that, because only aggregated results would be reported back to the organizations, it would not be possible to identify data provided by individual respondents.

We administered the survey in two stages (Mitchell & James, 2001). At Stage 1, a total of 252 (73%) followers completed the survey. At Stage 2, one month later, team leaders were asked to rate the performance of followers during the past month. Participating companies asked us to restrict leader-rated performance to four randomly selected team members to avoid placing excessive work demands on the selected leaders. After sending reminders, completed survey data were obtained from a total of 30 team leaders (61%). The total number of team members for whom leader performance ratings were provided was 118.

The average number of years that our sample of leaders had served as the leader of their team was 5.50 years ($SD = 5.31$). Of the leaders, 70% held graduate degrees, 60% were men, and their mean age was 40 years ($SD = 7.99$). On average, the organizational tenure of our sample of team members was 9.95 years ($SD = 8.93$) and their mean age was 36.26 years ($SD = 9.34$). Of the followers, 37% held graduate degrees and 70% were women. To assess the potential effects of nonresponse bias, we tested for differences between the study variables for followers whose leaders did and did not participate at Stage 2. No significant ($p > .05$) differences were obtained.

Measures

Authentic leadership. We used the 16-item Authentic Leadership Questionnaire (ALQ) developed and validated by Walumbwa and colleagues (2008) to measure authentic leadership. Followers were asked to rate the frequency of authentic leadership behaviors exhibited by the leader on a 5-point Likert-type scale, using anchors ranging from *never* to *almost always*. Sample items include "Seeks feedback to improve interactions with others" (self-awareness), "Solicits views that challenge his or her deeply held positions" (balanced processing), "Says exactly what he or she means" (relational transparency), and "Demonstrates beliefs that are consistent with actions" (internalized moral perspective). The Cronbach's alpha for the ALQ obtained in our study was .95. Because our interest lies in authentic leadership behaviors as they are displayed to different work teams, we averaged this measure within work groups. In support of our aggregation decision (Bliese, 2000), we obtained an average r_{wg} of .82 (*Mdn* = .82, range = .70–.86), using a uniform null distribution, an ICC(1) of .28, and an ICC(2) of .67. Finally, an analysis of variance (ANOVA) indicated a significant amount of between-group variance: $F(48, 203) = 3.01$, $p < .01$.

Authentic followership. We measured authentic followership using 16 items from a self-report Authenticity Inventory developed by Kernis and Goldman (2006) that we adapted to reflect the dimensional structure identified by Walumbwa et al. (2008). The 16 items appear in the appendix. In the present study, we asked followers to rate themselves on these items using a 5-point Likert-type scale with anchors ranging from *completely agree* to *completely disagree*. We obtained an internal reliability estimate (coefficient alpha) for this scale of .85.

Basic need satisfaction. Deci and colleagues (2001) developed and validated a 21-item self-report instrument that measures needs for autonomy, competence, and relatedness. Followers rated these items on a 7-point Likert-type scale using anchors ranging from *completely agree* to *completely disagree*. Sample items for each of the basic needs include "I am free to express my ideas and opinions on the job" (autonomy), "People at work care about me" (relatedness), and "I do not feel very competent when I am at work" (competence; reverse scored). We obtained an internal reliability estimate (coefficient alpha) for this scale of .92.

Work role performance. Griffin and associates (2007) developed and validated a measure of individual work role performance that operationalizes different aspects of work behavior (proficient, adaptive, and proactive) at different levels (individual, team, and organization). For the current study, our interest lies in the manifestation of these three behaviors at the individual level. We included 9 items measuring the subdimensions of proficiency ("Carried out the core parts of the job well"), adaptivity ("Adapted well to changes in core tasks"), and proactivity ("Initiated better ways of doing core tasks"). Leaders rated the frequency of these follower behaviors on a 5-point Likert-type scale, with anchors ranging from *never* to *almost always*. The Cronbach's alpha obtained as a measure of internal consistency for this scale was .86.

