

# What does leadership do to the leader? Using a patternoriented approach to investigate the association of daily leadership profiles and daily leader well-being

Poetz, Lennart<sup>1</sup> & Volmer, Judith<sup>1</sup>

<sup>1</sup>Otto-Friedrich-Universität Bamberg

We hereby declare that the protocol has been submitted to an ethical review committee. Ethical approval has already been granted.

#### **Abstract**

Recent research on leadership acknowledged that leadership behavior is not only related to followers' but also to leaders' well-being. Additionally, previous findings suggest that leadership behaviors show day-to-day variation and that multiple leadership styles can be present within one leader at the same time. Therefore, adopting an actor-centric perspective and applying a pattern-oriented approach we build on existing research to shed light on the daily relationship of leadership profiles and leader well-being. We will rely on the full-range model of leadership and conservation of resources theory to investigate (1) if daily profiles of transformational, contingent reward, management-by-exception active, management-byexception passive, and laissez-faire leadership behaviors exist for leaders, (2) if profile membership is stable or dynamic across one week, and (3) if the leadership profiles are differentially related to leaders' daily thriving and time pressure, as well as their daily emotional exhaustion, positive affect, and negative affect. We propose that some leadership profiles can be both beneficial (i.e., associated with increased positive affect and decreased negative affect via enhanced thriving) and harmful (i.e., associated with increased emotional exhaustion via increased time pressure) for leaders' well-being at the same time. We will test our hypotheses in a daily diary study over five workdays (i.e., one typical working week) with two measurement points per day in a planned sample of 250 leaders and their followers. We will apply multilevel latent profile analysis to identify leadership profiles and perform BCH analysis to investigate the daily relationship of the leadership profiles and the outcomes.

Keywords: latent profile analysis, daily diary study, full-range model of leadership

# 1 Introduction

Research on the full range model of leadership (Avolio, 2011) has shown various links between transformational and transactional leadership and followers' performance, motivation, satisfaction, or well-being (Judge & Piccolo, 2004; Montano et al., 2017; G. Wang et al., 2011). In recent years, researchers adopted an actor-centric perspective and started to investigate the relationships between leadership behavior and leader outcomes (Arnold et al., 2015; Kaluza et al., 2020; Lanaj et al., 2016). For example, Kaluza et al.'s (2020) meta-analysis revealed that constructive leadership behaviors (especially transformational and participative leadership) were positively related to leader well-being, whereas destructive leadership behaviors (especially active destructive leadership) were negatively related to leader well-being. However, other recent studies show that constructive leadership, such as transformational leadership (Lin et al., 2019) or servant leadership (C. Liao et al., 2020) can under certain conditions also be negatively related to leader well-being due to resource depletion. Nevertheless, most of the research so far only focused on one or two leadership behaviors in isolation. However, this isolated perspective does not account for a typical, daily leadership routine as leaders usually apply several leadership behaviors to a different degree (Arnold et al., 2017; Doucet et al., 2015). For example, from a theoretical perspective, Bass and Riggio (2006) already stated a combination of transformational and transactional leadership to be the ideal leadership profile. Indeed, there is a research stream that accounts for the fact that several leadership behaviors can be represented in one leader at the same time (Doucet et al., 2015; Foti et al., 2012). This so-called pattern-oriented approach (i.e., latent profile analysis, LPA) considers "how patterns of personal attributes within leaders (e.g., behavioral styles) interact to predict leadership outcomes" (Arnold et al., 2017, p. 1038) and "seeks to identify different subgroups (i.e., clusters) of leaders who share a similar configuration, profile, or pattern of individual differences, such as values or behavioral styles, and then studies these different

cohorts with respect to various criteria of interest" (Arnold et al., 2017, p. 1038). Some studies have already investigated how these different leadership profiles relate to leadership outcomes (Doucet et al., 2015; Foti et al., 2012; Gavan O'Shea et al., 2009). However, these studies concentrated on follower-related leadership outcomes. An exception is a study by Arnold et al. (2017) who investigated the relationship between leadership profiles and leaders' burnout and perceived role demands. All these studies have in common that they investigated leadership as a rather stable construct. However, recent research (Kelemen et al., 2020; McClean et al., 2019) acknowledged that leadership behavior shows within-person fluctuation as "the ways in which leaders interact with their followers may differ from day to day or even within the day" (Kelemen et al., 2020, p. 1). Nevertheless, a combination of these different research streams has not been conducted so far. Indeed, until now we do not know in what way the interaction of different leadership styles within one person differs from day to day or varies across a week. Additionally, it remains unclear how the daily patterns of leadership styles are related to daily leader outcomes such as leader well-being.

By conducting a daily diary study over five consecutive working days with two measurement points per day, the study will first investigate if daily leadership profiles, that is, the theoretical meaningful combination of transformational, transactional, and laissez-faire leadership within one person, exist, second, if these profiles are dynamic (i.e., show day-to-day variation) or rather stable, and third, how these profiles of daily leadership behaviors are associated with same day leader well-being. In this way, the study will make several contributions. Our study adopts a within-person perspective and assesses leadership behavior and well-being as dynamic constructs that vary within individuals. Recent research shows that many constructs in applied psychology vary intraindividually to a large degree (N. P. Podsakoff et al., 2019), with proportions of within-person variance of around .50, ranging between around .40 (e.g., self-efficacy, satisfaction) to around .60 (e.g., sleep, justice). Taking a dynamic

perspective is also relevant when studying leadership (.47) and well-being (.47 for exhaustion; .53 for affect; all within-person proportions taken from N. P. Podsakoff et al., 2019). Both constructs are considered to be dynamic, which means they change over time and fluctuate within individuals (Kelemen et al., 2020; Sonnentag, 2015). Research showed that it is important to study leadership at the within-person level as this "can change and challenge preconceived relations in leadership" (Kelemen et al., 2020, p. 2). For example, research found that the size and even the direction of relationships can be different on the within-person than on the between-person level, as shown by Z. Liao et al. (2018). They demonstrated a positive link of leader abusive behavior and consideration and initiating structure on the day-level, whereas between-person level research would suggest a negative relationship. Findings like this show that relationships between variables can be different on different levels of analyses, therefore helping to complement the nomological network of leadership constructs (Kelemen et al., 2020). However, we move beyond existing within-person leadership research as we are not only focusing on one leadership style in isolation but on transformational, transactional (i.e., contingent reward, management-by-exception active and passive), and laissez-faire leadership in combination. Therefore, we will adopt a pattern-oriented approach to study the combination of these behaviors. In this way, we follow a recent call by Kelemen et al. (2020), who encouraged researchers to investigate how daily leader behaviors relate and coexist. As proposed by Kelemen et al. (2020), it is important to analyze the combination of different leadership behaviors within one leader and within one day "because it can extend understanding of leader behaviors that may be difficult to capture at a general level of analysis and can challenge how we understand leadership" (p. 15). More specifically, our daily leadership profiles approach enables us to study which different combinations of transformational, transactional, and laissez-faire behaviors exist within individuals and "whether these unique style patterns are idiosyncratic or whether these styles are consistent with theoretical expectations" (Arnold et al., 2017, p. 1039). With our daily pattern approach, we can move beyond Arnold et al.'s (2017) between-person study and answer unique research questions that are still to be answered. More specifically, we will investigate day-to-day changes in profile membership. Thereby, we are able to determine if leaders who belong to profile A (say, a profile high on transformational and contingent reward behaviors and low on passive behaviors) on day t also belong to profile A on day t + 1 or rather to profile B (say, a profile low on transformational and contingent reward behaviors and high on passive behaviors). Thereby, we can move the leadership literature forward to get a deeper insight into the stability or dynamic of leadership behaviors across a week. In this way, for example, we are able to determine if a leader demonstrates his or her "standard" leadership style combination throughout the week or rather can draw on different style combinations from day to day, for example, as a reaction to different work situations. In terms of profile stability, we will also assess if we can find the same leadership profiles every day or find different profiles on different days, which would speak for greater variability in the number of existing profiles. Questions like these are only able to be answered with a day-level approach. Thereby, this knowledge can help to enrich theory on and provide insights into leadership behaviors that cannot be reached and captured with traditional between-person and variable-centered approaches.

