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# Managers' Resources for Authentic Leadership – a Multi-study Exploration of Positive Psychological Capacities and Ethical Organizational Climates

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**While authentic leadership is highly valued in today's business world, managers do not necessarily have the resources to attain it. Building on conservation of resources theory, we propose a conceptual model to address how personal and contextual resources predict authentic leadership. Study 1 analyses the day-to-day variability in managers' positive psychological capacities as personal resources in relation to changes in authentic leadership. In addition, it tests ethical organizational climates as stable, contextual resources for authentic leadership. In Study 2, we replicate our results on the between-person level and extend the research model by exploring promotion focus as a link in the relationship between personal resources and authentic leadership. Evidence from an experience sampling study with 89 managers surveyed daily on 10 consecutive working days (Study 1) and a field survey of 130 managers at two points in time (Study 2) supports the hypothesized role of personal resources and promotion focus for authentic leadership. In both studies, only principled but not benevolent ethical organizational climates emerged as a contextual resource for authentic leadership. We discuss the implications for current management research and practice.**

## Introduction

Authentic leadership (AL) is highly valued in today's business world as it relates to positive outcomes for employees and organizations (Banks *et al.*, 2016; Gardner *et al.*, 2011; Gill and Caza, 2018; Hoch *et al.*, 2018). While substantial progress has been made in the study of AL since its introduction (Avolio and Gardner, 2005; Luthans

and Avolio, 2003), scholars call for a better understanding of the theoretical underpinnings of AL and greater plurality in methodological approaches to fully develop its theoretical and practical merit (Alvesson and Einola, 2019; Iszatt-White and Kempster, 2018; Sidani and Rowe, 2018).

In the present paper, we seek to advance AL theory and its managerial implications in three ways. Firstly, we build on conservation of resources (COR) theory (Hobfoll, 1989, 2001; Hobfoll *et al.*, 2018) – a well-established theory in the organizational behaviour literature (Halbesleben *et al.*, 2014) – to better understand the antecedents of AL. According to COR theory's distinction between personal and contextual resources, we predict that managers draw from positive psychological capacities (i.e. personal resources),

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which are proximate to the self, as well as the ethical organizational climate (i.e. contextual resources), which is grounded in the social context (Halbesleben *et al.*, 2014; Hobfoll, 2002; ten Brummelhuis and Bakker, 2012). This distinction also speaks to recent views in COR theory that ‘resources exist in caravans’ (Hobfoll, 2011, p. 116), counterbalancing the emphasis on studying one resource at a time (Hobfoll *et al.*, 2018). Assuming that ‘work and organizational settings can create ecologies that foster engagement and resilience’ (Hobfoll, 2011, p. 117), we argue that both personal resources (i.e. positive psychological capacities) and contextual resources (i.e. ethical organizational climates) facilitate managers’ AL.

Secondly, responding to current debates in the management literature to what extent promotion focus – a self-regulatory orientation towards individuals’ ideals and aspirations (Higgins, 1997) – explains *why* managers show positive leadership behaviours (Johnson *et al.*, 2017; Kark and van Dijk, 2019; Sassenberg and Hamstra, 2017; Tuncdogan, van den Bosch and Volberda, 2015), we apply COR theory to explore the role of managers’ promotion focus as a mediator linking personal resources to AL. Luthans and Avolio (2003) positioned self-regulation as a central part of AL (see also Gardner *et al.*, 2005). However, AL scholars’ perspectives on the role of self-regulation differ and have not been tested empirically (Avolio and Gardner, 2005; Gardner *et al.*, 2011). We test whether the alignment with one’s ideal self as inherent in self-regulatory promotion focus mediates the relationship between personal resources and managers’ AL.

Finally, we incorporate the called-for temporal element into management theorizing and research (Fischer, Dietz and Antonakis, 2017; Kelemen, Matthews and Breevaart, 2019; McClean *et al.*, 2019; McCormick *et al.*, 2018), especially in relation to AL (Alvesson and Einola, 2019; Ibarra, 2015; Sidani and Rowe, 2018). Kelemen, Matthews and Breevaart (2019) argue that ‘studying leadership in a daily fashion is critical [...] as it gives unique insight that cannot be easily captured in other ways’ (p. 2). Day-level research enables (1) testing of leadership theories at the within-person level (see also McCormick *et al.*, 2018); (2) in-depth insights into the short-term processes of leadership; and (3) the analysis of leadership in its natural context. Despite its original formulation as a dynamic phenomenon (Avolio and Gardner,

2005; see also Cooper, Scandura and Schriesheim, 2005; Luthans and Avolio, 2003; May *et al.*, 2003), in the study of AL ‘these good intentions have later been largely replaced by static [...] conceptualizations and empirical studies’ (Alvesson and Einola, 2019, p. 387). Following these recent reviews and meta-analyses (Kelemen, Matthews and Breevaart, 2019; McClean *et al.*, 2019; Podsakoff *et al.*, 2019), we explore AL at the day level.

