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THREE ESSAYS ON BEHAVIORAL ADAPTABILITY IN THE LEADERSHIP CONTEXT

Palese Tristan

Palese Tristan, 2020, THREE ESSAYS ON BEHAVIORAL ADAPTABILITY IN THE
LEADERSHIP CONTEXT

Originally published at : Thesis, University of Lausanne

Posted at the University of Lausanne Open Archive <http://serval.unil.ch>

Document URN : urn:nbn:ch:serval-BIB_515BE44F30FA5

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FACULTÉ DES HAUTES ÉTUDES COMMERCIALES
DÉPARTEMENT DE COMPORTEMENT ORGANISATIONNEL

**THREE ESSAYS ON BEHAVIORAL ADAPTABILITY
IN THE LEADERSHIP CONTEXT**

THÈSE DE DOCTORAT

présentée à la

Faculté des Hautes Études Commerciales
de l'Université de Lausanne

pour l'obtention du grade de
Docteur ès Sciences Économiques, mention « Management »

par

Tristan PALESE

Directrice de thèse
Prof. Marianne Schmid Mast

Jury

Prof. Felicitas Morhart, Présidente
Prof. Franciska Krings, experte interne
Prof. Judith Hall, experte externe

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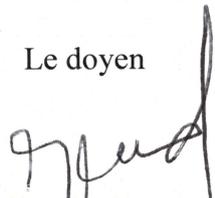
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La thèse est intitulée :

THREE ESSAYS ON BEHAVIORAL ADAPTABILITY IN THE LEADERSHIP CONTEXT

Lausanne, le 7 février 2020

Le doyen



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and have found it to meet the requirements for a doctoral thesis.

All revisions that I or committee members
made during the doctoral colloquium
have been addressed to my entire satisfaction.

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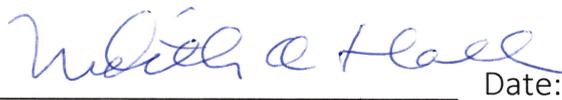
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ACKNOWLEDGMENTS

First, I would like to express my sincere gratitude to my advisor Prof. Marianne Schmid Mast for the continuous support during my Ph.D. Her guidance helped me in all the time of research and writing of this thesis. The various research projects she involved me in have allowed me to broaden my knowledge and skills as a researcher. I could not have imagined having a better advisor and mentor for my Ph.D.

Besides my advisor, I would like to thank the rest of my thesis committee, Prof. Franciska Krings and Prof. Judith Hall, for their insightful comments and encouragement, but also for the hard questions, which incited me to widen my research from various perspectives.

Moreover, I thank my fellow PhD students and labmates for the stimulating discussions and for all the fun we have had in the last four years.

Last but not the least, I would like to thank my family members and my close friends for supporting me spiritually throughout writing this thesis and my life in general. In particular, I have a very strong thought for my beloved girlfriend Clarisse, who supported me every day of this long journey.

Overview of the Thesis

Leaders find themselves in rapidly changing environments characterized by increased complexity. To effectively respond to such complexity, leaders need to be flexible and adaptive (Bass, Avolio, Jung, & Berson, 2003; Hooijberg, Hunt, & Dodge, 1997). “Flexible and adaptive leadership involves changing behavior in appropriate ways as the situation changes” (Yukl & Mahsud, 2010, p. 81). Such adaptability has been discussed and investigated mainly with respect to how leaders adapt to different situations such as changes in economic environments, in leadership tasks, and in hierarchical positions (Uhl-Bien, Marion, & McKelvey, 2007; Vroom & Jago, 2007; Yukl & Mahsud, 2010). However, what has been neglected so far is how adaptive leadership plays out in daily social interactions between leaders and their subordinates.

Yet, leaders are confronted with many subordinates who differ from each other with respect to their personality, attitudes, and values. These individual differences may lead subordinates to have different expectations regarding how leaders should behave. For instance, people who are high in extraversion and conscientiousness prefer a more transformational leadership style (Moss & Ngu, 2006), women have greater preference for leaders showing consideration than men (Vecchio & Boatwright, 2002), and the more people want to have influence at work the less they prefer task-oriented leadership and the more they prefer a charismatic leadership style (Ehrhart & Klein, 2001).

Expectation Confirmation Theory posits that satisfaction increases if a person’s expectations are met (Jiang & Klein, 2009), as evidenced for consumer satisfaction (Oliver, 2010), information technology user satisfaction (Bhattacharjee, 2001), patient satisfaction after medical consultations (Cousin, Schmid Mast, Roter, & Hall, 2012), and subordinates’ satisfaction when work-related expectations are fulfilled (Kopelman, 1979). Therefore, I argue that leaders need to adapt their interpersonal behavior (e.g., their leadership style)

according to the expectations (needs or preferences) of their subordinates in order to have satisfied subordinates. This ability to change one's interpersonal behavior to match the expectations of different social interaction partners is called behavioral adaptability (Schmid Mast & Hall, 2018). In the context of my thesis, I define leaders' behavioral adaptability as the ability of leaders to change their leadership style according to their subordinates' preferences or needs. The way I study and understand leaders' behavioral adaptability is to focus on behavior and on what actually happens in terms of leaders' behavior when they interact with their subordinates.

The Importance of Behavioral Adaptability for Leaders

Different leadership theories have suggested that leaders need to master an array of different leadership styles to respond to different situations (e.g., Leaderplex Model; Hooijberg et al., 1997) such as in subordinates development level (e.g., situational leadership; Blanchard, Zigarmi, & Nelson, 1993). The idea of adaptive leadership with a focus on leader-subordinates interaction is particularly present in transformational leadership theory (Bass et al., 2003). Transformational leadership includes leader behavior such as showing inspirational motivation (providing a vision and inspiring and motivating the employee), intellectual stimulation (fostering innovation and creativity of the employees), idealized influence (being a trusted and admired role model), and individualized consideration (having personalized interactions with employees, teaching and coaching them) (Bass & Avolio, 1994). Individualized consideration is of particular interest in the context of my thesis because it refers to leaders recognizing their subordinates' individual differences in terms of needs and desires and demonstrating acceptance of these individual differences when interacting with their subordinates (Bass & Riggio, 2006). Individualized consideration therefore acknowledges the importance for leaders to adapt their leadership style according to their subordinates' individual differences. Further, I suggest that leaders' behavioral adaptability is

a prerequisite for showing individualized consideration. If leaders are not able to change their interpersonal behavior in adaptive ways, they cannot show individualized consideration when they have subordinates with different expectations.

It has already been shown that a mismatch between expected and perceived leadership is negatively related to subordinates' satisfaction (Driscoll, 1978; Elpers & Westhuis, 2008). Research also shows that transformational leadership (Bass & Avolio, 1994) – which, as we have discussed, includes the idea of leaders' behavioral adaptability through the individualized consideration dimension – is related to more subordinate satisfaction and to more trust in the leader (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Moreover, subordinate satisfaction with the leader is one of the main aspects of overall subordinate satisfaction (Harter, Schmidt, & Hayes, 2002) and subordinate satisfaction is related to better job performance (Judge, Thoresen, Bono, & Patton, 2001). Therefore, by adapting their leadership style, leaders not only potentially improve the relationship with their subordinates by showing them individualized consideration; they can also positively affect subordinates' performance and therefore positively affect the company and the organization as a whole.

Even though behavioral adaptability seems to be an important skill for leaders, the processes of behavioral adaptability have been under-researched in the leadership literature and some questions remained unanswered. Here are three questions I aimed to answer in the context of my thesis: What is the role of leaders' individual differences in leader behavioral adaptability? What are the subordinates' characteristics that impact leader behavioral adaptability? And finally, what are the potential dark sides of behavioral adaptability for leaders?

The Behavioral Adaptability Model as a Framework

To shed light on the processes of behavioral adaptability in the leadership context, I choose to build my thesis around the Behavioral Adaptability Model (Palese & Schmid Mast,

2019). We originally developed this theoretical model to describe how behavioral adaptability is achieved in social interactions, regardless of the social context in which these social interactions occur. Applied to the leadership context, the model can be described as follow (see *Figure 1* below for an adaptation of the model to the leadership context).

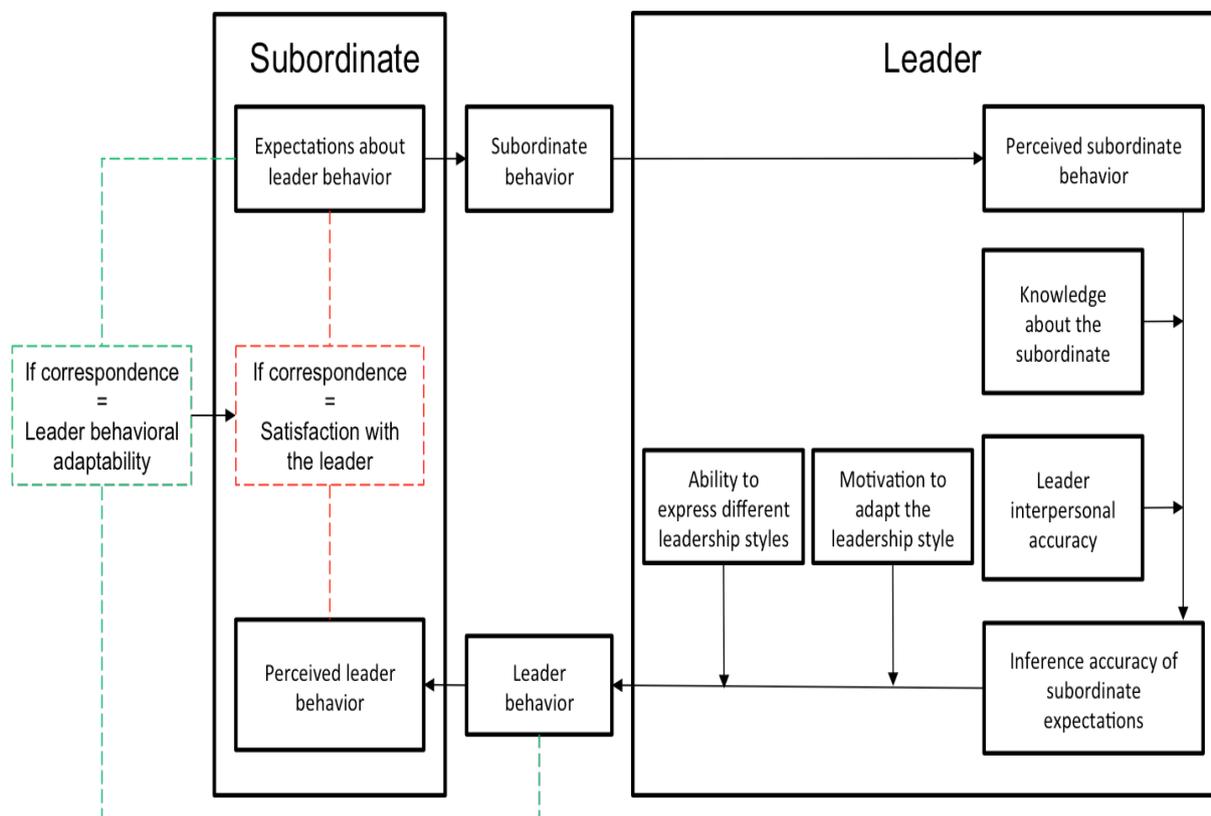


Figure 1. Adaptation of the Behavioral Adaptability Model to the leadership context

Subordinates first harbor expectations about which leadership styles their leader should express (“Expectations about leader behavior”). These expectations are important because they influence how subordinates behave with their leader in the workplace (“Subordinate behavior”). For instance, a subordinate who expects to be involved in decision-making and who expects to be led by a participative leader might signal this by proposing solutions and suggestions during group meetings.

Leaders then use the observed behavior of their subordinates (“Perceived subordinate behavior”) to infer their subordinates’ expectations. Whether these inferences are correct or not (“Inference accuracy of subordinate expectations”) depends on three things (Palese &

Schmid Mast, 2019). First, it depends on the subordinates' expressive clarity¹. Second, it depends on how well leaders know their subordinates ("Knowledge about the subordinate"). Third, it depends on leaders' interpersonal accuracy ("Leader interpersonal accuracy"). Interpersonal accuracy has been defined as the ability to correctly assess others' emotions, personality, intentions, motives, and thoughts (Hall, Schmid Mast, & West, 2016; Schlegel, Boone, & Hall, 2017; Schmid Mast & Hall, 2018).

However, making correct inferences about subordinates' expectations is not sufficient for leaders to show behavioral adaptability. First, they also need to be motivated to behave in an adaptive way ("Motivation to adapt the leadership style"). As suggested by Palese and Schmid Mast (2019), some leaders might prefer to show the same leadership style to all of their subordinates regardless of their subordinates' individual expectations to avoid any unfair treatment. In this case those leaders would not be motivated to express behavioral adaptability. Second, leaders also need to be able to show different types of leadership behavior ("Ability to express different leadership styles"). Indeed, even though they are motivated to change their behavior, leaders would not be able to do so if they do not have different types of leadership style at their disposal. Finally, in line with the Behavioral Adaptability Model (Palese & Schmid Mast, 2019), leaders' behavioral adaptability is conceptualized as the correspondence between subordinates' expectations about leaders' behavior and leaders' actual behavior ("Leader behavior") and I expect leader behavioral adaptability to increase subordinate satisfaction with their leaders.

In my thesis, Paper 1 and Paper 2 focused on the antecedents of behavioral adaptability and Paper 3 on the consequences of behavioral adaptability for leaders. In Paper 1, I investigated whether people who are better at recognizing emotions in others are also those

¹ While the subordinates' expressive clarity is important for leaders in order to express behavioral adaptability, it is important to note that I did not study this aspect of the model in the context of my thesis.

who express more behavioral adaptability in the leadership context. Then, in Paper 2, I set out to test whether the subordinates' belonging to the in- or to the out-group impacts the extent to which people in leadership position express behavioral adaptability. Further, in Paper 2 I also investigated how social dominance orientation (Pratto, Sidanius, Stallworth, & Malle, 1994) is related to behavioral adaptability and whether this relation differs depending on the subordinates' belonging to the in- or to the out-group. Finally, in Paper 3, I focused on how behavioral adaptability is perceived by third parties and I set out to test under which conditions changing leadership style between different subordinates is perceived more or less positively.

Papers Summaries

Paper 1 – Emotion Recognition Ability and Behavioral Adaptability in the Leadership Context: The Role of Gender. Emotion recognition ability – ERA – is the ability to correctly detect and label emotions in others (Schlegel et al., 2019). ERA is related to social relationships of higher qualities (Hall, Andrzejewski, & Yopchick, 2009) and past empirical evidence suggested that people in leadership position who are higher in ERA have more satisfied subordinates (Byron, 2007; Schmid Mast, Jonas, Cronauer, & Darioly, 2012). However, as highlighted by Schmid Mast and Hall (2018), only little research has tried to understand the processes by which ERA leads to better social interaction outcomes and there is a “black box” between making correct inferences about others (e.g., ERA) and social interaction outcomes. In Paper 1, we therefore set out to shed light on the processes by which ERA lead to better social interaction outcomes by investigating the link between ERA and behavioral adaptability in the leadership context. First evidence in the context of physician-patient interaction showed that ERA was related to behavioral adaptability during medical consultation in female but not in male physicians (Carrard, Schmid Mast, Jaunin-Stalder,

Junod Perron, & Sommer, 2018) and we set out to test whether the same results would emerge in a leadership context.

To do so, we conducted two studies following the same procedure. We first assessed participants' ERA and then we asked them to do a role-play in immersive virtual reality. In this role-play, participants were in the role of a leader and they had to give two pep talks to two underperforming subordinates. Subordinates were described as preferring different leadership style (one preferring a more participative leadership style and the other one a more directive leadership style) and we coded to which extent participants expressed participative and directive behavior while giving their pep talks.

Results showed that for directive behavior, ERA was unrelated to showing adaptive behavior for both men and women. In other words, individuals who were high in ERA were not necessarily those who expressed more (or less) directive behavior towards the subordinate preferring a directive (or a participative) leadership style. For participative behavior, the higher women scored on ERA, the more they expressed participative behavior when they interacted with a subordinate preferring a participative leadership style. However, ERA was not related to women's ability to express less participative behavior when confronted with the subordinate preferring a directive leadership style. For men, ERA was not related to their ability to express adaptive participative behavior, both when they were confronted with a subordinate preferring a participative leadership style and when confronted with a subordinate preferring a directive leadership style. In Paper 1, we therefore replicated in the leadership context, at least to some extent, the findings found in the context of physician-patient interaction (Carrard et al., 2018). Further, our results suggested that ERA might be more related to the development of behavioral adaptability skills for behavior that are fostering social relationships (e.g., participative behavior in the leadership context).

Paper 2 - The Role of Social Categorization and Social Dominance Orientation in Behavioral Adaptability. People use social categories to readily distinguish between in- and out-group members (Tajfel & Turner, 1986) and this social categorization impacts peoples' behavior. For instance, people tend to discriminate between in- and out-group members by allocating more resources to and by cooperating more with in-group members than out-group members (Balliet, Wu, & De Dreu, 2014; Tajfel, 1970; Tajfel, Billig, Bundy, & Flament, 1971). This refers to the in-group favoritism according to which people tend to favor members of their own social group in comparison to out-group members (Tajfel, 1970; Tajfel et al., 1971). In this paper, we suggested that the in-group favoritism might lead people to be more motivated to adapt their interpersonal behavior to their social interaction partners' expectations when interacting with in-group members than when interacting with out-group members. Our assumption was therefore that people would express more behavioral adaptability when interacting with two in-group members than when interacting with two out-group members. In Paper 2, we set out to test this assumption in the leadership context by investigating whether the subordinates' belonging to the in or the out-group impacts how people in leadership position express behavioral adaptability. Moreover, we also investigated how the social dominance orientation – SDO – of people in leadership position influences the extent to which they express behavioral adaptability depending their subordinates' belonging to the in- or the out-group. Our assumption was that SDO would be negatively related to behavioral adaptability when interacting with out-group subordinates, but positively related to behavioral adaptability when interacting with in-group subordinates.

To test our assumptions, we conducted two experimental studies in which we manipulated subordinates' belonging to the in or the out-group. In both studies, we also measured participants' SDO. Study 1 only included male Caucasian participants from Switzerland and we used the same role-play in immersive virtual reality as the one used in

Paper 1. Study 2 was an online vignette study based on the same scenario, which was conducted with participants (Caucasian and Black African men and women) from the US. In Study 1, behavioral adaptability was assessed based on the coding of participants' behavior, whereas it was assessed through a self-reported questionnaire in Study 2.

Results from both studies did not support the assumption that people in leadership position express less behavioral adaptability towards out-group members than toward in-group members. However, our results showed that SDO was differently related to behavioral adaptability depending on the subordinates' belonging to the in- or the out-group, but also depending on the social category of the person in leadership position (e.g., ethnicity and sex). Indeed, SDO was negatively related to behavioral adaptability for African American participants (men and women) regardless of the subordinates' belonging to the in- or the out-group. However, for Caucasian participants the relationship between SDO and behavioral adaptability depended both on the subordinates' belonging to the in- or the out-group and on the sex of the participants. Indeed, results from Study 1 showed that Caucasian men express more behavioral adaptability when interacting with in-group subordinates, but not necessarily less behavioral adaptability when interacting with out-group subordinates. Moreover, Study 2 showed that self-reported behavioral adaptability was negatively related to SDO in Caucasian women when confronted with out-group subordinates, but not positively related to SDO when confronted with in-group subordinates. This paper therefore highlighted the importance of taking into account the social categories of the different stakeholders involved in the interaction when studying the role of SDO in interpersonal processes.

Paper 3 – Perception of Managers Who Change Their Interpersonal Behavior: How and When Should Managers Adapt to Their Subordinates? Subordinates are not a homogeneous group and they differ from each other with respect to how they want to be supervised (Ehrhart & Klein, 2001; Moss & Ngu, 2006; Vecchio & Boatwright, 2002).

Because a mismatch between expected and perceived leadership is negatively related to subordinate satisfaction with the manager (Driscoll, 1978; Elpers & Westhuis, 2008), managers should therefore show individualized consideration and adapt their leadership style according to the expectations of each subordinate if they want to have satisfied subordinates (Bass & Riggio, 2006). However, in Paper 3, I argued that expressing individualized consideration might not be without risks for managers. Indeed, perception of fairness is important when it comes to judge the legitimacy of an authority (Tyler & Lind, 1992) and behavioral inconsistency is important in defining whether a procedure is fair or not (Barrett-Howard & Tyler, 1986; Leventhal, 1980). Yet, managers who face subordinates with different expectations may have to express inconsistent behavior in order to show individualized consideration and may therefore be perceived more negatively. In Paper 3, I therefore suggested that managers who have multiple subordinates with different expectations face a dilemma: either they show individualized consideration to match their subordinates' individual preferences and needs but appear inconsistent in the eyes of third parties, or they behave the same way with all of their subordinates without taking into account their subordinates' individual preferences or needs to appear consistent in the eyes of third parties. Paper 3 aimed at resolving this dilemma by investigating under which conditions changes in managers' leadership style are perceived positively by third parties so that managers would be able to show individualized consideration without suffering from negative personal consequences. My assumption was that changes in managers' interpersonal behavior should be justified in the eyes of third parties in order to be perceived positively.

To test this assumption, I conducted two experimental studies in which I asked participants to watch videos of a manager interacting with two subordinates separately and then to rate the manager on different dimensions. In Study 1, the manager showed a different leadership style with each subordinate and I manipulated whether participants knew about the

leadership preferences of each subordinate. In Study 2, I manipulated the leadership styles shown by the manager as well as whether the subordinates had different or the same leadership preferences.

Altogether, results from both studies showed that managers' unjustified behavioral inconsistency jeopardizes how third parties evaluate managers and that changes in managers' leadership style should always be justified in the eyes of third parties to prevent individualized consideration from becoming a double-edged sword for managers. Before changing their leadership style in order to show individualized consideration, managers should be careful about two things. First, they should ensure that their subordinates have different expectations. Second, they should show individualized consideration in a transparent way so that third parties (e.g., other team members) can understand the reason why they express different leadership style across subordinates.

Contributions

Empirical contributions. As mentioned above, the Behavioral Adaptability Model posits that three prerequisites are necessary for leaders in order to show behavioral adaptability (Palese & Schmid Mast, 2019). First, they need to correctly infer their subordinates' expectations. Second, they need to be motivated to adapt their leadership style. Third, they need to be able to express different leadership styles. Also, according to this theoretical model, leaders who express behavioral adaptability should also have more satisfied subordinates. Although I focused on the consequences of behavioral adaptability on leaders instead of on subordinates in Paper 3, the three papers of my thesis contribute to a better understanding of the behavioral adaptability processes in the leadership context.

Regarding the first prerequisite (i.e., correct inferences), Paper 1 showed that ERA, which is one dimension of interpersonal accuracy (Hall et al., 2016), is related to behavioral adaptability but only for participative leadership behavior in women when they are confronted

with a subordinate preferring a participative leadership style. These results therefore support those found in the context of physician-patient interactions (Carrard et al., 2018) in that they suggest that behavioral adaptability may be related, at least to some extent, to interpersonal accuracy but only in women.

Regarding the second prerequisite (i.e., motivation to adapt), Paper 2 showed that SDO is a personal orientation that may impact differently how people from different social categories are willing to express behavioral adaptability when they are in a leadership position. Further, Paper 2 also highlighted the potential impact of subordinates' belonging to the in- or the out-group when studying the role of SDO in behavioral adaptability for Caucasian people in leadership position. Although Nicol (2009) showed that SDO was negatively related to consideration in the leadership context, Paper 2 went further in that it highlighted the importance of taking into account both the social category of the person in leadership position and that of the subordinates when investigating the role of SDO on leadership style. Altogether, Paper 1 and 2 emphasized the importance of taking into account both individual (e.g., preferred leadership style) and social (e.g., ethnicity) characteristics of the subordinates when investigating the link between leaders' individual differences (e.g., ERA and SDO) and behavioral adaptability.

Regarding the third prerequisite (i.e., ability to express different leadership style), Paper 1 showed that people are able to change their leadership style to match their subordinates' individual expectations when they are aware of these expectations. These results are, to my knowledge, the first empirical evidence in the leadership literature showing that people are, overall, able to change their actual leadership style across two subordinates who have different expectations.

Finally, I believe that Paper 3 contributes to the leadership literature in that it highlights a paradox regarding the effects of individualized consideration in leadership processes by

showing that behavioral adaptability can become a double-edged sword for leaders if they change their behavior without apparent and valid justifications. Yes, leaders should show individualized consideration to satisfy their subordinates' individual preferences or needs as suggested by transformational leadership theory (Bass & Riggio, 2006). But they need to do it in a transparent way in order to avoid being evaluated negatively by third parties (e.g., team members, supervisor, or colleagues). To my knowledge, the two studies from Paper 3 are the first ones investigating in an experimental way the effect of changes in leaders' interpersonal behavior between different subordinates on leaders' evaluations by third parties.

Practical contributions. Even though in Paper 1 we only found limited evidence for a relation between ERA and behavioral adaptability, I argue that leadership training might benefit from incorporating interpersonal accuracy training aspect both for women and men. Indeed, leaders spend about 80% of their working time in social interactions (Kotter, 1999) and interpersonal accuracy is related to social relationships of higher quality (Hall et al., 2009). Moreover, interpersonal accuracy is related to positive leadership outcomes, such as subordinate satisfaction (Schmid Mast et al., 2012) or managerial ratings (Byron, 2007). Interpersonal accuracy is trainable (Blanch-Hartigan, Andrzejewski, & Hill, 2012; Schlegel, Vicaria, Isaacowitz, & Hall, 2017) and developing the ability to make correct inferences about others may help leaders (both men and women) to identify their subordinates expectations and to adapt their leadership style accordingly. In addition, interpersonal accuracy training would not only help leaders to have more satisfied subordinates by enabling them to know which leadership style they should show to each subordinate. It would also enable leaders to ensure that their changes in leadership style are justified, which is an important aspect for leaders if they want to be perceived positively by third parties, as suggested by Paper 3.

Moreover, leaders should be trained to develop a culture of relational transparency within their teams. As suggested by Paper 3, leaders would benefit from explaining why they do not necessarily show the same leadership style to all of their subordinates because it would enable them to show individualized consideration without misunderstandings. However, I also argue that a climate of relational transparency requires setting up managerial practices that allow subordinates to express their needs and preferences freely. For instance, leaders may organize regular meetings with their entire team during which all subordinates could explicitly express their individual needs and preferences. Such meetings would not only enable leaders to know better their subordinates, it would also enable all the team members to realize that there are individual differences in terms of preferred supervision style, justifying why their leader sometimes behave differently with each of them.

To take advantage of such climate of relational transparency, leaders need to be willing to change their leadership style when having subordinates with different needs. Therefore, when selecting people for leadership position, it is essential to select those who are willing to adapt to their subordinates. As mentioned above, Paper 2 suggests that SDO may be an interpersonal orientation related to less willingness to adapt one's leadership style to subordinates, at least for people who are from low-status social groups (e.g., women and Black/African American in the US). Moreover, SDO has already been related to less consideration in the leadership context (Nicol, 2009). If companies want to foster the expression of behavioral adaptability among their leaders, it would therefore be relevant to select people who are low in SDO for leadership positions.

Methodological contributions. My thesis investigated leadership process by focusing on actual leadership behavior. In Paper 1 and 2², I asked participants to play the role a leader and I coded their actual leadership behavior while giving a pep talk to two subordinates. In

² Study 2 of Paper 2 was the only study included in my thesis in which I used a self-reported questionnaire of behavioral adaptability.

Paper 3, I asked participants to watch videos in which I manipulated the actual leadership behavior expressed by a leader while interacting separately with two subordinates. In much of the existing leadership research, leadership behaviors are studied and assessed via self-report measures or by subordinates who report their leaders' behavior (Podsakoff & Organ, 1986; Spector, 1994). However, using self-report measures to study leadership behavior is problematic for two reasons. First, self-reports of behavior do not always correspond to actual behavior. Second, if leadership behavior and other variables, such as leaders' individual differences (e.g., ERA or SDO) or leadership outcomes, are all assessed by questionnaires, there is a potential problem of common method bias in the data (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). I hope that my thesis will contribute to the leadership literature and more generally to the literature in social psychology by encouraging scholars in these fields to use less self-reported measures of behavior. Further, I argue that the use of self-report measures should generally be avoided when studying behavior or skills that can be measured through performance based tests. Indeed, self-report measures may reflect more what people think about their skills or behavior rather than their actual skills or behavior. For instance, past research has shown that self-reported assessment of interpersonal accuracy is poorly related to interpersonal accuracy performance based assessments (Hall et al., 2009; Murphy & Lilienfeld, 2019) and people tend to overestimate their skill in making correct inferences about others (Ames & Kammrath, 2004). This is the reason why I used interpersonal accuracy performance based tests (e.g., the Body and Face PONS (Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979) and the Geneva Emotion Recognition Test (Schlegel, Grandjean, & Scherer, 2014)) to assess ERA in Paper 1.