Furthermore, our within-person approach enables us to study the proximal links with important leadership outcomes, such as leaders' own well-being, which can help advance theory on leadership outcomes (Kelemen et al., 2020). More specifically, we will study how the daily interaction of different full-range leadership behaviors within leaders is related to their well-being. Therefore, we follow a recent research stream that adopts an actor-centered perspective and focuses on leader-related outcomes of leadership behavior (e.g., Kaluza et al., 2020). However, due to our daily pattern-oriented approach we extend on the one hand the existing between-person level leadership pattern research (e.g., Arnold et al., 2017; Doucet et al., 2015) and on the other hand the present daily within-person leadership research (e.g., Lanaj et al.,

2016; C. Liao et al., 2020), which mostly studied one single leadership style in isolation. Therefore, we take into account that full range leadership behaviors can coexist within one leader when examining how they relate to leader well-being. Our daily pattern-oriented approach will allow us to understand better how daily leadership style configurations are differentially related to daily leader well-being. Thereby, we address a different research question than LPA studies on the between-person level (e.g., Arnold et al., 2017). More specifically, whereas between-person research can answer questions like if leaders belonging to profile A report greater well-being than leaders belonging to profile B, our within-person approach can make different statements. For example, we can investigate if a leader reports different levels of well-being on a day he or she belongs to profile A (say, a profile high on transformational and contingent reward behaviors and low on passive behaviors) compared to a day he or she belongs to profile B (say, a profile low on transformational and contingent reward behaviors and high on passive behaviors). As outlined above, within-person research is an important extension of between-person research as this allows to study the short-term relationships of configurations of leadership behaviors and leader well-being. Additionally, our study acknowledges the fluctuating nature of leadership behavior (Kelemen et al., 2020), which can manifest itself in different well-being levels for the same leader throughout the week. In this way for example, we can advance theory on the full-range model by investigating on the day-level how the leadership pattern that theoretically was formulated to be the most effective one in terms of follower outcomes (i.e., the combination of transformational and transactional elements; Avolio, 2011) is related to daily leader well-being as an important leadership outcome. Therefore, daily leadership studies can enhance our understanding of the associations of different configurations of leaders' day-to-day behavior compared to their general behavior. For example, in terms of practical implications, leadership workshops on the full-range leadership model (Avolio, 2011) could include teaching leaders about the long-term (e.g., within several weeks or months) versus the short-term (i.e., within days) associations of different interacting leadership behaviors with follower and leader outcomes, such as performance, satisfaction, or well-being. More specifically, even though leaders should be encouraged to demonstrate a combination of transformational and contingent reward behaviors as this was postulated to be most effective in terms of follower outcomes (Avolio, 2011), their attention should also be drawn to potential downsides for themselves, such as increased exhaustion of the end of the day, which would make sufficient recovery necessary.

On top of that, we aim to account for the inconsistent findings on leadership behavior and leaders' well-being by differentiating between affective (i.e., positive and negative affect) and strain-based (i.e., emotional exhaustion) well-being. By including positive and negative affect as indicators of affective well-being, and emotional exhaustion as an indicator of strainbased (un)well-being, we try to shed light on the differential effects previous research found when investigating the association between leadership behavior and leader well-being. For example, whereas Lanaj et al. (2016) found a positive link between transformational leadership and leaders' positive affect, Lin et al. (2019) also found a positive link between transformational leadership and leaders' emotional exhaustion. With the help of the present study, we aim at integrating these results to examine the role of leadership behavior patterns for both the affective and the strain-based components of leader well-being. Indeed, both the depletion of energy resources, (i.e., emotional exhaustion; Arnold et al., 2015; Arnold et al., 2017; Byrne et al., 2014), and affectivity (e.g., Joseph et al., 2015) have been argued to be relevant in the context of leadership. In addition to investigating affective and strain-based well-being outcomes, we also contribute to the literature on leadership behaviors and leader well-being by examining potential mechanisms that connect daily leadership profiles and daily leader wellbeing. More specifically, we propose a dual-pathway model, which consists of one path including beneficial leader outcomes and one path including detrimental leader outcomes. We suggest that certain combinations of leadership behaviors can be both beneficial (through

increased thriving; Spreitzer et al., 2005) and detrimental (through enhanced time pressure) for leaders' well-being. Thriving at work has been defined as "the psychological state in which individuals experience both a sense of vitality and a sense of learning at work" (Spreitzer et al., 2005, p. 538) and the key of the construct is that the vitality and the learning component function together and enrich each other (Porath et al., 2012). Thriving was recently shown to be related to well-being (Kleine et al., 2019) and to fluctuate daily (Niessen et al., 2012). Tim pressure reflects the demands of a job that are posed on an individual and includes working fast and hard to accomplish one's tasks. More specifically, it has been defined as have been defined as "a situation in which the amount of work to be done exceeds the amount of time available for task accomplishment" (Fay & Sonnentag, 2002, p. 225). Job demands such as time pressure have been shown to be important in the context of leadership and well-being (Arnold et al., 2017; Li et al., 2018) and it was argued that leaders are confronted with a high amount of job demands which are likely to deplete the leaders' psychological resources (Li et al., 2018).

We propose that some leadership patterns are associated with enhanced feelings of thriving at work (i.e., with resource gains) which in turn is beneficial for leaders' well-being, whereas the same leadership patterns can also at the same time be related to increased time pressure (i.e., with resource losses) for the leader, therefore, being detrimental for leaders' well-being. Similarly, we suggest that other leadership patterns are associated with less thriving (i.e., with reduced resource gains) but at the same time also with less time pressure (i.e., with reduced resource losses). In fact, there is ample evidence in the literature that workplace behaviors and roles can be associated with benefits and costs for actors simultaneously which lends support for our assumption of a dual-pathway model of resource gain and resource loss processes in the context of leadership behaviors and leader well-being.

Taking together, we draw on the full-range leadership theory (Avolio, 2011) to investigate how daily leadership patterns, i.e. a combination and interaction of transformational,

transactional, and laissez-faire behaviors that can coexist within one leader, relate to leaders' daily ratings of well-being. Transformational leader behaviors (TFL) incorporates stimulating and inspiring followers, communicating a motivating vision for the team and the organization, being a role model for followers, or dealing with each follower's needs. Transactional leadership in turn incorporates clarifying roles, tasks, objectives, and rewards (contingent reward, CR), actively searching for followers' mistakes and deviances from rules and standards (management-by-exception active, MBE-A), and dealing with followers' mistakes and deviances without actively searching for those (management-by-exception passive, MBE-P). Last, the full-range theory includes laissez-faire behaviors, which are reflected by "nonleadership", that means an avoidance of decision-making and a withdrawal of leadership responsibilities (Bass & Riggio, 2006). However, the full-range model of leadership is not without criticism, for example, due to issues of construct validity (Rowold et al., 2015) or the idea that it is not sufficient to fully capture leadership (Yukl & Gardner, 2020). Nevertheless, we chose the full-range model of leadership for several reasons: first and most importantly, the model explicitly accounts for the possibility of multiple leadership behaviors coexisting within one leader (Avolio, 2011). As suggested by Bass (1999), transformational and transactional behaviors are displayed by every leader (albeit to varying degrees) which supports our approach to study these behaviors not in isolation but in combination. Additionally, the theory states that effective leaders display both transformational and contingent reward behaviors (Avolio, 2011) which makes it necessary to study these behaviors simultaneously. In addition, transformational leadership has been widely studied in the last years (Judge & Piccolo, 2004; van Knippenberg & Sitkin, 2013). Due to the theoretical conception of TFL coexisting with transactional elements within one leader, we see a shortage of research that investigates transformational, contingent reward, management-by-exception active and passive, and laissez-faire behaviors in parallel and the necessity to integrate those leadership behaviors that have often been treated separately. As such, we see it as important to base our study on one theory that explicitly states that different leadership behaviors can coexist within one leader which is why it fits well to our pattern-oriented approach. Furthermore, the model covers both active leadership behaviors (i.e., transformational, contingent reward) and passive leadership behaviors (i.e., management-byexception and laissez-faire) which allows investigating in what way profiles that are dominated by effective but effortful behaviors and profiles that are dominated by rather ineffective but effortless behaviors and other profiles including various combinations of full-range leadership behaviors are differently related to leader well-being. Additionally, incorporating laissez-faire leadership answers the call by Kelemen et al. (2020) to study laissez-faire leadership on a daily level. Studying also passive elements of leadership is especially important against the background of the study by Arnold et al. (2017) who found that a passive profile with high levels on laissez-faire behaviors and low levels on the other behaviors differed significantly from the disengaged profile (i.e., a profile with low levels on all full-range behaviors). The author concluded that laissez-faire behavior "is not simply the absence of transformational and/or transactional leadership; it appears to encompass a separate set of behaviors" (p. 1052). Drawing on this finding we see the importance to build on a theory that explicitly incorporates passive leadership behaviors. This is why the full-range model is also better suited for our research questions than other leadership styles, such as servant (Eva et al., 2019), ethical (Brown et al., 2005), or authentic leadership (Walumbwa et al., 2008). In these leadership constructs, no passive behaviors are included. On top, recent research suggests substantial overlap of these leadership constructs with elements of the full-range model (Anderson & Sun, 2017; Hoch et al., 2018) which could inflate our pattern approach. Hence, we see it as more appropriate to build on the full-range theory alone.

# 2 Theoretical background and hypotheses

# 2.1 Leader well-being – A conservation of resources perspective

Research so far has used different theoretical perspectives when investigating the leader behavior – leader well-being link, such as resource theories, affect theories, or appraisal theories (see Kaluza et al., 2020). In the present study we will draw on Conservation of Resources Theory (COR theory; Hobfoll, 1989) which is in line with other research on leadership behavior and leader well-being (Arnold et al., 2017; Lin et al., 2019; Zwingmann et al., 2016). COR theory (Hobfoll, 1989) states that individuals aim at keeping, protecting, and fostering their resources. Following Hobfoll, resources can be understood "as those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies" (Hobfoll, 1989, p. 516). Some resources are commonly valued, such as well-being, self-esteem, or a sense of purpose in life (Hobfoll et al., 2018). More broadly, anything that an individual perceives to support goal attainment can be considered a resource (Halbesleben et al., 2014). Therefore, goals and the process to reach them as well as a broader understanding of resources as time, energy or knowledge form an important part of COR theory. Resources are important and valuable for individuals, not only in their own right, but also because they give individuals the opportunity to invest resources in order to protect against resource loss or gain new resources (Hobfoll et al., 2018). Those individuals who possess resources and who are able to invest resources in order to gain new resources are more likely to enter a gain cycle. In contrast, resource loss cycles are more likely for individuals who have fewer resources. As they are less able to protect against resource loss or gain new resources, further resource loss is more likely, leaving individuals in a loss spiral that "gains in momentum as well as magnitude" (Hobfoll et al., 2018, p. 106). Hence, COR theory incorporates dynamic elements that focus on resource gain and loss processes within one person and also within shorter time frames, such as days.

