Authentic Leadership: Effects on Work Performance and Analysis of Mediating Processes

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The concept of authenticity, long present in Western philosophical thought (Harter, 2002), has been incorporated into contemporary theories about leadership in the business literature over the last decade (Avolio et al., 2004; Gardner et al., 2005; Luthans, 2002; Luthans & Avolio, 2003, May et al., 2003). This was done following the demand for leadership action based on principles such as transparency, consistency, balance and integrity (Dealy & Thomas, 2006; Avolio & Luthans, 2006), which are considered the solid foundations of constructive, responsible and long-lasting organizational projects (George & Sims, 2007; George, Sims, McLean, & Mayer, 2007; George, 2003). Building on previous works (Luthans & Avolio, 2003; Gardner et al., 2005; Ilies et al., 2005), Walumbwa, Avolio, Gardner et al. defined authentic leadership as a pattern of leader behavior inspired by positive psychological capacities, which stimulates these same capacities and a positive ethical climate in groups. It is capable of generating greater self-awareness, internalized moral perspective, balanced information processing, and relational transparency between leaders and followers, thus making positive self-development possible (2008: 94). This study investigated the influence of authentic leadership on job performance in a sample of employees and supervisors in a large company in Brazil. The study also developed and tested a model linking authentic leadership with in-role performance via interactional justice and creative behaviors. Using survey data, we found that authentic leadership positively affected employee in-role performance at work. Data analysis also verified a significant positive relationship between authentic leadership and the other variables included in the study. With respect to the mediation tests, it was possible to observe that creative behaviors mediated the relationship between authentic leadership and performance, and that the perception of interactional justice mediated the relationship between authentic leadership and creative behavior. From the practical stand point, our results suggest that efforts should be made to develop authentic leader behaviors among those in charge of managing teams, a point that should guide the agenda for the training and development programs. Attention to the issue of authenticity might improve organizational performance in the short run by stimulate higher levels of engagement (Avolio et al., 2004), and thus foster business performance (Avolio & Gardner, 2005), as well as the development of innovative solutions to internal problems and market challenges. Besides, development and monitoring of authentic behavior in organizations might also prevent decisions and actions that are not aligned to ethical principles (Walumbwa et al., 2008).

INTRODUCTION

As many historic examples in ancient and contemporary civilization can attest, the actions of a few leaders and their objectives seem frequently to run against principles such as honesty, justice, democracy, respect to life and sustainability. Although moral and ethical issues have been integrated into the debate in business administration research and practice for some time, the intensification of economic, social and environmental problems as well as the reoccurrence of ethical scandals in public and private organizations within the last decade have renewed a concern about leadership based on principles, which have encouraged the development of theories on authentic leadership in the academic management literature (Avolio & Gardner, 2005; Avolio, Gardner, Walumbwa, Luthans, & May, 2004; Avolio, Luthans, & Walumbwa, 2004; Gardner, Avolio, Luthans, May, & Walumbwa, 2005). The study by Walumbwa, Avolio, Gardner et al. (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008) was an important step for theoretically studying, validating and empirically investigating authentic leadership. Nevertheless, research on the subject has just begun, and additional investigations on the effects of authentic leadership on a broader set of followers' attitudes and behaviors in the work context are still necessary. More scholarly work is also important to better understand the mechanisms that promote and condition such influence, as well as to evaluate the generalizability of this theory to a wider variety of cultural contexts.

Two objectives guided this study. On one hand, our research sought to empirically examine the extent to which the recognition of a leader as authentic promotes individual follower work performance, using data obtained from Brazil, with employees of a large national company in the energy sector. This effort sought to answer the call of various authors for leadership studies in more diverse contexts, in order to enhance understanding in the field and to validate theories beyond the US-EU context (Bass, 1990; House & Aditya, 1997; Lowe & Gardner, 2001); our efforts aimed to advance this purpose by testing authentic leadership in a Latin-American country with a developing economy that has become a relevant player in contemporary economy, both regionally and globally.