Control variables. In this study, we controlled for leader–member social exchange. We did so to rule out the alternative explanation that the posited positive relationship between authentic leadership and authentic followership (Hypothesis 3) can be attributed to a more general positive social exchange between leaders and followers. Followers rated seven leader–member social exchange items (Bernerth, Armenakis, Field, Giles, & Walker, 2007) on a 7-point Likert-type scale using anchors ranging from *strongly agree* to *strongly disagree*. We obtained an internal reliability estimate (coefficient alpha) for this scale of .91. In addition, we controlled for the following demographic variables that may affect the relationship between leaders and followers: overall team size, tenure as a leader, and tenure as team leader. We included these control variables and leader–member social exchange in the model by creating paths between them and the variables we thought they were most likely to influence. We found that the addition of these controls did not meaningfully change our results. Therefore, following the recommendations of Becker (2005), we omitted these variables from subsequent analyses.

Analyses

We analyzed the data using the Mplus statistical package (Muthén & Muthén, 1998–2012). First, we conducted a confirmatory factor analysis on our measurement model. Next, because multilevel structural equation models are too parameter intensive for our data (Grizzle et al., 2009),[1] we specified a multilevel path model to test the hypothesized structural relationships. This multilevel path model, however, had only one degree of freedom. Because the constraint of only one degree of freedom prevented a meaningful test of model fit, we excluded information on model fit. When excluding information on fit indices, the results of a multilevel path model are similar to those obtained through hierarchical linear modeling (HLM; Grizzle et al., 2009).

To assess our hypothesized cross-level model, we followed the procedures described by Hoffmann (1997) and Hoffmann, Griffin, and Gavin (2000) and adopted by Walumbwa and colleagues (2010). Specifically, we first tested the main and mediating effects of authentic followership and authentic leadership on basic need satisfaction. In HLM terminology, this consists of an intercept as outcome model. The mediating effects were established by testing alternative models that specify a direct link among authentic leadership, authentic followership, and follower work role performance (James, Mulaik, & Brett, 2006; Preacher, Zhang, & Zyphur, 2011). These alternative models indicate whether a residual direct effect remains after already including basic need satisfaction in the model.

Next, we examined cross-level interaction effects by testing whether authentic leadership moderates the relationship between authentic followership and basic need satisfaction at the group level of analysis. This consists of an intercept and slope as outcome model. We added between-group interactions to control for spurious cross-level interaction effects (Hoffmann, 1997; Hoffmann & Gavin, 1998). To assess Hypothesis 5, we tested whether basic need satisfaction mediates the interaction effect of authentic leadership and authentic followership on follower work role performance. This consists of a test of mediated moderation (Muller, Descartes, Judd, & Yzerbyt, 2005). We followed the procedures recommended by Bauer,

Preacher, and Gil (2006) to assess the degree to which the indirect effect of authentic followership on follower work role performance (via basic need satisfaction) differs for low and high levels of authentic leadership.

Finally, because the teams in our data set are further nested within organizations, we accounted for nonindependence in our data at the organizational level by including the "type = COMPLEX" command in Mplus. This command corrects standard errors and the chi-square test of model fit for nonindependence of observations (Satorra, 2000).

Results

Measurement Model and Descriptive Statistics

Consistent with prior research in this area (Kernis & Goldman, 2006; Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008; Walumbwa et al., 2010), we validated our measurement model using item parcels. We adopted a domain-representative approach that constructs item parcels using items from the subdimensions of each construct (Little, Cunningham, Shahar, & Widaman, 2002). Specifically, we constructed four parcels for authentic leadership and authentic followership and three parcels for basic need satisfaction and follower work role performance. A confirmatory factor analysis on these parcels showed a good fit to the data (Hu & Bentler, 1998, 1999): $\chi^2(71) = 87.03$, $p = .09$, standardized root mean square residual = .03, root mean square error of approximation = .04, comparative fit index = .99. To further test whether these constructs were distinct, we alternatively constrained each pairwise factor to unity. We found that constraining the factor correlation significantly worsened the model fit ($p < .05$).