Therefore, it is a well-suited basis for our daily within-person investigation of dynamic and fluctuating states such as well-being (Sonnentag, 2015). Additionally, previous research showed that resources are relevant in the context of leadership (Byrne et al., 2014; Tafvelin et al., 2019) and that certain leadership behaviors are associated with more or less resources (Kaluza et al., 2020; Lin et al., 2019). Furthermore, COR theory is not only well-suited for studies on the relationship of single leadership styles and well-being, but even more for our study in which we examine the interplay of different leadership behaviors and their link with leader well-being. In line with research on resources and psychological outcomes in general which explicitly called for "the examination of unique combinations of resources" (Halbesleben et al., 2014, p. 1356) and on leadership patterns and leader well-being in specific (Arnold et al., 2017), we view COR theory as particularly suitable for our research questions. It is acknowledged that resources interact and appear together, which is reflected in resource caravans (Hobfoll et al., 2018), and that resources in combination can be differentially related to psychological outcomes than single resources (Arnold et al., 2017; Hobfoll et al., 2018). In the same line we propose that specific combinations of leadership behaviors (i.e., leadership profiles) might be differentially related to leader well-being as these certain combinations might be associated with more or less resource gain and loss processes for leaders throughout the day (i.e., resource fluctuations) (Arnold et al., 2017). Therefore, COR theory is well-suited to explain the interaction of leadership behaviors within an individual leader and within one day and the relationship with the fluctuating nature of leader well-being from day to day.

# 2.2 Leadership behavior and leader well-being

Researchers recently started to investigate the relationship of several leadership behaviors for leaders themselves. Lanaj et al. (2016) for example found that daily demonstration of transformational leadership was linked to improvements of leaders' daily affect, partly by fulfilling leaders' daily needs. This beneficial effect of constructive leadership for leaders

themselves was also meta-analytically supported (Kaluza et al., 2020). However, another recent study comes to a different conclusion by showing that transformational leadership on the weeklevel was associated with increased leader emotional exhaustion and subsequent leader turnover intentions (Lin et al., 2019). It could be that the affective reaction towards one's leadership behavior differs from the cognitive or energetic reaction which could explain the inconsistent findings. A study about the daily link between abusive supervision and leader outcomes comes from Qin et al. (2018). They found that on days leaders engaged in abusive supervision they also reported higher recovery levels and increased next-day work engagement. Interestingly, these benefits seemed to be only short-lived as the direction of the relationship turned out to be negative when looking at longer periods. Other leadership styles have been investigated as well. C. Liao et al. (2020) for example could show that engaging in servant leadership behavior can be both positive and negative for leaders' feelings of depletion, depending on leaders' previous experiences with perspective-taking. More specifically, the authors found that only those leaders felt depleted on days they demonstrated a high amount of servant leadership behavior who were inexperienced in perspective-taking. In contrast, leaders who were more experienced in perspective-taking reported less depletion on days engaging in servant leadership behavior.

Taken together, research shows that there is a link between leadership behavior and leader well-being (Kaluza et al., 2020). However, most of the studies only investigated one leadership style at a time. Indeed, the whole picture seems to be more complex. We suggest that an approach that takes into account several leadership styles at once might be more appropriate to reflect the complexity of a leader's range of daily behavior.

# 2.3 Profiles of leadership behavior

Some research has already applied a pattern-oriented approach to study leadership. Such an approach tries to identify unobserved (i.e., latent) subgroups in a population whose members share specific personal attributes (Spurk et al., 2020). More specifically, applied to leadership

research, the aim is to identify subgroups of leaders who share a similar combination of different leadership styles. This approach is therefore appropriate for studying the full-range model of leadership as the theory suggests that leaders demonstrate, to a varying degree, behaviors associated with the three leadership styles transformational, transactional, and laissez-faire (Bass, 1985). Indeed, previous research lent support for Bass' (1985) theorizing by demonstrating that different forms of leadership coexist to a varying degree within one individual (Doucet et al., 2015). Applying cluster analyses, the authors identified six different clusters of leaders: superleaders (high on transformational and transactional, low on laissezfaire), transactors (high on transactional, moderate on transformational and laissez-faire), moderate leaders (moderate on all three behaviors), visionary distant (moderate on transformational, low on transactional, high on laissez-faire), distant rewarding (low on transformational, moderate on transactional and laissez-faire), and distant punitive (low on transformational and transactional, high on laissez-faire). Additionally, the authors could also identify optimal patterns of leadership. In line with theorizing (Avolio, 2011) and previous findings (Gavan O'Shea et al., 2009), superleaders were shown to have the employees with the highest ratings of leader trust, fairness, commitment, and the highest leader rated employee inrole performance and job dedication. However, in contrast to the assumption that leaders who demonstrate both transformational and transactional behaviors are more effective compared to those who only demonstrate transactional behavior, Doucet et al. (2015) only found small differences when comparing superleaders and transactors regarding leadership outcomes.

However, the previous studies mostly concentrated on the link between leadership patterns and employee outcomes. One exception is the study by Arnold et al. (2017) who focused on the relationship with leader outcomes (leader burnout and leader role demands). In a study with 183 leaders, demographics were assessed at the first measurement point, full-range leadership behavior was assessed at time two, and leader burnout and leader role demands (e.g.

They identified four leadership profiles: disengaged (low levels on transformational, transactional, and laissez-faire), passive (low levels on transformational and contingent reward, high levels on management-by-exception passive and laissez-faire), optimal (high levels on transformational and contingent reward, low levels on management-by-exception passive and laissez-faire), and comprehensive (high levels of all behaviors). Additionally, they found that leaders who belonged to the comprehensive pattern reported the highest levels of burnout and role demands, followed by the leaders belonging to the passive pattern. Leaders in the optimal pattern showed to be the second-lowest on burnout and role demands, whereas leaders in the disengaged pattern reported the lowest levels of burnout and role demands. The authors argued that enacting high levels of (conflicting) leadership styles (as in the comprehensive pattern) or the negative outcomes associated with passive forms of leadership can drain leaders' resources. Therefore, the optimal leadership pattern seems to be beneficial for leaders' health as the positive outcomes associated with this pattern can enhance resource acquisition for leaders.

However, Arnold et al. (2017) investigated the leadership behavior – leader well-being link over a longer period with a time lag of three months between the leadership and the well-being ratings. Hence, it is likely that the positive effects of optimal leadership behaviors and the negative effects of the passive leadership behaviors had time to unfold and therefore influence the leaders' resource pool. Nevertheless, the short-term effects (i.e., on the day-level) may differ from the effects covering several months. This assumption is in line with week-level research finding that the demonstration of transformational leadership is associated with an increase in leader emotional exhaustion (Lin et al., 2019) and with day-level findings of short-term benefits for leaders when acting abusively towards subordinates (Qin et al., 2018). Reviews and meta-analyses that compare within-person study results to between-person study results suggest that relationships can differ across levels. McCormick et al. (2020) for example

found that around one fourth of the relationships in management research differed across levels. For leader behavior, the percentage was even higher (42%). In another meta-analysis, Pindek et al. (2019) investigated differences in stressor-strain relationships across levels. They found that the relationships at the between-person level were stronger than at the within-person level. Looking at between-person changes and within-person variability of well-being, Sonnentag (2015) found that, even though factors predicting change and variability of well-being are often comparable, there are factors, such as challenge stressors, that have different effects at the within-person and the between-person level. Taken together, these findings suggest that between-person results cannot always directly be transferred to within-person results. Therefore, a day-level perspective can be an important extension of previous research, as it allows to study short-term processes and to capture leadership and well-being in its natural context (Kelemen et al., 2020). In this way, one can gain information on how to optimize not only the general but also the daily leadership practice, which for example becomes relevant when designing and implementing leadership interventions.

## 2.4 Daily fluctuations of leadership behavior

Investigating leadership on the day-level means focusing on the state (a specific moment in time) instead of the trait (more generally and rather consistent over time) of behaviors. Therefore, it is acknowledged that behavior does not only differ between persons but also fluctuates within one person across time (Bolger et al., 2003; Curran & Bauer, 2011; Fisher & To, 2012). This approach has also been adopted in leadership research and has several advantages for the field, such as testing theories at a within-person level, investigating proximal (short-term) relationships of leadership, and conducting leadership research in a natural context (c.f. Kelemen et al., 2020).

The review of day-level leadership studies by Kelemen et al. (2020) found that daily transformational leadership was positively related to proximal follower outcomes, such as job

engagement (Tims et al., 2011) or positive affect (Kelloway et al., 2013), as well as to positive leader outcomes (i.e., increase in positive affect, Lanaj et al., 2016). In turn, transactional leadership behaviors were found to be both positively (contingent reward) and negatively (management-by-exception) related to follower job engagement (Breevaart et al., 2014). Destructive leadership styles, e.g. abusive supervision, were found to have detrimental consequences on follower outcomes, such as an increase in workplace deviance (Vogel & Mitchell, 2017) or reduced work engagement (Barnes et al., 2015). However, the findings on the relationship with leader outcomes turned out to be mixed. Whereas Qin et al. (2018) found that leader abusive supervision was associated with enhanced leader evening recovery and next day leader work engagement, Foulk et al. (2018) demonstrated that leader abusive supervision was related to decreased leader need fulfillment and evening relaxation. As noted by Kelemen et al. (2020), day-level studies on laissez-faire leadership are still missing.