This study also attempts to build theory and advance a more comprehensive understanding of the process by which authentic leaders stimulate the work performance of their followers. This was done by closely following the rationale proposed in the literature (Avolio et al., 2004; Gardner et al., 2005; Walumbwa et al., 2008) that establishes the fundamental mechanisms of social exchange (Blau, 1964) and intrinsic motivation (Deci, Connell, & Ryan, 1989) as the conceptual background explaining the influence of authentic leadership. In this study, we trace the development of a mediating model by first proposing and investigating the relevance of engagement in creative behaviors (Amabile, 1988; Zhou & Shalley, 2003; Zhou & George, 2003, 2007) as a via associated with intrinsic motivation through which followers of authentic leaders can achieve higher levels of in-role performance. We next examine how authentic leadership influences creative behaviors by developing the social exchange aspects of the process and incorporating perception of interactional justice (Bies & Moag, 1986; Bies, 2001) as a mediating variable to help further explain that process.

THEORECTICAL BACKGROUND AND HYPOTHESES

Authentic Leadership

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literature over the last decade (Avolio et al., 2004; Gardner et al., 2005; Luthans, 2002; Luthans & Avolio, 2003, May et al., 2003). This was done following the demand for leadership action based on principles such as transparency, consistency, balance and integrity (Dealy & Thomas, 2006; Avolio & Luthans, 2006), which are considered the solid foundations of constructive, responsible and long-lasting organizational projects (George & Sims, 2007; George, Sims, McLean, & Mayer, 2007; George, 2003).

Building on previous works (Luthans & Avolio, 2003; Gardner et al., 2005; Ilies et al., 2005), Walumbwa, Avolio, Gardner et al. defined authentic leadership as a pattern of leader behavior inspired by positive psychological capacities, which stimulates these same capacities and a positive ethical climate in groups. It is capable of generating greater self-awareness, internalized moral perspective, balanced information processing, and relational transparency between leaders and followers, thus making positive self-development possible (2008: 94).

Based on theories of self esteem and self-regulation (e.g., Kernis, 2003; Ryan & Deci, 2003; Gardner et al., 2005), Walumbwa et al. (2008) also define and validate four dimensions of authentic leadership: (1) *self-awareness*, i.e., showing an understanding of one's strengths and weaknesses, acquiring insights into oneself in living with others, and being conscious of one's impact on others; (2) *relational transparency*, i.e., showing one's true self, sharing information and expressing one's thoughts and genuine feelings in an emotionally appropriate manner; (3) *balanced information processing*, i.e., engaging all relevant information in an objective analysis before making a decision, including opinions different than one's own; and (4) *internalized moral perspective*, i.e., showing engagement in self-regulation directed by internal moral principles and values in making decisions and acting, as opposed to consent to group, organizational or social pressures.

Authentic leaders act according to deep personal values and convictions, which would generate credibility, as well as follower respect and trust (Gardner et al., 2005; Walumbwa et al, 2008), and would stimulate equally authentic engagement among them (Shamir & Eilam, 2005). Authentic leaders also foster open communication, engaging their followers in sharing critical information and their perceptions and feelings about issues; they would recognize and value individual differences, and have the ability to identify the talents of others and to motivate them to use such talents (Luthans & Avolio, 2003). By encouraging constructive divergence, these leaders would promote networks of collaborative relationships with followers, which would tend to act authentically with their leader, coworkers, clients and other stakeholders of the business, incorporating the example of the leader. This would promote structures of inclusion and positive ethical climates, which could become the cultural basis for the organization over time (Avolio et al., 2004) and stimulate levels of engagement capable of making a fundamental difference in the business performance (Avolio & Gardner, 2005).

The main purpose of this study was to investigate the association between authentic leadership and followers individual performance. Organizational and social psychology studies on authenticity have suggested that it can increase employee self esteem and performance (Grandey et al., 2005; Kernis, 2003). In order to explain the relationship between actions of authentic leaders and the in-role performance of their followers, researchers (e.g.: Avolio et al., 2004; Gardner et al., 2005; Walumbwa et al., 2008) have evoked intrinsic motivation theory (Deci, Connell, & Ryan, 1989) and social exchange perspectives (Blau, 1964). According to these perspectives, followers of authentic leaders would be willing to exert more effort because their self-determination would be encouraged by authentic leaders,

stimulating the voluntary internalization of self-regulating processes, and to reciprocate to their relationship with their leaders.