In addition, having used an immersive virtual reality environment in Paper 1 and 2 is also an important methodological contribution to the leadership literature. Thanks to immersive virtual reality, one can standardize and control the interaction partners with whom

participants interact so that all participants are confronted with the same interaction partners who behave in the exact same way. Immersive virtual reality therefore makes it possible to study social interactions with a control that is difficult to achieve even when actors are used as confederates. Because I was studying behavioral adaptability in the context of my thesis, using this technology enabled me to make sure that all the behavior changes observed in the participants stem from the participants and were not initiated by any differences in subordinates' behavior. To my knowledge, only one published paper used the immersive virtual reality to study leadership processes (Latu, Schmid Mast, Lammers, & Bombari, 2013). In this study, Latu et al. (2013) used virtual reality to investigate how successful female leaders can empower women in public speaking. Given the benefits provided by this technology, I hope that more and more scholars will take the opportunity to use it when studying social interactions in the leadership context. I do believe that leadership tasks, such as giving negative feedback, managing conflict, or public speaking are tasks in which the interaction partners (e.g., subordinates) can easily be standardized and programmed a priori in immersive virtual reality.

Future research

In the following section, I will present some avenues that I would like to see pursued in future research about behavioral adaptability. Because behavioral adaptability is considered to be an important skill in everyday life and not only at the workplace (Palese & Schmid Mast, 2019; Schmid Mast & Hall, 2018), I decided to take a step back and take some of the following suggestions out of the leadership context.

Regarding the leadership context, I first argue that future research should investigate whether behavioral adaptability explains the relation between ERA and positive leadership outcomes in women. Indeed, it has been shown that ERA is positively related to subordinates' satisfaction with female leaders (Byron, 2007) and Paper 1 suggests that ERA is related to

adaptive participative behavior in women. It is therefore possible that female leaders who are higher in ERA have more satisfied subordinates because they are the ones who adapt their participative behavior toward their subordinates' expectations. Future research on this topic should therefore test the mediation between ERA, adaptive participative behavior, and leadership outcomes in women. Further, scholars should also investigate whether behavioral adaptability mediates the relationship between ERA and positive interaction outcomes in women outside the leadership context. Some evidence going in this direction have been found in the medical context with female physicians' ERA being positively related to verbal and nonverbal behavioral adaptability and female physicians' nonverbal behavioral adaptability being positively related to patients' satisfaction (Carrard et al., 2018). Future investigation should therefore set out to replicate these findings in other contexts in which ERA is related to better social interaction outcomes, such as education (Bernieri, 1991; Kurkul, 2007).

Moreover, future research in the leadership context should try to replicate findings from Paper 1 and 2 with real managers to generalize the results with a more relevant population. Even though in both papers I put participants in the role of a leader, I did not know whether they had leadership experience (e.g., in the context of a student association or at work). Knowing whether leadership experience impacts the links between leaders' individual differences (e.g., ERA and SDO) and behavioral adaptability may have important practical implications for organizations.

Finally, in Paper 3 the leader in the videos was always a man and I argue that future research should investigate whether people perceive changes in leaders' interpersonal behavior differently depending on the sex of the leader. Indeed, I suggest that expressing individualized consideration in a transparent way may be a more relevant advice for male leaders than for female leaders. Indeed, being more relationship-oriented is more expected from women than from men (Eagly & Wood, 1999) and women who express individualized

consideration in a transparent way may emphasize their feminine attributes in the eyes of third parties. Because characteristics of successful managers are more associated with masculine traits than with feminine traits (Schein, 1973; Schein, Mueller, Lituchy, & Liu, 1996), by showing individualized consideration in a transparent way female leaders may therefore shoot themselves in the foot.

In addition, future research outside the leadership context should set out to test the relation between behavioral adaptability and other dimensions of interpersonal accuracy. To date, the only two studies that investigated the link between interpersonal accuracy and behavioral adaptability (Paper 1; Carrard et al., 2018) used ERA to operationalized interpersonal accuracy. Although ERA is the most common way to assess interpersonal accuracy, it is also only one dimension of interpersonal accuracy (Hall et al., 2016). To better understand the link between interpersonal accuracy and behavioral adaptability, I argue that scholars in the field of social perception should investigate whether behavioral adaptability is related to others interpersonal accuracy dimensions, such as making correct inferences about personality or motivations. Doing so would provide a better understanding of which “type” of interpersonal accuracy is more predictive of behavioral adaptability (Palese & Schmid Mast, 2019). Moreover, it would enable researchers to find out if interpersonal accuracy is not at all related to behavioral adaptability in men, or if ERA is the only one interpersonal accuracy dimension that is not related to behavioral adaptability in men.

Conclusion

Throughout the three papers of my thesis, I have combined different streams of research from organizational behavior (e.g., social perception, leadership, prejudices) to investigate behavioral adaptability in the leadership context. This approach enabled me to investigate behavioral adaptability from different perspectives and, I hope, to apprehend it as comprehensively as possible. Moreover, this approach made me realize how complex the

study of behavioral adaptability is. However, what is complex is exciting and I am convinced that research on behavioral adaptability is only just beginning. Behavioral adaptability is an important skill in social life and its study should not be set aside because of its complexity. I hope that my thesis will contribute to the building of a better understanding of behavioral adaptability and that it will inspire future researchers who would be interested in pursuing research on this topic, whether in the leadership context or in other contexts.

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Emotion Recognition Ability and Behavioral Adaptability in the Leadership Context: The
Role of Gender

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Abstract

People differ from each other by their personality, attitudes, or values. These individual differences may lead people to have different expectations regarding the way one should behave with them during social interactions. Because of these different expectations, we argue that one should express behavioral adaptability towards his or her interaction partner in order to reach better social interaction outcomes. In this paper, we argue that emotion recognition ability – ERA – is an important interpersonal skill to help individuals understanding what behavior they should show when interacting with a specific interaction partner and should therefore be related to behavioral adaptability. Some preliminary evidence supports this assumption in the context of physician patient interaction in women but not men. In two studies, we tried to generalize these results by investigating the relation between ERA and behavioral adaptability in the leadership context. The first study included 55 participants and the second 166 participants. Both studies followed the same procedure. First, we assessed the ERA of participants. Then, in an immersive virtual environment, participants were asked to give two pep talks to two subordinates who were described as preferring a different leadership style. Results show that ERA is not related to adaptive directive behavior neither in women nor in men whatever the subordinates' preferences. However, ERA is related to adaptive participative behavior in women but only when they are confronted with someone preferring a participative leadership style. These studies highlight how the interaction partners' expectations can impact the link between ERA and behavioral adaptability in women.

Emotion Recognition Ability and Behavioral Adaptability in the Leadership Context: The Role of Gender

People differ in how they want to be treated in social interactions based, among others, on their goals, gender, and personality. At the workplace, for instance, people differ with respect to the leadership style they prefer (Ehrhart & Klein, 2001). Women prefer more considerate leaders than men (Vecchio & Boatwright, 2002), and extraverted and conscientious people prefer a more transformational leadership style (Moss & Ngu, 2006). But do interaction partners take those individual differences into account in social interactions? Those who do, are people who change their interpersonal behavior according to their interaction partners' expectations (e.g., preferences or needs), which is a skill called behavioral adaptability (Carrard, Schmid Mast, Jaunin-Stalder, Junod Perron, & Sommer, 2018; Schmid Mast & Hall, 2018).

In this paper, we argue that emotion recognition ability (ERA), which is the ability to correctly recognize emotions in others from nonverbal cues (Schlegel et al., 2019), is particularly important to develop behavioral adaptability skill. By correctly identifying emotions in others, people who are high in ERA can more easily understand when they are expressing interpersonal behavior that are in line or not with the expectations of their interaction partner and therefore try to adapt their behavior accordingly. For instance, if a leader expresses a leadership style that does not correspond to that which a subordinate prefers, that subordinate will probably express discontent. If the leader is high in ERA, he or she will typically be able to correctly read the expression of discontent and can then adapt his or her leadership behavior accordingly. In contrast, if the leader is low in ERA, her or she will probably miss relevant emotional cues indicating that the subordinate is not satisfied and will therefore not try to adapt his or her leadership style accordingly. We therefore suggest that people who are high in ERA may have had more opportunities during their lives to develop

their behavioral adaptability skill and the aim of this paper was to investigate whether people who are high in ERA are also those who are more skilled at expressing behavioral adaptability in social interactions.

ERA and Social Interaction Outcomes

Overall, making correct inferences about others is related to social relationships of higher quality (Hall, Andrzejewski, & Yopchick, 2009) and to positive social interaction outcomes in multiple different contexts (Palese & Schmid Mast, 2019). For instance, in the workplace context, salespeople who are high in ERA have better sales performance than those low in ERA (Byron, Terranova, & Nowicki Jr, 2007) and people in a leadership position who are high in ERA have more satisfied subordinates. This has been shown with participants taking on the role of the leader in a problem-solving task (Schmid Mast, Jonas, Cronauer, & Darioly, 2012) and for real female (but not male) leaders (Byron, 2007). Leader ERA is also a significant predictor of transformational leadership (Rubin, Munz, & Bommer, 2005), which is related to subordinates' satisfaction (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Finally, executives with a better ERA are rated higher by their superiors on building effective work relationships (Rosete & Ciarrochi, 2005). Other studies also highlighted the benefit of ERA in other contexts such as education and medical consultations. For instance, physicians who are higher in ERA have more satisfied patients (DiMatteo, Taranta, Friedman, & Prince, 1980) and high ERA students learn better during dyadic teaching interaction than low ERA students (Bernieri, 1991). In sum, ERA is related to positive social interaction outcomes in many different contexts both for those high in ERA (e.g., showing transformational leadership) and for those interacting with them (e.g., more satisfaction with the leader) (Schmid Mast & Hall, 2018). But what are the processes through which ERA influences social interaction outcomes?

Because ERA is a perceptual skill, one might wonder how such a perceptual skill can influence social interaction outcomes. As highlighted by Schmid Mast and Hall (2018), there is a “black box” between making correct inferences about others (e.g., ERA) and social interaction outcomes, and only little research has tried to understand the processes by which ERA leads to better social interaction outcomes. How a person who is high in ERA behaves in social interactions and how this skill affects the interaction outcomes remains under-researched. Moreover, ERA does not seem to have a systematic relation to how a person behaves in social interactions, especially for behavior that should be related to positive social interaction outcomes, such as smiling, nodding or back channeling (Hall et al., 2009). Being high in ERA therefore does not predict the extent to which a person will express such behavior. However, people high in ERA are more skilled at expressing desired emotions (Elfenbein et al., 2010). Therefore, it might not be a certain behavioral style that goes with being high in ERA, but it might rather be the ability to flexibly adapt one’s interpersonal behavior according to the demand of a specific situation (e.g., a specific interaction partner).

Behavioral Adaptability: The Missing Link

In this paper, we pursue the question of how individual differences in ERA play out in social interactions. We argue that people who are able to better understand the emotional reactions of their interaction partner during social interaction (by being high in ERA) are also those who are more skill at adapting their interpersonal behavior towards the expectations, needs, and preferences of their interaction partners.

Theoretically, it has already been highlighted that ERA is a skill that helps individuals to infer what the intentions of others are and to resort to an adapted behavior (Halberstadt, Denham, & Dunsmore, 2001; Hall et al., 2009; Hampson, van Anders, & Mullin, 2006). Empirically, the first evidence making the link between ERA, behavioral adaptability and positive interaction outcomes stems from the context of physician-patient interaction with

female but not male physicians' ERA being related to their behavioral adaptability (Carrard et al., 2018): The higher female physicians scored in ERA, the more they adapted their behavior during the consultation with regard to their patients' preferences. Further, the more female physicians showed nonverbal behavioral adaptability the more satisfied their patients were (Carrard et al., 2018). This first evidence supported the assumption that behavioral adaptability – instead of specific behavior expressed by people high in ERA – might be the missing link explaining the relationship between ERA and positive interaction outcomes.

Gender Considerations

Women are typically more communal, meaning more interdependent, more caring, and more relationship-oriented than men (Eagly & Wood, 1999). This focus on relationships might explain why women are usually better in ERA than men (Hall, Gunnery, & Horgan, 2016). Moreover, we argue that this interest for social relationships could also be responsible for women who are higher in ERA to be more motivated to use emotional information from others to express behavior in an adaptive way when interacting with them. In addition, women spend more time developing and maintaining social relationships than men (Wong & Csikszentmihalyi, 1991) and high ERA women might have had more opportunities than high ERA men to develop behavioral adaptability skills during their lives. Additionally, men are less sensitive to emotional cues and pay less attention to them (Bloise & Johnson, 2007). Therefore, men may take less advantage of these cues to develop behavioral adaptability skills, even though they are able to recognize emotions in others. As a consequence, we expect the relation between ERA and behavioral adaptability to be stronger in women than in men. As described above, initial evidence of this gender difference exists in the context of physician-patient interaction (Carrard et al., 2018).

Current Studies

In two studies we tested the relation between ERA and behavioral adaptability using a student sample to generalize the results previously found with physicians. We tested the relation between ERA and behavioral adaptability by measuring students' ERA and then observing how they adapt their interpersonal behavior when performing a typical leadership task; giving a pep talk.

We chose to study behavioral adaptability in the leadership context because the question of how a leader's skill in correctly assessing others' emotions affects social interaction outcomes in the workplace has been the object of much research over the years, but has also shown inconclusive empirical results (Kerr, Garvin, Heaton, & Boyle, 2006; Mayer, Salovey, & Caruso, 2004; Palmer, Walls, Burgess, & Stough, 2001). Our current research can therefore make a contribution not only to questions stemming from the domain of social perception in social psychology but also to the leadership literature.

There is some evidence suggesting that ERA is an important interpersonal skill for leaders that can help them to choose relevant behavior when interacting with different subordinates. Indeed, the more leaders are high in ERA, the more they show transformational leadership behavior (Gardner & Stough, 2002; Rubin et al., 2005). Transformational leadership is associated with better leadership effectiveness and group productivity, but also with increased subordinate satisfaction and trust in the leader (Lowe, Kroeck, & Sivasubramaniam, 1996). Transformational leadership includes leader behavior such as showing inspirational motivation, intellectual stimulation, idealized influence, and individualized consideration (Bass & Avolio, 1994). Individualized consideration is of particular interest because it refers to leaders recognizing their subordinates' individual differences in terms of needs and desires and demonstrating acceptance of these individual differences when interacting with their subordinates (Bass & Riggio, 2006). Individualized consideration therefore acknowledges the importance of leaders adapting their behavior

towards their subordinates' individual differences. Further, we suggest that leaders' behavioral adaptability is a prerequisite for showing individualized consideration. If leaders are not able to change their interpersonal behavior in adaptive ways, they cannot show individualized consideration.

Although the idea of adapting one's behavior to different subordinates is not new in the leadership literature (Bass, Avolio, Jung, & Berson, 2003; Blanchard, Zigarmi, & Nelson, 1993), what is new in our approach is that we do not use questionnaires to assess ERA and behavioral adaptability. In much of the existing research, leadership behaviors are assessed via self-report measures or by subordinates who report their leaders' behavior (Podsakoff & Organ, 1986; Spector, 1994). However, self-reports of behavior do not always correspond to actual behavior. ERA is also often measured through self-reporting in the leadership literature but self-reported assessments of social perception abilities are poorly related to performance based assessments (Hall et al., 2009; Murphy & Lilienfeld, 2019) and people tend to overestimate their skills in making correct inferences about others (Ames & Kammrath, 2004). Furthermore, if leadership behavior and other variables (e.g., ERA) are all assessed by questionnaires, there is a potential problem of common method bias in the data (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To overcome this potential problem, we used a performance test to assess ERA and code participants' actual leadership behavior in a face-to-face interaction with different interaction partners to assess behavioral adaptability.

Study 1

Method

Participants. Fifty-five participants (27 females, 28 males) were recruited on a university campus in the French speaking part of Switzerland. Participants (age $M = 23$ years, $SD = 5.34$) were approached by research assistants and asked to participate in a one-hour

study. As an incentive, participants were offered the equivalent of 20 US\$. The great majority (96.4%) of the participants were students.

Procedure. At the outset of the study, participants signed an informed consent form stating that they would be videotaped during the experiment. After having signed the form, participants' ERA was measured. The experimenter then informed the participants that they would play the role of a leader giving separate pep talks to two of their female subordinates who recently showed a drop in performance. We did not provide a particular job setting in which to deliver the pep talks. The participants were simply informed that they were the director of a large company and that they had just learned that two of their subordinates had obtained mediocre results in the last month. Participants were told that they absolutely wanted to keep the performance standards of all subordinates high, which is why they decided to talk to the two underperforming subordinates to motivate and encourage them to perform better in the future. Finally, before seeing both subordinates, participants received a short description about the subordinates and they had 5 minutes to prepare each pep talk.

Participants were informed that each pep talk was to last about 4 min and that the subordinates were not to interrupt during the talk. Additionally, they were told that if they had not finished after 4 minutes there would be a knock at the door, which was their secretary reminding them that they had another appointment and that they needed to wrap up. After each pep talk, participants reported the leadership behavior they employed and how much they liked the subordinate.

Experimental manipulation and design. Subordinates' descriptions were manipulated to vary in the leadership style under which they function best. One subordinate was described as "works best when she is *included in the decision-making*, when *decisions can be re-discussed*, when *responsibilities are shared between her and the leader*, and when there is an *atmosphere that fosters interpersonal relations in the team*" (working best under a

participative leadership style). The other subordinate was described as “works best when she is *confronted with premade decisions, when decisions are not re-discussed, when responsibilities are entirely assumed by the leader, and when there is an atmosphere that fosters task-orientation in the team*” (working best under a directive leadership style). The leadership style under which the subordinates work best was the only variable that we experimentally manipulated and participants interacted with both subordinates. We therefore had a within-subject experimental design. In order to limit spillover effects due to this experimental design we counterbalanced the order in which participants saw one or the other subordinate first.

We gave very explicit descriptions of the subordinates because we wanted to ensure that all participants perceived the differences between the two subordinates. This demand effect was induced on purpose in order to ensure that participants did not have to infer anything about the subordinates. We wanted to disentangle any inference skill (e.g., ERA) from the measurement of behavioral adaptability to be able to test whether people who are high in ERA are also those who are more skilled in expressing adaptive behavior. If participants had to infer what the subordinates wanted and if they were wrong, they would not show behavioral adaptability not because they were not be able to change their behavior, but because they made wrong inferences.

Material and measures. We used virtual humans in immersive virtual reality as the subordinates with whom the participants interacted. In this specific 3-dimensional virtual world, participants wear a head-mounted-display (HMD) through which they perceive the virtual world. Because participants are able to move and look around in the virtual world similar to the real world, Immersive Virtual Environment Technology (IVET) provides a highly ecologically valid environment while at the same time ensuring complete standardization of the social interaction partner (Blascovich et al., 2002) – the two women

subordinates in our case. We opted for using virtual reality and virtual humans to completely standardize and control the social interaction partners. Because we are studying behavioral adaptability, we wanted to make sure that all the behavior changes observed in the participants stem from the participants and were not initiated by any differences in subordinates' behavior.

In IVET, participants had to give a pep talk to two of their female subordinates (virtual humans) who were both sitting behind a desk in their respective offices. The virtual humans were programmed to greet the participants at the beginning of the interaction when the participants entered the office. When participants finished their pep talk, the virtual human thanked them and said goodbye. The experimenter via keyboard commands elicited these behaviors from the virtual human at the beginning and at the end of each pep talk. However, there was no other intervention from the experimenter during the pep talk. While the participants gave their pep talk, the virtual human expressed the same behavior across all participants to ensure the interaction partner standardization. They remained attentive (slightly moving her head, making eye contact most of the time but not always) but did not say anything.

To control for error variance, the two subordinates were chosen to be as similar as possible. This is why we opted for two subordinates of the same sex. We chose the subordinates to be women because women are more likely associated with low status and lower hierarchical positions than men (Rudman & Kilianski, 2000). The subordinates were of similar age and attractiveness and they wore the same style of clothes (*Figure 1*). Finally, both subordinates behaved in exactly the same way and did not express any cues that might have indicated a preference for a particular leadership style.

ERA. To measure participant ERA, we used the Body and Face PONS (Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979), which is a 27-min video, composed of 40 excerpts

(without sound) each lasting 2 sec. The excerpts show a Caucasian woman playing out different scenarios with her face and body. For each excerpt, participants are asked to choose one of two possible answers, such as “*returning a faulty item to the store*” or “*expressing motherly love*”. The correct answer was the one that the actress intended to display. The correct answers were summed up to an ERA score, $M = 29.31$, $SD = 2.74$ (women: $M = 29.59$, $SD = 2.64$, men: $M = 29.04$, $SD = 2.86$). There was no gender difference in terms of test performance, $t(53) = 0.75$, $p = .456$.

Leadership behavior. A research assistant coded the extent to which participants showed participative and directive behavior when giving the pep talk. This coding was done for both pep talks without the coder knowing what the preference of the virtual human was in each video. For participative behavior, the research assistant was told that a highly participative leadership style focuses more on social relationships and on the fact that decisions can be called into question by the subordinates, responsibilities are shared between the leader and the subordinates, and subordinates are included in the decision making. For directive behavior, the research assistant was told that a highly directive leadership style focuses more on the task and on the fact that premade decisions can not be negotiated with the subordinates, that responsibilities are entirely assumed by the leader, and that decisions are made without including the subordinates. The coding was done as a global impression rating on a 5-point Likert scale ranging from 1 (*not at all participative/directive*) to 5 (*very much participative/directive*) and we instructed the research assistant to focus on what the participants said to the subordinates. The coding was therefore based on the participants’ verbal behavior. Even though the way participants spoke to the subordinates (e.g., the tone of the voice) may have impacted how participative or directive participants were perceived, we decided to not give so much weight on the nonverbal behavior for the coding, mainly because

participant wore a head-mounted-display, so the amount of nonverbal behavior accessible to the research assistant was limited (e.g., no facial expressions).

This coding enabled us to code whether the participants showed adaptive leadership behavior meaning expressing more participative behavior and less directive behavior to the subordinate preferring a participative leadership style and less participative behavior and more directive behavior to the subordinate preferring a directive leadership style. A second coder rated a sub-sample of 15 videos. The inter-rater reliability was $r = .82$ and $r = .87$, for participative and directive behavior, respectively. Both coders were unaware of the conditions.

Self-reported leadership behavior. After each pep talk, we asked participants how much participative and directive behavior they showed. Participative behavior shown by the participants was assessed with the following three statements: “When interacting with my subordinate, I was collaborative/tolerant/open”. Directive behavior shown by the participants was assessed with the following three statements: “When interacting with my subordinate, I was directive/firm/authoritarian”. Participants indicated their agreement with each of these statements on a scale ranging from 1 (do not agree at all) to 5 (agree completely). Cronbach alphas for the self-reported amount of participative behavior were .75 and .90 for behavior shown towards the subordinate functioning best under a participative and under a directive leadership style respectively. Cronbach alphas for the self-reported amount of directive behavior were .78 and .75 for behavior shown towards the subordinate functioning best under a directive and under a participative leadership style respectively.

Self-reported subordinate liking. To measure how much participants liked each of the subordinates, we asked them to indicate at the end of each pep talk how *nice*, *kind*, and *likeable* they perceived the subordinate to be. Each item was assessed on a 5-point Likert

scale ranging from 1 (*not at all*) to 5 (*very much*). Cronbach alphas were .85 and .87 for the participative and the directive condition respectively.

Results

Preliminary analyses.

Self-reported leadership behavior. First, we tested whether participants reported having behaved differently with the two subordinates and whether the descriptions of the subordinates evoked different leadership behavior in participants. Participants reported having behaved in a more *participative* way when faced with the subordinate functioning best under a participative leadership style, ($M = 3.97$, $SD = 0.67$) than when faced with the subordinate functioning best under the directive leadership style ($M = 3.70$, $SD = 0.84$), $t(54) = 2.19$, $p = .033$. They indicated having behaved in a more *directive* way when faced with the subordinate working best under the directive leadership style ($M = 3.29$, $SD = 0.73$) than when faced with the subordinate working best under the participative leadership style ($M = 2.75$, $SD = 0.78$), $t(54) = 4.59$, $p < .001$. This confirms that the manipulation worked; participants perceived the two subordinates as preferring different leadership styles.

Leadership behavior. Overall, participants showed significantly more *participative* behavior when interacting with the subordinate preferring a participative leadership style ($M = 3.15$, $SD = 1.31$) than with the subordinate preferring a directive leadership style ($M = 2.09$, $SD = 1.09$), $t(54) = 5.56$, $p < .001$. Women and men did not differ in terms of their participative behavior: M women = 3.26, SD women = 1.35; M men = 3.04, SD men = 1.29; $t(53) = 0.63$, $p = .532$, for participative behavior shown towards the subordinate functioning best under a participative leadership style; M women = 2.30, SD women = 1.03; M men = 1.89, SD men = 1.13; $t(53) = 1.38$, $p = .174$; for participative behavior shown towards the subordinate functioning best under a directive leadership style.

Moreover, participants showed significantly more *directive* behavior in the directive leadership condition ($M = 3.00$, $SD = 1.28$) than in the participative leadership condition ($M = 1.87$, $SD = 0.82$), $t(54) = 6.27$, $p < .001$. Women and men also did not differ in terms of their *directive* behavior: M women = 3.00, SD women = 1.27; M men = 3.00, SD men = 1.31; $t(53) = 0.01$, $p = .980$, for directive behavior shown towards the subordinate functioning best under a directive leadership style; M women = 1.81, SD women = 0.96; M men = 1.93, SD men = 0.66; $t(53) = 0.51$, $p = .611$, for directive behavior shown towards the subordinate functioning best under a participative leadership style.

Finally, *participative* and *directive* behavior were negatively correlated both when participants interacted with the subordinate functioning best under a directive leadership style ($r = -.33$, $p = .013$; see Table 1) and when interacting with the subordinate functioning best under a participative leadership style ($r = -.26$, $p = .056$; see Table 2). Therefore, when participants expressed more participative behavior during a specific pep talk they also tended to express less directive behavior during that specific pep talk, and vice versa.

Self-reported subordinate liking. We also tested whether participants liked both virtual humans equally and whether they liked subordinates who preferred a certain leadership style more. There was no difference in liking between the two virtual humans ($M_1 = 3.81$, $SD_1 = 0.78$; $M_2 = 3.86$, $SD_2 = 0.70$), $t(54) = 0.72$, $p = .474$. Additionally, there was no difference in liking between the subordinate who preferred a participative leadership style ($M = 3.89$, $SD = 0.73$) and the subordinate who preferred a directive leadership style ($M = 3.78$, $SD = 0.75$), $t(54) = 1.66$, $p = .104$.

Main results. Because the experiment had a within-subject design we clustered the data per participants and we used robust standard errors to correct for the statistical dependence among the multiple observations from the same participants in all our regression analyses. In all the analyses, we included the order in which the participants interacted with both

subordinates as control variable. To test whether ERA is related to adaptive leadership behavior and whether this relation depends on the subordinates' preference and on the gender of the participants, we ran two separate regression analyses for participative and directive behavior respectively.

First, we ran a hierarchical multiple regression analyses with participant ERA, subordinate preference, and participant gender as predictors of *directive* behavior in the first step. There was a significant main effect of subordinate preference ($b = -1.13, p < .001$). In the second step, we added all possible combinations for two-way interactions between participant ERA, participant gender, and subordinate preference. None of the two-way interactions was significant. In the third step, we included the three-way interaction between participant ERA, subordinate preference, and participant gender. The three-way interaction was not significant ($b = .20, p = .248$). Therefore, directive behavior was only predicted by subordinates' preference (Table 3).