In sum, adopting a resource-based perspective grounded in COR theory (Halbesleben *et al.*, 2014; Hobfoll, 2001, 2002, 2011; Hobfoll *et al.*, 2018), we apply two complementary methodological approaches to explore personal and contextual resources as predictors of AL and incorporate temporal dynamics (Fischer, Dietz and Antonakis, 2017; Kelemen, Matthews and Breevaart, 2019; McClean *et al.*, 2019; Podsakoff *et al.*, 2019; Shamir, 2011). Study 1 employs an experience sampling design to quantify the proportion of within-person variance in AL over time and how personal resources drive these fluctuations (Kelemen, Matthews and Breevaart, 2019; McClean *et al.*, 2019). Furthermore, we investigate ethical organizational climates as stable contextual resources for AL (Luthans and Avolio, 2003; Petersen and Youssef-Morgan, 2018). In Study 2, a field study with two points of measurement, we examine promotion focus as an underlying process linking personal resources and AL (Kark and van Dijk, 2019). Here we test personal resources and AL on a between-person level of analysis and replicate the findings of the role of contextual resources. The multi-study approach allows us to constructively replicate (Eden, 2002) and compare results (Iszatt-White and Kempster, 2018; Xanthopoulou *et al.*, 2009), thereby advancing the understanding of AL and COR theory at within- and between-person levels of analysis (Kelemen, Matthews and Breevaart, 2019; McCormick *et al.*, 2018; Miller and Bamberger, 2016; Podsakoff *et al.*, 2019).

Figure 1 summarizes the conceptual model of the present research.

## Authentic leadership

AL means that managers enact their true selves in the leadership role, and requires ‘being honest with oneself [...], being sincere with others [...], and behaving in a way that reflects one’s personal values’ (Leroy *et al.*, 2015, p. 1678). Authentic

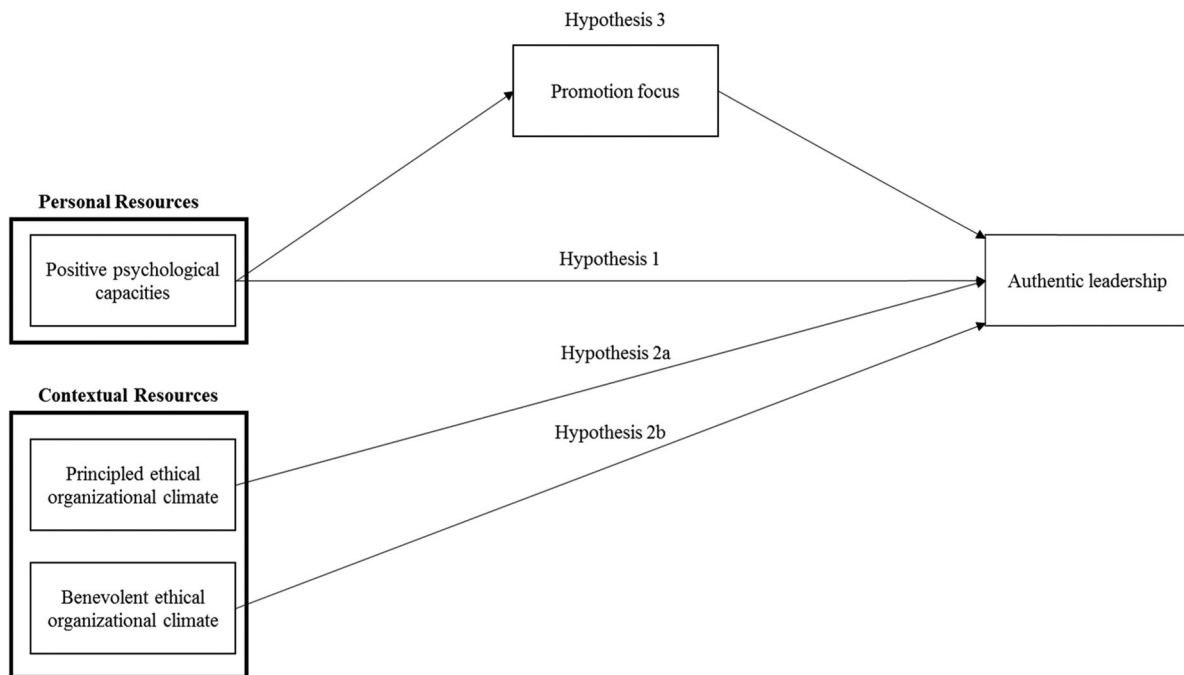


Figure 1. Conceptual model of present research. In Study 1, the role of positive psychological capacities as antecedent of authentic leadership was measured on the day level (within-person design). In Study 2, the role of positive psychological capacities as antecedent of authentic leadership was measured on the general level (between-person design)

leaders demonstrate *self-awareness* in relation to their personal values, strengths and weaknesses, and impact on others. Their *internalized moral perspective* manifests in actions guided by personal values, even in the face of external pressures. Through *balanced processing*, authentic leaders encourage others to voice opposing points of view and carefully consider these before reaching conclusions. Authentic leaders show *relational transparency* as they express their true thoughts and feelings (Avolio and Gardner, 2005; Neider and Schriesheim, 2011; Walumbwa *et al.*, 2008).

While a wealth of empirical research supports the positive outcomes of AL for employees and organizations (Banks *et al.*, 2016; Gardner *et al.*, 2011; Gill and Caza, 2018; Hoch *et al.*, 2018), only few studies investigated predictors of AL (cf. Petersen and Youssef-Morgan, 2018). Jensen and Luthans (2006) found that managers' psychological capital related positively to AL. Petersen and Youssef-Morgan (2018) replicated this finding. Their results also showed a positive first-order correlation of perceptions of the organization's psychological climate and AL. Peus *et al.* (2012) found that employees were more likely to ascribe AL when they saw their managers

as possessing high levels of self-knowledge and self-consistency. Nübold, van Quaquebeke and Hülshager (2019) showed that managers' mindfulness related positively to self- and other-ratings of AL, and that a mindfulness intervention enhanced AL perceptions. In sum, current evidence points to managers' personal characteristics as well as the organizational context as facilitating factors for AL.