Due to this being the most recent theory on the subject, there are still few empirical studies on authentic leadership in the organizational context. However, the study done by Walumbwa et al. (2008) with professionals from diverse sectors in the United States, China and Kenya suggests that the recognition of a leader as authentic is associated with higher levels of performance.

Thus, in this study, we present the following hypothesis:

Hypothesis 1: Authentic leadership is positively associated with the in-role performance of individual followers.

Authentic Leadership, Creativity and Performance

In building a model linking authentic leadership and in-role performance, we further drew on the foundation explained above to posit mediating mechanisms to explain that process. The first mechanism associated with mobilizing intrinsic motivation is leader enabled processes for the generation of new and useful ideas in the work context; that is, the engagement in creative behaviors (Amabile, 1988; Madjar, Oldham, & Pratt, 2002; Zhou & Shalley, 2003).

Academics and practitioners are unanimous in pointing out innovations as a source of opportunity and strategic differentiation for organizations (Amabile et al., 2005; Sternberg, 2003, 2008). Innovations are the product of creativity, i.e., the production of novel and useful ideas by individuals and groups (Amabile, 1988; Madjar, Oldham, & Pratt, 2002) as they engage in creative processes (George & Brief, 1992; Zhou & George, 2001, 2003). In firms, the creativity of employees seems to be a fundamental factor to allow excellence, not just through ground breaking innovations that foster prosperity, but also through learning and continuous processes improvement to assure that a firm can remain effective over time. Each individual can potentially contribute in this process with suggestions diverse in nature, from more efficient and original ways of performing a function, to proposals that can improve or restructure how teams and the very organization operate.

Although it has been called for by scholar and practitioners as means to improve competitiveness by firms (e.g.: Amabile, 1988; Shalley and Gilson, 2004), creativity does not necessarily play a part in the explicit attributions of the majority of individuals in the work context. Yet, creative employees would show greater ability to solve problems and, therefore, could reach higher levels of performance (Woodman, Sawyer, & Griffin, 1993). Nevertheless, creative processes are considered to be the outcome of social interactions and influence in the work context (Madjar, Oldham, & Pratt, 2002). Although creativity has been connected to individual characteristics that would foster the capacity to be creative (e.g., Amabile, 1998; Sternberg, O'Hara, & Lubart, 1997), various authors also suggested that the work context, and specifically the leaders, would contribute to stimulating or discouraging employee creative behaviors (e.g., Amabile et al., 2004; Gong, Huang, & Farh, 2009; Oldham & Cummings, 1996; Shalley & Gilson, 2004; Zang & Bartol, 2010).

Trust and positive emotions are attributes that authentic leaders are particularly capable to promote and which can impact creative processes. The inherent positivity of

authentic leaders would promote in their followers a stronger belief in the self-relevance of their objectives and would take them on in realistic optimism (Avolio et al., 2004), amplifying their attention and perception span, and thus raising the number of cognitive elements available for association in cognitive processes, as well as stimulating new forms of reasoning that can help them figuring new ways to act, thus allowing more flexible and creative thoughts that foster increased engagement in creative behaviors (Clark & Isen, 1982; Fredrickson, 1998, 2001; Wright & Cropanzano, 2004).

On the other hand, negative states like frustration and irritation would tend to undermine employee creativity (Zhou & George, 2003). The process of authentic leadership, nevertheless, would be predominantly characterized by positive mood and affect, consequently increasing the intrinsic motivation of subordinates. The intrinsically motivated individual, that is, the individual intellectually involved with work and who experiences pleasure performing their job, would also become more committed and excited with his/her professional activity (Eisenberger & Aselage, 2009).

Thus, the following hypotheses are formulated:

Hypothesis 2: Engagement in creative behaviors is positively associated with in-role performance.