We then ran a hierarchical multiple regression analyses with participant ERA, subordinate preference, and participant gender as predictors of *participative* behavior in the first step. There was a significant main effect of subordinate preference ($b = 1.05, p < .001$). In the second step, we added all possible combinations for two-way interactions between participant ERA, participant gender, and subordinate preference. None of the two-way interactions was significant. In the third step, we included the three-way interaction between participant ERA, subordinate preference, and participant gender. The three-way interaction was significant ($b = -.30, p = .021$) (Table 4). To better understand this three-way interaction we decided to do separate analyses for men and women.

First, we conducted a multiple hierarchical regression analysis for women with participant ERA and subordinate preference as predictors of participative behavior in the first step. In the second step, we added the two-way interaction between participant ERA and

subordinate preference. Analyses of the second step revealed a significant two-way interaction between participant ERA and subordinate preference ($b = .26, p = .019$) (Table 5). To better understand the two-way interaction, we analyzed the simple slopes for the relation between participant ERA and participative behavior according to subordinate preference (Figure 2). When the subordinate was described as preferring a participative leadership style, the slope was positive and significantly different from 0 ($b = .23, p = .010$). That is, the higher women were on ERA the more they showed participative behavior towards the subordinate preferring a participative leadership style. When the subordinate was described as preferring a directive leadership style, the slope was negative but not significant ($b = -.03, p = .536$), meaning that for women, ERA was not related to their ability to show less participative behavior when a directive leadership style was required (Figure 2).

We then conducted a hierarchical multiple regression analysis for men with participant ERA and subordinate preference as predictors of participative behavior in the first step. In the second step, we added the two-way interaction between participant ERA and subordinate preference. Analyses of the second step revealed no significant two-way interaction between participant ERA and subordinate preference ($b = -.04, p = .587$) on participative behavior. For men, ERA was not related to their ability to show more participative behavior when a participative leadership style was required. It was also not related to show less participative behavior when a directive leadership style was required (Table 6).

Discussion Study 1

In Study 1, results showed that people are able to adapt their leadership behavior to the subordinates they interact with and there was no gender difference in this. When looking at whether this ability to express adaptive behavior was related to ERA both for directive and participative behavior, results showed that for *directive* behavior, ERA was unrelated to showing adaptive behavior for both men and women. In other words, individuals who were

high in ERA were not necessarily those who expressed more (or less) directive behavior towards the subordinate preferring a directive or a participative leadership style. Directive behavior may be less interpersonally oriented than participative behavior, which is why ERA was not related to adapting one's directive behavior.

For *participative* behavior, the higher women scored on ERA, the more they expressed participative behavior when they interacted with a subordinate preferring a participative leadership style (*Figure 2*). However, ERA was not related to women's ability to express less participative behavior when confronted with the subordinate preferring a directive leadership style (*Figure 2*). For men, ERA was not related to their ability to express adaptive participative behavior, both when they were confronted with a subordinate preferring a participative and when confronted with a subordinate preferring a directive leadership style.

The expected link between ERA and behavioral adaptability only emerged for women with respect to their participative behavior towards the subordinate who had a preference for participative leadership behavior. We think that the preference for a participative leadership style may have made salient the interpersonal domain when interacting with the subordinate preferring a participative leadership style. Because women are more relationship-oriented than men (Eagly & Wood, 1999) and because interpersonal accuracy, which includes ERA, is related to affiliation (Hall et al., 2009), it may be possible that women who score higher in ERA are also those who are more motivated to adapt their behavior that are fostering social relationships (e.g., participative behavior in the leadership context). We think that for women, the same underlying interest in the social domain might have manifested itself cognitively (i.e., correctly reading others' emotions) and in their behavior (i.e., showing adaptive participative behavior) when confronted with the subordinate preferring a participative leadership style.

However, when women interacted with the subordinate preferring a directive leadership style, there was no relationship between ERA and adaptive participative behavior. Women who were higher in ERA did not show less participative behavior than those low in ERA. This result may be due to the fact that directive leadership is a less interpersonally oriented leadership style than participative leadership (Eagly & Johnson, 1990). A participative leadership style may be easier to express for women who are high in ERA because it may be more in line with their need to develop and maintain good social relationships. Moreover, women are usually expected to be more participative and they are particularly poorly evaluated when they do not express such a leadership style (Eagly & Johannesen-Schmidt, 2001; Eagly, Makhijani, & Klonsky, 1992). Social expectations might therefore prevent women who are high in ERA to express a less participative leadership style when required, even though they might be motivated or able to do so.

Because men are less oriented towards social relationships than women (Eagly & Wood, 1999), they might be less motivated to adapt their behavior to their interaction partner during social interaction to maintain good relationships, regardless of the leadership behavior. This could explain why there is no relationship between ERA and adaptive behavior in men. In Study 2, we therefore tested whether relationship-orientation might explain the relation between ERA and adaptive behavior.

In Study 1, subordinates were always women and all women participants therefore interacted with same-gender subordinates whereas all men interacted with opposite-gender subordinates. This limits the generalizability of the results in the sense that we do not know if the results we found for women are an ingroup-outgroup effect, or an effect that is specific for female-female hierarchical interaction. Study 2 addresses this problem by including male subordinates.

In addition, the link we found between ERA and adaptive participative behavior in women, when confronted with the subordinates preferring a participative leadership style, could be explained by personality and intelligence. Indeed, extraversion, conscientiousness, openness to experience, emotional stability and intelligence are positively related to the ability to correctly assess others (Davis & Kraus, 1997; Hall et al., 2009) and a recent meta-analysis showed that ERA is related to intelligence (Schlegel et al., 2019). In the context of leadership, there is also evidence showing that the link between emotional intelligence (a concept closely related to ERA) and leadership outcomes can mostly be explained by leader personality and leader intelligence (Antonakis, Ashkanasy, & Dasborough, 2009). It is therefore important to add these variables in future analyses to test whether ERA explains variance in adaptive behavior above and beyond what is explained by personality and intelligence in the leadership context.

Finally, self-monitoring, which is the self-perceived ability to change personal behavior in social interaction (Snyder & Gangestad, 1986), could also be a trait related to behavioral adaptability. Indeed, individuals who do not perceive themselves as able to change their behavior in social interaction may lack the required confidence to change their behavior during a specific social interaction. In Study 2, we therefore included personality (including self-monitoring and relationship-orientation) and intelligence measures and had a much larger sample.

Study 2

Method

Participants. Initially, we recruited 176 participants from the participant pool at our institution. We excluded 8 participants because of technical issues during the experiment and because the level of French of the participants was not adequate. In addition, 2 participants were removed from the dataset because of their incorrect answers for the manipulation checks

(explained in more detail below). The final number of participants used for this study was 166 (86 females, 80 males). All the participants were students (undergraduate and graduate, majoring in different domains) and the majority were Caucasian (69.9 %). Participants (age $M = 21.22$ years, $SD = 2.48$) were paid the equivalent of 45 US\$ for their participation. Moreover, they were informed that they had the possibility to obtain a 15 US\$ bonus (explained in more detail below).

Procedure. Study 2 was organized in two parts. First, participants filled in a one-hour online questionnaire to assess their personality traits of extraversion, openness, emotionality, honesty-humility, agreeableness, conscientiousness, self-monitoring, and relationship-orientation. They also performed an online intelligence test, an ERA test, and they provided socio-demographic information (gender, age, ethnicity, and level of education). Participants also gave their informed consent to be videotaped during a role-play taking place in our laboratory about 3 days later. In this consent form, we also informed participants that they would have the opportunity to receive a bonus if they performed well in one of the tasks. We did not tell them for which specific task the bonus was attributed to incentivize them for the entire study.

Second, similar to Study 1, participants came to our virtual reality laboratory to give pep talks to two of their subordinates. To improve the ecological validity of the social interaction with regard to Study 1, we provided more detailed information about the situation participants were to imagine they were in. We told participants that they were a leader in an office branch of a world-renowned company. They had 10 people under their supervision and two of them showed a drop in performance. Participants were informed that there were 3 main reasons for the decrease in performance: 1) the two subordinates are very slow answering client emails, 2) they arrive late at meetings and 3) they have difficulties respecting deadlines. We asked the participants to explain these problems to the two subordinates and to suggest

solutions so that they could return to the previously high performance levels. We provided more information about the situation because participants from Study 1 told us that they did not really know what to say to the virtual subordinates because the “performance drop” was just too vague of a description.

Participants had 3 min for each pep talk. We shortened the time compared to Study 1 because we saw that participants had trouble speaking for a total of 4 min. Finally, similarly to Study 1, participants were told that if they had not finished after 3 min there would be a knock at the door to remind them to wrap up.

After each pep talk, participants filled in a questionnaire about which leadership style was preferred by the subordinate (manipulation check) and how much they liked each subordinate. The manipulation check enabled us to determine if participants paid attention during the instructions. Participants received the bonus if they answered the manipulation check correctly for the first pep talk. The majority of participants (80.12%) received a bonus. Moreover, 2 participants were removed from the dataset because they did not answer the manipulation checks correctly for both pep talks, indicating that they had not paid attention while reading the descriptions of the subordinates.

Experimental manipulation and design. As in Study 1, participants received a short description of both subordinates before seeing them and they had 5 min to prepare both pep talks. Subordinate descriptions were manipulated to vary in the subordinate’s preferred leadership style. These descriptions were similar to those in Study 1 and were supposed to convey a preference for a participative or a directive leadership style. We changed the wording slightly, which is why we provide the details here. One subordinate was described as “preferring when the leader lets him/her *work in an autonomous way while providing him/her with personal support*, when *responsibilities are shared between him/her and the leader* and when he/she is *included in the decision making*” (preference for a participative leadership

style). The other subordinate was described as “preferring when the leader *guides him/her in doing the work by giving him/her specific instructions, when responsibilities are entirely assumed by the leader* and when he/she is *confronted with premade decisions*” (preference for a directive leadership style). As in Study 1, participants interacted with both subordinates. We therefore had a within-subject experimental design with subordinates’ leadership style preferences being the only variable that we experimentally manipulated. The order in which the participants saw the two subordinates was counterbalanced across the participants to avoid spillover effects due to this experimental design.

Material and measures. We used the same virtual reality environment as in Study 1 with some modifications. We added a condition with male subordinates so that participants interacted either with two female or two male subordinates (*Figure 3*). The gender of the subordinates was counterbalanced across participants. Additionally, the subordinates were sitting at their desks when the participants entered the office and then they got up to greet the participants. As in Study 1, the behavior expressed by the subordinates were the same across all the participants to ensure the interaction partner standardization.

Personality traits. We measured extraversion, openness, emotionality, honesty-humility, agreeableness, and conscientiousness with the French version of the HEXACO-60 (Ashton & Lee, 2009). The questionnaire included 10 items for each dimension with a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The questionnaire had a good reliability for all dimensions, Cronbach alphas being .84, .82, .76, .73, .75, and .73 for honesty-humility ($M = 3.28$, $SD = 0.76$), emotionality ($M = 3.07$, $SD = 0.71$), extraversion ($M = 3.48$, $SD = 0.53$), agreeableness ($M = 2.99$, $SD = 0.55$), conscientiousness ($M = 3.42$, $SD = 0.58$), and openness to experience ($M = 3.51$, $SD = 0.62$), respectively.

To measure self-monitoring, we used a validated French version (Gana & Brechenmacher, 2001) of the Eighteen-Item Measure of Self-Monitoring (Snyder &

Gangestad, 1986), composed of 18 items (10 reversed items) with a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items are “In different situations and with different people, I often act like a very different person” and “I have trouble changing my behavior to suit different people and different situations” (reversed). The reliability of the scale was good (Cronbach alpha = .82) ($M = 3.94$, $SD = 0.79$).

To measure relationship-orientation, we used the Communal Orientation Scale (Clark, Oullette, Powell, & Milberg, 1987). The scale was translated into French by the authors and back translated from French to English by a native English speaker. Differences between the original questionnaire and the back translation were discussed and solved among the translation team. The scale is composed of 14 items (7 reversed items) with a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items are “When making a decision, I take other people’s needs and feelings into account” and “I don’t especially enjoy giving others aid”. The reliability of the scale was good (Cronbach alpha = .80) ($M = 3.72$, $SD = 0.48$).

ERA. To measure participant ERA we used the Geneva Emotion Recognition Test (GERT; Schlegel, Grandjean, & Scherer, 2014). The GERT is an emotion recognition test composed of 83 videos in which actors (men and women) portray 14 different emotions (6 items for each emotion with the exception of despair that contained only 5 items). In this test, actors express emotions by using facial expressions, their upper-body, and their voice. Audio information is restricted to paralinguistic information because the actors talk in a language created for the purpose of this test. Therefore, there is no semantic information that is communicated by the actors. For each video, participants can choose among 14 answer alternatives. The correct answer is that expressed by the actor. The emotion recognition accuracy score is the sum of the correct answers ($M = 55.76$, $SD = 7.05$). There was a gender

difference: Women ($M = 57.17$, $SD = 6.63$) scored significantly higher than men ($M = 54.24$, $SD = 7.22$), $t(164) = 2.73$, $p = .007$.

Intelligence. To measure intelligence, we used the Cattell CFT-3 (Weiss, 2006) which assesses fluid intelligence ($M = 41.07$, $SD = 5.93$). There was a gender difference: Men ($M = 42.19$, $SD = 5.62$) scored significantly higher than women ($M = 40.02$, $SD = 6.05$), $t(164) = 2.38$, $p = .018$.

Leadership behavior. A research assistant coded the extent to which participants showed participative behavior and directive behavior when giving the pep talk. As in Study 1, we instructed the research assistant to focus on what the participants said to the subordinates so the coding was based on the participants' verbal behavior. This coding was done for both pep talks and we asked the research assistant to rate participants' behavior by taking into account if the following aspects of participative and leadership style were expressed by the participants. The aspects of a participative leadership style presented to the research assistant were: 1) let their subordinate work autonomously while providing personal support, 2) share responsibilities with their subordinate, and 3) include their subordinate in the decision making. The aspects of a directive leadership style were presented to the research assistant as follows: 1) guide their subordinate by giving them specific instructions, 2) assume all the responsibilities, and 3) confront their subordinate with premade decisions. The coding was on a 4-point Likert scale ranging from 0 to 3. A score of 0 indicated that the participants did not express any aspects of a directive/participative behavior when giving the pep talk, whereas a score of 3 indicated that the participants expressed very much of these aspects.

As in Study 1, this coding enabled us to code whether the participants showed adaptive leadership behavior, meaning that they were more participative with the subordinate preferring a participative leadership style than with the subordinate preferring a directive leadership style, and more directive with the subordinate preferring a directive leadership

style than with the subordinate preferring a participative leadership style. Two other coders coded a sub-sample of 33 videos. The inter-rater reliabilities were $r = .80$ and $r = .59$ for participative and directive behavior style, respectively³. All the coders were unaware of the conditions.

Manipulation check. After each pep talk, we asked participants how much the subordinate preferred a participative or a directive leadership style. Preference for a participative leadership style was assessed with the following three statements: “The subordinate prefers a leader who lets him or her work in an autonomous way”, “...who shares the responsibilities”, and “... who includes him or her in decision making”. Preference for a directive leadership style was assessed with the following three statements: “The subordinate prefers a leader who gives precise instructions”, “...who assumes all the responsibilities”, and “... who takes decisions alone”. Participants indicated their agreement with each of these statements on a scale ranging from 1 (do not agree at all) to 5 (agree completely). Cronbach alphas for the preference for a participative leadership style were .71 and .75 for the subordinate preferring a participative and directive leadership style, respectively. Cronbach alphas for the preference for a directive leadership style were .62 and .60 for the subordinate preferring a participative and directive leadership style, respectively.

Self-reported subordinate liking. To measure how much participants liked each of the subordinates, we asked them to indicate at the end of each pep talk how *nice*, *kind*, *likeable*, and *attractive* they perceived the subordinate to be. Each item was assessed on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*very much*). Cronbach alphas were .80 and .77 for the participative and the directive condition, respectively.

Results

³ The inter-rater reliabilities scores represent the average level of agreement between the three coders on 33 videos. We obtained them by calculating the mean of the r values from each possible pair of coders.

Preliminary analyses.

Manipulation check. First, we conducted manipulation checks to test whether participants perceived the difference between the subordinates in terms of the preference for a specific leadership style. The manipulation of the information about the leadership style preferred by each subordinate worked: Subordinates described as preferring a participative leadership style were perceived as preferring a participative leadership style ($M = 4.44$, $SD = 0.60$) more so than subordinates described as preferring a directive leadership style ($M = 2.03$, $SD = 0.78$), $t(165) = 28.85$, $p < .001$. Subordinates described as preferring a directive leadership style were perceived as preferring a directive leadership style ($M = 4.22$, $SD = 0.77$) more so than subordinates described as preferring a participative leadership style ($M = 2.73$, $SD = 0.91$), $t(165) = 14.16$, $p < .001$.

Leadership behavior. Overall, participants showed significantly more participative behavior as coded from the videotapes to the subordinate preferring a participative leadership, ($M = 1.11$, $SD = 0.90$) than to the subordinate preferring a directive leadership style ($M = 0.76$, $SD = 0.80$), $t(165) = 4.18$, $p < .001$. Women and men did not differ in terms of their participative behavior: M women = 1.21, SD women = 0.88; M men = 1.01, SD men = 0.92; $t(164) = 1.41$, $p = .162$, for participative behavior shown towards the subordinate preferring a participative leadership style; M women = 0.83, SD women = 0.83; M men = 0.69, SD men = 0.76; $t(164) = 1.12$, $p = .265$; for participative behavior shown towards the subordinate preferring a directive leadership style.

Participants showed significantly more *directive* behavior to the subordinate preferring a directive leadership style, ($M = 0.90$, $SD = 0.93$) than to the subordinate preferring a participative leadership style ($M = 0.35$, $SD = 0.60$), $t(165) = 7.10$, $p < .001$. Women and men also did not differ in terms of their *directive* behavior: M women = 0.98, SD women = 0.97; M men = 0.83, SD men = 0.88; $t(164) = 1.05$, $p = .294$, for directive behavior shown towards the

subordinate preferring a directive leadership style; M women = 0.42, SD women = 0.64; M men = 0.28, SD men = 0.55; $t(164) = 1.54$, $p = .125$; for directive behavior shown towards the subordinate preferring a participative leadership style.

Finally, *participative* and *directive* behaviors were negatively related both when participants interacted with the subordinate preferring a directive leadership style ($r = -.20$, $p = .008$; see Table 7) and when interacting with the subordinate preferring a participative leadership style ($r = -.16$, $p = .036$; see Table 8). Therefore, when participants expressed more participative behavior during a specific pep talk they also tended to express less directive behavior during that specific pep talk, and vice versa.

Self-reported subordinate liking. The preferred leadership style of the subordinates did not have an impact on how much the participants liked the subordinates. There was no significant difference in liking between the subordinates who preferred a participative leadership style ($M = 3.55$, $SD = 0.72$) and those who preferred a directive leadership style ($M = 3.56$, $SD = 0.70$), $t(165) = 0.23$, $p = .822$. Finally, we tested whether subordinate gender had an impact on how much the participants liked them. Female subordinates were significantly more liked ($M = 3.69$, $SD = 0.63$) than male subordinates ($M = 3.42$, $SD = 0.75$) for subordinates described as preferring a more directive leadership style, $t(164) = 2.54$, $p = .012$. And female subordinates were marginally significantly more liked ($M = 3.65$, $SD = 0.66$) than male subordinates ($M = 3.44$, $SD = 0.78$) for subordinates described as preferring a more participative leadership style, $t(164) = 1.86$, $p = .065$.

Main results. We ran the same analyses as in Study 1. In addition to the order in which the participants interacted with the two subordinates, we included personality measures (openness to experience, conscientiousness, extraversion, agreeableness, neuroticism,

honesty-humility, self-monitoring and relationship-orientation), intelligence and subordinates gender as additional control variables in all the analyses^{4,5}.

First, we ran a hierarchical multiple regression analysis with participant ERA, subordinate preference, and participant gender as predictors of *directive* behavior in the first step. There was a significant main effect of subordinate preference ($b = -.55, p < .001$). In the second step, we added all the possible combinations of two-way interactions between participant ERA, participant gender, and subordinate preference. None of the two-way interactions was significant. In the third step, we included the three-way interaction between participant ERA, subordinate preference, and participant gender. The three-way interaction was not significant ($b = .03, p = .213$). As in Study 1, directive behavior was only predicted by subordinate preference (Table 10).

We then ran a hierarchical multiple regression analysis with participant ERA, subordinate preference, and participant gender as predictors of *participative* behavior in the first step. There was a significant main effect of subordinate preference ($b = .36, p < .001$). In the second step, we added all the possible combinations of two-way interactions between participant ERA, participant gender, and subordinate preference. None of the two-way interactions was significant. In the third step, we included the three-way interaction between participant ERA, subordinate preference, and participant gender. The three-way interaction was significant ($b = -.09, p = .001$) (Table 11). To better understand this three-way interaction we decided to the analyses for men and women separately.

First, we conducted a hierarchical multiple regression analysis for women with participant ERA and subordinate preference as predictors of participative behavior in the first

⁴ We also conducted these analyses without the additional control variables included in the model and the pattern of results was exactly the same, both regarding directive and participative behavior.

⁵ The correlations between all the variables included as predictors in the regression analyses are reported on Table 9.

step. In the second step, we added the two-way interaction between participant ERA and subordinate preference. Analysis of the second step revealed a significant two-way interaction between participant ERA and subordinate preference ($b = .07, p = .001$) (Table 12). To better understand the two-way interaction, we analyzed the simple slopes for the relation between participant ERA and participative behavior according to subordinate preference (*Figure 4*). When the subordinate preferred a participative leadership style, the slope was positive and significantly different from 0 ($b = .05, p < .001$). That is, the more women are high in ERA, the more they showed participative behavior towards the subordinate preferring a participative leadership style. When the subordinate preferred a directive leadership style, the slope was negative but not significant, ($b = -.02, p = .236$), meaning that for women, ERA was not related to their ability to show less participative behavior when a directive leadership style was required.

To test whether relationship-orientation explains the link between adaptive participative behaviors in women when they are confronted with a subordinate preferring a participative leadership style, we decided to run a correlational analysis to investigate if relationship-orientation was related to ERA and to participative behavior. Table 13 reports the correlations between all of the variables of interest in women for the experimental conditions in which they had to interact with the subordinate preferring a participative leadership style. Results of the correlational analysis suggest that, while ERA was positively related to participative behavior, relationship-orientation was neither related to ERA nor to participative behavior. Therefore, we did not test for mediation, and relationship-orientation did not seem to explain the relation between ERA and adaptive participative behavior in women when confronted with someone preferring a participative leadership style.

We then conducted a hierarchical multiple regression analysis for men with participant ERA and subordinate preference as predictors of participative behavior in the first step. In the

second step, we added the two-way interaction between participant ERA and subordinate preference. Analyses of the second step revealed no significant two-way interaction between participant ERA and subordinate preference ($b = -.02, p = .305$) on participative behavior. For men, ERA was unrelated to their ability to show more participative behavior when a participative leadership style was required and to their ability to show less participative behavior when a directive leadership style was required (Table 14).

Discussion Study 2

Study 2 replicated all the findings of Study 1. First, as in Study 1 results showed that people are able to adapt their leadership behavior to the subordinates they interact with and there was no gender difference. Second, we found the same pattern of results as in Study 1 when determining whether this ability to express adaptive behavior was related to ERA both for directive and participative behaviors. The higher women scored on ERA, the more they showed participative behavior towards the subordinate preferring a participative leadership style. Additionally, there was no relation between women's ERA and how much participative behavior they showed towards the subordinate preferring a directive leadership style. For men, ERA was not related to their ability to express adaptive behavior with respect to both their participative and their directive behavior, regardless of the subordinates' preference.

Further, extending the findings of Study 1, we showed that ERA explains variance in adaptive participative behavior above and beyond what is explained by personality and intelligence in women when they are confronted with someone preferring a participative leadership style. In other words, women high in ERA showed more participative behavior towards the subordinate preferring a participative leadership style, whatever their personality traits or their intelligence. Moreover, we replicated the findings of Study 1 using another ERA performance test, enabling us to generalize our results to a larger extent.

We expected to find a stronger relationship between ERA and adaptive leadership behavior in women than in men because women are more oriented towards others (Eagly & Wood, 1999) and seek to maintain social relationships (Wong & Csikszentmihalyi, 1991). However, results of Study 2 showed that the relationship between ERA and adaptive participative behavior found in women when they had to interact with someone preferring a participative leadership style was not explained by their relationship-orientation. Indeed, neither ERA nor showing participative behavior toward the subordinate preferring a participative leadership style, were related to relationship-orientation in women (Table 8). The absence of a relation between ERA and relationship-orientation might be explained by how we assessed relationship-orientation. We used the Communal Orientation Scale (Clark et al., 1987), which assesses how people perceive themselves as helpful and empathic. In hindsight we think that this scale may be too specific to reflect the extent to which a person cares about his or her social relationships. The context of leadership in which the experiment was set might also explain why we did not find any relationship between relationship-orientation and adaptive participative behavior. While the Communal Orientation Scale (Clark et al., 1987) assesses to what extent someone is helpful and empathic in general, this might not be related to how much this same person is relationship-oriented in the workplace.

General Discussion

In this paper, we argued that people who are higher in ERA may be those who take more advantage of emotional cues when interacting with others in social interactions. High ERA people may therefore have had more opportunities during their life to take advantage of this skill to develop behavioral adaptability skills. In two studies, we aimed to test whether people who are particularly good at correctly assessing others' emotions are those who are able to adapt their interpersonal behavior according to the expectations and preferences of different social interaction partners. Past research in the context of physician-patient

interaction showed that ERA was related to behavioral adaptability in women, but not in men (Carrard et al., 2018), and we set out to test whether in a leadership context the same results would emerge. We indeed showed that only for women, the higher they scored in ERA, the more they adapted their participative behavior towards interaction partners who prefer a participative style. For subordinates preferring a directive leadership style and for male participants, there was no relation between ERA and behavioral adaptability. We think that learning about the preference for a participative leadership style activated a social goal in women, which is why they adapted their participative behavior in line with their ERA capabilities. Men being lower in interpersonal orientation, were unaffected by this. Men who excel in ERA do not seem particularly motivated or able to behave according to the preferences and needs of their interaction partner. Overall, our results are consistent with the findings of a meta-analysis showing that making correct inferences about others (e.g. ERA) might be less connected to psychosocial functioning in men than in women (Hall et al., 2009). Further, our results suggest that ERA could be more related to psychosocial functioning for behavior fostering social relationships (e.g., participative behavior in the leadership context).

Even if the results of Study 2 showed that relationship-orientation does not seem to explain the relation between ERA and behavioral adaptability in women, we still think that being able to accurately assess others' emotions and to adapt one's behavior according to others' preferences stems from underlying common interpersonal skill and competence. We believe that ERA and behavioral adaptability are the expression of this skill on the cognitive (i.e., ERA) and behavioral (i.e., behavioral adaptability) level. Further investigations therefore need to be undertaken to understand the process behind the link between ERA and behavioral adaptability in women and the factors that could influence this link. For instance, the fact that there is a relation between ERA and adaptive participative behavior when confronted with someone preferring a participative leadership style and not when confronted with someone

preferring a directive leadership style suggests that social expectations (e.g., women are expected to express a more participative leadership style; Eagly & Johannesen-Schmidt, 2001) may be one of these factors “deactivating” the link between ERA and behavioral adaptability. In our studies, those who were high in ERA and who might have the ability to adapt their level of participative behavior might therefore not have dared to express less participative behavior when interacting with someone preferring a more directive leadership style because of social expectations.

Future research should also investigate whether behavioral adaptability leads to positive social interaction outcomes. Indeed, Expectation Confirmation Theory posits that satisfaction increases if a person’s expectations are met (Jiang & Klein, 2009). People who are competent in behavioral adaptability should therefore have, overall, social relationships of a higher quality because they would be able to adapt their interpersonal behavior according to the expectations of a large number of interaction partners.