# 2.5 Latent profiles of daily leadership behaviors

As outlined above, we adopt a pattern-oriented approach and a dynamic perspective of leadership in order to investigate if profiles of daily full range leadership behaviors exist for leaders. We see the value of our approach in its ability to identify subgroups of leaders who share meaningful configurations of leadership behaviors on a daily basis. In this way, we are able to detect qualitatively distinct profiles that "vary based on the relative standing of each profile indicator" (Chawla et al., 2020, p. 21) which enhances our understanding of the daily combination of leadership behaviors. However, LPA is an exploratory and inductive approach which is why we refrain from framing specific hypotheses about the number of profiles and the level and shape of the profiles (Chawla et al., 2020; Gabriel et al., 2018; Morin et al., 2011; M. Wang & Hanges, 2011). Nevertheless, we can discuss certain profiles that are theoretically plausible, based on previous findings and theorizing. In line with the studies by Doucet et al. (2015) and Arnold et al. (2017) as well as theorizing about optimal patterns of leadership

(Avolio, 2011) it is plausible to assume that there will be days on which leaders demonstrate high levels of transformational and contingent reward behaviors and low levels of MBE and laissez-faire behaviors. Additionally, we assume that there will be days on which leaders primarily clarify goals, expectations and rewards (i.e., high levels of contingent reward behaviors) and only demonstrate low to moderate levels of transformational behaviors and low levels of passive behaviors. Furthermore, other days might be characterized by tasks which make it important that followers perform these tasks exactly in a prescribed manner, therefore, making it necessary for the leader to demonstrate high levels of MBE behaviors. Again, on other days, leaders might primarily deal with own issues or urgent tasks that prevent them from active interactions with their followers, therefore implying a highly passive profile (i.e., low levels of transformational and transactional behaviors, high levels of laissez-faire behaviors). Last, other variations are also conceivable, such as high levels of transformational leadership (but not contingent reward) and low levels of passive behaviors, or high levels of transactional behaviors but low levels of transformational and laissez-faire behaviors. As a solid data base for within-person profiles of daily leadership behaviors is lacking and to preserve the exploratory nature of a pattern-approach, we state the following research question:

Research Question 1: Do profiles of daily leadership behaviors (i.e., transformational leadership, contingent reward, management-by-exception, and laissez-faire) exist for leaders?

# 2.6 Dynamic or stability of membership in profiles of daily leadership behaviors

When we assume that daily profiles of leadership behaviors exist, as described above, we can also analyze in what way profile membership is dynamic or stable throughout the week. As described recently (Chawla et al., 2020), stability of daily profile membership can be understood in two different ways. On the one hand, one can assess if leaders belong to the same or to different profiles throughout the week (i.e., do leaders report the same combination of

leadership behaviors across all days or do they report different combinations). On the other hand, it can be assessed if leaders "stay in the same profile day after day, or whether they belong to a different profile from one day to the next" (Chawla et al., 2020, p. 22) (i.e., is a leader who is a member of profile A on day t also member of profile A on day t + 1). In this way, we are able to determine if leadership profile membership fluctuates daily, therefore implying a dynamic phenomenon.

From a theoretical perspective, Bass (1999) suggested that "every leader displays a frequency of both the transactional and transformational behaviors as part of their own unique style, but each leader's profile involves more of one and less of the other" (p.11). That said, the theory lends support to the assumption that every leader incorporates both transactional and transformational elements in his or her daily leadership routine. However, the degree and the frequency to which certain behaviors are demonstrated can vary between individuals, but also within one leader. As leaders are confronted with different tasks, problems and follower issues from day-to-day, leaders also need to vary their behavior to effectively deal with the different challenges that they are confronted with. For example, a leader who generally acts in a very transformational way (e.g., considers individual follower's problems and needs, encourages others to tackle problems from different perspectives) and who is clear about expectations and rewards (i.e., high on contingent reward behaviors) might still act in a passive way on a day on which he or she primarily needs to deal with own issues due to strict deadlines or urgent matters. Similarly, also leaders who withdraw themselves from their leadership responsibilities on most of the days (i.e., leaders high on passive but low on active constructive behaviors) might see the necessity to demonstrate active behaviors like communicating a vision, motivating the employees or clarifying expectations and rewards on other days (e.g., because their team is confronted with a new challenge or a major change). As leaders need to react to the daily issues in their leadership role different behaviors are differently effective in certain situations which makes it necessary to adapt their behavior to the concrete situation. Therefore, a change in profile membership from day-to-day is conceivable. Research on the fluctuating nature of daily leadership behavior underlines this assumption. For example, Breevaart et al. (2014) found that the large majority of the variance in transformational and transactional leadership behaviors was explained by the day-level (67-80%) which shows that leaders demonstrate these behaviors to a varying degree. Drawing on this high amount of within-person variability, the authors speculated that there are days on which leaders for example demonstrate high levels of transformational and contingent reward behaviors and that there are other days on which they primarily deal with followers' mistakes or deviances from rules. However, the authors did not apply a pattern-oriented approach which is why they could not test for leadership profiles and a potential change from day-to-day.

As mentioned, prior research did not investigate leadership profile membership on a daily basis but only at one time point (Arnold et al., 2017; Gavan O'Shea et al., 2009). Therefore, until now we do not know if leadership profile membership is dynamic, in that it changes from day-to-day, or if it is a rather stable phenomenon. Hence, we aim to answer the following open research question.

Research Question 2: Is membership in daily leadership profiles stable?

### 2.7 Outcomes of profiles of daily leadership behaviors

As outlined above, research shows that fluctuations of leadership are related to fluctuations of leader well-being, however, leadership behaviors seems to be associated with costs as well as with benefits for leaders themselves (Lanaj et al., 2016; Lin et al., 2019). It is less clear how the combinations of daily leadership behaviors are related to daily leader well-being. We suggest that some leadership profiles are simultaneously related to more or less resource acquisition (i.e., thriving) and to more or less resource depletion (i.e., time pressure). Previous findings support our assumption of parallel resource gain and resource loss processes

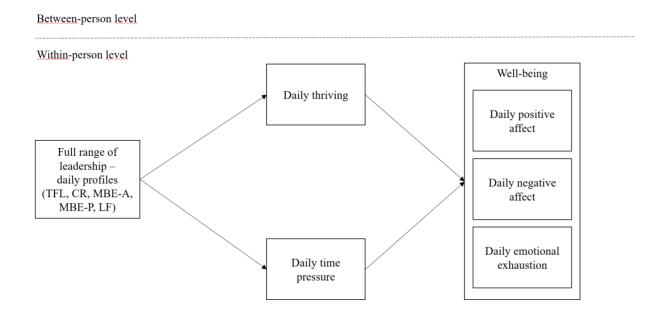
that exist on the daily level. Cangiano et al. (2019) for example showed that daily proactive behavior was beneficial for actors as reflected by increases in perceived competence and vitality, whereas it was also harmful for actors by increasing anxiety and reduced detachment from work. Similarly, Koopman et al. (2016) investigated the costs and benefits associated with daily OCB for actors and found that helping others was positive for actors as reflected by increased positive affect and in turn increased job satisfaction and affective commitment, but also negative for actors as indicated by reduced work goal progress which in turn was associated with reduced daily well-being (i.e., emotional exhaustion, job satisfaction, and affective commitment). In the same line, we assume that also the link of leadership behaviors and leader well-being can be explained best by a dual-pathway model. More specifically, we can imagine that on days leaders demonstrate primarily transformational and active elements of transactional leadership behavior (i.e. contingent reward) but low levels of MBE and LF they put a lot of effort, energy, and time into their behavior (Lin et al., 2019), thus being associated with resource losses in the form of increased time pressure which in turn could manifest itself in further resource losses (Arnold et al., 2017), that is, in feelings of depletion and exhaustion at the end of the working day. However, at the same time the described combination of high TFL and CR and low MBE and LF was found to be very effective in terms of follower outcomes (Doucet et al., 2015) and includes helping followers with personal problems, being proactive and initiating new solutions for existing problems, making use of own strengths, is related to goal progress and meaning of work and thus is likely to be reflected in enhanced perceptions of thriving at work on that day (Kleine et al., 2019; Niessen et al., 2012). Thriving (e.g., the feeling that one is acquiring or applying knowledge and skills at work) is an important resource for individuals that can manifest itself in increased positive affect and decreased negative affect. In contrast, when assuming a different profile, say one that is low on TFL, CR, MBE, and high on LF, both the resource gain and loss processes could be attenuated. On days leaders show more passive forms of leadership behaviors, they do not invest that many resources into their followerdirected behavior which can be associated with reduced time pressure and fewer resource losses, thus helping to preserve the leaders' resources which in turn can be linked to reduced emotional exhaustion. Similarly, such profiles can also be related to less resource gains, in that leaders do not profit from their leadership behavior in form of thriving as there are less opportunities for learning and strength use and in turn also less positive associations with leaders' evening affect.