Hypothesis 3: Creative behavior mediates the relationship between authentic leadership and the in-role performance of the follower.

Authentic Leadership, Creative Behavior and Interactional Justice

Another way in which authentic leaders can activate high levels of performance among their followers relates to their social exchanges (Blau, 1964). Authentic leadership theory also highlights this perspective by proposing that followers of authentic leaders would be willing to exert more effort so as to reciprocate to their relationship with their leaders (Avolio et al., 2004; Walumbwa et al., 2008). However, some qualifying elements of the nature of the relationship that authentic leaders establish with their followers can be further elaborated; we attempt to advance this by proposing that the quality of that relationship is an essential part of the process, in particular justice in interpersonal and informational treatment given to followers by leaders.

Justice theories (Adams, 1965; Bies & Moag, 1986; Leventhal, 1976; Thibaut & Walker, 1975) have established the fundamental role exercised by feelings, values and beliefs regarding what is considered just or unjust by individuals in the workplace. These theories have highlighted different bases for justice thoughts as employees access fairness: distributive justice, relative to fairness in the distributions of positive or negative outcomes, like salaries, promotions or disciplinary sanctions, among others; procedural justice, relative to fairness in the criteria adopted for a certain decision to be established; and interactional justice, relative to the fairness in interpersonal treatment and information received from others at work.

More recently, some researchers have argued that a taxonomy exclusively focused on the bases of justice perhaps would offer limitations to accurately represent how employees cognitively structure fairness. Based on social exchange theories, these authors argue that, in their everyday experiences, the target of justice judgments would be the parties with whom employees have exchange relationships in the workplace, as for example their supervisors

(Cropanzano, Rupp, Mohler, & Schminke, 2001; Lavelle, Rupp, & Brockner, 2007). Discussions regarding justice based on this multifoci approach elicit the notion of justice as an interpersonal experience, lived in relationships, and remit a vision of justice as a competency to be developed and performed by leaders (Rupp, Baldwin, & Bashshur, 2006; Rupp & Aquino, 2009).

The premise established in this study is that authentic leadership involves a set of behaviors of leaders that would provide a sense to followers that they are the recipients of just treatment. Authentic leaders are guided by a set of values directed to make what is right and just for the leader and for their followers (Luthans & Avolio, 2003) – by demonstrating relationship transparency and balanced information processing, authentic leaders would be particularly effective in the promotion of interactional justice perceptions in its two dimensions: interpersonal and informational justice. Besides having the potential to mitigate negative reactions due to other bases of injustice, such as distributive or procedural ones (Greenberg, 2006, 2009), interactional justice would be a form of justice more readily brokered by immediate supervisors. While supervisors often have limited power to change policies of human resources of the firm, they often have free will to treat their subordinates with respect and dignity, and to share complete and detailed work relevant information with them (Greenberg, 2009). In the leader/follower relationship, awareness regarding one's impact over the others, transparency in the relationship, openness to constructive divergence and faithfulness to personal ethical values can act as antidotes against interpersonal slips like deception, abusive and coercive actions, as well as other forms of interactional injustice (Bies, 2001; Bies & Moag, 1986; Bies & Tripp, 1996).

With this, we advance the following hypothesis:

Hypothesis 4: Authentic leadership is positively associated with the perception of interactional justice of the followers.

In addition, interactional justice could be a powerful mechanism through which authentic leader can improve follower engagement in creative behaviors, a field of research that still needs to be explored further (Rickards & Moger, 2006). The literature on organizational justice has shown that it has strong emotional consequences (Tyler & Smith, 1998; Van Knippenberg, De Cremer, & Van Knippenberg, 2007). Perception of justice has been associated with positive affective states, while perception of injustice seems to provoke feelings such as sadness and resentment (Folger & Cropanzano, 1998; Bies & Tripp, 2002). A key factor that can influence the positive affectivity of followers of authentic leaders is their perception regarding the actions of their leaders (Avolio et al., 2004).