Moreover, scholars in the leadership domain may also want to address the effects of leader behavioral adaptability on different outcomes, such as subordinate satisfaction and job performance. Moreover, given that increased ERA is related to more transformational leadership (Rubin et al., 2005) and that transformational leadership, and especially individual consideration, is linked to more subordinate satisfaction and more trust in the leader (Podsakoff et al., 1990), future research should test whether leader behavioral adaptability mediates the relation between leader ERA and subordinate satisfaction, especially for female leaders. Indeed, it has been shown that the subordinates of female (but not male) leaders, who are high in ERA, are more satisfied than those who are low in ERA (Byron et al., 2007). Increased female leader ERA might be related to more subordinate satisfaction because female leaders who are able to correctly assess the emotions of their subordinates might also

be those who adapt their leadership style to their subordinates which in turn increases their satisfaction.

Also, in our two studies, we used students who put themselves in the shoes of leaders. Typically, students do not have much leadership experience. A replication of the results we found in our studies with real leaders would be an important addition. Leaders could be tested with one of the standardized interpersonal accuracy tests and they could be filmed when interacting with several of their subordinates. However, one difficulty that arises when investigating these research questions in real leaders and their subordinates – and the reason we used a standardized setting – is that leaders do not necessarily all have a comparable range of subordinate preferences for different leadership styles which then makes comparisons difficult. Alternatively, “standardized” subordinates could be used as in the present studies.

In addition, in both studies participants interacted with virtual humans in immersive virtual reality. As mentioned in the method section of Study 1, using this technology has benefits when studying behavioral adaptability because it enables to standardize the social interaction partners to ensure that all the behavior changes observed in the participants stem from the participants and are not initiated by any differences in subordinates’ behavior. However, even though IVET provides highly ecological environment (Blascovich et al., 2002), one could argue that using virtual humans in virtual reality might not have been ideal when studying behavioral adaptability. Indeed, in both studies the interaction with the virtual humans was restricted to greetings at the beginning and at the end of the speech and participants did more of a monologue for the rest of the pep talk. Future research could address this limitation by investigating the same research question using confederates to play the role of the subordinates. However, these confederates would have to be trained to behave in the exact same way with the participants to ensure that their behaviors would not impact

participants' behavior. Moreover, this solution is also more resources demanding, which why we opted for using virtual humans in our studies.

Finally, this paper focused on how making correct inferences on a very particular aspect of others (i.e., ERA) is related to behavioral adaptability. However, making correct inferences about others is not limited to ERA. Indeed, people can also make inferences about others on other dimensions such as their motivation, personality, or social attributes. Yet, to date, the only other study that investigated the link between behavioral adaptability and the ability to make correct inferences about others also used ERA to operationalize interpersonal accuracy (Carrard et al., 2018). We therefore argue that future research should investigate whether behavioral adaptability is related to other interpersonal accuracy dimensions. Doing so would provide a better understanding of which "type" of interpersonal accuracy is more predictive of behavioral adaptability (Palese & Schmid Mast, 2019). Moreover, it would enable researchers to find out whether ERA is the only one interpersonal accuracy dimension that is not related to behavioral adaptability in men, or if interpersonal accuracy is, overall, not related to behavioral adaptability in men.

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Table 1

Correlations between leadership behavior (participative and directive) and all the variables of interest for the experimental conditions in which participants had to interact with the subordinate preferring a directive leadership style (Study 1)

	Participative behavior	Directive behavior
Participative behavior	-	-.33*
Directive behavior	-.33*	-
Participant ERA	.10	.01
Participant gender	-.19	.00

Note. $N = 55$; Participant gender coded as 0 = Female and 1 = Male; * $p < .05$

Table 2

Correlations between leadership behavior (participative and directive) and all the variables of interest for the experimental conditions in which participants had to interact with the subordinate preferring a participative leadership style (Study 1)

	Participative behavior	Directive behavior
Participative behavior	-	-.26*
Directive behavior	-.26*	-
Participant ERA	.27*	-.23*
Participant gender	-.09	.07

Note. $N = 55$; Participant gender coded as 0 = Female and 1 = Male; * $p < .10$

Table 3

Hierarchical Multiple Regression Analyses with Participant ERA, Subordinate Preference, and Participant Gender Predicting Directive Behavior, Controlling for Condition Order (Study 1)

	Step 1		Step 2		Step 3	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Condition order	-0.15	0.23	-0.14	0.23	-0.14	0.23
Subordinate Preference	-1.13	0.18 *	0.88	2.61	4.07	3.86
Participant ERA	-0.03	0.04	0.05	0.08	0.11	0.09
Participant Gender	0.01	0.23	2.53	2.22	5.40	3.75
Subordinate Preference X Participant ERA			-0.07	0.09	-0.18	0.13
Participant Gender X Participant ERA			-0.09	0.08	-0.19	0.13
Subordinate Preference X Participant Gender			0.07	0.37	-5.67	5.01
Subordinate Preference X Participant Gender X Participant ERA					0.20	0.17
R ²	.23		.25		.26	

Note. $N = 55$; *SE* = adjusted standard errors; subordinate preference dummy coded as 0 =

Preference for a directive leadership style and 1 = Preference for a participative leadership style; * $p < .05$

Table 4

Hierarchical Multiple Regression Analyses with Participant ERA, Subordinate Preference, and Participant Gender Predicting Participative Behavior, Controlling for Condition Order (Study 1)

	Step 1			Step 2			Step 3		
	<i>b</i>	<i>SE</i>		<i>b</i>	<i>SE</i>		<i>b</i>	<i>SE</i>	
Condition order	0.61	0.25	*	0.61	0.26	*	0.61	0.26	*
Subordinate Preference	1.05	0.19	*	-1.80	3.07		-6.68	3.07	*
Participant ERA	0.07	0.04	*	0.05	0.05		-0.03	0.05	
Participant Gender	-0.15	0.25		1.01	2.06		-3.39	2.52	
Subordinate Preference X Participant ERA				0.09	0.07		0.26	0.10	*
Participant Gender X Participant ERA				-0.04	0.07		0.11	0.09	
Subordinate Preference X Participant Gender				0.23	0.39		9.02	3.74	*
Subordinate Preference X Participant Gender X Participant ERA							-0.30	0.13	*
R ²	.25			.27			.29		

Note. $N = 55$; *SE* = adjusted standard errors; subordinate preference dummy coded as 0 =

Preference for a directive leadership style and 1 = Preference for a participative leadership style; * $p < .05$

Table 5

Hierarchical Multiple Regression Analyses for Female Participants with Participant ERA and Subordinate Preference Predicting Participative Behavior, Controlling for Condition Order (Study 1)

	Step 1			Step 2		
	<i>b</i>	<i>SE</i>		<i>b</i>	<i>SE</i>	
Condition order	0.60	0.33		0.60	0.33	
Subordinate Preference	0.96	0.29	*	-6.67	3.11	*
Participant ERA	0.10	0.04	*	-0.03	0.50	
Subordinate Preference X Participant ERA				0.26	0.10	*
R ²	.23			.30		

Note. $N = 27$; *SE* = adjusted standard errors; subordinate preference dummy coded as 0 = Preference for a directive leadership style and 1 = Preference for a participative leadership style; * $p < .05$

Table 6

Hierarchical Multiple Regression Analyses for Male Participants with Participant ERA and Subordinate Preference Predicting Participative Behavior, Controlling for Condition Order (Study 1)

	Step 1			Step 2	
	<i>b</i>	<i>SE</i>		<i>b</i>	<i>SE</i>
Condition order	0.63	0.39		0.63	0.39
Subordinate Preference	1.14	0.27	*	2.34	2.15
Participant ERA	0.05	0.06		0.07	0.07
Subordinate Preference X Participant ERA				-0.04	0.08
R ²	.26			.26	

Note. $N = 28$; *SE* = adjusted standard errors; subordinate preference dummy coded as 0 =

Preference for a directive leadership style and 1 = Preference for a participative leadership style; * $p < .05$

Table 7

Correlations between leadership behavior (participative and directive) and all the variables of interest for the experimental conditions in which participants had to interact with the subordinate preferring a directive leadership style (Study 2)

	Participative behavior	Directive behavior
Participative behavior	-	-.20*
Directive behavior	-.20*	-
Participant ERA	.06	-.00
Participant gender	-.09	-.08
Subordinate gender	-.11	.01
Intelligence	-.10	.07
Self-monitoring	-.03	.04
Relationship-orientation	.06	.00
Openness to experience	.10	-.04
Conscientiousness	-.00	.09
Agreeableness	-.02	-.04
Extraversion	.06	-.03
Emotionality	.01	.09
Honesty-Humility	.24*	-.01

Note. $N = 166$; Participant and subordinate gender coded 0 = Female and 1 = Male; * $p < .05$

Table 8

Correlations between leadership behavior (participative and directive) and all the variables of interest for the experimental conditions in which participants had to interact with the subordinate preferring a participative leadership style (Study 2)

	Participative behavior	Directive behavior
Participative behavior	-	-.16**
Directive behavior	-.16**	-
Participant ERA	.24**	-.07
Participant gender	-.11	-.12
Subordinate gender	.05	.13
Intelligence	.02	-.16**
Self-monitoring	.12	-.11
Relationship-orientation	.20**	.00
Openness to experience	.15*	-.02
Conscientiousness	.12	-.06
Agreeableness	-.07	-.04
Extraversion	.09	-.07
Emotionality	.02	.03
Honesty-Humility	.12	.05

Note. $N = 166$; Participant and subordinate gender coded 0 = Female and 1 = Male; * $p < .10$,

** $p < .05$

Table 9

Correlations between all the variables included as predictors for participative and directive behavior in the regression analyses (Study 2)

	1	2	3	4	5	6	7	8	9	10	11
1. Participant ERA											
2. Participant gender	-.21**										
3. Subordinate gender	.04	.13*									
4. Intelligence	.29**	.18**	.00								
5. Self-monitoring	.03	.26**	.04	.06							
6. Relationship-orientation	.05	-.25**	-.08	.08	-.12						
7. Openness to experience	.07	.14*	.01	.06	.15*	.17**					
8. Conscientiousness	-.04	.02	.04	-.00	-.18**	-.02	-.02				
9. Agreeableness	.04	.08	-.01	.11	-.15*	.12	-.00	-.08			
10. Extraversion	-.07	.18**	.02	-.02	.52**	.01	.12	.02	-.11		
11. Emotionality	.03	-.44**	.02	-.11	-.39**	.38**	-.12	.12	-.15*	-.26**	
12. Honesty-Humility	.10	-.19**	-.02	.05	-.48**	.29**	.13*	.07	.37**	-.24**	.15*

Note. $N = 166$; Participant and subordinate gender coded 0 = Female and 1 = Male; * $p < .10$, ** $p < .05$

Table 10
Hierarchical Multiple Regression Analysis Participant ERA, Subordinate Preference, and Participant Gender Predicting Directive Behavior, Controlling for Condition Order, Intelligence, Personality Traits, and Subordinate Gender (Study 2)

	Step 1		Step 2		Step 3	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Condition order	0.04	0.09	0.04	0.09	0.04	0.09
Intelligence	0.00	0.01	0.00	0.01	0.00	0.01
Consciousness	0.05	0.09	0.07	0.09	0.07	0.09
Openness to experience	0.02	0.08	0.02	0.08	0.02	0.08
Extraversion	-0.07	0.10	-0.06	0.10	-0.06	0.10
Honesty-Humility	0.02	0.08	0.01	0.08	0.01	0.08
Emotionality	0.02	0.07	0.02	0.07	0.02	0.07
Agreeableness	-0.04	0.09	-0.02	0.10	-0.02	0.10
Relationship-orientation	-0.06	0.12	-0.05	0.13	-0.05	0.13
Self-monitoring	0.04	0.08	0.04	0.08	0.04	0.08
Subordinate gender	0.11	0.09	0.11	0.09	0.11	0.09
Subordinate Preference	-0.55	0.08 *	-0.27	0.61	0.51	0.82
Participant ERA	-0.01	0.01	-0.01	0.01	-0.01	0.02
Participant Gender	-0.19	0.12	-1.14	0.89	-0.42	1.21
Subordinate Preference X Participant ERA			-0.01	0.01	-0.02	0.01
Participant Gender X Participant ERA			0.02	0.02	0.00	0.02
Subordinate Preference X Participant Gender			-0.01	0.16	-1.44	1.15
Subordinate Preference X Participant Gender X Participant ERA					0.03	0.02
R ²	.13		.14		.14	

Note. $N = 166$; *SE* = adjusted standard errors; subordinate preference dummy coded as 0 = Preference for a directive leadership style and 1 = Preference for a participative leadership style; * $p < .05$

Table 11
Hierarchical Multiple Regression Analysis Participant ERA, Subordinate Preference, and Participant Gender Predicting Participative Behavior, Controlling for Condition Order, Intelligence, Personality Traits, and Subordinate Gender (Study 2)

	Step 1		Step 2		Step 3				
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>			
Condition order	0.11	0.10	0.11	0.10	0.11	0.10			
Intelligence	-0.01	0.01	0.00	0.01	-0.01	0.01			
Consciousness	0.13	0.09	0.13	0.09	0.13	0.09			
Openness to experience	0.07	0.08	0.07	0.08	0.07	0.08			
Extraversion	0.08	0.10	0.08	0.10	0.08	0.10			
Honesty-Humility	0.27	0.08	*	0.27	0.08	*	0.27	0.08	*
Emotionality	-0.07	0.09	-0.07	0.09	-0.07	0.09			
Agreeableness	-0.19	0.10	-0.19	0.10	-0.19	0.10			
Relationship-orientation	0.17	0.13	0.17	0.13	0.17	0.13			
Self-monitoring	0.13	0.09	0.13	0.09	0.13	0.10			
Subordinate gender	-0.04	0.09	-0.04	0.09	-0.04	0.09			
Subordinate Preference	0.36	0.09	*	-1.04	0.82	-3.64	1.14	*	
Participant ERA	0.02	0.01	*	0.00	0.01	-0.02	0.01		
Participant Gender	-0.07	0.11	-0.31	0.83	-2.73	1.01	*		
Subordinate Preference X Participant ERA			0.02	0.01	0.07	0.02	*		
Participant Gender X Participant ERA			0.00	0.01	0.05	0.02	*		
Subordinate Preference X Participant Gender			0.01	0.19	4.90	1.40	*		
Subordinate Preference X Participant Gender X Participant ERA					-0.09	0.02	*		
R ²	.15		.16		.19				

Note. $N = 166$; SE = adjusted standard errors; subordinate preference dummy coded as 0 = Preference for a directive leadership style and 1 = Preference for a participative leadership style; * $p < .05$

Table 12

Hierarchical Multiple Regression Analyses for Female Participants with Participant ERA and Subordinate Preference Predicting Participative Behavior, Controlling for Condition Order, Intelligence, Personality Traits, and Subordinate Gender (Study 2)

	Step 1		Step 2		
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	
Condition order	0.10	0.14	0.10	0.14	
Intelligence	-0.01	0.01	-0.01	0.01	
Consciousness	0.09	0.14	0.09	0.14	
Openness to experience	-0.12	0.11	-0.12	0.11	
Extraversion	0.15	0.12	0.15	0.12	
Honesty-Humility	0.32	0.10	* 0.32	0.10	*
Emotionality	-0.11	0.11	-0.11	0.11	
Agreeableness	-0.20	0.14	-0.20	0.14	
Relationship-orientation	0.12	0.17	0.12	0.17	
Self-monitoring	0.08	0.13	0.08	0.13	
Subordinate gender	-0.05	0.13	-0.05	0.13	
Subordinate Preference	0.38	0.14	* 0.38	1.16	*
Participant ERA	0.02	0.01	-0.02	0.01	
Subordinate Preference X Participant ERA			0.07	0.02	*
R ²	.15		.22		

Note. $N = 86$; adjusted standard errors in parentheses; subordinate preference dummy coded as 0 = Preference for a directive leadership style and 1 = Preference for a participative leadership style; * $p < .05$

Table 13

Correlations between all the variables of interest in women for the experimental conditions in which they had to interact with the subordinate preferring a participative leadership style (Study 2)

	1	2	3	4	5	6	7	8	9	10
1. Participative behavior										
2. ERA	.38*									
3. Intelligence	.09	.35*								
4. Self-monitoring	.21*	.09	.23*							
5. Relationship-orientation	.14	.08	.09	.05						
6. Openness to experience	.02	.14	.09	.12	.18					
7. Conscientiousness	.11	.21*	-.02	-.28*	.00	.00				
8. Agreeableness	.05	.15	.09	-.23*	.13	-.05	.02			
9. Extraversion	.19	.02	.09	.39*	.18	.16	.01	.02		
10. Emotionality	-.05	-.06	-.03	-.32*	.24*	-.05	.15	-.14	-.28*	
11. Honesty-Humility	.05	.03	-.02	-.42*	.11	.11	.13	.36*	.02	-.09

Note. * $p < .05$. $N = 86$

Table 14

Hierarchical Multiple Regression Analyses for Male Participants with Participant ERA and Subordinate Preference Predicting Participative Behavior, Controlling for Condition Order, Intelligence, Personality Traits, and Subordinate Gender (Study 2)

	Step 1			Step 2		
	<i>b</i>	<i>SE</i>		<i>b</i>	<i>SE</i>	
Condition order	0.05	0.15		0.05	0.15	
Intelligence	-0.02	0.01		-0.02	0.01	
Consciousness	0.15	0.13		0.15	0.13	
Openness to experience	0.28	0.11	*	0.28	0.11	*
Extraversion	-0.04	0.18		-0.04	0.18	
Honesty-Humility	0.15	0.13		0.15	0.13	*
Emotionality	-0.02	0.13		-0.02	0.13	
Agreeableness	-0.17	0.15		-0.17	0.15	
Relationship-orientation	0.24	0.19		0.24	0.19	
Self-monitoring	0.16	0.14		0.16	0.14	
Subordinate gender	0.02	0.13		0.02	0.13	
Subordinate Preference	0.33	0.11	*	1.21	0.83	
Participant ERA	0.02	0.01		0.03	0.01	*
Subordinate Preference X Participant ERA				-0.02	0.02	
R ²	.20			.20		

Note. $N = 80$; adjusted standard errors in parentheses; subordinate preference dummy coded as 0 = Preference for a directive leadership style and 1 = Preference for a participative leadership style; * $p < .05$



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Figure 1. The two female virtual subordinates used in Study 1.

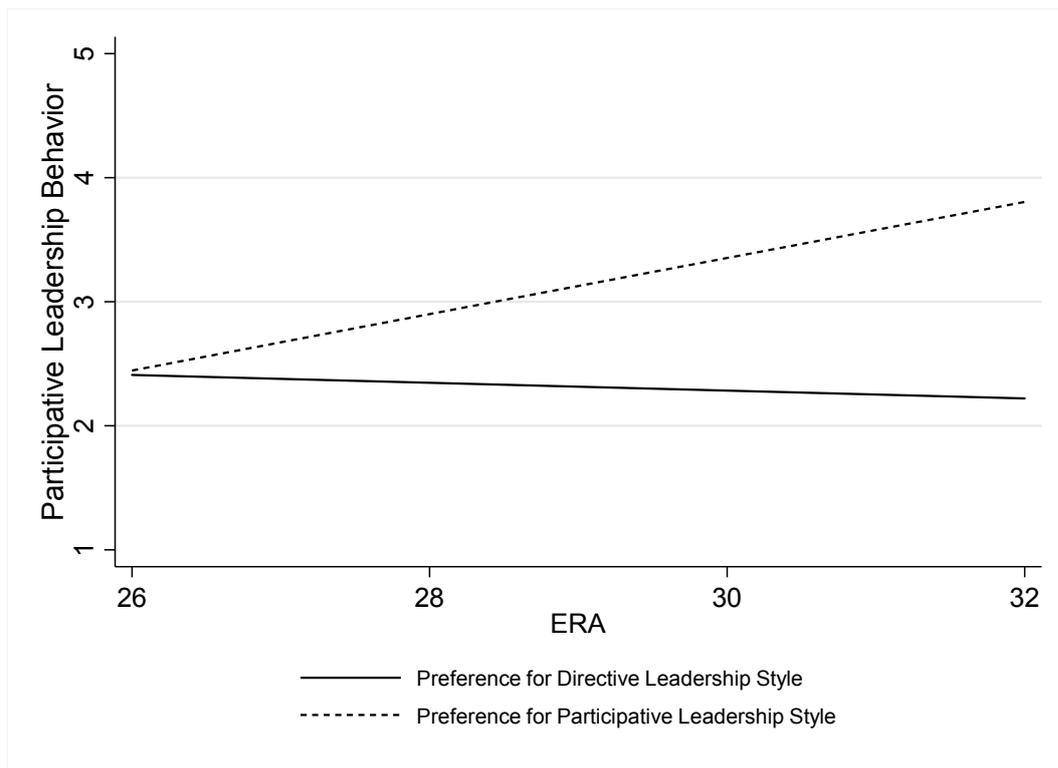


Figure 2. Interaction effect between female participants' ERA and subordinates' descriptions on participative leadership behavior (Study 1), slope for the subordinate working best under a participative leadership style significantly different from 0, slope for the subordinate working best under a directive leadership style not significantly different from 0.



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Figure 3. The two female and male virtual subordinates used in Study 2.

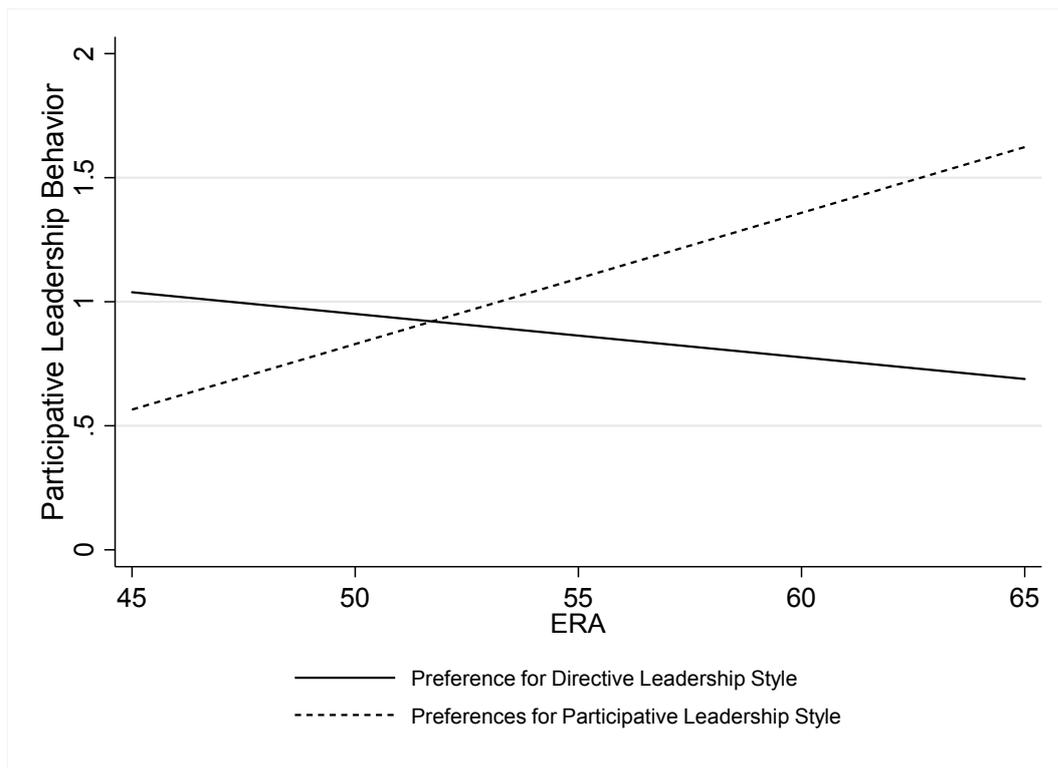


Figure 4. Interaction effect between female participants' ERA and subordinates' preference on participative leadership behavior (Study 2), slope for subordinate preferring a participative leadership style significantly different from 0, slope for the subordinate preferring a directive leadership style not significantly different from 0.

The Role of Social Categorization and Social Dominance Orientation in Behavioral
Adaptability

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Abstract

Behavioral adaptability is the ability to adapt one's interpersonal behavior to the expectations of the social interaction partners. We investigated two factors that impact the extent to which people express behavioral adaptability. First, we investigated whether behavioral adaptability depends on the interaction partners' social categories (in-group vs. out-group). Second, we tested whether social dominance orientation – SDO – is related to behavioral adaptability and whether this relationship depends on the interaction partners' belonging to the in- or out-group. To do so, we conducted two studies in which we manipulated whether the interaction partners belong to the in- or to the out-group and in which we assessed participants SDO. In both studies, participants were in the role of a leader who had to give separate pep talks to two subordinates who differed in terms of preferred leadership style and we operationalized behavioral adaptability by coding to which extent participants adapted (Study 1) or reported that they would adapt (Study 2) their leadership style according to their subordinates' individual preferences. Study 1 used immersive virtual reality and included White/Caucasian male participants ($N = 173$). Study 2 was a vignette study including men and women who were either White/Caucasian or Black/African American ($N = 741$). Results showed that the subordinates' social category did not impact the extent to which participant express behavioral adaptability. However, results showed that SDO was differently related to behavioral adaptability depending both on participants social categories (e.g., ethnicity and sex) and subordinates' belonging to the in- or out-group.

The Role of Social Categorization and Social Dominance Orientation in Behavioral Adaptability

Behavioral adaptability is the ability to change one's interpersonal behavior to match the expectations of the social interaction partner (Schmid Mast & Hall, 2018). At the workplace for instance, if two subordinates have different preferences with regard to leadership style, behaviorally adaptive leaders would change their leadership style to suit each subordinate. Behavioral adaptability is considered to be an important interpersonal skill because it may help people in reaching better social interaction outcomes (Carrard & Schmid Mast, 2015; Carrard, Schmid Mast, & Cousin, 2016; Carrard, Schmid Mast, Jaunin-Stalder, Junod Perron, & Sommer, 2018; Palese & Schmid Mast, 2019b; Schmid Mast & Hall, 2018). Past theoretical development highlighted that three prerequisites are necessary to express behavioral adaptability (Palese & Schmid Mast, 2019b). First, people should be able to correctly identify their interaction partners' expectations. Second, they should be motivated to express behavioral adaptability. And third, they should be able to change their interpersonal behavior.

In the present research, we aim to pursue this line of research about the processes of behavioral adaptability by investigating two factors that may impact the extent to which people are motivated to express behavioral adaptability in social interactions. First, we investigate whether behavioral adaptability depends on whether it is shown towards members of the in-group or members of the out-group. Second, we argue that social dominance orientation – SDO –, which is “the extent to which one desires that one's in-group dominate and be superior to out-groups” (Pratto, Sidanius, Stallworth, & Malle, 1994, p. 742), might affect behavioral adaptability depending on whether the interaction partners belong to the in- or the out-group. In this paper, we therefore set out to test whether behavioral adaptability is impacted by the social interaction partners' social categories (e.g., in-group vs. out-group) and

whether these social categories moderate the relationship between SDO and behavioral adaptability.

Social Categorization and Behavioral Adaptability

People use social categories to readily distinguish between in- and out-group members (Tajfel & Turner, 1986) and this social categorization impacts peoples' perceptions and behavior (Abad-Merino, Dovidio, Tabernero, & González, 2018; Hugenberg & Sacco, 2008). At a perceptual level, social categorization implies that people perceive in- and out-group members differently. For instance, people are more likely to see sub categories and differentiate more among individuals within their in-group than among the members of the out-group; they tend to perceive out-group members in a more stereotypical way (Judd, Ryan, & Park, 1991). This refers to the out-group homogeneity effects (Judd & Park, 1988). At a behavioral level, social categorization affects how people respond to and behave towards in- and out-group members. For instance, people tend to discriminate between in- and out-group members by allocating more resources to and by cooperating more with in-group members than out-group members (Balliet, Wu, & De Dreu, 2014; Tajfel, 1970; Tajfel, Billig, Bundy, & Flament, 1971). This refers to the in-group favoritism according to which people tend to favor members of their own social group in comparison to out-group members (Allen & Wilder, 1975; Locksley, Ortiz, & Hepburn, 1980; Tajfel, 1970; Tajfel et al., 1971; Voci, 2006).

In this paper, we focused on the effect of social categorization at a behavioral level by investigating whether the social categories of the interaction partners impact the extent to which people express behavioral adaptability during social interactions. In line with the in-group favoritism bias, we argue that people may be more motivated to take into account their interaction partners' expectations, and consequently may express more behavioral adaptability when interacting with in-group members than when interacting with out-group members.