At the same time, the current studies do not inform us about at least three important issues. First, it remains to be addressed whether AL fluctuates over short periods of time and what drives these fluctuations (Kelemen, Matthews and Breevaart, 2019). Managers who act authentically on one day may not necessarily do so tomorrow (cf. Breevaart *et al.*, 2014; Johnson *et al.*, 2012; Kelemen, Matthews and Breevaart, 2019). Johnson *et al.* (2012) showed that (transformational) leader behaviours fluctuate substantially between days (within-person variance 37%). Original conceptualizations of AL assumed such temporal dynamics on the day level (Avolio and Gardner, 2005; Cooper, Scandura and Schriesheim, 2005; Luthans and Avolio, 2003; May *et al.*, 2003), but research has failed to study these fluctuations (e.g. Alvesson

and Einola, 2019; Ibarra, 2015; Iszatt-White and Kempster, 2018).

Second, previous research leaves unanswered *why* specific predictors such as personal resources enable managers to attain AL. We build on COR theory (Hobfoll, 1989, 2001; Hobfoll *et al.*, 2018) to test the role of managers' promotion focus as a mediating variable to explain why personal resources facilitate managers' AL (Johnson *et al.*, 2017; Kark and van Dijk, 2019; Sassenberg and Hamstra, 2017; Tuncdogan, van den Bosch and Volberda, 2015).

Third, what is meant by 'a positive, highly developed organizational context and culture' (Luthans and Avolio, 2003, p. 257) in the realm of AL is yet to be fully understood (cf. Petersen and Youssef-Morgan, 2018). Following recent emphasis on ethics in AL theory (Lemoine, Hartnell and Leroy, 2019), we test the role of benevolent and principled ethical organizational climates (Kish-Gephart, Harrison and Treviño, 2010; Martin and Cullen, 2006; Victor and Cullen, 1988) as contextual resources for AL from the perspective of COR theory (Hobfoll, 2011; Hobfoll *et al.*, 2018).

#### *Temporal dynamics of authentic leadership*

Luthans and Avolio (2003) as well as Avolio and Gardner (2005) highlighted the dynamic nature of AL. Cooper, Scandura and Schriesheim (2005) further suggested studying the temporal dynamics of AL as the extent to which managers have personal resources available from day to day. Incorporating temporal dynamics into the study of AL allows for a more fine-grained understanding of *how* and *why* managers lead authentically (Alvesson and Einola, 2019; Ibarra, 2015). McClean *et al.* (2019) referred to three forms of temporal dynamics, describing 'the degree and pattern by which leader behavior changes over time' (p. 481): (1) abrupt shifts; (2) gradual changes; and (3) short-term fluctuations. Our research focuses on short-term behavioural fluctuations, also termed the 'ebb and flow' of leadership, as measured in experience sampling studies (Podsakoff *et al.*, 2019). Drivers of short-term fluctuations in leadership are transient affective and cognitive states linked to COR theory (Kelemen, Matthews and Breevaart, 2019; McClean *et al.*, 2019; McCormick *et al.*, 2018), such as demands (e.g. email load; Rosen *et al.*, 2019) and the availability (or lack of) resources (e.g. emotional exhaustion; Whitman, Halbesleben and Holmes, 2014).

#### *A resource-based perspective on authentic leadership*

We build on COR theory (Halbesleben *et al.*, 2014; Hobfoll, 1989, 2001; Hobfoll *et al.*, 2018) as a theoretical basis for understanding *how* and *why* resources help managers to attain AL. The central tenet of COR theory is that 'people must invest resources in order to protect against resource loss, recover from losses and gain resources' (Hobfoll *et al.*, 2018, p. 105). We apply COR theory's principle of resource investment, arguing that managers invest personal resources and contextual resources to attain AL as this facilitates further resource gain (Halbesleben *et al.*, 2014). As COR theory assumes resource fluctuations (Halbesleben *et al.*, 2014; Hobfoll, 2002), managers will show AL to the extent that they have personal and contextual resources available. Researching personal resources together with ethical organizational climates as part of the contextual resources that facilitate managers' AL also answers Hobfoll *et al.*'s (2018) call for the study of resource caravans.

Managers struggle to attain AL due to a lack of personal and contextual resources. Luthans and Avolio (2003) argued that managers need 'positive psychological capacities *and* a positive, highly developed organizational context and culture' (p. 257) to attain AL. Managers aspire to AL (George, 2007; Ibarra, 2015), striving to align their personal values, beliefs and goals with how they behave 'every day, in each and every interaction' (May *et al.*, 2003, p. 248). However, business practice often requires them to make tough decisions, while lacking time to reflect and promote a bottom line that values profit over people (Peus, 2011).

In line with COR theory, we define resources broadly as those entities (e.g. objects, states, conditions) which individuals perceive to support their goal attainment (Halbesleben *et al.*, 2014). Personal resources are proximate to the self, whereas contextual resources are external and part of the social context (Hobfoll, 2002; ten Brummelhuis and Bakker, 2012). Specifically, we investigate three positive psychological capacities: *self-efficacy*, *self-esteem* and *optimism*. These represent central personal resources in COR theory (Halbesleben *et al.*, 2014; Hobfoll, 2002, 2011; Hobfoll *et al.*, 2018). In addition, we test benevolent and principled ethical organizational climates (Martin and Cullen, 2006; Victor and Cullen, 1988) as contextual resources. They represent an

organization's 'core and unassailable principles' (May *et al.*, 2003, p. 251) and play a vital role in organizational functioning (Barraquier, 2011; van Prooijen and Ellemers, 2015). Ethical organizational climates are contextual resources because they facilitate shared psychological environments, which allow managers to align their personal values, beliefs and goals with their actions (Eagly, 2005; Lemoine, Hartnell and Leroy, 2019; May *et al.*, 2003).

