



Navigating leadership in uncertain times: the role of personality and context

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ABSTRACT

This study examines the relationship between contextual and personality factors and leadership behavior. Understanding the dynamics of explorative and exploitative leadership behavior is critical in today's organizations. Data from an empirical study of N=139 German leaders from different industries show significant positive correlations between emotional stability, openness to experience and explorative leadership behavior. In addition, perceived environmental uncertainty and autonomy are significant factors that positively influence explorative leadership behavior. These findings offer recommendations for leaders and organizations in turbulent times and highlight the complex interplay of context, personality and leadership behavior.

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Introduction

Companies today are faced with the challenge of having to adapt to a constantly changing environment (Birkinshaw & Gibson, 2004; Crossan & Apaydin, 2010; Javed et al. 2020). Rapid technological advances and dynamic changes in consumer demand have become the norm (Cennamo, 2021; Cronin et al. 2019; Howard, 2022; Matsunaga, 2022). This requires companies to be able to proactively anticipate future developments and find innovative solutions while managing their current business processes efficiently. This balancing act is referred to as ambidexterity and requires ambidextrous leadership (O'Reilly III & Tushman, 2013; Rosing, Frese & Bausch, 2011; Gibson & Birkinshaw, 2004). Ambidextrous leadership encompasses a range of leadership activities, from open and exploratory to closed and exploitative (Zacher & Rosing, 2015). It involves the ability to manage conflicting activities within the leadership role (Rosing et al. 2010).

Ambidextrous leadership is critical to fostering innovation, but it also poses significant challenges for leaders (Zacher & Rosing, 2015; Rosing et al, 2011; Gebert & Kearney, 2011; Chang & Hughes, 2012; Gibson & Birkinshaw, 2004; Lin et al, 2012; O'Reilly & Tushman, 2004). This study aims to investigate which personality factors and which contextual factors particularly influence the explorative leadership side. For the theoretical basis of the selection of contextual factors, I draw on Johns' (2006) categorical framework. Within this framework, I identify two contextual factors that I consider particularly relevant in today's world and that are related to open and closed leadership activities. The first context factor is environmental uncertainty. In an environment characterized by change and uncertainty (Matsunaga, 2022), people tend to follow familiar, proven behaviors. They exhibit closed behaviors to reduce their perceived uncertainty (Jauch & Kraft, 1986; Hogg, 2007; Cooper & Thatcher, 2010). However, too strong a focus on closed behaviors can be detrimental, as the example of Kodak shows, who were unable to manage the transition to the digital age (Lucas & Goh, 2009; O'Reilly & Tushman, 2004). The second contextual factor is perceived job autonomy, which is crucial in today's uncertain environment (Nie et al. 2023). Job autonomy allows employees the freedom to make their own decisions and choose different ways of approaching their tasks, thus fostering a sense of ownership and empowerment. Perceived autonomy might

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significantly enhance open leadership behavior, as leaders with high autonomy are more likely to experiment and act more proactive (Frese et al. 1996). Thus, at first glance, perceived uncertainty seems to hinder open leadership activities, while autonomy seems to promote open leadership activities.

To fully understand what influences open, explorative and closed, exploitative leadership behavior, it is important to also consider personality factors, as these have a major influence on leadership behavior (Judge & Bono, 2000; Phipps & Prieto, 2011; Kornør & Nordvik, 2004; Özbag, 2016). In an environment characterized by change, emotional stability is an important personality factor (Bradley et al. 2013). This factor reflects the ability to cope with stress and uncertainty (Costa & McCrae, 1992; Halim et al. 2011). Another important personality trait in an innovation-oriented environment is openness to experience (Bass, 1990). Previous research shows that openness means actively and flexibly engaging with new stimuli and it is considered a catalyst for innovation (Yukl, 1998; DeYoung et al. 2005).

Building on the contributions of Ghoshal & Bartlett (1994) and Judge & Bono (2000), this research addresses the following question: *To what extent do certain contextual and personality factors influence open and closed leadership activities?* Thus, this study makes several key contributions. It extends the literature with insights into how contextual and personality-related factors influence leadership. Researchers argue that context has a significant influence on leadership and the existing literature in the field of leadership does look at the mentioned influencing factors to some extent (Fiedler, 1978; Raisch et al. 2009; Gallardo-Gallardo et al. 2020). However, there is a particular research gap in the influence of contextual factors on opening and closing leadership, with the exception of Keller & Weibler (2014). With the two contextual factors of autonomy and uncertainty, I focus on two important, under-researched variables. As part of the personality factors, I consider emotional stability and openness to experience, two variables that have so far been little researched in relation to explorative or exploitative leadership behavior. I also highlight an important oversight in the current debate by focusing on the person-situation-interaction theory (Keller & Weibler, 2014; Judge & Zapata, 2015). For example, I look at the conditions under which emotionally stable people can lead in a particularly explorative way. Here, this study provides interesting findings and encourages scholars to set a focus in future studies on the combined effect of context and personality to understand the root causes of explorative and exploitative leadership.