Indeed, it has been highlighted that people should be more motivated to develop and maintain cooperation with in-group members than with out-group members because of the need to build a positive reputation within their own group (Yamagishi, Jin, & Kiyonari, 1999). Because people are looking for developing and maintaining cooperation with in-group members, they may be particularly motivated to adapt their interpersonal behavior to their in-group social interaction partners' expectations during social interactions. Indeed, by adapting their behavior to their social interaction partner's expectations people may reach better social interaction outcomes (Palese & Schmid Mast, 2019b; Schmid Mast & Hall, 2018) and foster subsequent cooperation with in-group members. In contrast, because people may be less motivated to develop and maintain cooperation with out-group members, they may also be less motivated in making effort to express behavior in adaptive way when interacting with out-group members. Therefore, we put forward the following hypothesis (see also *Figure 1*):

Hypothesis 1: People will express less behavioral adaptability when interacting with out-group members than when interacting with in-group members.

Social Dominance Orientation and Behavioral Adaptability

Past research has shown that SDO is negatively related to concern for others and to empathy (Sidanius et al., 2013). Moreover, SDO is negatively related to agreeableness and tender-mindedness (Akrami & Ekehammar, 2006; Duckitt & Sibley, 2010; Sibley & Duckitt, 2008), but positively related to tough-mindedness (Sibley, Wilson, & Duckitt, 2007). Therefore, SDO seems to be related to individual characteristics that may be negatively related to behavioral adaptability. But do high SDO individuals express less behavioral adaptability than those low in SDO? To our knowledge, no study has investigated whether SDO is related to behavioral adaptability. We aim at filling this gap in the literature by suggesting that SDO does not necessarily make people express less behavioral adaptability, but that SDO may be positively related to behavioral adaptability in some situations. We

argue that whether the relationship between SDO and behavioral adaptability is positive or negative depends on the interaction partners' belonging to the in- or the out-group.

Because high SDO people tend to have more negative attitudes towards out-groups (Whitley, 1999), we argue that those who are high in SDO might be less motivated to take into account their interaction partners' expectations when interacting with out-group members than those low in SDO. Indeed, SDO is negatively related to the willingness to work cooperatively with out-group members (Sidanius, Pratto, & Mitchell, 1994). This lack of motivation to collaborate with out-group members may manifest itself in less effort to behave in an adaptive way for people higher in SDO. We therefore hypothesize the following (see also *Figure 1*):

Hypothesis 2: SDO will be negatively related to behavioral adaptability when interacting with out-group members.

Moreover, Sidanius et al. (1994) suggested that SDO may be positively related to in-group favoritism. Therefore, we argue that high SDO people would not only discriminate out-group members but also favor those from the in-group. As mentioned above, this in-group favoritism may manifest itself in the context of social interaction in a greater motivation to take into account individual expectations of in-group members. Thus, contrary to what we predicted when interacting with out-group members, we suggest that the higher people are on SDO, the more they will be motivated to express behavioral adaptability when interacting with in-group members. We therefore expect the following (see also *Figure 1*):

Hypothesis 3: SDO will be positively related to behavioral adaptability when interacting with out-group members.

Current Studies

To test our hypotheses, we conducted two experimental studies in which we manipulated whether the interaction partners belong to the in- or the out-group. Using an

experimental design enabled us to test whether belonging to the in- or out-group is causal for showing more or less behavioral adaptability.

In Study 1, participants interacted with two different virtual humans in immersive virtual reality and we assessed participants' behavioral adaptability, meaning to what extent they changed their social interaction behavior according to the virtual humans' interaction expectations. Participants were randomly assigned to interact with virtual humans either belonging to the in- or the out-group. Study 2 was an online vignette study with the same scenario as in Study 1 but behavioral adaptability was assessed via a self-report questionnaire. In both studies, participants had to imagine being in a leadership position and we operationalized behavioral adaptability by coding to what extent participants adapted (Study 1) or reported that they would adapt (Study 2) their leadership style according to their subordinates' individual expectations. Palese and Schmid Mast (2019a) already showed that personal characteristics of the interaction partners (such as their leadership style preference) impact the way women express behavioral adaptability in the leadership context. The current research pursues this line of research by investigating whether interaction partners' social characteristics (e.g., their belonging to a specific social group) and participants' personal characteristics (e.g., SOD) affect behavioral adaptability in the leadership context.

We choose to operationalize behavioral adaptability in the leadership context because it has been highlighted that being able to adapt one's interpersonal behavior is an important skill for leaders (Palese & Schmid Mast, 2019a, 2019c). Indeed, transformational leadership, which is a leadership style related to more subordinate satisfaction and trust in the leader (Podsakoff, MacKenzie, Moorman, & Fetter, 1990) includes individualized consideration (Bass & Avolio, 1994). Leaders show individualized consideration when their behavior demonstrates acceptance of their subordinates' individual differences (Bass & Riggio, 2006) and transformational leadership theory therefore acknowledges the importance of leaders

taking into consideration their subordinates' individual differences and adapting their interpersonal behavior accordingly.

Moreover, Aiello, Pratto, and Pierro (2013) highlighted that the workplace is a relevant context to study the effect of SDO on interpersonal processes. For instance, they showed that leaders who are high on SDO used more harsh power tactics than those who are low in SDO (Aiello et al., 2013), which suggests that SDO impacts the way leaders behave towards their subordinates. Similarly, it has been shown that leaders' SDO is negatively related to consideration, which was defined as the ability to adapt to others (Nicol, 2009). However, to our knowledge, no study investigated the effect of SDO on interpersonal processes in the leadership context depending on the subordinates' belonging to the in- or to the out-group. Our current research therefore makes a contribution not only in the domain of social psychology but also to the leadership literature.

Study 1

Method

Preliminary online survey. Because we wanted to test the effect of the social interaction partners' social category on behavioral adaptability, we experimentally manipulated subordinates' belonging to the in- or the out-group (more details below). The majority of the participants from the participant pool at our institution being Caucasian, we decided that the subordinates in the in-group experimental conditions would be Caucasian and we restricted Study 1 to Caucasian participants. However, because the ethic committee of our institution does not allow us to use ethnicity as a criterion for participating in a study, we did a preliminary online survey to identify eligible participants. We told the participants that the online survey was going to be used to identify eligible participants for the laboratory session of Study 1, taking place a few weeks later.

In this preliminary online survey, we first assessed participants' SDO. The time lapse between the preliminary online survey and the laboratory session of Study 1 enabled us not only to select the eligible participants but also to put a time buffer between the measurement of SDO and the laboratory task, thus reducing a potential demand effect. To this end, we also added distractor questions about participants' consumption of animal products and attitude towards using animals for profit⁶ to the SDO measure administered in the online survey. Also, we asked participants to report some demographic information (e.g., sex, age, and ethnicity). This preliminary online survey was sent to all men in the participant pool at our institution. In total, 338 male participants filled in the preliminary online survey.

Participants. Out of the 338 participants who answered the preliminary online survey, 244 participants were identified as eligible to participate in the laboratory session. Finally, only 177 participants responded positively to our invitation to participate. Given the selection criteria, they were all Caucasian male students (undergraduate or graduate, majoring in different domains) and received the equivalent of 18 US\$ for participating in the laboratory session, which lasted about 30 min. Because of technical issues during the laboratory session, we had to eliminate 1 participant from the dataset because he interacted much more than the other participants with the experimenter. Moreover, we also had to eliminate 2 other participants because the video recording did not work for these participants. Finally, we had to eliminate 1 participant from the dataset because he reported being Caucasian in the preliminary online survey but that was actually not the case. The final number of participants in Study 1 was therefore 173 ($M_{age} = 20.95$, $SD_{age} = 2.51$).

Laboratory session. Participants came to our virtual reality laboratory to participate in a role-play in order to assess their behavioral adaptability. We told participants that they were

⁶ Given that these measures were used only to raise doubts among participants about the study's goals and that we did not use them in the testing of our hypotheses, we decided to report no further details about these measures.

the office manager of a bank branch and that they had 10 subordinates under their supervision. We informed participants that two of their male subordinates showed a decrease in performance in the past two months and that they should give pep talks of 2 to 3 min to each of these two subordinates separately. Participants were informed that the decrease in performance came from 3 main causes: 1) the two subordinates were very slow answering client emails, 2) they arrived late at meetings and 3) they had difficulties respecting deadlines. Participants were asked to explain these problems to the two subordinates and suggest solutions to them so that their previously high performance levels could be attained again.

Before seeing each of the subordinates, participants received a short description of each of them and had 5 min to prepare each pep talk. Subordinate descriptions were manipulated to vary in subordinate preference for a specific leadership style. One subordinate was described as “preferring when the leader lets him work in an autonomous way while providing him with personal support, when responsibilities are shared between him and the leader and when he is included in the decision making” (preference for a participative leadership style). The other subordinate was described as “preferring when the leader guides him in doing the work by giving him specific instructions, when responsibilities are entirely assumed by the leader and when he is confronted with premade decisions” (preference for a directive leadership style). Participants were videotaped while giving each pep talk and the order in which the participants saw the two subordinates was counter balanced across the participants to avoid systematic spillover effects.

After giving the two pep talks, participants filled in a questionnaire about which leadership style was preferred by the subordinates to ensure they perceived the difference between the two. Also, we asked participants how attractive and pleasant they found each of the subordinates to be. Finally, participants answered a manipulation check question to ensure that our experimental manipulation worked (see more detail below).

Material. We used virtual humans in immersive virtual reality as the subordinates with whom the participants interacted. In this specific 3-dimensional virtual world, participants wear a head-mounted-display (HMD) through which they perceive the virtual world. Because participants are able to move and look around in the virtual world similar to the real world, Immersive Virtual Environment Technology (IVET) provides a highly ecologically valid environment while at the same time ensuring complete standardization of the social interaction partner (Blascovich et al., 2002) – the two male subordinates in our case. We opted for using virtual reality and virtual humans to completely standardize and control the social interaction partners. Because we are studying behavioral adaptability, we wanted to make sure that all the behavior changes observed in the participants stemmed from themselves and were not initiated by any differences in the subordinates' behavior.

In IVET, participants had to give a pep talk to two of their male subordinates (virtual humans) who were each sitting behind a desk in their respective offices. The virtual humans were programmed to get up from their desk and greet the participant at the beginning of the interaction when the participant entered the office. During the pep talk, the virtual human remained attentive (slightly moving his head, making eye contact most of the time but not always) but did not say anything. When participants finished their pep talk, the virtual human thanked them and said goodbye. Behaviors of the virtual human were elicited by the experimenter via keyboard commands.

To control for error variance, the two subordinates were chosen to be as similar as possible to each other. This is why we opted for two subordinates of the same sex. The two subordinates were also from the same age, the same size, wore the same style of clothes and behaved in exactly the same manner. Because we wanted to study behavior towards in- and out-group members with respect to race, we kept sex constant in that all the virtual subordinates were men and all our participants were men.

Experimental manipulation. We manipulated the social category of the two subordinates. To do so, we manipulated their apparent ethnicity. In the “*in-group*” condition, the two subordinates were White individuals. In the “*out-group*” condition, the two subordinates were Black individuals (*Figure 2*). As described above, we made this choice because the experiment took place in Switzerland (a Western European country) and most of the participants in our participant pool are Caucasian. In addition to apparent ethnicity, we also manipulated the subordinates’ names so that they had names typical for White people from Western European countries (Christian and Thomas) in the “*in-group*” condition and typical names from sub-Saharan Africa (Assane and Djibril) in the “*out-group*” condition. Participants were randomly assigned to one of the experimental condition so we had a between-subjects experimental design with participants being confronted either to in-group or to out-group subordinates.

Measures.

SDO. To measure SDO, we used a validated French version (Duarte, Dambrun, & Guimond, 2004) of the Social Dominance Orientation Scale (Pratto et al., 1994), composed of 16 items (8 reversed items) with a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items are “It is probably a good thing that there are some groups at the top and others at the bottom” and “All groups should be given equal opportunities in life” (reversed). The reliability of the scale was good (Cronbach alpha = .86; $M = 2.64$, $SD = 0.94$).

Behavioral adaptability. A research assistant blind to the experimental conditions watched the videos of all the participants and coded the extent to which participants showed behavioral adaptability when giving their pep talks⁷. To do so, the research assistant knew what the preference of each subordinate was and he coded to what extent participants changed their behavior to adapt their leadership style to both subordinates’ preferences. The coding

⁷ To ensure that the coder was blind to the experimental condition, we had to edit the videos to mute the sound each time the participants said the names of the subordinates.

was done as a global impression on a 7-point Likert scale from -3 (participants expressing more directive behavior to the subordinate described as preferring participative leadership and more participative behavior to the subordinate described as preferring directive leadership, meaning that they showed low behavioral adaptability) to 3 (participants expressing more directive behavior to the subordinate described as preferring directive leadership and more participative behavior to the subordinate described as preferring participative leadership, meaning that they showed high behavioral adaptability). A score of 0 indicated that the participant behaved in the exact same manner with both subordinates ($M = 0.91$, $SD = 0.91$). An additional coder, also blind to the experimental conditions, rated a sub-sample of 41 videos. The inter-reliability was $r = .64$.

Self-reported subordinate liking. To measure how much participants liked each of the subordinates, we asked them to indicate at the end of each pep talk how nice, kind, likeable, and attractive they perceived the subordinate to be. Each item was assessed on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*very much*). Reliability between the 4 items was good regardless of the subordinates' social category and preferred leadership style. For the Black subordinates, Cronbach alphas were .76 and .78 for the subordinates described as preferring a participative leadership style and those described as preferring a directive leadership style respectively. For the White subordinates, Cronbach alphas were .77 and .78 for subordinates described as preferring a participative leadership style and for those described as preferring a directive leadership style respectively. We therefore created a composite score of self-reported subordinate liking by averaging these 4 items.

Perceived subordinate preference. To ensure that participants correctly perceived the subordinates as preferring different leadership styles, we used 6 items (3 reversed items) on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*totally*) assessing how much they perceived the subordinate as preferring a directive leadership style. Sample items are “He

prefers a superior who gives him precise instructions” and “He prefers a superior who includes him in decision-making” (reversed item). Participants answered these 6 items for both subordinates separately and the reliabilities between the items were good. Cronbach alphas were .72 for the subordinates described as preferring a participative leadership style and .69 for those described as preferring a directive leadership style. The higher the score, the more the subordinate was perceived as preferring a directive leadership style and the lower the score, the more the subordinate was perceived as preferring a participative leadership style.

Manipulation check. To ensure that the participants paid attention to the ethnicity of the subordinates to whom they gave their speech, we asked them to choose the pictures of the two subordinates they spoke to from the 4 pictures in *Figure 2*. Participants in the “*in-group*” condition were supposed to pick the 2 pictures of the White subordinates, whereas participants in the “*out-group*” condition were supposed to pick the 2 pictures of the Black subordinates.

Results

Preliminary analyses.

Self-reported subordinate liking. First, we conducted independent-samples *t*-tests to test whether there was a significant difference in terms of self-reported subordinate liking between the White and the Black subordinates. There was a significant difference for the subordinates described as preferring a participative leadership style. For subordinates described as preferring a participative leadership style, the participants reported to like the Black subordinates more ($M = 3.84$; $SD = 0.61$) than the White subordinates ($M = 3.63$; $SD = 0.63$), $t(171) = -2.23$, $p = .027$. Moreover, for the subordinates described as preferring a directive leadership style, there was also a marginally significant difference of liking between the Black ($M = 3.90$; $SD = 0.57$) and the White ($M = 3.73$; $SD = 0.62$) subordinates, $t(171) = -$

1.86, $p = .065$. These results were unexpected because the subordinates expressed exactly the same interpersonal behavior (e.g., same speech, voice, and nonverbal behavior). Consequently, we include the self-reported subordinate liking score as a control variable in our main analyses.

Perceived subordinate preferences. Second, we conducted a paired-samples t -test to test whether the participants perceived the difference between the two subordinates in terms of the preference for a specific leadership style. The subordinate described as preferring a participative leadership style was perceived as preferring significantly less directive leadership ($M = 1.68$; $SD = 0.56$) than the subordinate described as preferring a directive leadership style ($M = 4.46$; $SD = 0.47$), $t(172) = -39.31$, $p < .001$. Therefore, the description about the subordinates that we gave to the participants worked.⁸

Manipulation check. All the participants in the “*in-group*” condition selected the two pictures of the White subordinates and all the participants in the “*out-group*” condition selected the two pictures of the Black subordinates. Therefore, all the participants were able to identify the two subordinates to whom they talked. This confirms that participants were able to distinguish between the White and the Black subordinates and that our experimental manipulation worked.

Main analyses. To test whether the subordinates’ belonging to the in- or the out-group impacts behavioral adaptability and whether SDO was related differently to behavioral adaptability depending on the subordinates’ belonging to the in- or the out-group of the participant we ran a hierarchical multiple regression analysis. In this analysis, we included in

⁸ For the sake of clarity, we only reported the overall results without taking into account subordinates’ belonging to the in- or the out-group. We did check if the results were similar between White and Black subordinates to ensure that the subordinates were perceived similarly regardless of their belonging to the in- or the out-group. Results showed that there were no significant differences between White and Black subordinates. In both cases the subordinate described as preferring a participative leadership style was perceived as preferring significantly less directive leadership than the subordinate preferring a directive leadership style.

all steps the order in which the participants interacted with the two subordinates and the self-reported subordinate liking score as control variables.

In the first step we included participant SDO and subordinates' belonging to the in- or the out-group as the predictor of behavioral adaptability. There was no significant main effect of subordinates' belonging to the in- or the out-group ($b = -.20, p = .154$) on behavioral adaptability. Therefore, subordinates' belonging to the in- or the out-group did not impact behavioral adaptability and Hypothesis 1 was not confirmed. Also, there was no significant main effect of participant SDO ($b = .10, p = .172$) on behavioral adaptability. In the second step, we included the two-way interaction between participant SDO and subordinates' belonging to the in- or the out-group. Analyses of the second step revealed a marginally significant two-way interaction between participant SDO and subordinates' belonging to the in- or the out-group ($b = -.28, p = .066$) (Table 1).

To better understand the two-way interaction and to test whether SDO was related differently to behavioral adaptability depending on the subordinates' belonging to the in- or the out-group (Hypotheses 2 and 3), we analyzed the simple slopes for the relation between participant SDO and behavioral adaptability according to subordinates' belonging to the in- or the out-group (Figure 3). For participants confronted with *out-group* subordinates, the slope was negative but not significantly different from 0 ($b = -.05, p = .667$), meaning that SDO was not negatively related to behavioral adaptability when interacting with out-group subordinates. Hypothesis 2 was therefore not confirmed. However, for participants confronted with *in-group* subordinates, the slope was positive and significantly different from 0 ($b = .23, p = .024$). Therefore, the more participants were high on SDO the more they expressed behavioral adaptability when interacting with in-group subordinates and Hypothesis 3 was confirmed.

Discussion Study 1

In Study 1, we set out to test whether social categories of the interaction partners impact how people express behavioral adaptability in social interactions. Hypothesis 1 postulated that people would express less behavioral adaptability when interacting with out-group members than with in-group members. Results from Study 1 showed that people did not express significantly less behavioral adaptability when interacting with out-group members than with in-group members. Hypothesis 1 was therefore not confirmed, which suggest that people do not seem to discriminate out-group interaction partners by not taking into account their expectations during social interaction.

Moreover, we also investigated whether SDO was related to behavioral adaptability. We first argued that SDO would be negatively related to behavioral adaptability when interacting with out-group members (Hypothesis 2). However, results showed that SDO was not related to behavioral adaptability when interacting with out-group members. Hypothesis 2 was therefore not confirmed and SDO does not seem to be a personal orientation impacting the extent to which people express behavioral adaptability towards out-group interaction partners. Finally, we predicted that SDO would be positively related to behavioral adaptability when interacting with in-group members (Hypothesis 3). Results indeed showed that the higher participants were in SDO, the more they expressed behavioral adaptability when interacting with in-group members and Hypothesis 3 was therefore confirmed. In social interactions, high SDO people seem to favor their in-group interaction partners by taking into consideration their individual expectations more so than those low in SDO. SDO might therefore be a personal orientation influencing to which extent people are motivated to put in effort to express behavioral adaptability towards people from their in-group. Taken together, results regarding Hypotheses 2 and 3 were in line with the fact that in-group bias is more related to in-group favoritism than to out-group discrimination (Brewer, 1979). People high in SDO tend to express more behavioral adaptability towards their in-group social interaction partners,

but not necessarily less behavioral adaptability towards their out-group social interaction partners.

Results regarding Hypothesis 1 and Hypothesis 2 might be encouraging, because they suggest that people, even those high SDO, do not discriminate out-group interaction partners by not taking into account their expectations. However, we believe that our experimental setting may also have reduced the potential negative impacts of our experimental manipulation and SDO on behavioral adaptability when people interacted with out-group members. Indeed, we used IVET for our role-play and an experimenter had to be present throughout the experiment to ensure that the scenario in virtual reality worked properly and to manage any technical problems that may have arisen. Therefore, social pressure due to the presence of the experimenter might have refrained people, even those high in SDO, from not showing behavioral adaptability to protect their personal image. Indeed, by not showing behavioral adaptability, participants would have communicated to the experimenter that they were not following the experimental instructions and that they were not taking into consideration their subordinates expectations and were discriminating them deliberately. In Study 2, we therefore decided to conduct an online experiment without any social pressure from the experimenter that might have influenced participants' behavior in Study 1. To do so, we asked participants to read the same scenario as in Study 1 and the descriptions of the two subordinates. We then asked participants to what extent they would adapt their behavior according to both subordinates' preferences (self-reported behavioral adaptability).

Moreover, in Study 1, we only had Caucasian male participants. Yet, according to the ideological asymmetry hypothesis (Fang, Sidanius, & Pratto, 1998; Peña & Sidanius, 2002; Sidanius, Levin, & Pratto, 1996), the impact of SDO on negative intergroup attitudes and behavior would be stronger among members of high-status groups than among members of low-status groups (Kteily, Sidanius, & Levin, 2011). Empirical evidence in the US supported

the ideological asymmetry hypothesis with SDO being positively related to US patriotism among Whites, whereas it was negatively related to US patriotism among Latinos and African Americans (Peña & Sidanius, 2002; Sidanius, Feshbach, Levin, & Pratto, 1997). In Study 2, we therefore investigated whether the ideological asymmetry hypothesis applies at the behavioral level by testing whether the relationship between SDO and behavioral adaptability differs between White/Caucasian individuals (i.e., “high-status” group) and African American/Black individuals (i.e., “low-status” group). In addition, the social dominance theory argues that men have more power than women in society and that gender is one group-based hierarchy around which societies are organized (Pratto, Sidanius, & Levin, 2006). In Study 2, we therefore also included female participants to investigate whether the relationship between SDO and behavioral adaptability differs between men and women.

Finally, in Study 1, no control variables regarding participants’ individual characteristics (e.g., personality) were measured. Yet, SDO is negatively related to agreeableness and to openness to experience (Sibley & Duckitt, 2009) and personality traits (agreeableness, openness to experience, extraversion, neuroticism and conscientiousness) are related to leadership effectiveness (Judge, Bono, Illies, Gerhardt, 2002). More specifically, agreeableness and extraversion are positively related to transformational leadership (Judge & Bono, 2000). Therefore, it is important to add personality traits in future analyses to test whether SDO explains variance in behavioral adaptability in the leadership context above and beyond what it explained by personality traits.

Study 2

Method

Participants. Initially, we recruited 751 participants from Prolific, a platform for online experiments (Palan & Schitter, 2018). Via Prolific, we prescreened participants based on their ethnicity, their first language, and their place of birth and life so that only Black/African

American and White/Caucasian English native speakers who were born and currently live in the United States where eligible for the study. Out of the 751 participants, 10 gave inconsistent information with the aforementioned prescreening criteria and we therefore decided to discard them from the data set. The final number of participants used for this study was 741 ($M_{age} = 33.41$; $SD_{age} = 11.02$), divided into 4 groups. 193 were Black/African American women, 153 were Black/African American men, 198 were White/Caucasian women, and 197 were White/Caucasian men. Participants were paid the equivalent of 5 US\$ for their participation.

Procedure. In Study 2, participants filled in a 25 min online survey. The survey was divided into three parts. First, participants answered questions assessing their SDO and their personality traits of extraversion, openness, emotionality, agreeableness, and conscientiousness. As in Study 1, we added questions about participants' consumption of animal products and attitude towards using animals for profit in order to avoid participants making the link between the different stages of the study and to limit a potential demand effect⁹.

Then, participants read a scenario similar to the role-play we used in Study 1. As in Study 1, participants had to imagine being the office manager of a bank branch with 10 subordinates under their supervision. Participants were made aware that two of their subordinates showed a decrease in performance during the past two months (for the same reasons as those described in Study 1) and that they would have to give a speech to each subordinate to explain the problem and to find a solution (as in Study 1). At the end of the scenario description, participants received a short description of each of the subordinates. One subordinate was described as preferring a participative leadership style, whereas the other was

⁹ As in Study 1, given that these measures were used only to raise doubts among participants about the study's goals and that we did not use them in the testing of our hypotheses, we decided to report no further details about these measures.

described as preferring a directive leadership style. To manipulate the leadership style under which the subordinates prefer to work we used the same descriptions as in Study 1.

After having read the description of the scenario, participants answered questions assessing to what extent they would adapt their leadership style in this situation, 3 manipulation checks to ensure that they were paying attention while reading the scenario, and some demographic questions (e.g., sex, age, ethnicity, and level of education).

Experimental manipulation. As in Study 1, we manipulated the subordinates' belonging to the in- or the out-group. To do so, we explicitly said in the scenario whether the subordinates were White or African American. Moreover, we manipulated the subordinates' names so that they had names commonly used by White US citizens (William and David for men and Sarah and Mary for women) or by African American US citizens (Zion and Malik for men and Akilah and Kimani for women). We included the experimental manipulation in the following sentence of the scenario: "While most of your subordinates have performed in line with your expectations, *Akilah and Kimani* (or *Sarah and Mary*, or *William and David*, or *Zion and Malik*), two *African American* (or *White*) *female* (or *male*) subordinates, have shown a decrease in performance over the past two months." Participants were randomly assigned to one of the experimental condition so we had a between-subjects experimental design with participants being confronted either to in-group or to out-group subordinates. To ensure that subordinates' belonging to the in- or the out-group was the only social category that was manipulated for all participants, the sex of the subordinates changed according to the sex of the participants, that is, female participants always read the scenario with two female subordinates and male participants always read the scenario with two male subordinates.

Measures.

SDO. We used the Social Dominance Orientation Scale (Pratto et al., 1994) to assess participants' SDO. The reliability of the scale was excellent (Cronbach alpha = .94) ($M = 1.99$, $SD = 0.96$).

Personality traits. We measured extraversion, openness to experience, emotionality, agreeableness, and conscientiousness with the Big-Five Inventory (BFI; John & Srivastava, 1999). The questionnaire included 44 items with a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) and had a good reliability for all dimensions. Cronbach alphas were .88, .81, .85, .82, and .88 for extraversion ($M = 2.72$, $SD = 0.92$), agreeableness ($M = 3.80$, $SD = 0.70$), conscientiousness ($M = 3.78$, $SD = 0.74$), openness to experience ($M = 3.87$, $SD = 0.65$), and emotionality ($M = 2.97$, $SD = 0.95$), respectively.

Self-reported behavioral adaptability. For the purpose of Study 2, we created 6 items (3 reversed items) assessing the extent to which the participants would show behavioral adaptability during the two meetings. Participants answered these items on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items are "I would change my leadership behavior according to *Akilah and Kimani's* (or *Sarah and Mary's*, or *William and David's*, or *Zion and Malik's*) individual preferences" and "I would propose the same amount of autonomy to *Akilah and Kimani* (or *Sarah and Mary*, or *William and David*, or *Zion and Malik* in the future" (reversed). The reliability between the 6 items was good (Cronbach alpha = .84) so we averaged them to create a composite score for self-reported behavioral adaptability ($M = 5.11$; $SD = 1.25$).

Perceived subordinate preference, sex, and ethnicity. To ensure that participants correctly perceived the subordinates as preferring different leadership styles, we used 1 item on a continuous scale from 0 (*the subordinates prefer to work under the same leadership style*) to 5 (*the subordinates prefer to work under different leadership styles*) in which we asked them to place a slider where it best matches the subordinate's description. To test

whether participants perceived the subordinates' difference in terms of leadership style preference, we conducted a one-sample *t*-test against 0. Results showed that participants indeed perceived that the subordinates preferred to work under different leadership styles ($M = 4.42, SD = 0.82$), $t(740) = 147.457, p < .001$.