However, predictions concerning other leadership patterns are more difficult. For example, we can only speculate if leaders on days on which they demonstrate primarily transformational behaviors profit more (e.g., because they can fully concentrate on TFL and therefore enhance their strengths and learning), less (e.g., TFL is most effective in combination with CR, and therefore leaders perceive less goal progress and feelings of achievement and skill utilization), or the same regarding resource acquisition processes compared with days on which they primarily demonstrate TFL and CR. However, in terms of resource loss processes, one might assume that leaders experience less time pressure on days they concentrate on TFL without investing time and energy in clarifying goals, expectations, and rewards (i.e., CR). In addition, on days leaders primarily demonstrate CR and MBE behaviors they might find themselves being involved in planning, assigning tasks, controlling and evaluating performance which produces the need to process many information and make decisions (Arnold et al., 2017) which can be associated with greater resource loss (i.e., greater time pressure and increased emotional exhaustion) but also with decreased resource gains (i.e., reduced thriving and positive affect, and increased negative affect) as it is less likely that leaders immediately receive benefits for their behaviors. In terms of leader well-being, such leadership profile could be a very unfavorable one. Considering these exemplary possibilities outlined above, we state the following question:

Research Question 3: Are daily leadership profiles differentially related to resource gains (i.e., thriving) and losses (i.e., time pressure) and in turn to leader evening well-being (i.e., emotional exhaustion, positive affect, and negative affect)?

A model of the study variables and the theoretical model is depicted in Figure 1.

**Figure 1**Model of study variables and hypothesized effects



### 3 Method

# 3.1 Procedure and participants

We will use a within-person design by conducting a daily diary study over five consecutive workdays with two measurement points per day. We will survey working employees with leadership responsibility who will be recruited through an online panel. To be eligible for participation, participants need to be employed and have leadership responsibility. Additionally, participants need to work during fairly regular work hours (i.e., between 7am and 6pm) and should not work in shifts. We aim at a final sample size of 250 participants who filled out both the afternoon and the evening survey on at least three days. Because this will make a

minimum of 750 observations in total, we follow the recommendations of Spurk et al. (2020) who proposed a sample size of minimum 500 people to be adequate for latent profile analyses, and previous between-person (Arnold et al., 2017) and within-person (Chawla et al., 2020) LPA studies. By including participants who provide valid responses of both measurement points on at least three days, we follow standard research practice in daily diary studies (Chawla et al., 2020; Rosen et al., 2016). Participants will be surveyed twice a day (i.e. an afternoon survey at the end of the workday to be filled out between 3pm and 7pm, and an evening survey before bedtime to be filled out between 8pm and 12am) for five consecutive working days (i.e. one standard working week). A period of one working week is chosen to reduce the demands for participants and to assure participants' commitment over the course of the study. The afternoon survey will assess leaders' ratings of their leadership behavior this day as well as characteristics of their working day (i.e., working hours, thriving, time pressure and job control as well as frequency and duration of interaction with followers) and previous night's sleep quality. The evening survey will assess leaders' ratings of their daily level of emotional exhaustion, their daily positive and negative affectivity, and pleasurable evening experiences as well as workfamily conflict as control variables. Prior to the daily surveys, participants will complete a baseline survey including demographic variables and screen out criteria (i.e., employment, leadership responsibility, no shift work, no irregular work hours). To reduce the issue of common-source bias (P. M. Podsakoff et al., 2003), we will also include follower ratings of daily leadership behavior. Therefore, at the end of each afternoon survey the leaders will receive a link that they are supposed to forward to minimum three of their followers. When following this link, the followers are directed to a survey in which they are asked to rate their leader's leadership behavior on the respective day.

In terms of data privacy, we will ensure that the participants' personal data, i.e. their email addresses, will be stored separate from their responses to the survey. Therefore, it will not be possible to trace back the responses to individual participants. The daily surveys for each participant will be matched with the help of an internal system variable of the survey platform we use that does not allow any conclusions to be drawn about individual persons. Participants' email addresses will be deleted three months after data collection is completed. Participants will have the right to let their email addresses be deleted at any time. Participants will be informed about these procedures at the beginning of the survey.

#### 3.2 Measures

Demographic data.

As demographic data age, gender, profession, working hours, job tenure, organizational tenure, leadership responsibility, leadership tenure, number of direct reports and frequency and duration of follower interactions will be assessed.

Leadership behaviors.

Transformational leadership will be assessed with six items of the German version (Heinitz & Rowold, 2007) of the Transformational Leadership Inventory (Podsakoff et al., 1996; 1990) as used and validated for the day-level investigation by Diebig et al. (2017). A sample item is "Today, I got the group to work together towards the same goal". The other leadership behaviors will be assessed with the respective subscales *contingent reward* (3 items, e.g. "I show satisfaction when others meet expectations"), *management-by-exception active* (4 items, e.g. "I primarily deal with errors and complaints"), *management-by-exception passive* (4 items, e.g. "I am firmly convinced that nothing should be changed without necessity"), and *laissez-faire* (3 items, e.g. "I clarify important questions immediately") of the German version of the Multifactor Leadership Questionnaire (MLQ Form 5x Short) (Felfe, 2006). The item formulation will be adapted to the day-level investigation. Ratings will be made on a 5-point scale (1 = totally disagree, 5 = totally agree). We will take the mean of the respective items above to create a single measure of transformational leadership, contingent reward,

management-by-exception active, management-by-exception passive, and laissez-faire, respectively. In the follower survey, the same items will be used in an adapted formulation (i.e., "Today, my leader...").

#### Emotional exhaustion.

Emotional exhaustion will be assessed with the respective 8-item subscale of the Oldenburg Burnout Inventory (OLBI) (Demerouti et al., 2003) and adapted to the day-level investigation (e.g. Volmer & Fritsche, 2016). A sample item is "Today after my work, I feel worn out and weary". Ratings will be made on a 5-point scale (1 = not true at all, 5 = completely true). We will take the mean of the eight items to form a single measure of emotional exhaustion.

#### Positive and negative affect.

Following Sonnentag et al. (2008), the daily positive and negative affect will be rated using the Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988) with six items for positive affect and negative affect, respectively. A sample item for positive affect is "active" and for negative affect "anxious". Ratings will be made on a 5-point scale (1 = not at all, 5 = very much). We will take the mean of the six items each to form a single measure of positive affect and negative affect, respectively.

#### Thriving.

We will assess daily thriving at work with the 10-item measure developed by Porath et al. (2012) which assesses learning and vitality with five items each. We will adapt the wording to fit to our daily assessment. Sample items are "Today at work, I have developed a lot as a person" (*learning*) and "Today at work, I felt alert and awake" (*vitality*). Ratings will be made on a 5-point scale (1 = strongly disagree, 5 = strongly agree). We will take the mean of the ten items to form a single measure of thriving at work.

#### Time pressure.

Time pressure will be assessed using the respective 5-item subscale of the Instrument for stress-related job analysis (ISTA) (Semmer et al., 1999), adapted for the day-level investigation (Ohly & Fritz, 2010). A sample item is "Today I was under time pressure". Ratings will be made on a 5-point scale (1 = totally disagree, 5 = totally agree). We will take the mean of the five items to form a single measure of time pressure.

#### Job control.

Job control will be assessed using the respective 5-item subscale of the Instrument for stress-related job analysis (ISTA) (Semmer et al., 1999), adapted for the day-level investigation (Ohly & Fritz, 2010). A sample item is "To what extent could you determine the sequence of the work steps yourself today". Ratings will be made on a 5-point scale (1 = not at all, 5 = very much). We will take the mean of the five items to form a single measure of job control.

#### *Sleep quality.*

Leaders' sleep quality will be assessed using the following item of the Pittsburgh sleep quality index (PSQI) (Buysse et al., 1989): "How would you evaluate your sleep quality last night". Ratings will be made on a 5-point scale (1 = very bad, 5 = very good).

#### Pleasurable evening experiences.

We will measure pleasurable evening experiences with four items taken from Sonnentag et al. (2014) and adapted to the daily assessment. A sample item is: "Today after work, I pursued activities that bring me joy." Ratings will be made on a 5-point scale (1 = fully disagree, 5 = fully agree). We will take the mean of the four items to form a single measure of pleasurable evening experiences.

We will assess work-family conflict with the respective 5-item scale taken from Netemeyer et al. (1996) and adapted to the daily assessment. In line with other research (e.g. Peters et al., 2014) we will adapt the formulation to assess the broader aspect of private life instead of the original emphasis on family life. A sample item is: "Today, the demands of my work interfered with my private life." Ratings will be made on a 5-point scale (1 = fully disagree, 5 = fully agree). We will take the mean of the five items to form a single measure of work-family conflict.

#### 3.3 Analytic strategy

We will use the standard p < .05 criteria for determining if the analyses described below suggest that the results are significantly different from those expected if the null hypothesis were correct.

If a person answers both measurement points on less than three days or only one measurement point per day, this person will be excluded from the analyses.