In Table 1 we provide a summary of the means, standard deviations, correlations, and internal consistency estimates for all study variables. We found significant relationships among authentic followership, authentic leadership, and follower work role performance. Furthermore, these three measures were even more strongly correlated with basic need satisfaction, suggesting that basic need satisfaction mediates these relationships. In the next section we examine these mediating effects in a structural path model by testing whether the direct relationships among authentic leadership, authentic followership, and work role performance add to the explanatory power of a model that already includes basic need satisfaction.

Structural Model: Main and Mediating Effects

We examined a path model that posited relationships for (a) both authentic followership and authentic leadership with follower basic need satisfaction and (b) follower basic need satisfaction with follower work role performance. To assess cross-level direct effects, we first examined the degree of between-group variance in follower basic need satisfaction. Results for a null model showed that 33% of the variance resided between groups. We applied grand mean centering to partial out variance in individual level variables (authentic followership) when assessing group-level effects (Hoffmann & Gavin, 1998). The results provide support for Hypothesis 1 that authentic followership is positively related to follower

Table 1
Means, Standard Deviations, Cronbach's Alphas, and Correlations
among Study Variables

	M	*SD*	1	2	3	4
1. Authentic leadership	3.32	0.73	**.95**			
2. Authentic followership	3.90	0.44	.37**	**.85**		
3. Follower basic need satisfaction	5.35	0.69	.48**	.44**	**.92**	
4. Follower work role performance	4.11	0.48	.32**	.30**	.47**	**.86**

Note: Cronbach's alphas are provided on the diagonal in bold. Authentic leadership is included in this table as an individual perception rather than in aggregated form. A sample size of 118 was used for all correlations involving follower work role performance.
**$p < .01$

basic need satisfaction ($\hat{y} = 0.37$, $p < .01$). In support of Hypothesis 2, authentic leadership was positively related to follower basic need satisfaction ($\hat{y} = 0.54$, $p < .01$). Consistent with Hypotheses 4 and 5, basic need satisfaction was positively related to follower work role performance ($\hat{y} = 0.40$, $p < .01$).

We compared our hypothesized model with alternative models that add relationships between (a) authentic leadership and work role performance and (b) authentic followership and work role performance to test whether basic need satisfaction fully mediates the effects of both variables. We found no significant relationships of authentic followership ($\hat{y} = 0.12$, $p = .07$) with follower work role performance, suggesting that basic need satisfaction fully mediates this relationship. To test the cross-level mediation effect, we followed the recommendations of Zhang, Zyphur, and Preacher (2008), who argued that cross-level mediation effects may be confounded if one looks at between-subject effects as mediators rather than between-group effects. We found no significant relationship of authentic leadership with work role performance ($\hat{y} = 0.12$, $p = .21$), suggesting that basic need satisfaction fully mediates this relationship.

Cross-Level Interaction Results

Hypothesis 3 predicted a cross-level interaction between authentic leadership and authentic followership on follower basic need satisfaction. To assess this cross-level interaction effect, we first established that a significant amount of between-group variance exists in the slopes of the relationship between authentic followership and follower basic need satisfaction ($\tau = .22$, $p = .06$). Next, we ran a multilevel model that specified an effect of authentic leadership on the intercept and slope of the relationship between authentic followership and follower basic need satisfaction. We applied group mean centering, adding group means of authentic followership at Level 2, to provide good estimates of the slope-effect while controlling for authentic followership. We found a significant effect of authentic leadership on the slope of the relationship between authentic followership and follower basic need satisfaction ($\hat{y} = 0.60$, $p < .01$).