Moreover, to ensure that the participants perceived the subordinates' sex and ethnicity accurately, we asked them whether the subordinates described in the scenario were women or men and whether they were White/Caucasian or Black/African American. All participants answered these questions correctly.

Results

In order to compare results from Study 2 with those of Study 1 and because we were interested to see if results from Study 1 were generalizable to populations of other social categories, we ran a hierarchical multiple regression analysis for each group of participants (White/Caucasian women, Black/African American women, White/Caucasian men, and Black/African American men) separately. In the first step we included participant SDO and subordinates' belonging to the in- or the out-group (*White vs. African American*) as the predictor of behavioral adaptability. Then in the second step, we included the two-way interaction between participant SDO and subordinates' belonging to the in- or the out-group. Moreover, we included personality traits, education, and age as control variables in both steps.

We first conducted the analyses for the White/Caucasian men. As in Study 1, there were no significant main effects of subordinates' belonging to the in- or the out-group ($b = .14, p = .415$) and participant SDO ($b = -.10, p = .236$) on behavioral adaptability in the first step. Unlike in Study 1, there was no significant two-way interaction effect between participant SDO and subordinates' belonging to the in- or the out-group ($b = -.26, p = .142$) (Table 2). Therefore, none of our hypotheses was confirmed for the White/Caucasian men.

Second, we conducted the analysis for the White/Caucasian women. There was no significant main effect of subordinates' belonging to the in- or the out-group ($b = -.11, p = .475$) on behavioral adaptability. However, there was a significant main effect of participant SDO ($b = -.21, p = .011$) on leadership behavioral adaptability in the first step. The higher they were on SDO, the less they reported that they would express behavioral adaptability. Moreover, there was a marginally significant two-way interaction effect between participant SDO and subordinates' belonging to the in- or the out-group ($b = .27, p = .099$) (Table 3). To better understand the two-way interaction and to test whether SDO is related differently to behavioral adaptability depending on the subordinates' belonging to the in- or the out-group (Hypotheses 2 and 3), we analyzed the simple slopes for the relation between participant SDO and behavioral adaptability according to subordinates' belonging to the in- or the out-group (Figure 4). With the *White/Caucasian* subordinates the slope was negative but not significantly different from 0 ($b = -.04, p = .778$), meaning that SDO was not related to behavioral adaptability when interacting with in-group subordinates. However, with the *Black/African American* subordinates the slope was negative and significantly different from 0 ($b = -.31, p = .003$), meaning that the higher White/Caucasian women were on SDO, the less they reported that they would express behavioral adaptability towards the out-group subordinates. Therefore, only Hypothesis 2 was confirmed for the White/Caucasian women.

Third, we conducted the analysis for the Black/African American men. The first step revealed that there was no significant main effect of subordinates' belonging to the in- or the out-group ($b = -.02, p = .932$) on behavioral adaptability. However, there was a significant main effect of participant SDO ($b = -.30, p = .017$) on behavioral adaptability. The higher they were on SDO, the less they reported that they would express behavioral adaptability. In the second step, there was no significant two-way interaction effect between participant SDO and subordinates' belonging to the in- or the out-group ($b = .16, p = .507$) (Table 4).

Therefore, SDO was negatively related to behavioral adaptability both when interacting with out-group subordinates (confirming Hypothesis 2) and when interacting with in-group subordinates (rejecting Hypothesis 3) for Black/African men.

Finally, we conducted the analysis for the Black/African American women. The first step revealed that there was no significant main effect of subordinates' belonging to the in- or the out-group ($b = .02, p = .921$) on behavioral adaptability. However, there was a significant main effect of participant SDO ($b = -.44, p = .001$) on behavioral adaptability. The higher they were on SDO, the less they reported that they would express behavioral adaptability. In the second step, there was no significant two-way interaction effect between participant SDO and subordinates' belonging to the in- or the out-group ($b = .07, p = .767$) (Table 5). Therefore, SDO was negatively related to behavioral adaptability both when interacting with out-group subordinates (confirming Hypothesis 2) and when interacting with in-group subordinates (rejecting Hypothesis 3) for Black/African women.

Discussion Study 2

As in Study 1, results from Study 2 first showed that the social category of the interaction partners (*in-group* vs *out-group*) did not impact behavioral adaptability and Hypothesis 1 was rejected for the 4 groups of participants. Participants did not report that they would adapt their leadership style less when interacting with out-group subordinates than when interacting with in-group subordinates. As highlighted in the discussion section of Study 1, these results are encouraging in that they may suggest that people do not discriminate between in- and out-group members in social interactions. However, we highlighted that the social pressure coming from the experimenter might have refrained participants from not expressing behavioral adaptability when interacting with out-group subordinates, explaining why we did not find any significant effect of the interaction partners' social category on behavioral adaptability in Study 1. Given that we used an explicit measure of behavioral

adaptability via a self-reported questionnaire in Study 2, one could also argue that social desirability might have dissuaded participants confronted with out-group subordinates from reporting that they would adapt less their interpersonal behavior than participants interacting with in-group subordinates. Indeed, explicit expressions of ethnic prejudice and negative attitudes towards ethnic minorities are declining over time (Abad-Merino et al., 2018; Pearson, Dovidio, & Gaertner, 2009) and the non significant results we obtained regarding Hypothesis 1 in Study 2 might reflect this phenomenon.

Moreover, we suggest that this phenomenon may not only concern overt expression of out-group prejudice and discrimination, but also overt expression of in-group favoritism. This could explain why SDO was not positively related to self-reported behavioral adaptability in White/Caucasian men when they interacted with out-group members, contrary to what we found in Study 1. The fact that the high SDO White/Caucasian men from Study 2 did not mention that they would express more behavioral adaptability than those low in SDO when interacting with in-group members might reflect that in-group favoritism in social interactions may appear in more subtle ways in people from “high-status” social groups (Pearson et al., 2009), such as through their interpersonal behavior. People from “high-status” groups (e.g., White male in the US or in Switzerland) who are high in SDO may therefore choose to favor members from their in-group in social interactions by expressing more behavioral adaptability (Study 1), but may choose to not mention it explicitly (Study 2).

In addition, following the ideological asymmetry hypothesis (Fang et al., 1998; Peña & Sidanius, 2002; Sidanius et al., 1996), according to which the impact of SDO on negative intergroup attitudes and behavior would be stronger among members of high-status groups than among members of low-status groups (Kteily et al., 2011), we decided to investigate how SDO impacts behavioral adaptability for “lower-status” groups (e.g., such as Black/African American people and women). Results first showed for White/Caucasian women that SDO

was not related to self-reported behavioral adaptability when interacting with in-group members. However, SDO was negatively related to self-reported behavioral adaptability when interacting with out-group members, confirming Hypothesis 2. Therefore, unlike what we found for White/Caucasian men in Study 1, SDO was related to discrimination against out-group members rather than to in-group favoritism in White/Caucasian women. We believe that this different pattern of results may come from the fact that women are part of a social group with less power than men in society (Pratto et al., 2006). We argue that women (even White women) may therefore feel that their social status in society is not totally secured. As a consequence, high SDO White/Caucasian women may prefer to increase their dominant position towards “lower-status” group members (e.g., Black/African American women) by discriminating against them in social interactions (e.g., by not taking into account their individual differences) rather than favoring their in-group members. This strategy would allow White/Caucasian women high in SDO to create greater social distance towards Black/African women and therefore maintain their higher social status in relation to women of a “lower” social status.

Finally, for Black/African American participants, both in men and women, SDO was negatively related to behavioral adaptability independently of their interaction partners’ social group. The more they were high on SDO the less they indicated that they would express behavioral adaptability both when interacting with out-group members and with in-group members. Results are therefore in line with Hypothesis 2 according to which people that are higher in SDO will express less behavioral adaptability for a discriminatory purpose. However, we found the opposite result that we expected for Hypothesis 3. This unexpected result for Black/African American people may reflect a “self-debilitation” process towards their in-group members in social interactions (Pratto et al., 2006). Indeed, because the Social Dominance Orientation Scale (Pratto et al., 1994) includes items such as “Some groups of

people are simply inferior to other groups” or “If certain groups stayed in their place, we would have fewer problems”, we argue that this scale might not necessarily measure “the extent to which one desires that one’s in-group dominate and be superior to out-groups” (Pratto et al., 1994, p. 742), but instead “a generalized orientation towards and desire for unequal and dominant/subordinate relations among salient social groups, regardless of whether this implies in-group domination or subordination” (Pratto et al., 2006, p. 282). Therefore, the Black/African American individuals who were high in SDO may agree to a larger extent with myths legitimizing the enhancement of group-based hierarchies in society in comparison to those who are low in SDO, leading them to have discriminatory practices and behavior in social interactions even at the expense of the members of their own social group. Furthermore, it has been shown that SDO is positively related to in-group attachment in people from “high-status” group (e.g., White/Caucasian individuals in the US), whereas it is negatively related to in-group attachment in people from “low-status” group (Black/African American and Latino individuals in the US) (Sidanius, Pratto, & Rabinowitz, 1994). Therefore, people from “low-status” group and who are high in SDO tend to feel less close to their own group than those who are low in SDO. This feeling of detachment from one’s own group might stem from a desire to not identify with the “low-status” groups and may lead high SDO people from these groups to discriminate against their in-group members in social interactions in order to differentiate themselves from them.

General discussion

In two studies, we aimed at testing whether the social category of the interaction partners impacts the extent to which people express behavioral adaptability in social interactions. Based on the literature on the in-group favoritism, we suggested that people would be more motivated and therefore would express more behavioral adaptability when interacting with in-group members than with out-group members. In both studies, results

showed that the social category of the interaction partners did not impact behavioral adaptability. Moreover, we also investigated how SDO is related to behavioral adaptability depending on the social interaction partners' belonging to the in- or to the out-group. Results showed that SDO is differently related to behavioral adaptability not only depending on the social interaction partners' belonging to the in- or to the out-group, but also depending on one's social category (e.g., ethnicity and sex). Therefore, this paper highlights the importance of taking into account the social categories of the different stakeholders involved in the interaction when studying the role of SDO in interpersonal processes.

Although not finding a significant effect of the interaction partners' social category on behavioral adaptability may seem encouraging because it suggests that people do not discriminate between in- and out-group members in social interactions by taking less into account out-group members expectations, we argue that future research should try to replicate our results with an experimental design that is less sensitive to social desirability. Indeed, even though we tried to limit the social pressure coming from the experimenter by doing an online experiment in Study 2, we believe in hindsight that the used of an explicit questionnaire for assessing behavioral adaptability might also not have been ideal. Indeed, participants may not have dared reporting that they would not adapt their behavior when interacting with out-group members, which is consistent with the fact overt expressions of prejudice are declining over time (Abad-Merino et al., 2018; Pearson et al., 2009). We argue that one way to investigate our research question with an experimental design that is less sensitive to social desirability would be to conduct an online study (to avoid the social pressure from the experimenter) in which behavioral adaptability would be measured less explicitly by coding the actual behavior of the participants while interacting separately with two interaction partners, as in Study 1 (to avoid the use of an explicit questionnaire). This

experimental design would require the use of an online platform through which participants would be videotaped directly from the webcam of their laptops.

Moreover, we argue that the social categories of the interaction partners may not only impact the motivation to express behavioral adaptability, but also the ability to do so. Indeed, social categorization implies that people perceive in- and out-group members differently and individuals within a social group are perceived as having similar and more prototypical characteristics of that specific group (Hugenberg & Sacco, 2008). However, this assimilative effect is more pronounced for out-group members than for in-group members (Linville, Fischer, & Salovey, 1989; Linville, Salovey, & Fischer, 1986). This refers to the out-group homogeneity effects (Judd & Park, 1988) according to which people are more likely to see sub categories and differentiate more among individuals within their in-group than among the members of the out-group; they tend to perceive out-group members in a more stereotypical way (Judd, Ryan, & Park, 1991). We argue that the out-group homogeneity effect would lead people to perceive out-group members as having similar expectations in social interactions. People would therefore be less likely to identify individual differences in terms of social interaction expectations when interacting with out-group members compared to when interacting with in-group members. Because being able to make correct inferences about the expectations of one's interaction partner is a prerequisite to express behavioral adaptability (Palese & Schmid Mast, 2019b), we suggest that people would therefore be less likely to express behavioral adaptability when interacting with out-group members. In other words, the out-group homogeneity effect (at a perceptual level) would lead to behavioral homogenization (at a behavioral level) when interacting with out-group members. Future studies on this topic might investigate how people behave with two interaction partners in a so-called zero-acquaintance situation (Ambady, Hallahan, & Rosenthal, 1995) in which people have no information about the interaction partners. In such situations, if people behave more similarly

with the out-group interaction partners than with the in-group interaction partners, it would support the idea that out-group homogeneity has an effect at a behavioral level. Because biases such as the out-group homogeneity effect occur rapidly and automatically (Abad-Merino et al., 2018; Hugenberg & Sacco, 2008) and because not adapting one's behavior may lead to negative interaction outcomes (Palese & Schmid Mast, 2019b), we argue that understanding how out-group homogeneity affects how people behave with out-group members is important in order to avoid the emergence of unintentional discriminatory practices during social interactions.

Finally, in both studies, participants had to imagine being in the role of a leader. Even though we do not know whether participants from these studies had a leadership position in real life (e.g., in a student association or at work), we believe that our results contribute to the leadership literature. We show that SDO is negatively related to self-reported behavioral adaptability for people belonging to "low-status" groups (e.g., women and Black/African American participants). People who are high in SDO but belong to "low-status" groups express less behavioral adaptability in general. Nicol (2009) already showed that SDO is related to less consideration towards others (subordinates) and our results replicated these findings, at least for people from "low-status" groups. Taking into consideration subordinates' needs being one aspect of transformational leadership (Bass & Avolio, 1994), and transformational leadership being related to subordinates satisfaction (Podsakoff et al., 1990), high SDO leaders may therefore also be those with less satisfied subordinates. Similarly, it has been shown that leaders who are higher in SDO tend to use more harsh power tactics towards their subordinates, which are tactics that generally show less interpersonal respect (Aiello et al., 2013). Our results therefore contribute to the growing literature on leadership suggesting that SDO may be related to the use of a less interpersonal-oriented leadership style.

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Table 1

Hierarchical Multiple Regression Analyses with Participant SDO and Subordinates' Belonging to the In- or the Out-group Predicting Leadership Behavioral Adaptability, Controlling for Condition Order and Self-reported Subordinates Liking (Study 1)

	Step 1			Step 2		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
Condition order	-0.06	0.14	-0.03	-0.08	0.14	-0.04
Subordinates preferring a participative leadership style liking	0.21	0.15	0.14	0.21	0.14	0.14
Subordinates preferring a directive leadership style liking	-0.03	0.15	-0.02	-0.04	0.15	-0.03
Subordinates' Belonging to the In- or the Out-group	-0.20	0.14	-0.11	0.52	0.42	0.21
Participants SDO	0.10	0.07	0.11	0.23	0.10	** 0.24
Participant SDO X Subordinates' Belonging to the In- or the Out-group				-0.28	0.15	* -0.43
R ²	.04			.06		

Note. $N = 173$; subordinates' belonging to the in- or the out-group coded as 0 = In-group subordinates and 1 = Out-group subordinates; * $p < .10$, ** $p < .05$

Table 2

Hierarchical Multiple Regression Analyses for the White/Caucasian Male Participants with Participant SDO and Subordinates' Belonging to the In- or the Out-group Predicting Leadership Behavioral Adaptability, Controlling for Participants' Personality Traits, Age, and Education (Study 2)

	Step 1			Step 2		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
Extraversion	-0.07	0.11	-0.06	-0.05	0.11	-0.04
Agreeableness	0.07	0.14	0.04	0.05	0.14	0.03
Conscientiousness	-0.27	0.15	* -0.16	-0.24	0.15	* -0.15
Emotionality	0.05	0.12	0.04	0.04	0.12	0.03
Openness to experience	-0.25	0.16	-0.13	-0.29	0.16	* -0.14
Age	-0.00	0.01	-0.02	-0.00	0.01	-0.01
Education	0.09	0.07	0.09	0.08	0.07	0.08
Subordinates' Belonging to the In- or the Out-group	0.14	0.18	0.06	0.73	0.44	* 0.30
Participant SDO	-0.10	0.09	-0.09	0.04	0.04	0.03
Participant SDO X Subordinates' Belonging to the In- or the Out-group				-0.26	0.17	-0.29
R ²	.07			.08		

Note. $N = 197$; subordinates' belonging to the in- or the out-group coded as 0 = Out-group subordinates and 1 = In-group subordinates; * $p < .10$

Table 3

Hierarchical Multiple Regression Analyses for the White/Causasian Female Participants with Participant SDO and Subordinates' Belonging to the In- or the Out-group Predicting Leadership Behavioral Adaptability, Controlling for Participants' Personality Traits, Age, and Education (Study 2)

	Step 1			Step 2		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
Extraversion	-0.04	0.10	-0.03	-0.05	0.10	-0.04
Agreeableness	0.11	0.13	0.07	0.09	0.13	0.06
Conscientiousness	-0.05	0.13	-0.03	-0.02	0.13	-0.02
Emotionality	0.26	0.11	** 0.21	0.27	0.11	** 0.22
Openness to experience	0.05	0.12	0.03	0.06	0.12	0.04
Age	-0.00	0.01	-0.04	-0.00	0.01	-0.04
Education	0.12	0.06	* 0.14	0.11	0.06	* 0.13
Subordinates' Belonging to the In- or the Out-group	-0.11	0.16	-0.05	-0.65	0.36	* -0.28
Participant SDO	-0.21	0.09	** -0.19	-0.31	0.10	** -0.28
Participant SDO X Subordinates' Belonging to the In- or the Out-group				0.27	0.16	* 0.27
R ²	.10			.12		

Note. $N = 198$; subordinates' belonging to the in- or the out-group coded as 0 = Out-group

subordinates and 1 = In-group subordinates, * $p < .10$, ** $p < .05$

Table 4

Hierarchical Multiple Regression Analyses for the Black/African American Male Participants with Participant SDO and Subordinates' Belonging to the In- or the Out-group Predicting Leadership Behavioral Adaptability, Controlling for Participants' Personality Traits, Age, and Education (Study 2)

	Step 1			Step 2					
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β			
Extraversion	-0.33	0.12	**	-0.23	-0.33	0.12	**	-0.24	
Agreeableness	-0.14	0.18		-0.08	-0.15	0.18		-0.09	
Conscientiousness	0.22	0.17		0.14	0.23	0.17		0.14	
Emotionality	-0.02	0.15		-0.01	-0.03	0.15		-0.02	
Openness to experience	0.06	0.17		0.03	0.06	0.17		0.04	
Age	-0.01	0.01		-0.09	-0.01	0.01		-0.08	
Education	0.15	0.09	*	0.15	0.15	0.09	*	0.15	
Subordinates' Belonging to the In- or the Out-group	-0.02	0.21		-0.01	-0.33	0.51		-0.13	
Participant SDO	-0.30	0.12	**	-0.21	-0.36	0.15	**	-0.25	
Participant SDO X Subordinates' Belonging to the In- or the Out-group					0.16	0.24		0.13	
R ²	.12			.12					

Note. $N = 153$; subordinates' belonging to the in- or the out-group coded as 0 = In-group

subordinates and 1 = Out-group subordinates, * $p < .10$, ** $p < .05$

Table 5

*Hierarchical Multiple Regression Analyses for the Black/African American Female
Participants with Participant SDO and Subordinates' Belonging to the In- or the Out-group
Predicting Leadership Behavioral Adaptability, Controlling for Participants' Personality
Traits, Age, and Education (Study 2)*

	Step 1			Step 2		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
Extraversion	0.05	0.12	0.03	0.05	0.12	0.03
Agreeableness	-0.07	0.16	-0.04	-0.07	0.16	-0.04
Conscientiousness	-0.21	0.16	-0.11	-0.21	0.16	-0.11
Emotionality	0.12	0.13	0.08	0.12	0.13	0.08
Openness to experience	0.21	0.16	0.09	0.20	0.17	0.09
Age	-0.01	0.01	-0.10	-0.01	0.01	-0.10
Education	0.20	0.08	** 0.18	0.20	0.08	** 0.18
Subordinates' Belonging to the In- or the Out-group	0.02	0.18	0.01	-0.10	0.45	-0.04
Participant SDO	-0.44	0.13	** -0.26	-0.49	0.20	** -0.29
Participant SDO X Subordinates' Belonging to the In- or the Out-group				0.07	0.25	0.06
R ²	.16			.16		

Note. $N = 193$; subordinates' belonging to the in- or the out-group coded as 0 = In-group

subordinates and 1 = Out-group subordinates, ** $p < .05$

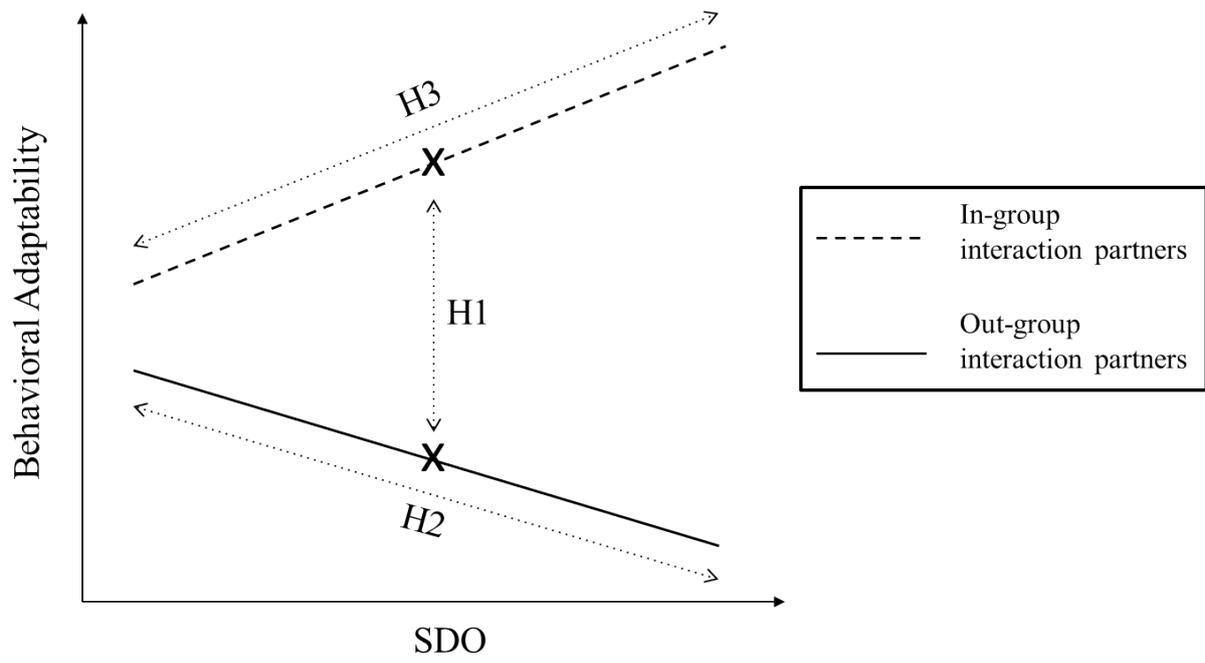


Figure 1. Graphical representation of the expected results.



Figure 2. The four virtual subordinates used in Study 1.

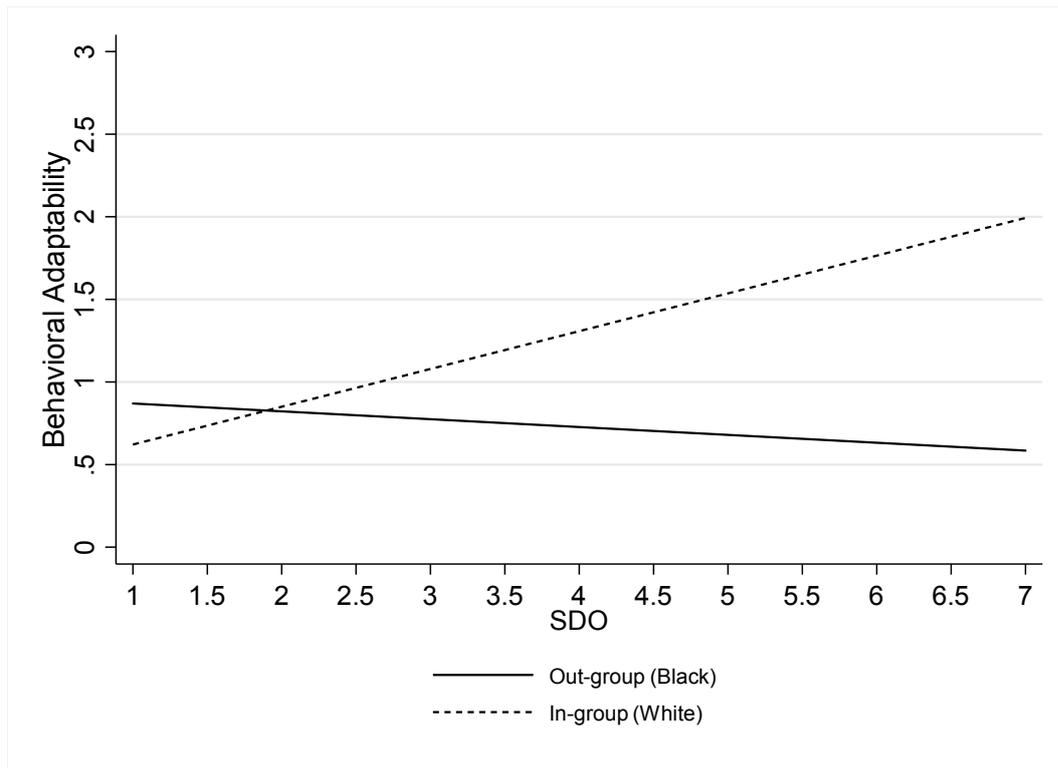


Figure 3. Interaction effect between participant SDO and subordinates' belonging to the in- or the out-group on leadership behavioral adaptability (Study 1), slope for the participants interacting with out-group subordinates not significantly different from 0, slope for the participants interacting with in-group subordinates significantly different from 0.

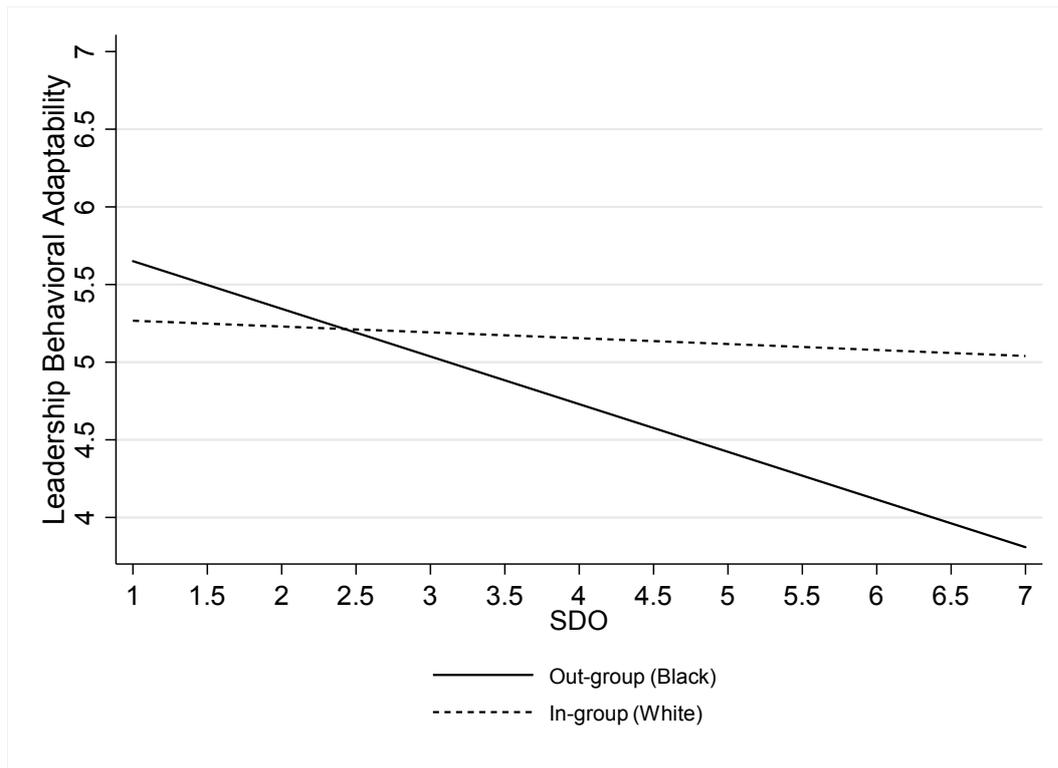


Figure 4. Interaction effect between participant SDO and subordinates' belonging to the in- or the out-group on leadership behavioral adaptability for the White/Caucasian female participants (Study 2), slope for the participants interacting with out-group subordinates significantly different from 0, slope for the participants interacting with in-group subordinates not significantly different from 0.