Literature Review

In the following, leadership, context and personality are first brought together before the individual factors examined in this study (Uncertainty, Autonomy, Openness to Experience, Emotional Stability) are described and the hypotheses developed.

Leadership, Context and Personality

Ambidextrous leadership describes a leader's ability to balance exploration through opening behavior and exploitation through closing behavior (Gebert & Kearney, 2011). Rosing et al. (2011) identify opening leader behavior as "a set of leader behaviors that includes encouraging doing things differently and experimenting, giving room for independent thinking and acting, and supporting attempts to challenge established approaches" (p. 967) and closing behaviors as "a set of behaviors that includes taking corrective action, setting specific guidelines, and monitoring goal achievement." (p. 967) Researchers debate the extent to which exploration and exploitation should be separated (O'Reilly & Tushman, 2004) and the degree to which such a separation is even possible. Rosing et al. (2011) argue that, even if teams are specialized in exploration, they are required to exploit to some degree because they need tangible results. On the contrary, teams primarily focused on exploitation may need to explore when faced with unexpected challenges or failures. For the purpose of this study, my primary focus is on explorative leadership behavior, a domain that presents particular challenges to leaders and is important in today's changing landscape (Jauch & Kraft, 1986; Hogg, 2007; Cooper & Thatcher, 2010; Matsunaga, 2022).

Understanding the root cause of behavior is mainly based on the study of personality variables (Judge & Bono, 2000; Phipps & Prieto, 2011). Personality research provides a well-structured framework, the Big Five model, which divides personality into five key factors (Judge & Bono, 2000). Two personality traits that have been well studied are conscientiousness and extraversion (Dudley et al. 2006; Barrick & Mount, 1991; Bono & Judge, 2004). Conscientiousness has been shown to be one of the most stable predictors of work-related outcomes, including job performance (Dudley et al., 2006; Barrick and Mount, 1991). Bono & Judge (2004) argue that extraversion has the strongest correlation with transformational leadership behavior. Extraverts tend to actively seek and enjoy change (Bono & Judge, 2004). Agreeableness is also strongly associated with transformational leadership (Judge & Bono, 2000). Within the Big Five traits, openness to experience is a more debated and less researched topic related to leadership (Judge & Bono, 2000). One of the challenges is the limited association of Openness to Experience with various applied criteria, with some exceptions such as Creativity (McCrae & Costa, 1997). At the same time, there is also limited research on neuroticism or its counterpart, emotional stability. Neuroticism correlates negatively with leader appearance and effectiveness (Judge et al. 2002; Cavazotte et al. 2012) and shows a negative relationship with concepts such as ethical leadership (Özbağ, 2016). On the contrary, emotional stability is particularly important in resolving interpersonal conflicts and representing an organization. Emotionally stable leaders tend to view stressful events as interesting growth opportunities and perceive that they can influence the outcome (Kirkpatrick and Locke, 1991). Furthermore, recent research by Park et al. (2022) suggests that emotional stability indirectly influences creative processes, highlighting its importance for leadership and innovation.

At the same time, the role of context has gained importance in understanding leadership (e.g. Gallardo-Gallardo et al. 2020). Fiedler was the first to emphasize that leadership does not happen in isolation (Oc, 2018; Fiedler, 1978). In management research, there were then long-standing appeals to consider the organizational context. Only recently has there been renewed interest in research (Dinh et al. 2014; Gardner et al. 2010). Despite this, there is no consensus on what exactly constitutes context for leadership (Ayman & Adams, 2012). This has also led to challenges with leadership theories such as transformational leadership, which initially had little regard for contextual factors. Johns (2006) attempts to bring structure to the multitude of contextual factors as part of his categorical framework. He defines context as a composition of the overall context and the discrete context. The overall context includes answers to the questions *where*, *who* and *when*. The discrete context, on the other hand, concentrates on more specific elements, for example the task context, the social context or the physical and temporal context. The context significantly influences which type of leadership is effective (Liden & Antonakis, 2009). This means that personal characteristics of the leader can be weakened by contextual factors in the development of leadership and its effectiveness (Sternberg & Vroom, 2002). Meanwhile, various leadership fields, such as contingency models, substitute for leadership models, implicit leadership theories and modern approaches, consider contextual factors as explanations or influencing factors (Oc, 2018). In examining the role of context in open, closed, and ambidextrous leadership, Mom et al. (2015) emphasize the importance of selecting leaders with long overall tenure but limited functional affiliation for roles that require ambidextrous behavior. In addition, Brion et al. (2010) address how management can cultivate an organizational environment that is conducive to both the exploration of new knowledge and the use of existing knowledge. They identify performance management, formalization, creativity, and risk-taking as key components of such an environment. In further research, Bledow et al. (2011) argue that the manifestation of ambidextrous leadership varies according to contextual conditions, highlighting culture as an important factor. Building on these studies, this study examines how relatively understudied contextual factors influence leadership style, particularly with regard to open, explorative or closed, exploitative approaches.