The connection between interactional justice and behaviors that benefit organizations is well known (Moorman, 1991; Malatesta & Byrne, 1997). Some research evidence suggests that the quality of relationships established between leaders and followers seems to be associated with increased the individual creativity (Tierney et al., 1999), in particular the positive experiences followers have with respect to the leader (e.g., Amabile et al., 2004; Madjar et al., 2002; Oldham & Cummings, 1996; Zhou & George, 2001, 2003; Zhang & Bartol, 2010). Authentic leaders would be particularly interested in empowering their followers so that they could make a difference in the context of their tasks, the projects they are involved with, or the very organization. By acting with coherence when making decisions, showing concern for employees and treating them with consideration, the authentic leaders

would fosters follower well being, thus contributing to improved psychological states for the followers (Bass, 1985).

On the other hand, interactional injustice, be it disrespect, the manifestation of derogatory judgments (Bies, 2001; Bies & Moag, 1986) from the part of the leaders, or deception, the omission of information or failings of one's word given in agreement (Bies & Tripp, 1996), would undermine confidence and commitment, thus leading to withdrawal behaviors. In addition, it could undermine organizational climates favorable to experimentation and trial and error so typically associated with the creative process. Coercion, for example, a form of abuse of power, would promote psychological distress (Bies & Moag, 1986), disempowering followers and therefore discourage creativity (Zhang & Bartol, 2010).

With this, the following hypothesis is advanced:

Hypothesis 5: Follower perception of interactional justice mediates the relationship between authentic leadership and engagement in creative behavior.

The following model synthesizes the hypotheses proposed in this study.

FIGURE 1
Model
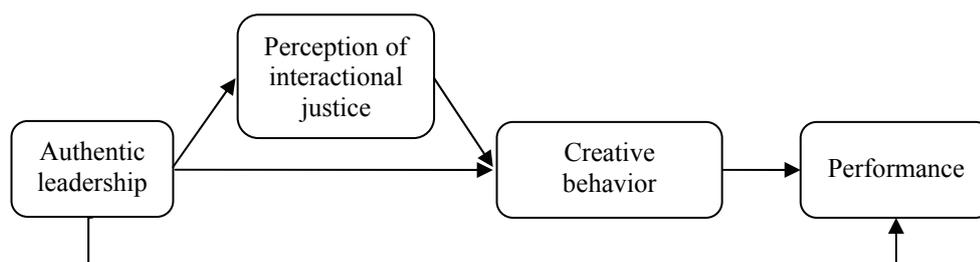
METHODS

Research setting, procedures and participants

This study was carried out based on a sample of 106 employees of a large Brazilian company in the energy sector. With respect to employees, 46.2% were women and 53.8% were men, and 77.4% have at least completed a bachelor's degree. The mean age is 41.0 years old, with a minimum of 22 and a maximum of 62, and the mean time at the business was 12.8 years. With respect to the supervisors, 48.1% were women and 51.9% were men, and 87.7% have at least completed a bachelor's degree. The average age is 43.8 years, with a minimum of 30 and a maximum of 56, and the mean time at the business was 20.2 years.

Each participant in the sample responded anonymously to the questionnaire. For each questionnaire answered by an employee, a questionnaire was also filled in by their respective supervisor. All the participants were informed that their responses would be used only for academic purposes, and that they would not be made available for anyone at the firm. In order to correctly associate the responses to the employee and their respective supervisor, each pair of questionnaires was identified with a code.

In the employees' case, a questionnaire divided in three parts was used, created for the realization of this study. The first part was meant to obtain demographic data on the

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respondents, such as sex, age, level of instruction, time at the firm and sex of the current immediate supervisor. The second part was meant to verify if the respondents recognized their supervisors as authentic leaders. In the third part, the perception of interactional justice was investigated with respect to the supervisors' mode of behavior.

In the supervisors' case, a questionnaire divided in three parts was used, created for the realization of this study. The first part was meant to obtain demographic data on the respondents, such as age, level of instruction and time at the firm. The second part was meant to hone in on the impression of the respondents about the creative behavior of their employees. In the third part, respondents evaluated the performance of the employees.

Measures

All measures are based on answers to 5-point Likert scales ranging from 0 (*Completely disagree*) to 4 (*Completely agree*).