As days (Level 1) will be nested within people (Level 2), the data will be nonindependent, therefore calling for a multilevel approach. Hence, multilevel latent profile analysis (MLPA) will be conducted (Chawla et al., 2020; Mäkikangas et al., 2018). First, null models will be run for all dependent and independent variables to decompose between- and within-person variance to calculate intraclass correlation coefficients (ICC) to check the appropriateness of a multilevel approach (Bliese et al., 2018). Statistically, the ICC is the ratio of the between-person variance to the total variance. Even though a significant ICC is often considered a precondition for the use of a multilevel approach, recent research suggests that a multilevel approach is also adequate when the ICC is low or non-significant (Bliese et al., 2018). Therefore, we will consider the multilevel structure of the data by performing MLPA. Next, to provide validity of the measures, multilevel confirmatory factor analysis (CFA) will

be conducted to model the factor structure with the respective leadership behaviors (transformational leadership, contingent reward, management-by-exception management-by-exception passive, laissez-faire), the mediators (thriving and time pressure) and the well-being indicators (emotional exhaustion, positive affect, negative affect) as distinct factors at Level 1. Following prior research (Chawla et al., 2020; Scott et al., 2010), items will be within-person centered. To test the proposed ten-factor model, we will rely on CFI (comparative fit index), SRMR (standardized root-mean-square residual), and RMSEA (root mean square error of approximation) as fit indices. Following Kline (2016) a good model fit is indicated by a CFI value > .90. For SRMR, a value < .05 indicates good model fit, whereas a value between .05 and .10 indicates acceptable model fit. For RMSEA, a value < .05 indicates good model fit, and an acceptable model fit is indicated by an RMSEA > .05 and < .08. We will also compare the ten-factor solution with alternative models: a four-factor solution (combining all leadership behaviors into one single factor and combining all well-being measures into one single factor), a seven-factor solution (combining contingent reward, management-byexception active, and management-by-exception passive into one single factor and combining positive affect and negative affect into one single factor), two eight-factor solutions (a) combining contingent reward, management-by-exception active and management-byexception passive into one single factor, and b) combining positive affect, negative affect and emotional exhaustion into one single factor), and a nine-factor solution (combining positive affect and negative affect into one single factor). Each of the alternative models will be compared with the ten-factor solution by relying on chi-square difference tests and the fit indices reported above.

Following Mäkikangas et al. (2018), we will use raw scores for the MLPA analyses, as group-mean centering can change model interpretation. When modeling the profiles of leadership behaviors, we will allow the means and variances across the profiles to be freely

estimated (Asparouhov & Muthén, 2008). However, when the model does not converge in case of freely estimated variances, we will only allow the means of the profile indicators (i.e. leadership behaviors) to be freely estimated (Diallo et al., 2016).

In the next step, the number of profiles will be investigated to answer research question 1. As MLPA is an inductive and exploratory approach, the number of profiles is not known apriori. We will start with specifying a two-profile solution and increase the number of profiles until the model fit does not improve any further (Nylund et al., 2007). For this, the full information maximum likelihood estimator with robust standard error estimation is applied (Asparouhov & Muthén, 2008). To check the model fit and to decide on the optimal number of profiles, we will rely on several fit indices: Log Likelihood (LL), Akaike Information Criterion (AIC), consistent AIC (CAIC), Bayesian Information Criterion (BIC), sample-size-adjusted BIC (aBIC), Lo-Mendell-Rubin likelihood test (LMR; Lo et al., 2001), and entropy. Following recent simulation studies (e.g. Diallo et al., 2016; Peugh & Fan, 2013), the best-fitting solution should have lower BIC, aBIC, and CAIC values when comparing with other solutions. For LMR, the value should be significant (p < .05), and the entropy value should be larger than for other solutions. Additionally, an elbow plot of the BIC and CAIC values will be calculated and the point where the slope of the plot flattens will be examined. Additionally, when deciding on the best profile solution, we aim at ensuring that the profiles are still theoretically interpretable (Spurk et al., 2020) and that the profile size is not too small, that is, in case an additional profile includes < 1.0% of the total sample size it should be rejected (Lubke & Neale, 2006).

To answer our research question on the stability or dynamic of profile membership we will investigate if leaders belong to the same leadership profiles throughout the week or if they are members of different profiles from day to day. For this, we will follow the approach of Chawla et al. (2020) and calculate the number and different types of profiles for each leader across the week. This enables us to receive the percentage of leaders who belong to one, two,

three, ... (depending on the number of profiles that we find) profiles throughout the week. Additionally, we will investigate change in profile membership from day-to-day. More specifically, for every profile we find we will calculate the percentage of leaders who are members of the target profile on day t and who are also members of the same target profile on day t + 1 versus those who are members of a different profile.

In the last step, we will test the association of the leadership profiles with the mediators (i.e., thriving and time pressure) and the outcomes (i.e. emotional exhaustion, positive affect, negative affect). Therefore, the BCH analysis (Asparouhov & Muthén, 2014) will be used to examine whether one profile is significantly different from the other profiles on the mediators and the well-being outcomes. More specifically, we aim at investigating how daily leadership profile membership (assessed in the afternoon after work) is associated with same-day thriving and time pressure (assessed in the afternoon after work) and same-day well-being (assessed in the evening before bedtime). Separate analyses will be conducted for each mediator and outcome. To test for the indirect effects of profile membership on well-being via thriving and time pressure, we will use bias-corrected bootstrapped standard errors and confidence intervals based on 10000 bootstrap samples (Hayes & Preacher, 2014). As prior research showed that job characteristics play an important role for employees' well-being (Crawford et al., 2010), we will add daily job control as control variable in the analyses. Additionally, we will control for participants' previous night's sleep quality, their pleasurable evening activities, and their workfamily conflict on the respective evening.

### References

- Anderson, M. H., & Sun, P. Y. T. (2017). Reviewing Leadership Styles: Overlaps and the Need for a New 'Full-Range' Theory. *International Journal of Management Reviews*, 19(1), 76–96. https://doi.org/10.1111/ijmr.12082
- Arnold, K. A., Connelly, C. E., Gellatly, I. R., Walsh, M. M., & Withey, M. J. (2017). Using a pattern-oriented approach to study leaders: Implications for burnout and perceived role demand. *Journal of Organizational Behavior*, *38*(7), 1038–1056. https://doi.org/10.1002/job.2182
- Arnold, K. A., Connelly, C. E., Walsh, M. M., & Martin Ginis, K. A. (2015). Leadership styles, emotion regulation, and burnout. *Journal of Occupational Health Psychology*, 20(4), 481–490. https://doi.org/10.1037/a0039045
- Asparouhov, T., & Muthén, B. (2008). Multilevel mixture models. In G. R. Hancock & K. M. Samuelsen (Eds.), *The CILVR series on latent variable methodology. Advances in latent variable mixture models* (pp. 27–51). Information Age Pub.
- Asparouhov, T., & Muthén, B. (2014). Auxiliary variables in mixture modeling: Using the BCH method in Mplus to estimate a distal outcome model and an arbitrary secondary model. https://www.statmodel.com/download/asparouhov\_
- Avolio, B. J. (2011). Full range leadership development (2nd ed.). SAGE Publications.
- Barnes, C. M., Lucianetti, L., Bhave, D. P., & Christian, M. S. (2015). "You Wouldn't Like Me When I'm Sleepy": Leaders' Sleep, Daily Abusive Supervision, and Work Unit Engagement. *Academy of Management Journal*, *58*(5), 1419–1437. https://doi.org/10.5465/amj.2013.1063
- Bass, B. M. (1985). Leadership and performance beyond expectations. Free Pr.
- Bass, B. M. (1999). Two Decades of Research and Development in Transformational Leadership. *European Journal of Work and Organizational Psychology*, 8(1), 9–32. https://doi.org/10.1080/135943299398410
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2. ed.). L. Erlbaum Associates. http://site.ebrary.com/lib/alltitles/docDetail.action?docID=10149967
- Bliese, P. D., Maltarich, M. A., & Hendricks, J. L. (2018). Back to Basics with Mixed-Effects Models: Nine Take-Away Points. *Journal of Business and Psychology*, *33*(1), 1–23. https://doi.org/10.1007/s10869-017-9491-z
- Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology*, *54*, 579–616.

  https://doi.org/10.1146/annurev.psych.54.101601.145030

- Breevaart, K., Bakker, A., Hetland, J., Demerouti, E., Olsen, O. K., & Espevik, R. (2014).

  Daily transactional and transformational leadership and daily employee engagement. *Journal of Occupational and Organizational Psychology*, 87(1), 138–157.

  https://doi.org/10.1111/joop.12041
- Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes*, *97*(2), 117–134. https://doi.org/10.1016/j.obhdp.2005.03.002
- Buysse, D. J., Reynolds, C. F., Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh sleep quality index: A new instrument for psychiatric practice and research. *Psychiatry Research*, 28(2), 193–213. https://doi.org/10.1016/0165-1781(89)90047-4
- Byrne, A., Dionisi, A. M., Barling, J., Akers, A., Robertson, J., Lys, R., Wylie, J., & Dupré, K. (2014). The depleted leader: The influence of leaders' diminished psychological resources on leadership behaviors. *The Leadership Quarterly*, 25(2), 344–357. https://doi.org/10.1016/j.leaqua.2013.09.003
- Cangiano, F., Parker, S. K., & Yeo, G. B. (2019). Does daily proactivity affect well-being? The moderating role of punitive supervision. *Journal of Organizational Behavior*, 40(1), 59–72. https://doi.org/10.1002/job.2321
- Chawla, N., MacGowan, R. L., Gabriel, A. S., & Podsakoff, N. P. (2020). Unplugging or staying connected? Examining the nature, antecedents, and consequences of profiles of daily recovery experiences. *Journal of Applied Psychology*, *105*(1), 19–39. https://doi.org/10.1037/apl0000423
- Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology*, 95(5), 834–848. https://doi.org/10.1037/a0019364
- Curran, P. J., & Bauer, D. J. (2011). The disaggregation of within-person and between-person effects in longitudinal models of change. *Annual Review of Psychology*, *62*, 583–619. https://doi.org/10.1146/annurev.psych.093008.100356
- Demerouti, E., Bakker, A. B., Vardakou, I., & Kantas, A. (2003). The convergent validity of two burnout instruments: A multitrait-multimethod analysis. *European Journal of Psychological Assessment*, 19(1), 12–23. https://doi.org/10.1027//1015-5759.19.1.12
- Diallo, T. M. O., Morin, A. J. S., & Lu, H. (2016). Impact of Misspecifications of the Latent Variance–Covariance and Residual Matrices on the Class Enumeration Accuracy of