In addition, studies look at the interaction of context and personality variables. These studies engage that the extent to which personality predicts job performance and behavior depends on contextual variables (Barrick & Mount, 1993). For example, openness to experience has been found to be a stronger predictor of job performance in occupations with high creative demands (Judge & Zapata, 2015). In another study, the relationship between employees' proactive personality and proactive behavior was moderated by innovation climate (Cormick et al. 2019).

As such, behavior and performance develop from the complex interaction between individual characteristics and the context or situation (Judge & Zapata, 2015). However, when examining research, this topic is often debated and the role of context in particular is overlooked in the literature (Griffin, 2007; Rosseau & Fried, 2001; Oc, 2018; Johns, 2006).

When selecting the context factors for this study, I use two important factors of today's leadership environment: perceived uncertainty with regard to the omnibus context and perceived autonomy with regard to the discrete leadership context. In selecting personality factors, I consider the variables that might be particularly important in promoting explorative leadership behavior in an ever-changing landscape (openness to experience and emotional stability). All of the selected variables are characterized by the fact that they have not yet been sufficiently studied in relation to explorative leadership behavior. In the following sections, I will describe the selected variables in detail and explain the reasons for their selection.

Uncertainty

A key element that arises primarily in the context of constant change is uncertainty (Matsunaga, 2022). To define uncertainty, Walker et al. (2003) describe an uncertain environment as any situation that deviates from determinism and involves unpredictability. From the individual's perspective, uncertainty is the perceived inability to accurately predict an outcome (Milliken, 1987). Individuals face uncertainty when confronted with complex situations and/or conflicting information (Brashers, 2001). Uncertainty thus manifests itself in scenarios characterized by ambiguity and complexity when people feel uncertain about their knowledge (Babrow, Hines & Kasch, 2000). In the world of work, uncertainty encompasses a range of situations, e.g. the feeling of uncertainty regarding the execution of a task or the management style of a supervisor. Uncertainty can have a negative impact on employees' work performance by triggering anxiety and depleting their mental resources (Cullen et al. 2014). As a natural reaction, people often try to reduce uncertainty. The concept of uncertainty reduction was originally developed in the context of communication science and was mainly concerned with interactions between strangers. The core message is that people are confronted with uncertainty when interacting with unknown partners and strive to minimize this uncertainty (Berger & Calabrese, 1974). However, the concept of uncertainty reduction has also found application in various other areas, such as entrepreneurship (Deng et al. 2019), human resource management and leadership. While these findings tend to suggest that closure behavior is used to reduce uncertainty, reducing uncertainty is only one possible response (Brashers, 2001). Rather, uncertainty can enable people to maintain hope or optimism. People in organizations are motivated differently to reduce uncertainty, which is partly determined by their evaluation of uncertainty as a challenge or threat (Kramer, 1999). There are different ways of acting: avoiding new information or actively searching for new information. In the first case, information is gathered that confirms the previous world view. This is an attempt to make sense of a particular event and reduce uncertainty. Therefore, in this case, closing leadership behavior is more likely to be applied (Griffin & Grote, 2020). However, information gathering can also intentionally increase uncertainty by seeking information that contradicts current beliefs (Frey et al. 1996). Thus, in this case, it is more likely that an opening leadership behavior is applied (Griffin & Grote, 2020). Similarly, Griffin & Grote (2020) proposed a model of uncertainty regulation stating that individuals with a high tolerance for uncertainty engage in opening leadership behaviors to further increase uncertainty. Specifically, leaders, the target population of this research, must

constantly deal with ambiguity and uncertainty and make decisions in such an environment (White & Shullman, 2010). Keller & Weibler (2014) find that environmental dynamism is positively associated with engagement in exploration. With this in mind, I hypothesize that leaders in particular have a high tolerance for uncertainty and adopt opening behaviors in order to keep up in a dynamically changing environment. Therefore, I hypothesize the following:

H1. Under conditions of perceived high environmental uncertainty, the leader will act more explorative than under conditions of perceived low environmental uncertainty.