Authentic leadership. We used the sixteen items from the *Authentic Leadership Questionnaire* (Walumbwa et al., 2008). The original Cronbach's alpha for this measure was .84, and the alpha observed in our sample was .87.

Perception of interactional justice. We used the six items from the scale developed by Moorman (1991). The original Cronbach's alpha for this measure was .93, and the alpha observed in our sample was .81.

Creative behavior. We used the eight items from the scale developed by Zhou and George (2001). The original Cronbach's alpha for this measure was .96, and the alpha observed in our sample was .87.

Performance. We used the seven items from the scale developed by Williams and Anderson (1991). The original Cronbach's alpha for this measure was .91, and the alpha observed in our sample was .90.

RESULTS

The hypotheses were tested by linear regression analysis, using the SPSS program for the calculations and following Baron and Kenny's (1986) approach for testing mediation. Table 1 presents descriptive statistics and zero-order correlations for the variables in the study.

Initially, we run a regression analysis to verify the direct effect of authentic leadership on performance. The determination coefficient of the regression was significant ($R^2 = 0.05$, F = 5.23, $p < 0.05$), as was the regression coefficient for the effect of the variable authentic leadership ($\beta = 0.22$, t = 2.29, $p < 0.05$). These results confirm hypothesis 1 in the sample; that is, the more authentic the leader is from the point of view of the follower, the better the follower's performance will be.

Afterward, we run a regression analysis to verify the effect of creative behavior on performance. The determination coefficient of the regression was significant ($R^2 = 0.24$, F = 32.39, $p < 0.01$), as was the regression coefficient for the effect of the variable creative

behavior ($\beta = 0.49$, t = 5.69, p < 0.01). These results confirm hypothesis 2 in the sample; that is, engagement in creative activities is positively related with in-role performance.

TABLE 1
Means, Standard Deviations and Zero-Order Correlations

Variables	Mean	s.d.	1	2	3
1. Authentic leadership	3.34	0.45			
2. Perception of interactional justice	3.63	0.46	.73**		
3. Creative behavior	2.91	0.66	.28**	.35**	
4. Performance	3.57	0.54	.22*	.16	.49**

n = 106   * p < 0.05   ** p < 0.01

Next, we analyzed the effect of authentic leadership on performance mediated through creative behavior. This was done through a single hierarchical regression analysis (Table 2). We included in the first block the authentic leadership variable, and the result which confirmed hypothesis 1 in the sample was found. We then added the creative behavior to the model. At this step we observed an increase in the determination coefficient, from 0.05 to 0.25, which was significant ($F_{Change} = 26.82$, p < 0.01). The authentic leadership variable did not present a significant effect in this step, contrary to the creative behavior variable ($\beta = 0.46$, t = 5.18, p < 0.01). This outcome indicates that creative behavior mediates the relationship between authentic leadership and performance, confirming hypothesis 3 in the sample.

TABLE 2
Results of Hierarchical Regression Analyses for Performance

Variables	β	t	R^2	ΔR^2
Authentic leadership	0.22	2.29*	0.05*	
Authentic leadership	0.09	0.99		
Creative behavior	0.46	5.18**	0.25**	0.20**

n = 106   * p < 0.05   ** p < 0.01

Also, we run a regression analysis to verify the effect of authentic leadership on the perception of interactional justice. The determination coefficient of the regression was significant ($R^2 = 0.54$, F = 120.18, p < 0.01), as well as the regression coefficient for the effect of the variable authentic leadership ($\beta = 0.73$, t = 10.96, p < 0.01). These results confirm hypothesis 4 in the sample; that is, authentic leadership is positively associated with the perception of interactional justice of the followers.