- Growth Mixture Models. *Structural Equation Modeling: A Multidisciplinary Journal*, 23(4), 507–531. https://doi.org/10.1080/10705511.2016.1169188
- Diebig, M., Bormann, K. C., & Rowold, J. (2017). Day-level transformational leadership and followers' daily level of stress: a moderated mediation model of team cooperation, role conflict, and type of communication. *European Journal of Work and Organizational Psychology*, 26(2), 234–249. https://doi.org/10.1080/1359432X.2016.1250741
- Doucet, O., Fredette, M., Simard, G., & Tremblay, M. (2015). Leader Profiles and Their Effectiveness on Employees' Outcomes. *Human Performance*, 28(3), 244–264. https://doi.org/10.1080/08959285.2015.1021039
- Eva, N., Robin, M., Sendjaya, S., van Dierendonck, D., & Liden, R. C. (2019). Servant Leadership: A systematic review and call for future research. *The Leadership Quarterly*, 30(1), 111–132. https://doi.org/10.1016/j.leaqua.2018.07.004
- Fay, D., & Sonnentag, S. (2002). Rethinking the effects of stressors: A longitudinal study on personal initiative. *Journal of Occupational Health Psychology*, 7(3), 221–234. https://doi.org/10.1037//1076-8998.7.3.221
- Felfe, J. (2006). Validierung einer deutschen Version des "Multifactor Leadership Questionnaire" (MLQ Form 5 x Short) von Bass und Avolio (1995) = Validation of a German version of the 'Multifactor Leadership Questionnaire' (MLQ Form 5x Short) by Bass and Avolio (1995). Zeitschrift Für Arbeits- Und Organisationspsychologie A&O, 50(2), 61–78. https://doi.org/10.1026/0932-4089.50.2.61
- Fisher, C. D., & To, M. L. (2012). Using experience sampling methodology in organizational behavior. *Journal of Organizational Behavior*, *33*(7), 865–877. https://doi.org/10.1002/job.1803
- Foti, R. J., Bray, B. C., Thompson, N. J., & Allgood, S. F. (2012). Know thy self, know thy leader: Contributions of a pattern-oriented approach to examining leader perceptions. *The Leadership Quarterly*, 23(4), 702–717. https://doi.org/10.1016/j.leaqua.2012.03.007
- Foulk, T. A., Lanaj, K., Tu, M.-H., Erez, A., & Archambeau, L. (2018). Heavy Is the Head that Wears the Crown: An Actor-centric Approach to Daily Psychological Power, Abusive Leader Behavior, and Perceived Incivility. *Academy of Management Journal*, 61(2), 661–684. https://doi.org/10.5465/amj.2015.1061
- Gabriel, A. S., Campbell, J. T., Djurdjevic, E., Johnson, R. E., & Rosen, C. C. (2018). Fuzzy Profiles: Comparing and Contrasting Latent Profile Analysis and Fuzzy Set

- Qualitative Comparative Analysis for Person-Centered Research. *Organizational Research Methods*, 21(4), 877–904. https://doi.org/10.1177/1094428117752466
- Gavan O'Shea, P., Foti, R. J., Hauenstein, N. M. A., & Bycio, P. (2009). Are the Best Leaders Both Transformational and Transactional? A Pattern-oriented Analysis. *Leadership*, 5(2), 237–259. https://doi.org/10.1177/1742715009102937
- Halbesleben, J. R. B., Neveu, J.-P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the "COR". *Journal of Management*, 40(5), 1334–1364. https://doi.org/10.1177/0149206314527130
- Hayes, A. F., & Preacher, K. J. (2014). Statistical mediation analysis with a multicategorical independent variable. *The British Journal of Mathematical and Statistical Psychology*, 67(3), 451–470. https://doi.org/10.1111/bmsp.12028
- Heinitz, K., & Rowold, J. (2007). Gütekriterien einer deutschen Adaptation des Transformational Leadership Inventory (TLI) von Podsakoff. *Zeitschrift für Arbeits-und Organisationspsychologie A&O*, 51(1), 1–15. https://doi.org/10.1026/0932-4089.51.1.1
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, *44*(3), 513–524. https://doi.org/10.1037/0003-066X.44.3.513
- Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of Resources in the Organizational Context: The Reality of Resources and Their Consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5(1), 103–128. https://doi.org/10.1146/annurev-orgpsych-032117-104640
- Hoch, J. E., Bommer, W. H., Dulebohn, J. H., & Wu, D. (2018). Do Ethical, Authentic, and Servant Leadership Explain Variance Above and Beyond Transformational Leadership? A Meta-Analysis. *Journal of Management*, 44(2), 501–529. https://doi.org/10.1177/0149206316665461
- Joseph, D. L., Dhanani, L. Y., Shen, W., McHugh, B. C., & McCord, M. A. (2015). Is a happy leader a good leader? A meta-analytic investigation of leader trait affect and leadership. *The Leadership Quarterly*, 26(4), 557–576. https://doi.org/10.1016/j.leaqua.2015.04.001
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755–768. https://doi.org/10.1037/0021-9010.89.5.755

- Kaluza, A. J., Boer, D., Buengeler, C., & van Dick, R. (2020). Leadership behaviour and leader self-reported well-being: A review, integration and meta-analytic examination. *Work & Stress*, *34*(1), 34–56. https://doi.org/10.1080/02678373.2019.1617369
- Kelemen, T. K., Matthews, S. H., & Breevaart, K. (2020). Leading day-to-day: A review of the daily causes and consequences of leadership behaviors. *The Leadership Quarterly*, 31(1), 101344. https://doi.org/10.1016/j.leaqua.2019.101344
- Kelloway, E. K., Weigand, H., McKee, M. C., & Das, H. (2013). Positive Leadership and Employee Well-Being. *Journal of Leadership & Organizational Studies*, 20(1), 107–117. https://doi.org/10.1177/1548051812465892
- Kleine, A.-K., Rudolph, C. W., & Zacher, H. (2019). Thriving at work: A meta-analysis. *Journal of Organizational Behavior*, 40(9-10), 973–999. https://doi.org/10.1002/job.2375
- Kline, R. B. (2016). Principles and practice of structural equation modeling. Guilford Press.
- Koopman, J., Lanaj, K., & Scott, B. A. (2016). Integrating the Bright and Dark Sides of OCB:
  A Daily Investigation of the Benefits and Costs of Helping Others. *Academy of Management Journal*, 59(2), 414–435. https://doi.org/10.5465/amj.2014.0262
- Lanaj, K., Johnson, R. E., & Lee, S. M. (2016). Benefits of transformational behaviors for leaders: A daily investigation of leader behaviors and need fulfillment. *Journal of Applied Psychology*, 101(2), 237–251. https://doi.org/10.1037/apl0000052
- Li, W.-D., Schaubroeck, J. M., Xie, J. L., & Keller, A. C. (2018). Is being a leader a mixed blessing? A dual-pathway model linking leadership role occupancy to well-being.

  \*Journal of Organizational Behavior, 39(8), 971–989. https://doi.org/10.1002/job.2273
- Liao, C., Lee, H. W., Johnson, R. E., & Lin, S.-H. (2020). Serving You Depletes Me? A Leader-Centric Examination of Servant Leadership Behaviors. *Journal of Management*, 47(5), 1185-1218. https://doi.org/10.1177/0149206320906883
- Liao, Z., Yam, K. C., Johnson, R. E., Liu, W., & Song, Z. (2018). Cleansing my abuse: A reparative response model of perpetrating abusive supervisor behavior. *Journal of Applied Psychology*, 103(9), 1039–1056. https://doi.org/10.1037/apl0000319
- Lin, S.-H., Scott, B. A., & Matta, F. K. (2019). The Dark Side of Transformational Leader Behaviors for Leaders Themselves: A Conservation of Resources Perspective.

  \*\*Academy of Management Journal, 62(5), 1556–1582.\*\*

  https://doi.org/10.5465/amj.2016.1255
- Lo, Y., Mendell, N. R., & Rubin, D. B. (2001). Testing the number of components in a normal mixture. *Biometrika*, 88(3), 767–778. https://doi.org/10.1093/biomet/88.3.767

- Lubke, G., & Neale, M. C. (2006). Distinguishing Between Latent Classes and Continuous Factors: Resolution by Maximum Likelihood? *Multivariate Behavioral Research*, 41(4), 499–532. https://doi.org/10.1207/s15327906mbr4104\_4
- Mäkikangas, A., Tolvanen, A., Aunola, K., Feldt, T., Mauno, S., & Kinnunen, U. (2018).