#### *Positive psychological capacities as personal resources*

According to Xanthopoulou *et al.* (2007), personal resources are 'aspects of the self that are generally linked to resiliency and refer to individuals' sense of their ability to control and impact upon their environment successfully' (p. 123f). They determine the extent to which employees adapt to challenges at work (e.g. Hobfoll *et al.*, 2018; Judge *et al.*, 1998; Xanthopoulou *et al.*, 2009). Employees draw from personal resources to increase desirable, resource-intensive behaviours such as speaking up (Ng and Feldman, 2012) and helping others (Halbesleben and Wheeler, 2015). In contrast, managers' resource depletion relates positively to abusive leadership and negatively to transformational leadership (Byrne *et al.*, 2014).

Drawing from this research, we argue that managers' *self-efficacy*, *self-esteem* and *optimism* relate positively to managers' AL (ten Brummelhuis and Bakker, 2012; Xanthopoulou *et al.*, 2007). *Self-efficacy* incorporates individuals' beliefs about their ability to mobilize the motivation, cognitive resources and courses of action necessary to execute behaviour in a given context (Bandura, 1997; Stajkovic and Luthans, 1998). *Self-esteem* is 'the degree to which an individual believes him/herself to be capable, significant and worthy as an organizational member' (Pierce and Gardner, 2004, p. 593). *Optimism* represents the cognitive appraisal of events, especially the reappraisal of negative or neutral situations (Seligman, 2006), as well as contingency planning (Luthans, Youssef-Morgan and Avolio, 2015). As resources 'do not exist individually but travel in packs, or caravans' (Hobfoll *et al.*, 2018, p. 106; see also Hobfoll, 2011), self-efficacy, self-esteem and optimism share common processes that drive motivation and behaviour (Luthans and Youssef-Morgan, 2017; Luthans *et al.*, 2007) and are highly correlated

(cf. Hobfoll, 2011). Research typically combines them into an overarching personal resources factor (e.g. Judge *et al.*, 1998; Luthans *et al.*, 2007; Xanthopoulou *et al.*, 2007), as we do in this work.

Personal resources are stable to an extent (e.g. ten Brummelhuis and Bakker, 2012), but also vary within short periods of time. In an experience sampling study by Xanthopoulou *et al.* (2009), personal resources varied substantially over a 5-day period. Two recent meta-analyses also show that self-efficacy and self-esteem exhibit a meaningful proportion of within-person variability (i.e. 36% – McCormick *et al.*, 2018; 39% – Podsakoff *et al.*, 2019).

Following COR theory's principle of resource investment, managers who experience high levels of self-efficacy, self-esteem and optimism are more likely to invest these resources towards attaining AL. In contrast, managers who experience low levels of positive psychological capacities will protect their remaining resources (e.g. by acting defensively) and are less likely to align their inner and outer selves (Halbesleben *et al.*, 2014; Hobfoll *et al.*, 2018). Specifically, managers who experience high levels of self-efficacy beliefs seek accurate information about their own abilities as well as potential for further development (Luthans, Youssef-Morgan and Avolio, 2015). Managers who experience high levels of self-efficacy are also better able to regulate their interpersonal behaviour (e.g. to overcome self-serving biases; Vohs and Ciarocco, 2004). Managers who experience high levels of self-esteem are less susceptible to external influences, which would otherwise keep them from enacting their true values (Pierce and Gardner, 2004). Managers who experience high levels of optimism reinterpret challenging situations positively, rendering them more likely to see personal development as 'work in progress' (Luthans and Youssef-Morgan, 2017) and seek out opportunities for learning when facing setbacks (Luthans, Youssef-Morgan and Avolio, 2015).

In contrast, managers who experience low levels of self-efficacy are more likely to protect their self-worth through self-enhancement and defensiveness (Kernis, 2003; Vohs and Ciarocco, 2004), reducing self-awareness and balanced processing. Individuals who experience low levels of self-efficacy are more prone to external influences rather than acting in line with their inner values (Bandura *et al.*, 2003). Low self-esteem also limits expressing one's true thoughts and feelings out of

fear of social judgement (Neider and Schriesheim, 2011; Walumbwa *et al.*, 2008). Managers who experience low levels of optimism will be more concerned with their vulnerabilities, and less likely to reinterpret challenges positively (Seligman, 2006). In sum, we suggest that managers who experience high levels of positive psychological capacities are likely to invest these personal resources towards AL, whereas managers who experience low levels of positive psychological capacities are less likely to do so.

*H1:* Managers' positive psychological capacities are positively related to authentic leadership.

#### *Ethical organizational climates as contextual resources*

Although contextual resources are provided by a different source (i.e. social context), they are employed in the resource investment process similarly to personal resources (Halbesleben *et al.*, 2014). According to COR theory, when contextual resources nurture individuals' aspirations, they are a second pathway to gaining further resources, such as AL (Hobfoll, 2001). Hobfoll (2011) described nurturing and supportive types of resources that organizational environments provide as resource caravans. Organizational climates define what constitutes right and expected behaviour in an organization (Schneider, Ehrhart and Macey, 2013), and serve as contextual resources for employees (e.g. Halbesleben *et al.*, 2014; Hobfoll *et al.*, 2018). Ethical organizational climates represent specific contextual resources for AL (Avolio and Gardner, 2005; Eagly, 2005; Luthans and Avolio, 2003; May *et al.*, 2003; Walumbwa *et al.*, 2008).