Autonomy

Building on Karasek's (1979) classical work on job strain, Hambrick et al. identified job demands and lack of job autonomy as key challenging elements in the leader's work context that have been understudied in leadership research (Ng et al. 2008). Job autonomy refers to the degree of latitude individuals have in making job-related decisions, such as what tasks to perform, how to do the work, and how to handle work exceptions (Hackman & Oldham, 1975). High levels of job autonomy are associated with increased job satisfaction, motivation, and performance, because individuals feel empowered to take initiative and make decisions that affect their work outcomes (Nguyen et al. 2003). In leadership roles, autonomy is particularly important because it allows leaders to explore and implement innovative strategies without being constrained by rigid procedures. However, autonomy can be a double-edged sword, as high levels of job autonomy might also lead to an increase in unethical behavior (Lu et al. 2017). The freedom associated with autonomy can lead to more creative problem-solving and adaptive responses to changing environments (Lu et al. 2017). Leaders who perceive high levels of autonomy might be more likely to engage in open leadership behavior, seeking out new opportunities and experimenting with new approaches. Leaders with greater autonomy might be able to tailor their leadership style to the unique needs of their teams and projects, fostering a culture of creativity and flexibility (Lu et al. 2017). On the other hand, perceived low autonomy can stifle creativity and lead to more conservative, risk-averse behaviors, hindering a leader's ability to adapt and innovate. In light of these insights, I propose the following hypothesis:

H2. Under conditions of perceived high autonomy, the leader will act more explorative than under conditions of perceived low autonomy.

Openness to Experience

Openness to experience is one of the dimensions of the five-factor model of personality (Costa & McCrae, 1992). It encompasses a number of traits such as imagination, curiosity, originality, open-mindedness, intelligence and artistic inclination. Openness to experience comprises two main dimensions: Intellect and Openness/Aesthetics. Intellect reflects a person's tendency towards intellectual curiosity, creativity and engagement with abstract or complex ideas. Individuals with high Intellect tend to explore intellectual areas and engage in abstract thinking. Openness and Aesthetics show a desire for new experiences (McCrae & Costa, 1997). Previous research considers exploration and exploitation as two types of learning behavior and studies show that openness to experience is strongly linked to learning behavior. It therefore makes sense to consider this personality factor (Mom et al. 2015; Keller & Weibler, 2014). Research shows that it is associated with active and flexible engagement with new stimuli and acts as a catalyst for creativity and exploration (DeYoung et al. 2005). In the work context, openness to experience has been identified as an important predictor of innovative work behavior, where employees actively explore and implement new ideas (Javed et al. 2020). Leaders who exhibit high openness to experience are more likely to take employees' opinions into account and readily embrace change (Detert & Burris, 2007). Based on person-situation interaction, the importance of openness to experience may become more apparent in environments characterized by change and uncertainty. In such environments, leaders are encouraged to experiment with new approaches and explore alternative options, a trait that is particularly conducive to individuals with high openness to experience (De Hoogh et al. 2005). In these challenging contexts, this trait may act as a driving force and motivate leaders to adopt open leadership behaviors. In addition, Mischel's (1997) situational strength argument proposes that jobs characterized by greater autonomy place fewer constraints on behavior, resulting in a weaker situation that allows individual personality traits to have a more significant influence on behavior. Therefore, when job autonomy is high, leaders with high levels of openness might be better able to leverage their intrinsic qualities for open leadership (H5). Therefore, I hypothesize the following:

H3. Leaders scoring high on openness will act more explorative than leaders scoring low on openness.

H4. Under conditions of perceived high environmental uncertainty, the relationship between openness and explorative behavior will be stronger than under conditions of perceived low environmental uncertainty.

H5. Under conditions of perceived high job autonomy, the relationship between openness and explorative behavior will be stronger than under conditions of perceived low job autonomy.