Figure 2
The Interaction Effect between Authentic Leadership and Authentic Followership in the Prediction of Follower Basic Need Satisfaction
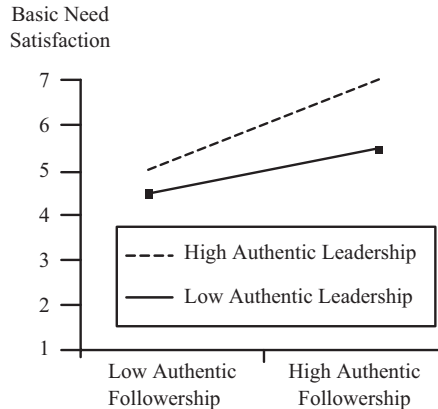
In Figure 2 we illustrate this relationship graphically, differentiating between low and high levels of authentic leadership, defined as one standard deviation below and above the mean (Aiken & West, 1991). As the figure indicates, the relationship of authentic followership with basic need satisfaction was stronger for high versus low levels of authentic leadership. We obtained support for the prediction of Hypothesis 3 that the positive relationship between authentic followership and follower basic need satisfaction would be stronger for high as opposed to low levels of authentic leadership. A moderated regression analysis further revealed that the interaction between authentic leadership and authentic followership explained an additional 5% of the variance in basic need satisfaction.

Hypothesis 6 posited that basic need satisfaction mediates the interaction effect of authentic leadership and authentic followership on follower work role performance. In support of this hypothesis, we found a significant indirect effect of this interaction on follower work role performance through basic need satisfaction ($\hat{y} = 0.11$, $p < .01$). Next, we compared the conditional indirect effect of authentic followership for authentic leadership at one standard deviation above the mean ($\hat{y} = 1.54$, $p < .01$) and at one standard deviation below the mean ($\hat{y} = 0.82$, $p < .01$). Consistent with Hypothesis 6, the results indicate that the indirect effect of authentic followership was 1.89 times stronger for authentic leadership at one standard deviation above the mean, compared to one standard deviation below the mean.

Discussion

This study set out to investigate how authentic followership and follower basic need satisfaction can enhance our understanding of previous research into the relationship

between authentic leadership and follower performance (Hmieleski et al., 2011; Walumbwa et al., 2008; Walumbwa et al., 2010; Walumbwa et al., 2011). Using SDT (Deci & Ryan, 2000; Gagné & Deci, 2005) as a guiding framework, we sought to examine previously underexplored mechanisms to shed new light on the unique relationships of authentic leadership with follower processes and performance, beyond the role of other positive leadership considerations (e.g., leader–member social exchange). Overall, we found support for our hypothesized model.

First, we found evidence for a positive relationship between authentic followership and follower basic need satisfaction (Hypothesis 1). This result provides support for the idea that the authentic functioning of followers is related to basic need satisfaction (Ilies et al., 2005; Kernis & Goldman, 2006): Followers who show their true selves in the workplace are more likely to feel that their work-related behavior resonates with who they are. Second, we found a positive relationship between authentic leadership and follower basic need satisfaction (Hypothesis 2). Leaders who are less likely to engage in ego-defensive behaviors and instead put their true self into play are more likely to satisfy follower basic needs. Thus, our findings provide initial support for the idea that authentic leadership also makes it more likely that followers come to feel that they are the author of their work-related behavior through the satisfaction of their basic needs (Gardner et al., 2005; Ilies et al., 2005).

Third, we found that the interaction between authentic leadership and authentic followership is positively related to follower basic need satisfaction (Hypothesis 3). Specifically, authentic behavior on the part of followers is more likely to be positively related to basic need satisfaction when those behaviors are supported by authentic leader behaviors. This interaction was shown to be synergistic, in that the combination of authentic leadership and authentic followership is associated with higher levels of basic need satisfaction. Finally, we found that basic need satisfaction mediates the positive relationships of authentic followership (Hypothesis 4) and authentic leadership (Hypothesis 5), and their interaction (Hypothesis 6), with follower work role performance. This finding confirms that the satisfaction of these needs promotes motivation that is rooted within a core and stable sense of self. Hence, basic need satisfaction helps us understand how and why authentic followership and authentic leadership are related to performance behaviors that are important in an unstable work environment (Griffin et al., 2007).