Several types of ethical organizational climates exist (Victor and Cullen, 1988), and can be present at the same time (Kish-Gephart, Harrison and Treviño, 2010; Martin and Cullen, 2006). *Benevolent* ethical organizational climates imply an overarching concern for individual well-being. Employees in benevolent climates share a mutual sense of care and concern for others (Victor and Cullen, 1988). Experiencing appreciation from close others is a valuable resource as interpersonal connections give rise to feelings of 'being in the right place' (Hobfoll *et al.*, 1990; Sarason and Sarason, 2009). Even when they encounter setbacks and struggle to achieve AL, managers in benevolent ethical organizational climates will feel accepted

and supported by co-workers. For example, managers will be more likely to draw on their positive relationships with others in the organization when forced to make difficult decisions (George, 2007; Ibarra, 2015). According to COR theory, these relationships and social interactions form part of the contextual resources that are available to managers (Hobfoll, 2011; Hobfoll *et al.*, 2018). Following COR theory's principle of resource investment, we therefore propose that managers in benevolent ethical organizational climates are likely to invest these personal resources towards AL:

*H2a:* A benevolent ethical organizational climate relates positively to authentic leadership.

*Principled* ethical organizational climates provide ethical rules and policies for ethical behaviour (Martin and Cullen, 2006). Actions are considered ethical when they comply with moral guidelines (Barnett and Vaicys, 2000). Codes of conduct raise managers' awareness of ethical behaviours (Schminke, Ambrose and Neubaum, 2005; van Sandt, Shepard and Zappe, 2006) and encourage them to reflect their own values (Shamir and Eilam, 2005). Ethical rules and policies also reduce uncertainty and accentuate personal accountability when making difficult decisions (May *et al.*, 2003). Following COR theory, we position ethical rules and policies as part of the contextual resources that are available to managers within a principled organizational climate (Hobfoll, 2011). Managers who experience principled ethical organizational climates will feel a sense of certainty and guidance provided by the organizational environment. The principled climate guides managers' actions when they seek to attain AL. For example, managers can draw on codes of conduct when faced with moral dilemmas and struggling to make the right decision (Lemoine, Hartnell and Leroy, 2019). Thus, in line with COR theory's principle of resource investment, we propose that managers in principled ethical organizational climates are likely to invest these personal resources towards AL:

*H2b:* A principled ethical organizational climate relates positively to authentic leadership.

## Study 1

Study 1 analyses personal resources in the form of positive psychological capacities (H1) and

contextual resources in the form of benevolent and principled ethical organizational climates (H2a, H2b) in relation to managers' daily AL.

### Method

*Sample and procedure.* We recruited 134 German-speaking managers through Bilendi, a professional research panel. Bilendi complies with quality norms for online research by multiple European research associations. Managers first completed a general survey that assessed general levels of AL, positive psychological capacities, positive affect, perceptions of their organizations' benevolent and principled ethical organizational climates, and demographic information. From the following Monday onwards, managers were invited to respond to two daily surveys over 10 consecutive working days. The morning survey sent at 6 a.m. to be filled in before work assessed day-level positive psychological capacities and positive affect. The afternoon survey sent at 4 p.m. to be filled in after work assessed day-level AL. Participation was incentivized (€5.60 for the general survey and €1.17 per daily survey).

To assess data quality, we used a self-report item of participants' levels of attentiveness. Single surveys were excluded when participants reported 'very low' or 'low' levels of attentiveness (i.e. ratings of 1 or 2 on a five-point scale; DeSimone, Harms and DeSimone, 2015). Forty-five managers were excluded from subsequent analyses as they provided less than three pairs of morning and afternoon surveys. Of the remaining 89 managers, 65.17% were male with a mean age of 42.08 years ( $SD = 9.64$ ). They comprised team managers (34.83%), department managers (32.58%), divisional managers (25.84%) or senior executives (6.74%). Their average management experience was 10.15 years ( $SD = 8.08$ ). The number of direct reports ranged from 2 to 72 ( $M = 18.82$ ,  $SD = 17.33$ ). They worked in different sectors, such as manufacturing (23.60%), finance (19.10%), communications (12.40%) and health services (11.20%).

Managers in the final sample completed 552 paired morning and afternoon surveys on the same day, and 63% of managers provided at least six pairs of valid data (i.e. completed morning and afternoon surveys at least 6 out of 10 days). In addition, managers completed 155 morning and 102 afternoon surveys (i.e. one but not the other).

The average response time was 1.5 minutes for the morning survey and 2 minutes for the afternoon survey. The average time between the completion of the morning and afternoon surveys was 10 hours and 20 minutes.

### Measures.

*Positive psychological capacities.* We assessed positive psychological capacities with six items from Xanthopoulou *et al.* (2009) in the general survey ( $\alpha = 0.82$ ) and the 10 morning surveys (average  $\alpha = 0.89$ ) with two items each for *self-efficacy* (e.g. 'When I think about work today, I feel I could deal efficiently with unexpected events'), *self-esteem* (e.g. 'When I think about work today, I feel valuable') and *optimism* (e.g. 'When I think about work today, I feel very optimistic about my future'). Participants responded on a five-point scale from 1 = does not apply at all to 5 = fully applies.

*Benevolent ethical organizational climate.* We assessed benevolent ethical organizational climate with four items ( $\alpha = 0.85$ ) from Victor and Cullen (1988). An example item is: 'The most important concern is the good of all people in the company'. Participants responded on a five-point scale from 1 = does not apply at all to 5 = fully applies.

*Principled ethical organizational climate.* We assessed principled ethical organizational climate with four items ( $\alpha = 0.66$ ) from Victor and Cullen (1988). An example item is: 'In this company, people are expected to strictly follow legal or professional standards'. Participants responded on a five-point scale from 1 = does not apply at all to 5 = fully applies.