Emotional stability

Emotional stability refers to a person's ability to deal effectively with negative emotions such as anxiety or stress (Costa & McCrae, 1992). Li (2012) engages that emotionally stable individuals exhibit consistent, adaptable and self-confident characteristics that enable them to recover quickly from negative emotional states caused by workplace stressors (Mmc et al. 2017). Liu and Yu (2019) suggest that individuals with high levels of emotional stability show remarkable adaptability when they are in challenging and unfamiliar environments. Emotional stability enables people to navigate uncertain and unpredictable environments with confidence

(Bradley et al. 2013; Halim et al. 2011). Similarly, Driskell et al. (2006) emphasize the tendency of emotionally stable leaders to successfully adapt to new and challenging environments, combined with a lower tendency to perceive stressful situations as threatening (Gallagher, 1990). The fact that open leadership behavior is characterized by a willingness to embrace and accept uncertainty (Griffin & Grote, 2020) leads to the reasonable hypothesis that individuals with high levels of emotional stability are more likely to exhibit open leadership behavior. Furthermore, building on Ng et al. 2008, I argue that neurotic individuals may feel insecure in jobs where they perceive high autonomy, leading them to engage in more exploitative leadership behavior.

H6. Leaders scoring high on emotional stability will act more explorative than leaders scoring low on emotional stability.

H7. Under conditions of high autonomy, the relationship between neuroticism and exploitative behavior will be stronger than under conditions of low autonomy.

Research & Methodology

The methodology includes the study sample followed by the measures, including reliability and validity.

Study Sample

The sample frame included leaders from all industries in Germany. To qualify, participants had to work in a managerial position. I collected the data in the Spring and Summer of 2023 and recruited participants through my home universities' institute. Quota-sampling techniques (Singleton, Straits & Straits, 1993) were applied to recruit participants from different industries. After translating and back translating all the instruments described below, I distributed the German version of the questionnaire online.

I received a total of 189 responses, 139 of which were fully completed, allowing me to draw on an N=139. 75% was male, 25% female. The majority of leaders (68%) had a leadership range of less than 10 people reporting directly to them. 23% had a span of 10 to 19 people, 4% had a range of 20 to 29 people, and the remaining 5% of more than 30 employees. Overall, participants came from the automotive (2%), mechanical engineering (10%), electrical engineering (2%), chemical and pharmaceutical (7%), financial services (4%), retail (7%), IT (7%), logistics and transportation (2%), energy (5%), media (1%) and public sector (16%) industries; all other leaders (37%) reported coming from an industry other than those listed.

Measures, Reliability and Validity

Environmental Uncertainty

I captured environmental uncertainty by technology uncertainty and demand uncertainty, taken from Atuahene-Gima and Li (2004), who adapted the measures for these two constructs from Jaworski and Kohli (1993). Technological uncertainty ($\alpha=.80$) was measured on a four-item scale that assesses the (perceived) speed and extent of technological change, as well as the diversity of new product introductions resulting from technological change (1= *does not apply* to 5= *applies*). The three-item scale measuring demand uncertainty ($\alpha=.64$) represents the speed of change in customer demands, product preferences as well as the development of new customer segments in the industry (1= *does not apply* to 5= *applies*).

Autonomy

I measured autonomy using the 3-item scale from Schwenk et al. (2014) (1= *does not apply* to 5= *applies*). The items were: "Within my scope of responsibility, I can decide for myself how to get a job done.", "I am generally free to decide how I should achieve my goals" and "I decide myself as to how to plan my working day." ($\alpha=.82$)

Personality

The Big Five Inventory-10 (BFI-10) (Rammstedt & John, 2007; Rammstedt, 2007) was applied to measure personality (1= *completely disagree* to 5= *completely agree*). This is explicitly intended for research contexts that are subject to strong time and financial restrictions, such as company surveys. It is a short version of the Big Five Inventory (John, Donahue & Kentle, 1991; John, Naumann & Soto, 2010; German adaptation: Rammstedt, 1997), which measures the prototypical five factors of personality. It consists of 10 items, two for each dimension of personality. The dimensions are neuroticism ($\alpha=.74$), extraversion ($\alpha=.84$), openness ($\alpha=.72$), agreeableness, ($\alpha=.58$), conscientiousness ($\alpha=.77$) (Rammstedt & John, 2007).

Explorative and exploitative leadership behavior

Leadership behavior was captured by two scales developed by Rosing and Zacher (2015) (1=not at all to 5=frequently). Example items for opening leadership behavior were „Allow different ways of accomplishing a task” and “Give possibilities for independent thinking and acting” ($\alpha=.89$). Example items for closing behavior were “Monitor and control goal attainment” and “Sanction errors” ($\alpha=.85$).

Control variables

To ensure that respondents gave honest answers, I used the Social Desirability-Gamma Short Scale (Nießen et al. 2019). This scale presents respondents with characteristics that are considered positive or negative in society. The questions are designed in such a way that the characteristics considered positive do not apply to most people, while the characteristics considered negative apply to

almost everyone. The aim is to identify the need for social desirability in people who agree with the traits considered positive but disagree with the traits considered negative.