Overall these findings provide several contributions to the study of authentic leadership. By explicating the role of authentic followership within authentic leadership, it helps to better explain how authentic leadership fosters follower autonomous work motivation and associated improvements in work role performance (Gardner et al., 2005; Ilies et al., 2005). By drawing extensively from SDT, we have advanced a new perspective on authentic leadership that clarifies how authentic leadership and authentic followership combine to coproduce follower motivation and behavior (Shamir, 2007). That is, such outcomes are shown to be a function not only of the leader, but equally of the person(s) being led (Avolio, 2007; Avolio, Walumbwa, & Weber, 2009; Lord, Brown, & Freiberg, 1999).

The current findings also clarify the position of authentic leadership vis-à-vis other theories of positive leadership (Avolio & Gardner, 2005). While previous research has shown that authentic leadership accounts for incremental variance in outcomes beyond ethical and transformational leadership (Hannah et al., 2011; Walumbwa et al., 2008; Walumbwa et al., 2011), it has remained silent regarding the unique processes through which

authentic leadership influences follower performance. For example, the mechanisms of follower empowerment and identification with the leader that Walumbwa and colleagues (2010) have shown to be operative for authentic leadership are similar to those that are manifest within transformational leadership (Kark, Shamir, & Chen, 2003). However, whereas transformational leadership is argued to "transform followers into leaders," authentic leadership is posited to create a context within which "followers can be true to the self." By focusing on authentic followership per se, this study provides initial insights into the unique processes whereby authentic leadership relates to follower outcomes. However, additional research is needed to further clarify these effects and contrast authentic leadership with other forms of positive leadership.

Future Research

Our findings suggest several avenues for future investigations. First, research that examines how authentic leadership and authentic followership are influenced by the overall climate and culture of the organization would be beneficial. Prior theoretical and empirical work suggests that authentic leadership supports and is supported by a positive, ethical, and inclusive work climate or culture (Gardner et al., 2005; Walumbwa et al., 2008). On one hand, we expect authentic leadership and authentic followership to play key roles in helping to create and maintain a more authentic organizational culture and climate. On the other hand, we expect that a more authentic organizational climate and culture may strengthen the effects of authentic leadership and authentic followership on work-related outcomes. Hence, future research is needed to examine the complex interplay between these arenas for authenticity.

Second, more research is needed to clarify how the variables included in our study relate to follower feelings of work engagement. Walumbwa and associates (2010) demonstrated that authentic leadership fosters work engagement through follower empowerment and identification. This raises the question of how authentic followership and follower basic need satisfaction relate to follower work engagement. Previous work suggests that work engagement (a) arises from the authentic expression of the self at work (Kahn, 1990), (b) is driven by leader behaviors that create a trusting and psychologically safe environment (May, Gilson, & Harter, 2004), and (c) is an important driver of follower job performance (Rich, LePine, & Crawford, 2010). In studying these relationships, future research should also explore how authentic followership and follower basic need satisfaction account for variance in work engagement over and above that attributable to follower feelings of identification with the leader and follower feelings of empowerment (Walumbwa et al., 2010).

Third, SDT posits that the needs for autonomy, competence, and relatedness are fundamental in that every human being benefits from their satisfaction (Deci & Ryan, 2000). This does not imply that SDT assumes that individual differences in the strength of these needs do not exist, however. For example, Schüler, Sheldon, and Fröhlich (2010) demonstrated that an implicit measure of the need for achievement moderates the relationship between the satisfaction of the need for competence and subsequent motivation to engage in sports activities. Future research that examines the degree to which implicit needs (such as the need

for affiliation) positively moderate the relationships between the satisfaction of basic needs (such as the need for relatedness) and work role performance would be beneficial.