Perception of Managers Who Change Their Interpersonal Behavior: How and When Should
Managers Adapt to Their Subordinates?

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Abstract

Individualized consideration, which involves taking into account subordinates' needs and preferences, is important for managers in order to have satisfied subordinates. However, because subordinates are not a homogenous group, they might differ from each other with respect to how they want to be supervised and under which leadership style they work best. Therefore, managers may have to express different interpersonal behaviors (i.e., leadership styles) among different subordinates if they want to express individualized consideration. Past research highlighted the importance of behavioral consistency for managers and those who express inconsistent interpersonal behavior among different subordinates may be perceived more negatively by third parties. Managers thus face a dilemma: either they show individualized consideration to match their subordinates' expectations, even though they may appear inconsistent in the eyes of third parties, or they behave in the same way with all of their subordinates without taking into account their subordinates' individual expectations so as order to appear consistent. Using an experimental design, we investigate in two studies how changes in managers' interpersonal behaviors impact the way they are evaluated and how justifications for these behavioral changes affect those evaluations. Together, results from these studies suggest that changes in managers' interpersonal behavior should be justified in the eyes of third parties to prevent individualized consideration from becoming a double-edged sword for managers.

Perception of Managers Who Change Their Interpersonal Behavior: How and When Should
Managers Adapt to Their Subordinates?

Michael has just started a new job. During his first day, he has a meeting with all the department members and Emily, his manager, is also present. Because Michael is stressed and does not know many people, he decides not to participate much in the discussion. Rather, he observes the team dynamics and especially Emily's behavior. Surprisingly, she behaves differently with Daniel and Ryan, two of his colleagues. While she gives extremely precise instructions to Daniel, Ryan seems to obtain no guidance at all. Yet, both of them hold the same position, have the same responsibilities, and have similar professional experiences. Puzzled by the behavioral inconsistency of Emily, Michael doubts Emily's competence as a manager. He thinks that good managers should show consistency in their behavior and treat everybody the same way. A few weeks later, after having discussed with Ryan and Daniel and observed their working style, he understands that Ryan loses all motivation when he is micro-managed and when he is not given much autonomy, whereas Daniel works best when he is told exactly what to do. Michael understands that Emily in fact adapts her leadership style to each of her group members and his judgment of Emily's leadership ability takes a drastic turn; instead of doubting her leadership competence, he evaluates her as a very skillful manager, able to adapt her leadership style so that each of the subordinates can perform at their best.

Michael's story shows how changes in managers' interpersonal behavior can be perceived differently by team members depending on whether the latter know why the changes occur. The aim of this paper is to investigate how changes in managers' behavior, when interacting with different subordinates, are perceived. This is a relevant question to address because managers typically have multiple subordinates under their supervision and the increased globalization and mobility make the workforce more diverse. Changes in people

with whom one collaborates are therefore more frequent and managers are confronted with many different types of subordinates (e.g., due to individual or cultural differences) who may differ with respect to how they want to be supervised and under which leadership style they work best. Individualized consideration, which is one aspect of transformational leadership (Bass & Avolio, 1994), highlights the importance for managers to take into account their subordinates' preferences and needs when interacting with them. Accordingly, managers may be required to behave differently depending on the subordinates with whom they interact. In this paper, we argue that these managers' behavioral changes may impact the way they are perceived by third parties within the organization (e.g., team members, colleagues, or superiors). Specifically, we suggest that individualized consideration may lead managers who have subordinates with different preferences or needs to be perceived more negatively by third parties and we investigate under which conditions managers who change their interpersonal behavior between different subordinates are perceived more or less positively.

The Relevance of Individualized Consideration

Subordinates are not a homogenous group; they differ from each other with respect to individual characteristics such as their personality, gender, values, among others. These individual differences lead subordinates to have different preferences as to how a manager should behave with them. For instance, people who are high in extraversion and conscientiousness prefer a more transformational leadership style (Moss & Ngu, 2006), women have greater preference for leaders showing consideration than men (Vecchio & Boatwright, 2002), and the more people want to have influence at work, the more they prefer charismatic leadership and the less they prefer task-oriented leadership (Ehrhart & Klein, 2001).

Research shows that a mismatch between expected and perceived leadership is negatively related to employee satisfaction (Driscoll, 1978; Elpers & Westhuis, 2008).

Therefore, managers should change their leadership style according to the expectations (e.g., preferences or needs) of each subordinate in order to have satisfied subordinates. To illustrate, if two subordinates have different preferences with regard to how their manager should include them in the decision making process, that manager should show a more participative leadership behavior to the subordinate wanting to be included in the decision making than to the subordinate preferring not to be involved.

Different leadership theories (e.g., situational leadership) have suggested that managers need to master an array of different leadership styles to respond to differences in subordinates, such as differences in development level (Blanchard, Zigarmi, & Nelson, 1993). The idea of adaptive leadership with a focus on manager-subordinate interaction is also present in the transformational leadership theory (Bass, Avolio, Jung, & Berson, 2003), which includes individualized consideration (Bass & Avolio, 1994). By expressing individualized consideration, managers recognize their subordinates' particular needs and desires and demonstrate acceptance of these individual differences (Bass & Riggio, 2006). For instance, "some employees receive more encouragement, some more autonomy, others firmer standards, and still others more task structure" (Bass & Riggio, 2006, p. 7). Individualized consideration therefore acknowledges the importance for managers to change their interpersonal behavior according to their subordinates' individual differences. Empirical results have shown that transformational leadership is related to more subordinate satisfaction and to more trust in the leader (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). This positive influence on subordinates might come from the fact that transformational leaders are also those showing individualized consideration by changing their interpersonal behavior according to their subordinates' preferences or needs.

A good leadership style is therefore characterized by individualized consideration and being a good manager may result in showing a particular interpersonal behavior (i.e., different

leadership styles) towards specific subordinates. Yet, little is known about how changes in managers' interpersonal behavior are perceived by third parties, such as other team members, colleagues, or superiors. We believe that investigating how changes in managers' interpersonal behavior are perceived by third parties is important because managers are oftentimes not isolated from others when interacting with their subordinates (e.g., during team meetings). In the next section, we argue that changes in managers' interpersonal behavior among different subordinates may negatively impact the way managers are perceived from a third party's perspective.

The Risks of Individualized Consideration

Because individualized consideration may lead managers to change their leadership style when interacting with particular subordinates, managers might have to express inconsistent interpersonal behavior when interacting with their various team members. However, behavioral consistency is important in defining whether a procedure is perceived as fair (Barrett-Howard & Tyler, 1986; Leventhal, 1980) and the perception of fairness plays an important role when it comes to judging the legitimacy of an authority (Tyler & Lind, 1992). Managers who change their leadership style across subordinates might therefore be perceived as treating their subordinates unfairly and might, as a consequence, be evaluated more negatively. In fact, past research supports the assumption that changes in managers' behavior are perceived negatively (De Cremer, 2003; Johnson, Venus, Lanaj, Mao, & Chang, 2012; Lam, Huang, & Chan, 2015; Whitener, Brodt, Korsgaard, & Werner, 1998). But why are leaders who show inconsistent behavior viewed negatively?

First, variance in leadership behavior may impact how effective managers are perceived to be (Johnson et al., 2012). For instance, people having supervisors who are inconsistent in their actions want to replace them significantly more often than those who have supervisors who express consistent behaviors (De Cremer, 2003). Moreover, managers expressing

inconsistent participative or transformational leadership behaviors are evaluated as less effective (Johnson et al., 2012; Lam, Huang, & Chan, 2015). Therefore, managers who show inconsistent behaviors when interacting with particular subordinates should be evaluated as less competent by third parties than managers who behave in the same way with all of their subordinates. Second, the literature on trust in the workplace highlights the importance for managers to express consistent behaviors in order to develop trusting relationships with their subordinates (Butler, 1991; Clark & Payne, 1997; Whitener et al., 1998). Accordingly, behavioral consistency is important in developing subordinates' trust because it increases the perceived reliability and predictability of their managers' behavior (Butler, 1991; Whitener et al., 1998). If managers behave consistently over time and across different situations, their subordinates can more easily predict their managers' future behavior and consequently trust them more easily (Whitener et al., 1998). As mentioned by Bartram and Casimir (2007), being seen as trustworthy is essential for managers in order to have satisfied subordinates. Past research has shown that there is a positive link between how trustworthy a manager is perceived and subordinate satisfaction with the manager (Bartram & Casimir, 2007; Jung & Avolio, 2000). Therefore, we argue that third parties may expect to be less satisfied to work for managers who show inconsistent interpersonal behaviors between different subordinates. Thus, contrary to what would be expected when seeing a behavioral change in a leader as individualized consideration, the literature reviewed here would predict that third party observers may form more negative impressions about managers who show inconsistent behavior when interacting with different subordinates.

A Manager's Dilemma

As stated previously, individualized consideration is beneficial at the dyadic level because it enables managers to satisfy their subordinates' individual preferences or needs. As a consequence, by adapting their behavior while interacting with different subordinates,

managers can increase their subordinates' satisfaction. However, past theoretical developments and empirical results emphasize the importance of behavioral consistency for managers to be perceived more positively. Therefore, there may be a potential price to pay for managers when expressing individualized consideration and those who have subordinates with different expectations under their supervision may face a dilemma: either they show individualized consideration to match their subordinates' individual preferences and needs but appear inconsistent in the eyes of third parties, or they behave the same way with all of their subordinates without taking into account their subordinates' individual preferences or needs to appear consistent in the eyes of third parties, but with the risk of not having all subordinates optimally satisfied.

Finding a solution to this dilemma is essential because if managers' changes in interpersonal behavior are perceived negatively, it could lead managers to choose not to show individualized consideration in order to protect their personal image. This choice could then have detrimental effects, not only on the relationships between managers and their subordinates, but also on the organization as a whole. Foregoing individualized consideration would decrease subordinate satisfaction with their manager, which is one of the main aspects of overall subordinate satisfaction (Harter, Schmidt, & Hayes, 2002) and of better job performance (Judge, Thoresen, Bono, & Patton, 2001). Knowing under which conditions changes in managers' interpersonal behavior are perceived positively would help managers lead their teams more efficiently and enable them to show individualized consideration without suffering from negative personal consequences.

So what should a manager do to avoid being assessed negatively by third parties when showing individualized consideration to subordinates with different preferences or needs? To be perceived positively, we argue that changes in a manager's interpersonal behavior among various subordinates must be justified in the eyes of third parties. In other words, it is

necessary, as third parties, to know the reasons why a manager changes the leadership style while interacting with various subordinates and these reasons should be valid. In the context of social interactions between managers and their subordinates, we believe that such valid justifications may be knowledge about the needs and/or the preferences of the subordinates. If third parties are able to understand that a manager expresses different interpersonal behaviors to particular subordinates in order to match the subordinates' individual preferences or needs, then the behavioral changes expressed by the manager should be evaluated in a more positive way. In this case, changes in a manager's interpersonal behavior would be an expression of individualized consideration shown towards subordinates. This refers to the example at the beginning of this paper when Michael becomes aware of the working styles of his fellow colleagues and sees that Emily, the manager, adapts to those. However, when there are no apparent valid reasons for managers to change their interpersonal behavior from one subordinate to another, we expect third parties to perceive managers more negatively when they express inconsistent interpersonal behaviors across subordinates. This parallels Michael's first impression of his Emily.

Current Studies

To our knowledge, no study to date has looked at how leaders who change their interpersonal behavior between different subordinates are perceived by third parties. In this paper, we aim at filling this gap in the literature by investigating how changes in managers' interpersonal behaviors impact the way managers are evaluated and how justifications for these behavioral changes affect those evaluations.

In two studies at the intersection of leadership and social perception, we asked participants to watch videos of a male manager interacting with two subordinates and then to rate the manager on how competent they perceive him to be and on how much they would be satisfied with that manager. In Study 1, the manager showed a different leadership style with

each of the subordinates and we manipulated whether the participant knew about the leadership preferences of each of the subordinate. In Study 2, we manipulated the leadership styles shown by the manager as well as the information about the preferences of the subordinates. The use of an experimental design allowed us to test for causal relationships between justifications for managers' behavioral changes and how managers are perceived by third parties.

Study 1

Method

Participants. Initially, we recruited 161 participants from the participant pool at our institution. Being an online study, we excluded 24 participants because of technical issues during the execution phase or because participants failed to answer control questions correctly (explained in more detail below). The final number of participants used for this study was 137 (77 women, 60 men; $M_{age} = 21.26$, $SD_{age} = 2.09$). All participants were students (undergraduate or graduate, majoring in different domains) and the majority were Caucasian (77.4%). Participants who completed the study and correctly answered the control questions participated in a lottery enabling them to win up to the equivalent of 300 US\$.

Procedure. At the outset of the study, participants were asked to read an introductory text describing a scenario they were going to be confronted with during the study. Participants were told that Franck, a 27-year-old start up manager, decided to summon for separate meetings the two subordinates (Julie and Marie) working with him by email because they showed a decrease in performance over the past few weeks. We chose the two subordinates to be women because the literature has shown that women are more likely to be associated with low status and lower hierarchical positions than men (Rudman & Kilianski, 2000). Moreover, because characteristics of successful managers are more associated with masculine traits than

with feminine traits (i.e., "think manager - think male" stereotype; Schein, 1973, 1975; Schein, Mueller, Lituchy, & Liu, 1996), we chose the manager to be a man.

After having read the introductory text, we informed participants that they were going to watch part of the two meetings between the manager and each of the subordinates (one video clip per meeting). Before each video clip, participants read the answer sent by the subordinate in response to the manager's summon email. We used these answers to manipulate the information about the preferred leadership style of the subordinate (described in more detail below). Given that this was an online study, after each video, participants were asked whether they encountered any technical problems while watching the videos.

Finally, after having watched both videos, participants assessed how competent they perceived the manager to be and how much they would be satisfied with such a manager. Then, they answered a manipulation check question (see below) and were asked whether they knew the person playing the role of the manager in the videos. To finish, they also answered some socio-demographic questions (e.g., sex, age, and ethnicity).

Material.

Videos. We created 2 video clips in which we manipulated the leadership style expressed by the manager while giving his speech. The two speeches were of the same length and the content was identical but phrased in a participative or in a directive style. For example, in the video clip in which the manager expressed directive leadership, he said "I have estimated the time that is necessary for this task and I ask you to dedicate at least three hours per day for prospecting new clients", while he said "You should therefore try to find a solution to better manage your workdays and make sure you spend time looking for new clients" in the video clip in which he expressed participative leadership. The manager always expressed more participative leadership when talking with Julie and more directive leadership when talking to Marie but the order in which the participants saw the two videos was

counterbalanced across participants. In both video clips, only the manager was videotaped while he was talking without interruption for 2 min (the subordinates were not visible or audible in both videos). The environment in which the manager was videotaped was the same in both videos and we ensured that the angle of view for both videos was identical.

A priori manipulation check. To ensure that the manager was perceived as expressing different leadership styles across the two videos, we conducted an a priori manipulation check using a different sample of participants from those who participated in Study 1. Seventy-one participants from the participant pool at our institution took part in this manipulation check and participated in a lottery enabling them to win up to an equivalent of 100 US\$. In this manipulation check, participants watched one of the two video clips we created (random assignment). Then they answered 4 items on a 5-point Likert scale ranging from 1 (*totally disagree*) to 5 (*totally agree*) assessing how directive the manager was perceived to be in the video. Sample items were “He is a manager who gives precise instructions to his subordinate” or “He is a manager who included his subordinate in decision making” (reversed item). The reliability between the 4 items was good (Cronbach Alpha = .68). An independent-samples *t*-test was conducted and results show that our manipulation worked: The manager was perceived as expressing significantly more directive leadership in the video in which he was supposed to express more directive leadership ($M = 4.01, SD = 0.53$) than in the video in which he was supposed to express more participative leadership ($M = 2.97, SD = 0.61$), $t(69) = 7.63, p < .001$.

Experimental manipulation. As mentioned previously, participants read the emails sent by the subordinates in response to the manager’s summon email before watching each video clip. The subordinates used these emails to inform the manager when they would be free for the meeting. In addition, we manipulated whether these emails communicated information about the leadership style preferred by each of the subordinates.

In the “*information available*” condition, the subordinates not only informed the manager about when they were free for the meeting, they also gave potential explanations as to why they underperformed in the past weeks. Participants read that one of the subordinates had the impression that she did not have enough freedom and autonomy and that she would appreciate more leeway in her work to indicate that this subordinate works best under a participative leadership style. Participants read that the other subordinate had the impression that she did not have enough support and instructions and that she would appreciate more guidance in her tasks, indicating that she works best under a more directive leadership style. Note that the manager’s leadership style in the videos was matched with the subordinate’s preference; the subordinate who prefers a directive leadership style was addressed in a directive way by the manager and the subordinate who prefers a participative leadership style was addressed in a participative way. Participants were therefore able to understand that the manager changed his leadership style to match his subordinates’ preferences.

In the “*information not available*” condition, no information about the leadership style preferred by each subordinate was communicated. In this condition, the answers sent by the two subordinates only included information about when they were free for the meeting. In this experimental condition, participants could therefore only see that the manager was changing his leadership style for no apparent reason.

Measures.

Control questions. Because this was an online study, we included two control questions to ensure that the participants were paying attention throughout the course of the study. After participants read the description of the scenario at the beginning of the study, they were asked which one of the 5 following assertions was wrong about the scenario: “Before each video clip, you will see the answers that Julie or Marie sent to Franck” (correct), “Julie and Marie contact fewer potential new customers than before” (correct), “Julie and Marie are getting a

pay raise” (incorrect), “Julie and Marie maintain the customer database with less attendance than before” (correct), and “Franck wants to make an appointment with Julie and Marie next week” (correct). Towards the end of the study, participants were asked which one of the 4 following topics was not covered by Franck in the video: “The way Marie and Julie manage their customer databases” (covered), “The response to emails that is not fast enough from Julie and Marie” (uncovered), “The call quotas to be made per week that are no longer reached by Julie and Marie” (covered), and “The implementation of a new offer reserved for the student population” (covered). These control questions were very easy to answer so a wrong answer indicated that the participant was not paying attention during the study. Nine out of 161 participants incorrectly answered at least one of these control questions and were eliminated from the dataset. In addition, we also asked whether participants had technical issues while watching the videos. Fifteen participants reported having problems while watching at least one of the two videos and we eliminated them from the dataset. As stated above, all the control questions led us to eliminate data from 24 participants.

Manager evaluation. Participants evaluated the manager on two dimensions: expected satisfaction with the manager and perceived competence of the manager. Both of these outcomes were assessed with items using a 5-point Likert scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). To assess expected satisfaction with the manager, participants indicated to what extent they agreed with the following statements: “I would be satisfied to have a manager like Franck” and “Franck is a person I would like to have as manager”. The correlation between the two items was .88 so we decided to average them. Perceived competence of the manager was measured with the following item: “Franck is competent as a manager”.

Manipulation checks.

Perceived manager's behavioral changes. To ensure that the manager's behavioral changes between the two videos were perceived by the participants, we asked them to what extent they agreed with the following statement at the end of the survey: "Franck changed his leadership style between the two videos" on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*totally*). A one-sample *t*-test against 3 was conducted and the results showed that participants indeed perceived that the manager expressed different leadership styles in the two videos ($M = 4.04$, $SD = 1.13$), $t(136) = 10.76$, $p < .001$. Moreover, there was no significant difference in terms of perceived manager's behavioral changes between the participants who had the information about the subordinates' preferences ($M = 3.87$, $SD = 1.21$) and those who did not have any information about the subordinates' preferences ($M = 4.20$, $SD = 1.02$), $t(135) = 1.61$, $p = .082$. These results show that whatever the information they had about the subordinates, participants perceived the manager as changing his leadership style from one subordinate to the other.

Perceived subordinates' preferences. To check whether participants in the "information available" condition were able to identify the leadership style preferred by each subordinate, we used 4 items on a 5-point Likert scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). Sample items are "Julie/Marie prefers a superior who gives her precise instructions" and "Julie/Marie prefers a superior who includes her in decision-making" (reverse item). Participants answered these 4 items for both subordinates respectively and the reliabilities between the items were good for both subordinates. Cronbach alphas were .78 for the subordinate preferring a directive leadership style and .81 for the one preferring a participative leadership style. The higher the score, the more the subordinate was perceived as preferring a more directive leadership style, and the lower the score, the more the subordinate was perceived as preferring a more participative leadership style.

We conducted a paired-samples *t*-test to test whether participants in the “*information available*” condition accurately perceived the preferred leadership style of the two subordinates. As expected, the subordinate who preferred a directive leadership style was perceived as preferring a more directive leadership style ($M = 4.28$, $SD = 0.51$) than the subordinate who preferred a participative leadership style ($M = 1.51$, $SD = 0.42$); $t(67) = -27.45$, $p < .001$. These results suggest that the manipulation worked and that the emails written by the two subordinates in the “*information available*” condition communicated differences regarding their preferred leadership style.

Results

Perceived competence. We tested whether participants who did not have any information about the subordinates’ preferences assessed the manager as less competent than those who had information about the subordinates’ preferences. We conducted an independent-samples *t*-test and results showed that participants who did not have information about the subordinates’ preferences assessed the manager as less competent ($M = 3.72$, $SD = 0.87$) than participants who had information ($M = 4.03$, $SD = 0.86$), $t(135) = 2.06$, $p = .042$.

Expected satisfaction. We also conducted an independent-samples *t*-test to test whether participants who did not have any information about the subordinates’ preferences expected to be less satisfied with the manager than those who had information about the subordinates’ preferences. Participants who did not know about the subordinates’ preferences expected to be less satisfied with the manager ($M = 3.41$, $SD = 0.89$) than participants who had that information ($M = 3.83$, $SD = 0.97$), $t(135) = 2.67$, $p = .009$.

Discussion Study 1

The goal of Study 1 was to investigate how third parties evaluate changes in a manager’s behavior when interacting with different subordinates and whether justifications for these behavioral changes affect how positively managers are perceived. Our assumption

was that changes in a manager's interpersonal behavior would be perceived more positively when the behavioral changes seem justified in the eyes of an observer (i.e., when the observer knows the needs or preferences for their superior's leadership style) than when change is observed but no frame of reference about whether this change is good or bad for the interaction partner is available. Results from Study 1 support this assumption. Participants who did not have any information about the subordinates' preferences expected to be less satisfied with the manager and evaluated the manager as less competent than participants who knew which leadership style was preferred by each subordinate and saw that the manager was changing his leadership style accordingly. In the "*information not available*" condition, the perceiver could not infer whether the subordinates would like (or not) the leadership expressed because no information about the subordinates' preferences was communicated. In the "*information available*" condition, participants were able to make an inference about the subordinates' potential satisfaction (100% match of the leader's style with the needs and preferences of the subordinates) whereas this was not possible in the "*information not available*" condition.

Study 1 showed, as predicted, that the same changes in a manager's interpersonal behavior can be perceived more or less positively depending on the information third parties have at their disposal. When third parties lack information and see managers change their interpersonal behavior without any apparent reason, they have a more negative reaction to it. In this situation, third parties may perceive a manager's behavioral inconsistency as an indication of unfair treatment towards their different subordinates (Barrett-Howard & Tyler, 1986; Leventhal, 1980). This perceived unfairness might then lead observers to evaluate managers more negatively (Tyler & Lind, 1992). However, when managers change their interpersonal behavior among different subordinates and third parties can see that it is in accordance to what the different subordinates need or prefer, the perception becomes more

positive. In this situation, the behavioral inconsistency shown by managers is most likely to be seen as a manifestation of individualized consideration.

In sum, Study 1 enabled us to show that changes in managers' interpersonal behavior across different subordinates are perceived more positively when it is clear that these changes are justified by the subordinates' individual needs or preferences. These results therefore highlighted that third parties (e.g., colleagues, team members, or superiors) must know and understand the reasons why managers sometimes behave differently depending on the subordinates with whom they interact. Managers, who are confronted with subordinates having different preferences or needs, should therefore communicate explicitly the reasons why they don't always use the same leadership style with all stakeholders (e.g., other team members). Our results show that being transparent about why they change their interpersonal behavior between different subordinates is essential for managers if they want to show individualized consideration without suffering from negative personal consequences when having subordinates with different preferences or needs.

Study 2

We argue that behavioral adaptability, which is the ability to flexibly adapt one's interpersonal behavior according to each specific interaction partner (Schmid Mast & Hall, 2018), is a prerequisite for leaders in order to show individualized consideration when they have subordinates with different preferences or needs. Indeed, leaders will not be able to express individualized consideration to subordinates having different preferences or needs if they are not able to change their interpersonal behavior accordingly. Behavioral adaptability should therefore be a valued social skill for managers and Study 1 showed that managers who are able to change their interpersonal behavior according to their subordinates' individual differences in a transparent way are perceived particularly positively, as the literature on the positive effects of individualized consideration would suggest.

However, in Study 1 it is unclear whether it was the fact that the manager changed his behavior from one subordinate to the next or the fact that the leader's style matched the subordinates' preferences perfectly that was responsible for the good evaluation of the manager in the "*information available*" condition. What would happen if the manager matched the preferences of the subordinates without changing his style? In Study 2, we set out to test whether changing (or not) one's behavior as a manager leads to more positive evaluations while holding the degree of match between the leader's style and the subordinates' preferences constant.

If managers can satisfy their subordinates' individual preferences or needs without having to change their interpersonal behavior, this may simply be due to luck and to the fact that their subordinates prefer the leadership style the managers naturally express. However, if managers have to change their interpersonal behavior to match the needs of their subordinates and succeed in doing so, it may communicate to third parties that the managers are motivated in taking into account their subordinates' individual differences and to show individualized consideration. This perceived intentionality should lead managers who change their behavior to meet their subordinates' individual differences to be perceived more positively than those who can meet their subordinates' individual differences without having to change their behavior. Accordingly, we postulate the following hypothesis:

Hypothesis 1: Managers who show the leadership style that is preferred by each of their subordinates will be evaluated more positively when they have to change their interpersonal behavior among subordinates (e.g., when supervising subordinates with different leadership style preferences) as opposed to when they can do it without changing their interpersonal behavior (e.g., when supervising subordinates with the same leadership style preference).

To test the aforementioned hypothesis, we first manipulated the preferences of the two subordinates; either they preferred different leadership styles or both preferred the same leadership styles (either both preferring a participative or a directive leadership style). In addition, we also manipulated whether the manager changed his leadership style between the subordinates; either he expressed different leadership styles to the two subordinates (as in Study 1), or the same leadership style to both subordinates (either by being participative or directive with both). These experimental manipulations lead us to have 9 experimental conditions that are explained in more detail in the method section (see also *Figure 1*). The comparison of the experimental condition 1 with 5 and with 9 (*Figure 1*) enabled us to test Hypothesis 1.

In addition, these experimental manipulations enabled us to test whether managers are perceived more negatively when they change their interpersonal behavior, even if they are not supposed to do it (inappropriate behavioral inconsistency; experimental conditions 4 and 7 – see *Figure 1*), than when they keep the same leadership style, but are supposed to change it (inappropriate behavioral consistency; experimental conditions 2 and 3 – see *Figure 1*). Because changing behavior between two subordinates, while knowing that both of them have the same preferences, could communicate the idea that the manager is deliberately not showing the leadership style preferred by one of the subordinates, we therefore postulate the following hypothesis:

Hypothesis 2: Managers expressing inappropriate behavioral inconsistency will be perceived more negatively than managers expressing inappropriate behavioral consistency.