To ensure content validity, items were selected and adapted from established scales and verified through expert review and pilot testing to ensure comprehensive coverage of the constructs. The external validity of the study was increased by using a cross-industry and demographically diverse sample, which improved the generalizability of the results. However, the study relied on self-reported measures, so common method bias might have been a problem. In future studies, self-reports of managers should be compared to the ratings of their employees.

Results

I used hierarchical regression analysis to test the hypotheses. As the managers in my data sample come from different industries, I used Analysis of Variance (ANOVA) to investigate whether this has an impact on their engagement in exploration and exploitation tasks. The analysis resulted in no significant differences in activity patterns across industries. This suggests that industry does not influence or bias the results. The means and standard deviations for all the variables, as well as the correlations for the sample are shown in [Table 1](#).

Table 1: Means, standard deviations and correlations among variables

Variable	Means	SD	2	3	4	5	6
1. Explore	4.215	.531	.212*	.173*	.265**	.293**	-.032
2. Openness	3.688	.859					
3. Emotional Stability	3.576	.849	-.130				
4. Environ. Uncertainty	3.343	.798	.057	.150			
5. Autonomy	4.297	.729	.076	.133	.040		
6. Exploit	3.133	.643	-.056	.033	-.048	.115	

Source: Author

In H1, I proposed that high environmental uncertainty positively relates to explorative behavior. H1 was supported because perceived high environmental uncertainty positively related to explorative behavior ($b=0.176$, $t(137)=3.219$, $p < 0.05$, $R^2 = 0.070$). In H2, I suggested that under conditions of perceived high autonomy, the leader would act more explorative than under conditions of perceived low autonomy. This hypothesis was supported. In H3, I proposed that Openness to Experience positively relates to explorative behavior. The analysis revealed that openness was indeed positively related to explorative behavior ($F(1,136) = 5.578$, $p < 0.05$). Specifically, the linear regression analysis showed a significant linear relationship between openness and exploratory behavior ($b = 0.123$, $t(137) = 2.362$, $p < 0.05$, $R^2 = 0.039$). These results provide support for Hypothesis 3. H4 concerns moderating effects. It postulates that under conditions of perceived high environmental uncertainty, the relationship between openness and explorative behavior will be stronger than under conditions of perceived low environmental uncertainty. To test this moderation effect, the Process program by Hayes was utilized. The interaction was found to be non-significant ($p=0.6199$). Hence, there was no support for H4. According to H5, under conditions of perceived high job autonomy, the relationship between openness and explorative leadership behavior will be stronger than under condition of perceived low job autonomy. Again, the Process program by Hayes was used and the interaction was found to be non-significant ($p=0.0541$). As predicted by H6, Emotional Stability was significantly related to explorative behavior ($F(1,137) = 4.215$, $p < 0.05$). Linear regression analysis supported this relationship, showing a significant linear connection between Emotional Stability and explorative behavior ($b=0.108$, $t(137)=2.053$, $p < 0.05$, $R^2 = 0.030$). H7 postulates that under conditions of high autonomy, the relationship between neuroticism and exploitative leadership behavior will be stronger than under conditions of low autonomy. This interaction was found to be non-significant ($p=0.4772$).

Discussion

As part of this research, I examined personality factors and contextual factors and their relationship with leadership behavior. The question posed was: *To what extent do certain contextual and personality factors influence open and closed leadership activities?* Based on the "person-situation interaction", I also investigated the joint influence of personality and context on leadership behavior. *The first hypothesis*, according to which environmental uncertainty would lead to explorative behavior, was confirmed in the present study. This is in line with the hypotheses put forward by Griffin & Grote (2020) and the findings of Keller and Weibler (2014). Contrary to the original arguments by Berger and Calabrese (1974), Griffin and Grote (2020) argue that people with a high tolerance for uncertainty are more likely to engage in exploratory behavior and thus consciously engage in uncertainty. The potentially high tolerance for uncertainty in leaders could contribute to the result in this study. Future studies could examine personal levels of