Fourth, additional research that extends our results by exploring the antecedents of authentic functioning of leaders and followers is needed. SDT suggests that an environment that does not support self-determination may frustrate followers' basic needs (Deci & Ryan, 2000). Continued need frustration may make an individual's self-esteem more fragile and thereby contribute to more ego-defensive and less authentic behaviors (Kernis & Goldman, 2006). Future studies could explore how key role models (e.g., parents, teachers, siblings) foster fragile versus secure self-esteem at early stages in one's development (Hannah & Avolio, 2010). This does not mean that individuals are unable to develop more secure self-esteem at a later stage in life (e.g., in the workplace). In this regard, SDT has argued that mindfulness may serve as a foundation of authentic functioning (Kernis & Goldman, 2006). By maintaining a receptive attention to and awareness of experiences in the present moment, mindful persons are more likely to be open and nondefensive (Kernis & Goldman, 2006; Lakey et al., 2008). Hence, another promising avenue for future research would be to examine the utility of mindfulness training as a tool for enhancing authentic functioning and the processes whereby it operates.

Limitations

When interpreting our findings, some limitations should be considered. One potential concern arises from our use of measures that were completed by the same source. Reliance on same source data is a limitation because it introduces potential common method variance (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003). In this study, we included leader ratings of performance to provide an external validation of our dependent variable. In addition, we used a multilevel research design that confirmed the existence of some of the posited effects at the group level of analysis, reducing possible biasing effects at the individual level. Nevertheless, future research should include alternative data sources to assess these relationships.

Another limitation pertains to the generalizability of our findings. Our participants were restricted to employees in small to medium-sized service companies in Belgium. Future investigations could assess the generalizability of our findings by drawing samples from individuals residing in other countries and/or organizational settings. For example, researchers could assess the extent to which our findings can be replicated in other dynamic environments (e.g., health care) using context-specific measures of performance (e.g., patient safety).

Finally, the sample size of this study created a limitation in terms of the statistical power required for certain estimation procedures and the power required to identify significant effects. For example, our limited sample size did not allow us to test and compare alternative models using multilevel structural equation modeling. The estimation of a multilevel structural equation measurement model is very parameter intensive, and our sample size could not handle such complexity (also see Grizzle et al., 2009). Despite these limitations in sample size, the results of this study confirmed all of the hypothesized relationships, suggesting robust findings.

Conclusion

Our findings suggest that follower self-determined work motivation is not solely a function of the authentic functioning of either the leader or the follower. Instead, autonomous work motivation among followers emerges from the synergistic effects whereby leader and follower authenticity combine to enhance follower satisfaction of basic needs for competence, relatedness, and autonomy. These results are important because the satisfaction of basic psychological needs clarifies how employees can find the motivation within to engage in the proficient, adaptive, and proactive behaviors that are critical to effective performance in the current, turbulent work environment.

Appendix

Authentic Followership

To what extent do these statements reflect your personal experiences at work?

1 = *completely disagree*; 2 = *disagree*; 3 = *neither agree nor disagree*; 4 = *agree*; 5 = *completely agree*

Self-Awareness

I am aware of why I do the things I do.
I am aware what demotivates me.
I am aware of what drives or motivates me.
I am aware of what I truly find important.

Balanced Processing

I'd rather not be confronted with my personal limitations and shortcomings.
When someone criticizes me, I try not to vest too much attention to it.
I'd rather not have my personal weaknesses exposed.
I try to block out unpleasant feelings about myself.

Relational Transparency

I often pretend to like something when I really do not.
Even when I disagree with someone, I will often silently agree.
I often behave in a way that does not reflect my true feelings or thoughts.
I often pretend to be someone I am not.

Internalized Moral Perspective

I stay true to my personal values.

I act in accordance with what I believe in.

People can count on me to behave in the same way over situations.

I act according to personal values, even if others criticize me for it.

Note

1. We corrected for measurement error by fixing the residual variance of the observed indicator in the path model to "1 – reliability × sample variance."

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