*Authentic leadership.* In the general survey, we assessed managers' AL with 14 items ( $\alpha = 0.85$ ) from the Authentic Leadership Inventory (ALI) (Neider and Schriesheim, 2011; German translation by Hörner, Weisweiler and Braun, 2015). Participants responded on a five-point scale from 1 = does not apply at all to 5 = fully applies. In the afternoon surveys, we adapted eight items (average  $\alpha = 0.86$ ) for daily measurement. We selected items with the highest factor loadings and contents appropriate for day-level measurement (cf. Bolger, Davis and Rafaeli, 2003; Gabriel *et al.*, 2018). An example item from the afternoon survey is: 'Today, I encouraged a work group member to voice an opposing point of view (*balanced processing*)'.



Participants responded on a six-point frequency scale from 1 = never to 6 = five or more times.

Control variables. The day of study was recorded to control for time-based effects (Ohly *et al.*, 2010). As previous research has shown that individuals feel more authentic when they are in a positive mood (Lenton *et al.*, 2013), we assessed positive affect with five items from the Positive and Negative Affect Schedule (PANAS) (Mackinnon *et al.*, 1999; German translation by Krohne, Egloff and Kohlmann, 1996) in the general survey ( $\alpha = 0.86$ ) and in each of the 10 morning surveys (average  $\alpha = 0.88$ ). We controlled for day-level positive affect in the subsequent analysis.

*Analytical strategy.* Missing data is a common phenomenon in experience sampling studies (Ohly *et al.*, 2010). While the data of the general survey was complete, the daily surveys showed missing values for 20.6% of positive psychological capacities as well as positive affect (i.e. 183 of 890 data points) and 26.3% of AL (i.e. 236 of 890 data points). Recent multilevel research demonstrated that multiple imputation is preferable over listwise deletion (Grund, Lüdtke and Robitzsch, 2016, 2018). We applied a reversed multiple imputation procedure for missing level-1 data with the *mice* package (van Buuren and Groothuis-Oudshoorn, 2011), taking into account the multilevel structure (Grund, Lüdtke and Robitzsch, 2018). Following Graham, Olchowski and Gilreath (2007), 20 datasets were imputed. Results were pooled with the *mitml* package (Grund, Robitzsch and Lüdtke, 2015).

We examined the factor structure of all items with multilevel confirmatory factor analysis (Muthén and Muthén, 2017; Zacher and Wilden, 2014). A model with three factors on the day level (i.e. AL, positive affect and positive psychological resources) and two factors on the person level (i.e. benevolent and principled ethical organizational climates) demonstrated an acceptable fit:  $\chi^2(162) = 473.45$ ,  $p < 0.001$ ; CFI = 0.930; TLI = 0.914; RMSEA = 0.046; SRMR<sub>within</sub> = 0.059; SRMR<sub>between</sub> = 0.098. In contrast, a one-factor model did not fit the data well:  $\chi^2(172) = 2819.37$ ,  $p < 0.001$ ; CFI = 0.407; TLI = 0.314; RMSEA = 0.132; SRMR<sub>within</sub> = 0.163; SRMR<sub>between</sub> = 0.131. We therefore deemed the theoretically assumed measurement model appropriate for hypothesis testing ( $\Delta\chi^2(10) = 2345.92$ ,  $p < 0.001$ ).

We used hierarchical linear modelling to test the research model as daily observations (level 1) were nested within persons (level 2). We centred the level-1 predictor variables – positive psychological capacities and positive affect – at the person's mean across days to control between-person confounds (group-mean centring). Level-2 variables – benevolent and principled ethical organizational climates – were standardized and grand-mean centred for interpretation (i.e. relative to the sample average; Ohly *et al.*, 2010). We ran the analysis using the *lme4* package (Bates *et al.*, 2015) in R (R Core Team, 2017).

## Results

*Within-person variance of day-level variables.* We first determined the proportion of variance in the day-level variables by calculating intra-class correlations (ICC(1)). The proportion of within-person variation was 38% for positive psychological capacities, 52% for positive affect and 37% for AL. This finding provides strong evidence for day-to-day fluctuations of AL, positive psychological capacities and positive affect.

*Descriptive statistics and correlations.* Table 1 displays means, standard deviations and zero-order correlations of the study variables at the person level ( $r_{bg}$ , above the diagonal) and the day level ( $r_{wg}$ , below the diagonal).

*Hypotheses testing.* Table 2 summarizes the hierarchical linear modelling results. The control variable day-level positive affect was not significantly related to day-level AL ( $\gamma_{10} = 0.04$ , SE = 0.07,  $p = 0.270$ ). Day-level positive psychological capacities related significantly positively to day-level AL ( $\gamma_{20} = 0.17$ , SE = 0.09,  $p = 0.034$ ). Managers reported more AL on days with higher levels of positive psychological capacities. Thus, data supported H1.