uncertainty tolerance in more detail to identify differences between various target groups. It could also be that leaders see exploration as their only viable option in times of perceived turbulence and uncertainty. This would mean that external pressure forces them to think in new and innovative ways (Keller and Weibler, 2014). *The second hypothesis* could be confirmed in the present study. It indicates a significant positive correlation between leaders' perceived level of autonomy and their explorative leadership behavior. This relationship can be logically explained by considering the nature of autonomy itself. When leaders experience greater freedom in their role, they do not feel constrained by rigid structures or control, which allows them to approach leadership with an open and innovative mindset. Nguyen et al. (2003) supports this and points out that empowerment and the freedom to make decisions independently can increase leaders' intrinsic motivation and encourage them to pursue new and innovative solutions. Furthermore, the freedom associated with autonomy is crucial for creative problem solving and adaptive responses. Lu et al. (2017) emphasize that an environment that provides autonomy empowers individuals to be more creative and adaptive. *The third hypothesis*, according to which openness to experience would lead to explorative behavior, was confirmed in the present study. This result confirms previous research (Keller & Weibler, 2014). Open-minded individuals are characterized by a strong need for change and a strong ability to understand and adapt to the perspectives of others (Costa & McCrae, 1988). Leaders high in Openness to Experience actively listen to their team members, consider different points of view, and allow exploration from their employees. Detert & Burris (2007) found similar results, showing that leaders high in Openness to Experience are more likely to value their employees' opinions and allow for change. *The fourth hypothesis* corresponds to the third, but perceived environmental uncertainty is added as a moderating variable. According to this hypothesis, environmental uncertainty strengthens the relationship between openness to experience and explorative leadership. This relationship could not be confirmed. It is plausible that the influence of openness to experience on explorative leadership behavior is already significant. Consequently, the introduction of environmental uncertainty will not significantly increase the effect, as open individuals may be inherently predisposed to explore new ideas and approaches, regardless of external factors. Research supports the assumption that uncertainty orientation is most closely related to openness to experience compared to the other Big Five personality traits, supporting the argument that individuals high in openness are inherently well equipped to deal with uncertainty (Hodson & Sorrentino, 1999).

The fifth hypothesis states that the relationship between openness and explorative leadership behavior is strengthened under conditions of high workplace autonomy. This expectation was based on Mischel's (1997) situational strength theory, which states that high-autonomy environments characterized by fewer behavioral constraints create a weaker situation that allows individual personality traits such as openness to have a stronger effect on behavior. However, in my study, this hypothesis could not be confirmed. Leaders with high levels of openness did not show a stronger tendency towards explorative leadership behavior when they perceive high autonomy in their role. It appears that while openness as a personality trait is consistently associated with a tendency towards exploration and innovation, the context variable of job autonomy does not reinforce this relationship in the expected way. One explanation is that the influence is more complex than assumed. It is likely that other moderating factors, such as the organizational climate, support systems, or the nature of the task itself, play a crucial role in the interaction between openness and explorative leadership behavior (Cormick et al. 2019). *The sixth hypothesis*, according to which emotional stability would lead to explorative behavior, was confirmed in the present study. This relationship can be explained by the fact that emotionally stable individuals are better able to deal with uncertainty and unpredictability (Liu & Yu, 2019), which is a characteristic of exploration. It is also plausible that emotionally stable individuals perceive potential stressors associated with explorative leadership behavior as a challenge rather than a threat (Lazarus & Folkman, 1984). This assumption is supported by the significant negative correlation between emotional stability and stress. *The seventh hypothesis* stated that perceived high job autonomy would strengthen the relationship between neuroticism and exploitative leadership behavior. This expectation was based on Ng et al.'s (2008) argument that individuals with high levels of neuroticism may feel insecure in roles characterized by high autonomy, possibly leading to more exploitative leadership behavior in order to regain a sense of control and stability. In my study, however, this hypothesis could not be confirmed. It might be possible that neurotic leaders use coping mechanisms that do not necessarily result in exploitative leadership behavior. They might seek additional guidance, rely more on their team, or find other ways to deal with their insecurity without turning to exploitative leadership strategies.

Implications

Theoretical Implications

This study contributes to existing leadership research by shedding light on the complex interplay between personality traits (Judge & Bono, 2000; Phipps & Prieto, 2011), contextual factors (Johns, 2006), and leadership behavior (Rosing et al. 2011). The results expand our understanding of the importance of openness to experience and emotional stability as personality factors that shape leadership behavior and adaptability to environmental conditions (Judge & Bono, 2000). The study also challenges conventional assumptions about the relationship between uncertainty and leadership behavior (Berger & Calabrese, 1974; Griffin & Grote, 2020). Furthermore, based on Johns' (2006) categorical framework, the study contributes to uncovering omnibus and discrete contextual factors related to explorative leadership behaviors (Mom et al. 2015; Brion et al. 2010). The lack of interaction effects found in this study is a significant result. It suggests that the expected moderating influences of perceived job autonomy and environmental uncertainty on the relationships between personality traits and leadership behaviors may not be as straightforward. It underscores the need of a more nuanced approach to understanding how leadership behaviors are influenced. This result invites researchers to consider additional variables or mechanisms that might explain the conditions under which personality traits interact with context

factors. By demonstrating that interaction effects were not present, this study underscores the importance of empirical validation in theoretical models and calls for continued investigation into the nature of leadership dynamics. The analysis of the findings contributes to the development of a more comprehensive theoretical foundation for leadership research that can better explain the dynamic nature of leadership, especially explorative leadership, in today's ever-changing world (Matsunaga, 2022).