Lastly, we analyzed the effect of authentic leadership on creative behavior mediated through the perception of interactional justice. This was done through a single hierarchical regression analysis (Table 3). We included in the first block the authentic leadership variable. At this step the determination coefficient was significant ($R^2 = 0.08$, F = 9.05, p < 0.01). The regression coefficient for the effect of the authentic leadership variable ($\beta = 0.28$, t = 3.01, p < 0.01) was also significant. At the second step, with the inclusion of the perception of interactional justice variable, an increase was observed in the determination coefficient, from 0.08 to 0.12, which was significant ($F_{Change} = 5.00$, p < 0.05). The authentic leadership

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variable did not present a significant effect in this step, contrary to the perception of interactional justice variable ($\beta = 0.30$, $t = 2.24$, $p < 0.05$). This outcome indicates that the perception of interactional justice mediates the relationship between authentic leadership and creative behavior, confirming hypothesis 5 in the sample.

TABLE 3
Results of Hierarchical Regression Analyses for Creative Behavior

Variables	β	t	R^2	ΔR^2
Authentic leadership	0.28	3.01**	0.08**	
Authentic leadership	0.06	0.45		
Perception of interactional justice	0.30	2.24*	0.12**	0.04*

n = 106   * p < 0.05   ** p < 0.01

DISCUSSION AND CONCLUSION

This paper aimed to investigate the influence of authentic leadership on employee performance in the Brazilian context, and, in that way, to collaborate with the development of studies related to leadership outside the US-EU limits. Authentic leadership was observed to be related to better levels of employees' performance at work in the group studied, corroborating the findings of Walumbwa et al. (2008), which represents an important result that extends the external validity of the leadership theories beyond its present borders (see House & Aditya, 1997; Lowe & Gardner, 2001), thus suggesting that organizations could benefit from creating conditions for the development of authentic leadership.

Data analysis also verified a significant positive relationship between authentic leadership and the other variables included in the study (perception of interactional justice and creative behavior). With respect to the mediation tests, it was possible to observe that creative behaviors mediated the relationship between authentic leadership and performance, and that the perception of interactional justice mediated the relationship between authentic leadership and creative behavior. These results extend understanding on the subject, once there were no studies referring to such relationships in the literature, and suggest that the motivational principles observed in theories of social exchange (Blau, 1964) and intrinsic motivation (Deci, Connell, & Ryan, 1989) might enlighten our understanding of the interpersonal process inherent to authentic leadership. In addition they corroborate and extend research on the effects of leadership on creativity (e.g., Gong, Huang, & Farh, 2009; Zang & Bartol, 2010), as well as research on the implications of leadership for interactional justice (Lavelle, Rupp, & Brockner, 2007; Rupp & Aquino, 2009).

From the practical stand point, our results suggest that efforts should be made to develop authentic leader behaviors among those in charge of managing teams, a point that should guide the agenda for the training and development programs. Attention to the issue of authenticity might improve organizational performance in the short run by stimulate higher levels of engagement (Avolio et al., 2004), and thus foster business performance (Avolio & Gardner, 2005), as well as the development of innovative solutions to internal problems and market challenges. Besides, development and monitoring of authentic behavior in organizations might also prevent decisions and actions that are not aligned to ethical principles (Walumbwa et al., 2008).

With respect to the limitations of the study, the size of the sample studied could be highlighted, which prevented the use of more sophisticated analytical tool such structural equation modeling, which require a much larger number of observation to be applied. Also, the fact that all leaders in the study are managers of a public sector business in Brazil also restricts the generalization of our findings to diverse sectors and occupational groups, although it also increases the internal validity of the findings by ruling out the effects of organizational level factors, such as organizational culture, in driving the results. The use of a survey also creates limits to the demonstration of causality, particularly since a cross-sectional rather than a longitudinal analysis was applied. This restriction, however, is balanced out by the fact that in our investigation leaders are actual managers and their subordinates are employees in an actual work setting. The application of multiple sources in the data gathering strategy also gives more confidence in the substantive relationship observed in the study.

Future studies can replicate the analyses carried out here to check these findings using a larger sample, also exploring them in alternative organizational contexts, such as private sector organizations in industries other than energy. The analyses of the influence of authentic leadership on other outcomes is recommended, such as work teams' performance, employee stress and turnover intentions. The investigation of the effects of authentic leadership on leader-member exchange is also another venue for future research that could be explored.

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