The relationship between managers' perceptions of benevolent ethical organizational climates and AL was not significant ( $\gamma_{01} = 0.01$ , SE = 0.08,  $p = 0.453$ ). Thus, data did not support H2a. However, managers' perceptions of principled ethical organizational climates displayed a significant positive relationship with AL ( $\gamma_{02} = 0.17$ , SE = 0.08,  $p = 0.023$ ). Thus, data supported H2b.<sup>1</sup>

<sup>1</sup>We tested a moderation model for exploratory purposes. Neither benevolent nor principled ethical organizational

Table 1. Study 1: within- and between-person descriptive statistics and correlations

Variable	M	SD	1	2	3	4	5	6	7	8
1 Day-level positive psychological capacities	3.66	0.75	–	0.62***	0.35**	0.61***	0.38***	0.44***	0.36***	0.39***
2 Day-level positive affect	3.09	0.81	0.59***	–	0.33**	0.38***	0.38***	0.37***	0.24*	0.06
3 Day-level authentic leadership	3.45	1.04	0.05	0.06	–	0.20	0.13	0.33**	0.09	0.22*
4 General positive psychological capacities	3.98	0.54	0.61***	0.38***	0.20	–	0.57***	0.49***	0.34**	0.32**
5 General positive affect	3.76	0.67	0.38***	0.38***	0.13	0.57***	–	0.43***	0.29**	0.16
6 General authentic leadership	4.03	0.43	0.44***	0.37***	0.33**	0.49***	0.43***	–	0.31**	0.36***
7 Benevolent ethical organizational climate	3.28	0.82	0.36***	0.24*	0.09	0.34*	0.29**	0.31**	–	0.34**
8 Principled ethical organizational climate	4.06	0.56	0.39***	0.06	0.22*	0.32*	0.16	0.36**	0.34**	–
9 Study day	5.50	0.00	–0.03	0.01	0.06	–	–	–	–	–

Note: Variables 1 to 3 and 10 are day-level variables (level 1) and variables 4 to 8 are person-level variables (level 2). Study day is a monotonic variable representing the day of the study (ranging from 1 to 10). Day-level positive psychological capacities and day-level positive affect were assessed in the morning. Day-level authentic leadership was assessed in the afternoon. Within-person correlations ( $r_{wg}$ ) are shown below the diagonal and are based on raw within-person scores ( $n = 552$  days); between-person correlations ( $r_{bg}$ ) are shown above the diagonal and are based on raw between-person scores ( $N = 89$  persons). Correlations for between-person variables are based on between-person scores. All means (M) and standard deviations (SD) are based on between-person scores. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$  (two-tailed).

Table 2. Study 1: results for research model predicting day-level authentic leadership

Variable	Estimates	SE	t	p
Intercept ( $\gamma_{00}$ )	3.44	0.08	45.02	<0.001
Level-1 predictors				
Day-level positive affect ( $\gamma_{10}$ )	0.04	0.07	0.62	0.270
Day-level positive psychological capacities ( $\gamma_{20}$ )	0.17	0.09	1.86	0.034
Level-2 predictors				
Benevolent ethical organizational climate ( $\gamma_{01}$ )	0.01	0.08	0.12	0.453
Principled ethical organizational climate ( $\gamma_{02}$ )	0.17	0.08	2.00	0.023
$\sigma^2$ (level-1 variance)	0.42			
$\tau^2$ (level-2 variance)	0.64			

Note: Pooled estimates of 20 imputed datasets. Sample size after imputation: level 1,  $n = 890$  days; level 2,  $N = 89$  persons. Hypotheses tests are one-tailed. Level-1 predictor is group-mean centred. Level-2 variables are standardized and grand-mean centred.

## Discussion

Theory suggests that AL is dynamic (Luthans and Avolio, 2003) as it depends on how managers behave 'every day, in each and every interaction' (May *et al.*, 2003, p. 248). In this first study, the fluctuations in managers' AL found over 10 days were substantive. This finding has implications for the development of theoretical models of AL (e.g. to include day-level outcomes for managers and employees) and its measurement (e.g. day-level self- and other-ratings) in future research (Fischer, Dietz and Antonakis, 2017; McClean *et al.*, 2019; McCormick *et al.*, 2018; Shamir, 2011). We also saw that when managers experienced high levels of positive psychological capacities in the morning, they reported a higher frequency of AL displayed

climates interacted with positive psychological capacities to predict AL. Detailed results are available from the first author upon request.

during the day. This finding confirms the resource investment principle of COR theory that individuals with more resources are better positioned for resource gains (Halbesleben *et al.*, 2014), that is, managers invested positive psychological capacities towards AL on a given day.

We tested benevolent and principled ethical organizational climates as contextual resources for managers' AL, focusing on ethical dimensions of the organizational context (Lemoine, Hartnell and Leroy, 2019). Only principled but not benevolent ethical organizational climates were related to AL. This finding contributes to the idea of resource caravans, pointing to kinds of contextual resources which foster managers' engagement in AL (i.e. when managers indicated that their work environments provided them with clear ethical guidelines (May *et al.*, 2003). We conclude that structures (e.g. codes of conduct) facilitate managers' sense of organizational support for moral behaviour

(van Prooijen and Ellemers, 2015), whereas caring norms may partly conflict with AL such as transparency and open, critical feedback (Hewlin, Dumas and Burnett, 2017).

## Study 2

In extension of Study 1, Study 2 addresses the role of managers' promotion focus as a mediating mechanism linking managers' positive psychological capacities to AL. Our reasoning builds on COR theory and research relating positive psychological capacities to promotion focus (e.g. Halbesleben *et al.*, 2014) as well as theorizing and research in the tradition of Higgins' (1997) self-regulatory focus theory to suggest that promotion focus is a predictor of positive forms of leadership (Johnson *et al.*, 2017; Kark and van Dijk, 2019; Sassenberg and Hamstra, 2017; Tuncdogan, van den Bosch and Volberda, 2015). In addition, Study 2 serves as a constructive replication of the previous findings regarding the relationships of positive psychological capacities and ethical organizational climates with AL (Eden, 2002; Miller and Bamberger, 2016).