Practical Implications

The study has practical implications for organizations in general and for leader development in particular. It emphasizes the importance of considering both personality traits and contextual factors when selecting, promoting and training leaders. Organizations that want to promote explorative leadership behavior can benefit from focusing on two important personality traits: Openness to experience and emotional stability. In addition, creating a work environment that is characterized by autonomy can help leaders reach their explorative potential. Likewise, organizations should acknowledge the role of uncertainty in leadership dynamics. The question posed by Griffin and Grote (2020), "When is more uncertainty better?" cannot be answered here. We do not know whether personal levels of uncertainty tolerance influence this relationship or whether leaders have high levels of uncertainty tolerance per se. Regardless, however, the finding that a higher level of uncertainty leads to explorative leadership behavior is beneficial. It can be helpful for companies to understand and shape uncertainty as something positive, as an opportunity and a challenge rather than a threat (Lazarus & Folkman, 1984).

Conclusions

The goal of my research was to identify the influences and dynamics behind explorative leadership behavior in particular and to gain insights that can guide organizations and leaders in dynamic environments. To be successful in today's fast-paced environment, leaders must not only engage in exploitative behaviors, but also explorative ones. An overemphasis on exploitative activities can be detrimental to organizations, as demonstrated by numerous examples in the business world, such as Kodak. Both contextual and personality factors play a central role in shaping leadership behavior. I have chosen variables that have received little attention in previous research, but which are becoming increasingly important today: Environmental uncertainty and autonomy as contextual factors and openness to experience and emotional stability as personality factors. The analysis resulted in environmental uncertainty, autonomy, openness to experience and emotional stability being positively correlated with explorative leadership behavior. What do these results mean for organizations operating in a dynamic environment? First, the results show that perceived uncertainty does not necessarily lead to more cohesive, exploitative behavior. Rather, it can also serve as an opportunity for leaders to embrace change, innovate and break new ground. This raises the question of when perceived uncertainty is used as an opportunity and catalyst for internal change. More generally, when can leaders be explorative in times of environmental change and uncertainty? Are leaders generally more tolerant of uncertainty? By examining dimensions such as uncertainty tolerance, we can develop a deeper understanding of what can influence a leader's ability to engage in explorative behavior. Ultimately, this knowledge can help organizations manage uncertainty effectively and drive innovation. In a broader context, it invites us to view uncertainty as a potential springboard for discovery and a paradigm shift in the way organizations perceive and use uncertainty. Second, leaders should have a certain degree of autonomy to enable explorative efforts. However, it is important not to ignore findings such as those of Lu et al. (2017), which highlight the downsides of providing too much autonomy and its potential to encourage unethical behavior. Third, in addition to viewing uncertainty as an opportunity for learning and growth and valuing autonomy, openness to experience has emerged as an important personality trait that influences explorative leadership behavior. Fourth, emotional stability is positively correlated with explorative leadership behavior. These results are particularly interesting for companies and organizations as they provide valuable insights into the personality traits that should be considered when filling leadership positions in order to promote innovative and adaptive leadership behavior. The findings, especially the influence of person-situation-interaction (Keller & Weibler, 2014; Judge & Zapata, 2015) on ambidextrous, explorative and exploitative leadership should be extended because in an ever-changing environment, it is imperative that neither side gains the upper hand, but that leaders are able to manage the ambiguities of two-sided leadership.

Limitations and Future Research

This study used a cross-sectional approach, which limits its ability to establish causality. Future research could benefit from longitudinal approaches that track the development of leadership behaviors over a longer time period in response to varying levels of perceived uncertainty. Another critical issue that deserves research attention is how cultural and gender differences influence the relationships between personality traits, context factors, and explorative leadership behavior. How might these relationships manifest in diverse cultural and gender contexts? In regard to environmental uncertainty, it could also be examined to what extent this leads to personal uncertainty. In this way, the omnibus factor (environmental uncertainty) would become a discrete factor (personal uncertainty), whose direct influence on leadership might be greater. It would also be valuable to investigate how different levels of uncertainty tolerance interact with openness to experience and emotional stability in driving explorative leadership behavior.

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