  Multilevel Latent Profile Analysis With Covariates. *Organizational Research Methods*, 21(4), 931–954. https://doi.org/10.1177/1094428118760690
- McClean, S. T., Barnes, C. M., Courtright, S. H., & Johnson, R. E. (2019). Resetting the Clock on Dynamic Leader Behaviors: A Conceptual Integration and Agenda for Future Research. *Academy of Management Annals*, *13*(2), 479–508. https://doi.org/10.5465/annals.2017.0081
- McCormick, B. W., Reeves, C. J., Downes, P. E., Li, N., & Ilies, R. (2020). Scientific Contributions of Within-Person Research in Management: Making the Juice Worth the Squeeze. *Journal of Management*, 46(2), 321–350. https://doi.org/10.1177/0149206318788435
- Montano, D., Reeske, A., Franke, F., & Hüffmeier, J. (2017). Leadership, followers' mental health and job performance in organizations: A comprehensive meta-analysis from an occupational health perspective. *Journal of Organizational Behavior*, 38(3), 327–350. https://doi.org/10.1002/job.2124
- Morin, A. J. S., Morizot, J., Boudrias, J.-S., & Madore, I. (2011). A Multifoci Person-Centered Perspective on Workplace Affective Commitment: A Latent Profile/Factor Mixture Analysis. *Organizational Research Methods*, *14*(1), 58–90. https://doi.org/10.1177/1094428109356476
- Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work–family conflict and family–work conflict scales. *Journal of Applied Psychology*, 81(4), 400–410. https://doi.org/10.1037/0021-9010.81.4.400
- Niessen, C., Sonnentag, S., & Sach, F. (2012). Thriving at work-A diary study. *Journal of Organizational Behavior*, 33(4), 468–487. https://doi.org/10.1002/job.763
- Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the Number of Classes in Latent Class Analysis and Growth Mixture Modeling: A Monte Carlo Simulation Study. *Structural Equation Modeling: A Multidisciplinary Journal*, *14*(4), 535–569. https://doi.org/10.1080/10705510701575396
- Ohly, S., & Fritz, C. (2010). Work characteristics, challenge appraisal, creativity, and proactive behavior: A multi-level study. *Journal of Organizational Behavior*, *31*(4), 543–565. https://doi.org/10.1002/job.633

- Peters, A., Michel, A., & Sonntag, K. (2014). Konflikte zwischen Privat- und Berufsleben bei Führungskräften. *Zeitschrift Für Arbeits- Und Organisationspsychologie A&O*, 58(2), 64–79. https://doi.org/10.1026/0932-4089/a000141
- Peugh, J., & Fan, X. (2013). Modeling Unobserved Heterogeneity Using Latent Profile Analysis: A Monte Carlo Simulation. *Structural Equation Modeling: A Multidisciplinary Journal*, 20(4), 616–639. https://doi.org/10.1080/10705511.2013.824780
- Pindek, S., Arvan, M. L., & Spector, P. E. (2019). The stressor–strain relationship in diary studies: A meta-analysis of the within and between levels. *Work & Stress*, *33*(1), 1–21. https://doi.org/10.1080/02678373.2018.1445672
- Podsakoff, N. P., Spoelma, T. M., Chawla, N., & Gabriel, A. S. (2019). What predicts within-person variance in applied psychology constructs? An empirical examination. *Journal of Applied Psychology*, 104(6), 727–754. https://doi.org/10.1037/apl0000374
- Podsakoff, P. M., MacKenzie, S. B., & Bommer, W. H. (1996). Transformational Leader Behaviors and Substitutes for Leadership as Determinants of Employee Satisfaction, Commitment, Trust, and Organizational Citizenship Behaviors. *Journal of Management*, 22(2), 259–298. https://doi.org/10.1177/014920639602200204
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879
- Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *The Leadership Quarterly*, *1*(2), 107–142. https://doi.org/10.1016/1048-9843(90)90009-7
- Porath, C., Spreitzer, G., Gibson, C., & Garnett, F. G. (2012). Thriving at work: Toward its measurement, construct validation, and theoretical refinement. *Journal of Organizational Behavior*, 33(2), 250–275. https://doi.org/10.1002/job.756
- Qin, X., Huang, M., Johnson, R. E., Hu, Q., & Ju, D. (2018). The Short-lived Benefits of Abusive Supervisory Behavior for Actors: An Investigation of Recovery and Work Engagement. *Academy of Management Journal*, 61(5), 1951–1975. https://doi.org/10.5465/amj.2016.1325

- Rosen, C. C., Koopman, J., Gabriel, A. S., & Johnson, R. E. (2016). Who strikes back? A daily investigation of when and why incivility begets incivility. *Journal of Applied Psychology*, 101(11), 1620–1634. https://doi.org/10.1037/apl0000140
- Rowold, J., Borgmann, L., & Diebig, M. (2015). A "Tower of Babel"? interrelations and structure of leadership constructs. *Leadership & Organization Development Journal*, 36(2), 137–160. https://doi.org/10.1108/LODJ-01-2013-0009
- Scott, B. A., Colquitt, J. A., Paddock, E. L., & Judge, T. A. (2010). A daily investigation of the role of manager empathy on employee well-being. *Organizational Behavior and Human Decision Processes*, 113(2), 127–140. https://doi.org/10.1016/j.obhdp.2010.08.001
- Semmer, N., Zapf, D., & Dunckel, H. (1999). Instrument zur stressbezogenen

  Tätigkeitsanalyse (ISTA). In H. Dunckel (Ed.), *Mensch, Technik, Organisation: Vol.*14. Handbuch psychologischer Arbeitsanalyseverfahren (pp. 179–204). Vdf,

  Hochschulverl. an der ETH Zürich.
- Sonnentag, S. (2015). Dynamics of Well-Being. *Annual Review of Organizational Psychology* and *Organizational Behavior*, 2(1), 261–293. https://doi.org/10.1146/annurevorgpsych-032414-111347
- Sonnentag, S., Arbeus, H., Mahn, C., & Fritz, C. (2014). Exhaustion and lack of psychological detachment from work during off-job time: Moderator effects of time pressure and leisure experiences. *Journal of Occupational Health Psychology*, 19(2), 206–216. https://doi.org/10.1037/a0035760
- Sonnentag, S., Binnewies, C., & Mojza, E. J. (2008). "Did you have a nice evening?" A daylevel study on recovery experiences, sleep, and affect. *Journal of Applied Psychology*, 93(3), 674–684. https://doi.org/10.1037/0021-9010.93.3.674
- Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S., & Grant, A. M. (2005). A Socially Embedded Model of Thriving at Work. *Organization Science*, *16*(5), 537–549. https://doi.org/10.1287/orsc.1050.0153
- Spurk, D., Hirschi, A., Wang, M., Valero, D., & Kauffeld, S. (2020). Latent profile analysis:

  A review and "how to" guide of its application within vocational behavior research.

  Journal of Vocational Behavior, 120, 103445.

  https://doi.org/10.1016/j.jvb.2020.103445
- Tafvelin, S., Nielsen, K., Thiele Schwarz, U. von, & Stenling, A. (2019). Leading well is a matter of resources: Leader vigour and peer support augments the relationship

- between transformational leadership and burnout. *Work & Stress*, *33*(2), 156–172. https://doi.org/10.1080/02678373.2018.1513961
- Tims, M., Bakker, A. B., & Xanthopoulou, D. (2011). Do transformational leaders enhance their followers' daily work engagement? *The Leadership Quarterly*, 22(1), 121–131. https://doi.org/10.1016/j.leaqua.2010.12.011
- van Knippenberg, D., & Sitkin, S. B. (2013). A Critical Assessment of Charismatic—

  Transformational Leadership Research: Back to the Drawing Board? *Academy of Management Annals*, 7(1), 1–60. https://doi.org/10.1080/19416520.2013.759433
- Vogel, R. M., & Mitchell, M. S. (2017). The Motivational Effects of Diminished Self-Esteem for Employees Who Experience Abusive Supervision. *Journal of Management*, 43(7), 2218–2251. https://doi.org/10.1177/0149206314566462
- Volmer, J., & Fritsche, A. (2016). Daily Negative Work Events and Employees' Physiological and Psychological Reactions. *Frontiers in Psychology*, 7, 1711. https://doi.org/10.3389/fpsyg.2016.01711
- Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008).

  Authentic Leadership: Development and Validation of a Theory-Based Measure. *Journal of Management*, 34(1), 89–126. https://doi.org/10.1177/0149206307308913
- Wang, G., Oh, I.-S., Courtright, S. H., & Colbert, A. E. (2011). Transformational Leadership and Performance Across Criteria and Levels: A Meta-Analytic Review of 25 Years of Research. *Group & Organization Management*, 36(2), 223–270. https://doi.org/10.1177/1059601111401017
- Wang, M., & Hanges, P. J. (2011). Latent Class Procedures: Applications to Organizational Research. Organizational Research Methods, 14(1), 24–31. https://doi.org/10.1177/1094428110383988
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063–1070. https://doi.org/10.1037/0022-3514.54.6.1063
- Yukl, G. A., & Gardner, W. L. (2020). Leadership in organizations. Pearson.
- Zwingmann, I., Wolf, S., & Richter, P. (2016). Every light has its shadow: a longitudinal study of transformational leadership and leaders' emotional exhaustion. *Journal of Applied Social Psychology*, 46(1), 19–33. https://doi.org/10.1111/jasp.12352