Method

Participants. Initially, we recruited 921 participants from the participant pool at our institution. Being an online study, we decided to exclude 119 participants because they failed

to answer control questions correctly or because of technical issues (explained in more detail below). The final number of participants used for this study was 802 (445 women, 357 men; $M_{\text{age}} = 20.58$, $SD_{\text{age}} = 2.68$). All participants were students (undergraduate or graduate, majoring in different domains) and the majority were Caucasian (74.3%). The participants who completed the study and who correctly answered the control questions participated in a lottery enabling them to win up to an equivalent of 100 US\$.

Procedure. Participants were confronted with the same scenario as in Study 1. We used the same two video clips as in Study 1, but created two additional video clips for the purpose of this study (more details below). Before watching each video clip, participants read a description of the subordinate the manager was going to talk to. We used these descriptions to manipulate the information about the preferred leadership style of each subordinate (more details below)¹⁰. After each video, participants reported whether they had technical issues while watching the video and answered questions about the manager (perceived competence and expected satisfaction with the manager). They were also asked manipulation check questions (see more details below) to ensure that our experimental manipulations worked. Participants then reported whether they knew the person playing the manager in the videos and some socio-demographic questions (e.g., sex, age, and ethnicity).

Experimental manipulations

Experimental design. This study was a 3 (change in leadership style: change in leadership style vs. only directive vs. only participative) by 3 (subordinates' preferences: preferences for different leadership styles vs. both preferring a participative leadership style vs. both preferring a directive leadership style) between subject experimental design. Note that when the leader changed his leadership style, this always happened according to the

¹⁰ Contrary to Study 1, all the participants from Study 2 received the information about the preferred leadership style of each subordinate.

preferences of the two subordinates. Participants were randomly assigned to one of the 9 experimental conditions (*Figure 1*).

Change in leadership style. Because we had two experimental conditions with the manager expressing the same leadership style to both subordinates, we had to create two additional video clips to complement those we used in Study 1 (1 additional version of a participative speech and 1 additional version of a directive speech). The two additional speeches were of the same length as those used in Study 1 and the content was identical. The manager was the same person as in Study 1 and the setting in which the manager was videotaped, the angle of filming, and the clothes the manager was wearing for these two additional video clips were the same as those used for Study 1.

To create an additional participative and directive video clip, we only slightly changed the wording in parts of the speeches. For instance, in the video clip in which the manager expressed a directive leadership style he said in one video “I want you to focus on student cities: *Amsterdam, Barcelona, and Berlin* as a priority”, while he said in the other one “I want you to focus on student cities: *Paris, Munich, and Edinburg* as a priority”. Similarly, in the video clip in which the manager expressed a participative leadership style he said in one video “Regarding the choice of the hostel, it is your call, *you have my green light*”, while he said in the other video “Regarding the choice of the hostel, it is your call, *I trust you completely*”.

Subordinates’ preferences. We manipulated the leadership style preferred by the subordinates by informing participants before each video clip that the manager (Franck) knew which leadership style was preferred by each subordinate. A preference for a directive leadership style was conveyed in the following way: *Because Franck has been working with Julie/Marie for a year, he knows that she prefers when she is guided and when she has specific instructions on how to do her work and when decisions are imposed on her.* A preference for a participative leadership style was conveyed the following way: *Because*

Franck has been working with Julie/Marie for a year, he knows that she prefers when she has more autonomy and freedom to organize her work and when she is included in decision-making. The two subordinates were described either as preferring 1) *different leadership styles*, 2) *both a participative leadership style*, or 3) *both a directive leadership style*. For the latter two cases, the same description for the subordinate's leadership preference was used for both subordinates.

Measures.

Control questions. We included the same control questions as in Study 1 to ensure that participants were paying attention throughout the study. Participants who answered one of the control questions incorrectly were eliminated from the dataset ($N = 60$). In addition, as in Study 1 we also asked whether participants had technical issues while watching the videos. All participants who reported having problems while watching the videos were omitted from the dataset ($N = 52$). Finally, participants who indicated knowing the actor playing the role of the manager were also eliminated ($N = 7$). As stated above, these control questions led us to eliminate data from 119 participants.

Manager evaluation. As in Study 1, participants evaluated the manager on two dimensions: expected satisfaction with the manager and perceived competence of the manager. We used the same items as in Study 1 (1 item for perceived competence and 2 items for expected satisfaction) on a 5-point Likert scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). The correlation between the two items for expected satisfaction was .83.

Manipulation checks.

Perceived changes in leadership style. To assess perceived manager's change in leadership style, we used the following item on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*totally*): "Franck changed his leadership style between the two videos" (same item that we used to assess perceived manager's behavioral changes in Study 1). A one-way

ANOVA was conducted to test the effect of changes in leadership style on perceived manager's changes in leadership style and the effect was statistically significant, $F(2, 799) = 488.33, p < .001$. Planned contrast revealed that the manager was perceived as changing his leadership style significantly more when he changed his leadership style ($M = 4.37, SD = 0.97$) than when he expressed only a participative leadership style ($M = 1.77, SD = 1.15$), $t_{\text{contrast}}(799) = 28.00, p < .001$, or only a directive leadership style ($M = 1.91, SD = 1.12$), $t_{\text{contrast}}(799) = 25.96, p < .001$. Moreover, there was no significant difference in perceived changes in leadership style between the manager expressing only a participative leadership or only a directive leadership style, $t_{\text{contrast}}(799) = 1.45, p = .147$. These analyses confirmed that our changes in the leadership style experimental manipulation worked.

Perceived subordinates' preferences. To assess perceived subordinates' preferences we used 4 items on a 5-point Likert scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). Sample items are "Julie/Marie prefers a superior who gives her precise instructions" and "Julie/Marie prefers a superior who includes her in decision-making" (reverse item). Participants answered the 4 items for each subordinate respectively and the reliabilities between the items were excellent for both subordinates. The Cronbach alphas were .96 for Marie and .95 for Julie. The higher the score, the more the subordinate was perceived as preferring a more directive leadership style, and the lower the score, the more the subordinate was perceived as preferring a more participative leadership style.

To ensure that the participants correctly perceived the difference between the subordinates in the experimental condition in which they were described as preferring different leadership styles we conducted a paired-samples *t*-test. As expected, the subordinate who was described as preferring a directive leadership style was perceived as preferring a more directive leadership style ($M = 4.58, SD = 0.53$) than the subordinate who was described as preferring a participative leadership style ($M = 1.32, SD = 0.45$); $t(267) = -60.06, p < .001$.

We also tested whether the participants perceived any difference between the subordinates' preferences when both of them were described as preferring either a participative leadership style or a directive leadership style. As expected, there was no significant difference in terms of perceived subordinates' preferences between the two subordinates ($M_1 = 1.52$, $SD_1 = 0.63$; $M_2 = 1.46$, $SD_2 = 0.57$) when they were both described as preferring a participative leadership style, $t(262) = -1.51$, $p = .131$. Unexpectedly however, there was a significant difference in terms of perceived subordinates' preferences between the two subordinates ($M_1 = 4.35$, $SD_1 = 0.63$; $M_2 = 4.16$, $SD_2 = 0.87$) when they were both described as preferring a directive leadership style, $t(270) = -4.23$, $p < .001$ ¹¹.

Results

Two-way ANOVAs were conducted to compare the effect of changes in leadership style and subordinates' preferences on expected satisfaction with the manager and the perceived competence of the manager. For both of these outcomes, we tested 1) whether having to change leadership style to satisfy both subordinates' preferences led the manager to be perceived more positively than satisfying the preferences of both subordinates without having to change leadership style (Hypothesis 1), and 2) whether showing inappropriate behavioral inconsistency was perceived more negatively than showing inappropriate behavioral consistency (Hypothesis 2).

Perceived competence. There was a marginally significant main effect of changes in leadership style, $F(2, 793) = 2.84$, $p = .059$, but no significant main effect of subordinates' preferences, $F(2, 793) = 1.72$, $p = .180$ on perceived competence. Moreover, there was a significant two-way interaction effect between changes in leadership style and subordinates'

¹¹ Although participants perceived a difference between the two subordinates when they were both described as preferring a directive leadership style, we believe that this does not compromise the validity of our results in Study 2 because the participants agreed with the fact that both subordinates preferred a directive leadership style. Indeed, the average for the perceived subordinate preference measure was above 4 out of 5 for both subordinates.

preferences, $F(4, 793) = 8.53, p < .001$. To better understand the results of the significant two-way interaction effect, we conducted planned contrast analyses. Results of these analyses are presented in *Figure 2*.

First, we compared the evaluation of participants in the experimental condition 1 to the perception of the participants in the experimental conditions 5 and 9 (*Figure 1*) to test whether the manager was perceived as more competent when he had to change his leadership style to satisfy both subordinates' preferences as opposed to when he could do so without having to change his leadership style. Results showed that the manager was not perceived as significantly more competent when he had to change his leadership style to match both subordinates' preferences ($M = 4.20, SD = 0.77$) than when he expressed only a directive leadership style with both of the subordinates preferring a directive leadership style ($M = 4.06, SD = 0.84$), $t_{\text{contrast}(793)} = 1.19, p = .235$ or when he expressed only a participative leadership style with both subordinates preferring a participative leadership style ($M = 4.21, SD = 0.75$), $t_{\text{contrast}(793)} = -0.04, p = .970$.

Second, we compared the evaluation of the participants in the experimental conditions 4 and 7 together against the evaluation of the participants in the experimental conditions 2 and 3 together (*Figure 1*) to test whether the manager was perceived as less competent when showing inappropriate behavioral inconsistency than when showing inappropriate behavioral consistency. Results showed that there was no significant difference in how competent the manager was perceived between when he expressed inappropriate behavioral inconsistency (either directive or participative) ($M = 3.78, SD = 0.89$) and when he expressed inappropriate behavioral consistency ($M = 3.80, SD = 0.81$), $t_{\text{contrast}(793)} = 0.310, p = .757$.

Expected satisfaction with the manager. There was a significant main effect of change in leadership style, $F(2, 793) = 38.63, p < .001$, but no significant main effect of subordinates' preferences, $F(2, 793) = 2.04, p = .131$ on expected satisfaction. Moreover,

there was a significant two-way interaction effect between change in leadership style and subordinates' preferences, $F(4, 793) = 6.98, p < .001$. To better understand the results for the significant two-way interaction between change in leadership style and subordinates' preferences, we conducted planned contrast analyses. Results of these analyses are presented in *Figure 3*.

First, we compared the evaluation of participants in experimental condition 1 to the perception of the participants in experimental conditions 5 and 9 (*Figure 1*) to test whether participants expected to be more satisfied with the manager when he had to change his leadership style to satisfy both subordinates' preferences than when he could satisfy the preferences of both subordinates without having to change his leadership style. Results showed that participants did not expect to be more satisfied with the manager when he had to change his leadership style ($M = 3.92, SD = 0.98$) than when he expressed only a directive leadership style with both subordinates preferring a directive leadership style ($M = 3.70, SD = 0.89$), $t_{\text{contrast}}(793) = 1.54, p = .126$. However, participants expected to be significantly less satisfied with the manager when he had to change his leadership style to match both subordinates' preferences than when he expressed only a participative leadership style with both subordinates preferring a participative leadership style ($M = 4.28, SD = 0.74$), $t_{\text{contrast}}(793) = -2.80, p = .006$.

Second, we compared the evaluation of the participants in the experimental conditions 4 and 7 together against the evaluation of the participants in the experimental conditions 2 and 3 together (*Figure 1*) to test whether participants expected to be less satisfied with the manager when showing inappropriate behavioral inconsistency than when showing inappropriate behavioral consistency. Results supported our assumption in that participants expected to be significantly less satisfied with the manager when he expressed inappropriate behavioral

inconsistency ($M = 3.40$, $SD = 0.92$) than when he expressed inappropriate behavioral consistency ($M = 3.81$, $SD = 0.83$), $t_{\text{contrast}}(793) = 4.44$, $p < .001$.

Discussion Study 2

In Study 2, we argued that if managers have to change their interpersonal behavior to match the needs of their subordinates and they succeed in doing so, it would communicate to third parties that the managers are motivated to take into account their subordinates' individual differences and that they intentionally show individualized consideration. We therefore expected third parties to evaluate managers satisfying the preferences of their different subordinates more positively when they have to change their interpersonal behavior to do so (e.g., when subordinates have different preferences) than when they can do it without having to adapt their interpersonal behavior (e.g., when subordinates have the same preferences). Unexpectedly, results showed that participants did not expect to be more or less satisfied with the manager and did not perceive him differently in terms of competence either way. Therefore, as long as the preferences and the needs of all the subordinates are fulfilled, being able to change interpersonal behavior does not seem to be an ability that provides added value in judging managers' skills. For third parties, what seems important is the managers' ability to show the interpersonal behavior expected by their subordinates, regardless of whether or not the managers need to change their behavior in doing so. Moreover, that people expected to be more satisfied with the manager in the experimental condition 9 than in the experimental condition 1 (opposite of Hypothesis 1) can be explained by the valence of the behavior shown by the manager, with participative behavior being most likely evaluated more positively in terms of expected satisfaction. The unexpected result may therefore be due to the fact that participants in experimental condition 9 saw the manager expressing participative behavior twice whereas those in experimental condition 1 only saw the manager expressing participative behavior once.

Additionally Study 2 enabled us to test whether the manager was perceived more negatively when he changed his behavior without there being a need to (inappropriate behavioral inconsistency), compared to when he did not change the behavior when there was a need to change his behavior (inappropriate behavioral consistency). Results showed different patterns of results for perceived competence and expected satisfaction with the manager. While there was no difference in terms of perceived competence, participants expected to be significantly less satisfied with the manager when he expressed inappropriate behavioral inconsistency than when he expressed inappropriate behavioral consistency (according to Hypothesis 2). This different pattern of results for perceived competence and expected satisfaction with respect to Hypothesis 2 might be explained by the fact that participants based their evaluation on different criteria for these two dimensions. It may be possible that participants assessed the competence of the manager based on whether he succeeded to satisfy both subordinates' preferences. To the extent that only one subordinate over the two received the expected leadership style both when the manager expressed inappropriate behavioral inconsistency and inappropriate behavioral consistency, the manager was therefore perceived similarly in terms of perceived competence. However, when the manager expressed inappropriate behavioral inconsistency, it could have communicated the impression that he was deliberately not showing the leadership style preferred by one of the subordinates. This inappropriate behavioral inconsistency between the two subordinates could have been perceived by the participants as a subtle form of discrimination and impacted the participants' perception of the manager at a more interpersonal level, explaining why participants expected to be less satisfied with the manager.

General Discussion

Past research in the leadership field emphasized the importance of individualized consideration for managers in order to have satisfied subordinates (Podsakoff et al., 1990).

However, because not all subordinates have the same expectations about how managers should behave (Ehrhart & Klein, 2001; Gerstner & Day, 1994; Keller, 1999; Moss & Ngu, 2006; Vecchio & Boatwright, 2002), managers who want to express individualized consideration may have to show inconsistent behavior (e.g., by expressing a different leadership style) when interacting with different subordinates. However, past research has shown that managers who express inconsistent behavior are perceived more negatively (De Cremer, 2003; Johnson et al., 2012; Lam et al., 2015). As a consequence, we argue that managers face a dilemma when having subordinates with different expectations: either they show individualized consideration to match their subordinates' expectations but appear inconsistent in the eyes of third parties, or they behave in the same way with all of their subordinates without taking into account their subordinates' individual expectations to appear consistent in the eyes of third parties running the risk of having less satisfied subordinates. In two studies, we investigate under which conditions expressing inconsistent interpersonal behavior towards different subordinates is perceived more or less negatively.

Study 1 demonstrates that being transparent is essential for managers if they want to show individualized consideration towards subordinates with different preferences or needs. Within an organization, people should therefore know and understand the reasons why their managers sometimes behave differently with different subordinates. In addition, Study 2 shows that managers' behavioral adaptability does not seem to be an important skill for third parties when evaluating managers. From a third parties perspective, what seems more important in evaluating managers, is their ability to express individualized consideration towards their subordinates, meaning showing the leadership style that matches the preferences of the subordinates, regardless of whether the managers need to change their leadership style to do so. Finally, altogether, Studies 1 and 2 show that managers' unjustified behavioral inconsistency could jeopardize how third parties evaluate them. Indeed, when managers are

expressing unjustified behavioral inconsistency (e.g., behavioral inconsistency without any apparent reason – Study 1 – or inappropriate behavioral inconsistency – Study 2), it may result in them being evaluated more negatively. Changes in interpersonal behavior should therefore always be justified in the eyes of third parties to prevent individualized consideration from becoming a double-edged sword for managers.

The two studies we conducted are not without limitations. First, the situation in which the participants found themselves was somewhat artificial (e.g., fictional case with videos of a manager interacting with two subordinates) and the role of the participants was not defined in both studies. Participants were just told that they were going to watch videos of a manager interacting with two subordinates during separate meetings. Therefore, participants were external to the situation and they were not particularly personally involved in the scenario. This could limit the generalizability of our results in that the evaluation of the managers' behavioral changes may vary depending on the third parties' involvement (e.g., the participants in our case). For instance, it may be possible that participants from our studies might have been more tolerant with the manager expressing behavioral inconsistency without justifications because they knew that they would not be impacted personally by the manager's behavioral inconsistency. Therefore, to generalize our results, future research should try to replicate them in a more naturalistic setting in which real managers would be evaluated by third parties while being part of an organization. Moreover, it would also be interesting to manipulate third parties' hierarchical position in relation to the manager to test whether managers' behavioral changes and justification for those changes are evaluated differently depending on the third parties' role within the organization (e.g., superior of the manager or colleagues of the subordinates).

Moreover, one could argue that expressing individualized consideration in a transparent way by explicitly saying the reasons why the behavioral changes between two subordinates

occurred may not always be relevant. Indeed, there might be some situation in which the subordinates may not necessarily call for transparency. For example, if a university professor supervises two doctoral students and one of them is smarter than the other, it may be unwise for the professor to explain them in transparent way why he or she is giving to one of them more autonomy. Therefore, we suggest that relational transparency should be developed in more subtle way by having managerial practices allowing subordinates to express their needs and preferences freely. For instance, managers may organize meetings with their entire team during which all subordinates could explicitly express their expectations in terms of supervision. These meetings would enable all team members to realize that there are individual differences in terms of preferred supervision style, justifying why their manager sometimes behave differently with each of them. Future research should therefore investigate in which situations transparency may be a relevant strategy when expressing behavioral inconsistency and what managerial practices could be adopted to develop a work climate allowing managers to show individualized consideration to their subordinates without being perceived negatively when it leads managers to behave differently with some of them.

Second, the manager was always a man and future research should investigate whether people perceive changes in managers' interpersonal behavior differently depending on the sex of the managers. This is a relevant question to address because characteristics of successful managers are more associated with masculine traits than with feminine traits (Schein, 1973, 1975; Schein et al., 1996). Therefore, because being relationship-oriented is more expected from women than from men (Eagly & Wood, 1999), female managers showing individualized consideration in a transparent way might highlight their feminine attributes which might lead third parties to evaluate them more negatively as managers.

Finally, future research should also investigate the processes through which justifications for managers' behavioral changes impact how third parties evaluate managers.

Indeed, in our studies we did not measure how fair the manager was perceived to behave with the two subordinates and we argue that perception of fairness might mediate the link between justifications for managers' behavioral changes and how third parties evaluate managers. Indeed, behavioral consistency impacts whether a procedure is perceived as fair or not (Barrett-Howard & Tyler, 1986; Leventhal, 1980) and perception of fairness is important when judging the legitimacy of an authority (Tyler & Lind, 1992). Managers who express behavioral inconsistency without justifications may therefore be perceived more negatively because they would appear as behaving in an unfair way towards their subordinates. Cho et Dansereau (2010) showed that managers' individualized consideration is related to managers' interpersonal justice. Managers who are perceived by their subordinates as expressing individualized consideration are therefore perceived as treating their subordinates in a more respectful and polite way. However, in the study conducted by Cho et Dansereau (2010), the subordinates evaluated both the extent to which their manager expressed individualized consideration and the extent to which their manager expressed interpersonal justice. But what would happen when taking a third party perspective as the one we took in the context of our studies? Would managers who behave inconsistently across different subordinates in order to show individualized consideration be perceived as expressing more interpersonal justice than managers who behave in the same way with all of their subordinates? In line with the results we found in this paper, we argue that this would be the case only if the behavioral changes are justified in the eyes of third parties. We suggest that future research should set out to test whether perception of interpersonal justice mediate the link between justification for the managers' behavioral changes and how managers are perceived by third parties.

Despite these limitations, we believe that our results highlight the importance of further investigating how changes in managers' interpersonal behavior are perceived and open avenue for future research. More precisely, investigating when changes in managers'

interpersonal behavior are perceived as being justified from the point of view of third parties is essential to give practical recommendations to managers so that they can take into account their subordinates' individual preferences in their team management and therefore show individualized consideration, without suffering from negative personal consequences.

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		Subordinates' preferences		
		D/P	D/D	P/P
Leadership style	D/P	① $\frac{D/P}{D/P}$	② $\frac{D/D}{\Delta D/P}$	③ $\frac{P/P}{\Delta D/P}$
	D/D	④ $\frac{D/P}{\blacktriangle D/D}$	⑤ $\frac{D/D}{D/D}$	⑥ $\frac{P/P}{D/D}$
	P/P	⑦ $\frac{D/P}{\blacktriangle P/P}$	⑧ $\frac{D/D}{P/P}$	⑨ $\frac{P/P}{P/P}$

100% match between subordinates' preferences and the leadership style expressed by the manager
 50% match between subordinates' preferences and the leadership style expressed by the manager
 0% match between subordinates' preferences and the leadership style expressed by the manager

Inappropriate behavioral inconsistency
 Inappropriate behavioral consistency

Figure 1. Description of the 9 experimental conditions of Study 2.

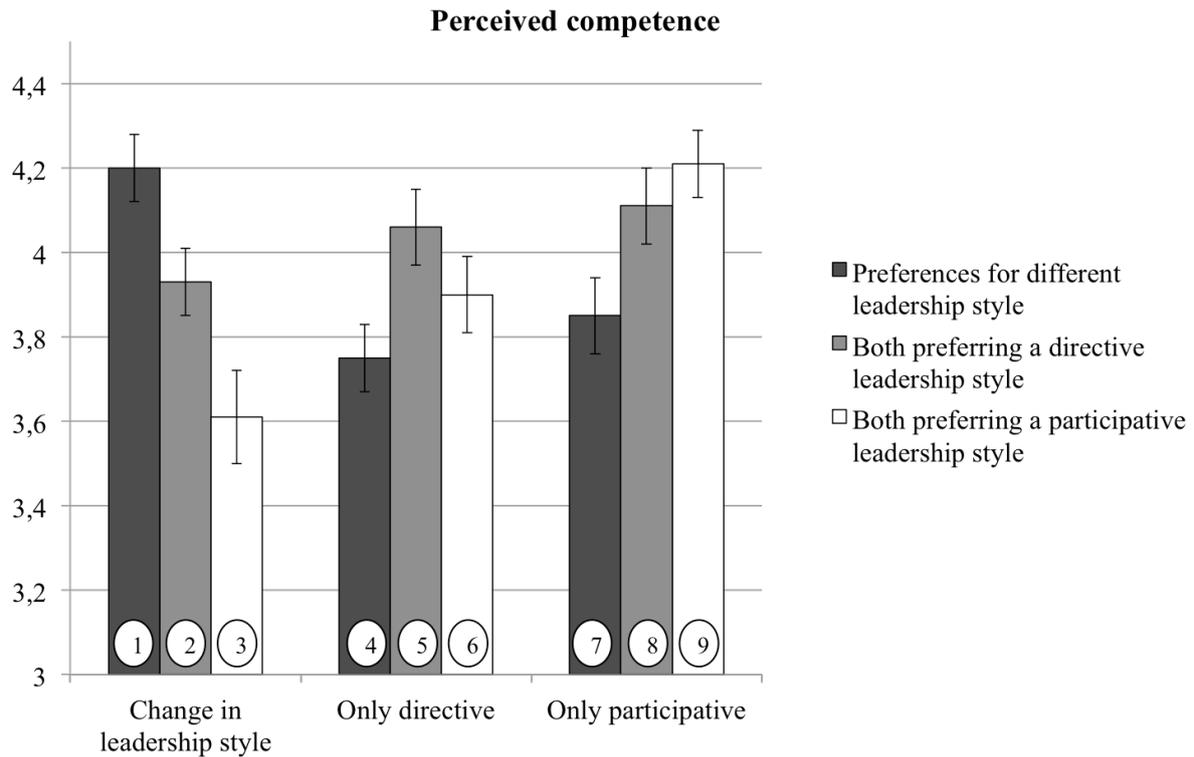


Figure 2. Perceived competence of the manager according to the experimental conditions. Standard errors are represented in the figure by the error bars attached to each column and each column corresponds to one of the 9 experimental conditions. To test Hypothesis 1, we compared the experimental condition 1 to the experimental conditions 5 and 9 separately. To test Hypothesis 2, we compared experimental conditions 4 and 7 together against experimental conditions 2 and 3 together.

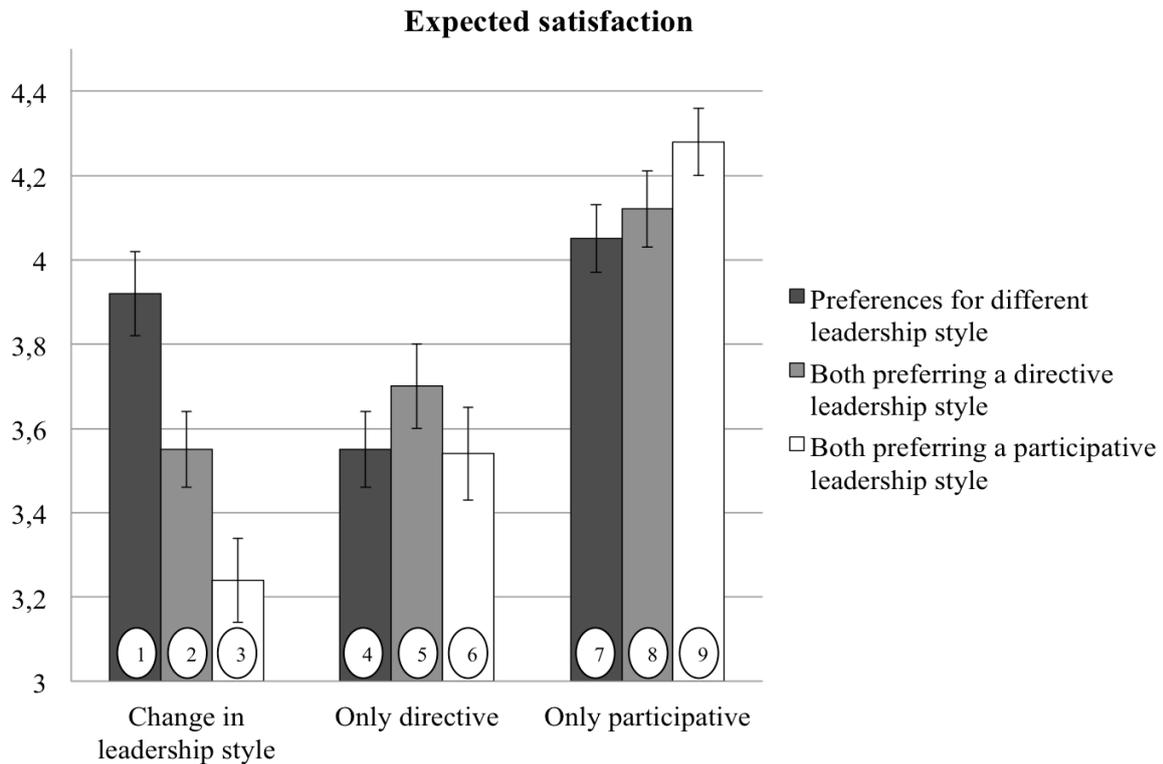


Figure 3. Expected satisfaction with the manager according to the experimental conditions. Standard errors are represented in the figure by the error bars attached to each column and each column corresponds to one of the 9 experimental conditions. To test Hypothesis 1, we compared the experimental condition 1 to the experimental conditions 5 and 9 separately. To test Hypothesis 2, we compared experimental conditions 4 and 7 together against experimental conditions 2 and 3 together.