### *Promotion focus as linking mechanism*

Regulatory focus theory suggests that people's behaviour is motivated by two fundamental motivational orientations: promotion and prevention (Brockner and Higgins, 2001; Higgins, 1997). A promotion focus describes a self-regulatory strategy that is attuned to individuals' ideals, hopes and aspirations (Brockner and Higgins, 2001; Higgins, 1997). It motivates individuals 'to bring their actual selves (their behaviors and self-conceptions) in alignment with their ideal selves (self-standards based on wishes and aspirations of how they would like to be)' (Brockner and Higgins, 2001, p. 35). In contrast, a prevention focus implies goals in accordance with ought selves, that is, one's felt duties and responsibilities (Brockner and Higgins, 2001).

In line with Higgins' (1997) theorizing, 'prevention focus and promotion focus are independent but not mutually exclusive constructs' (Neubert, Wu and Roberts, 2013, p. 289) – that is, they coexist as separate dimensions rather than opposite ends of the same spectrum. Recent meta-analytical findings largely affirm this reasoning (Gorman *et al.*, 2012; Lanaj, Chang and

Johnson, 2012). Although both foci coexist, they are activated by (largely) different antecedents and relate differently to subsequent outcomes. Recent leadership research concentrates on managers' promotion focus, demonstrating that it facilitates desirable leadership behaviours as well as follower outcomes (Kark and van Dijk, 2019; Sassenberg and Hamstra, 2017). In addition, research by Kim *et al.* (2019) suggests that people's promotion focus, but not prevention focus, predicts the subjective experience of authenticity. In line with these arguments as well as meta-analytical findings that a prevention focus is unrelated – in the case of self-efficacy and optimism – or negatively related – in the case of self-esteem – to positive psychological capacities (Gorman *et al.*, 2012; Lanaj, Chang and Johnson, 2012), we predict the influence of positive psychological capacities on managers' promotion focus and subsequent AL.

The promotion focus is malleable and can be affected by factors within the individual (Higgins, 1997, 2000), such as their level of personal resources (Lanaj, Chang and Johnson, 2012), which in turn facilitate positive appraisals of challenging situations (Luthans and Youssef-Morgan, 2017; Petersen and Youssef-Morgan, 2018). By framing challenging situations as opportunities, a promotion focus allows managers to remain perseverant and to invest their resources to attain AL (Hobfoll, 2001, 2011); that is, managers are more likely to focus on self-improvement rather than self-protection (Gardner *et al.*, 2005). In contrast, when managers lack personal resources, self-protection and the avoidance of challenges are triggered (e.g. Heimpel, Elliot and Wood, 2006). Therefore, in line with COR theorizing (specifically, Corollaries 1, 3 and 4; Halbesleben *et al.*, 2014), we expect that low levels of positive psychological capacities will attenuate managers' promotion focus, while high levels will facilitate it. Two meta-analyses support this argument: Gorman *et al.* (2012) found positive relationships of self-esteem and optimism with promotion focus, and Lanaj, Chang and Johnson (2012) demonstrated its positive associations with self-esteem and self-efficacy.

Promotion-focused managers are fuelled by the motivation to achieve their ideal selves (Christian, Garza and Slaughter, 2011). We therefore expect that managers' promotion focus facilitates AL because it motivates them to align the ideal inner self with one's outer self. A promotion focus enables

greater resilience in the light of obstacles and setbacks that would otherwise prevent managers from achieving the ideal 'authentic self' (Brockner and Higgins, 2001; Kark and van Dijk, 2007; Neubert *et al.*, 2008). Specifically, it helps managers achieve higher levels of self-awareness by reflecting on discrepancies between their actual and ideal selves while maintaining a growth orientation (Kark and van Dijk, 2007). Promotion-focused managers are more likely to take risks to attain their ideals and follow their personal beliefs (Brockner and Higgins, 2001), consistent with an internalized moral perspective. A promotion focus enables them to explore alternative routes before reaching decisions (Tuncdogan, van den Bosch and Volberda, 2015), to listen to multiple perspectives and be open to new information (Kark and van Dijk, 2007). In sum, we suggest that managers who draw on their positive psychological capacities are more likely to self-regulate towards their ideal selves, which in turn facilitates AL:

*H3:* Managers' positive psychological capacities have an indirect effect on authentic leadership through managers' promotion focus.

### Methods and results

*Sample and procedure.* We surveyed 230 German-speaking managers recruited via the ISO-certified panel provider respondi at two points in time with a time lag of 10 days to reduce method bias (Podsakoff, MacKenzie and Podsakoff, 2012). The first questionnaire ( $t_1$ ) assessed positive psychological capacities, positive affect, perceptions of benevolent and principled ethical organizational climates, and demographic information. The second questionnaire ( $t_2$ ) assessed promotion focus and AL.

A total of 148 (64.35%) managers responded to the survey at both time points. We excluded 18 managers who reported low levels of attentiveness (i.e. ratings of 1 or 2 on a five-point scale) (DeSimone and Harms, 2018; DeSimone, Harms and DeSimone, 2015).<sup>2</sup> All subsequent analyses

<sup>2</sup>Following the recommendations by DeSimone and Harms (2018), we analysed the results with and without data screening. The 18 excluded cases did not differ in their demographics from the remaining sample. Of the variables included in our model, only benevolent ethical work climate differed significantly between the excluded ( $M = 2.82$ ,  $SD = 0.75$ ) and included cases ( $M = 3.26$ ,  $SD$

were based on the responses collected from 130 managers. 56.92% of participants were male and their average age was 43.75 years ( $SD = 10.48$ ). Participants worked as team managers (31.54%), department managers (36.15%), divisional managers (18.46%) or senior executives (13.85%). They had an average management experience of 11.58 years ( $SD = 8.70$ ). The number of direct reports ranged from 1 to 97 ( $M = 15.77$ ,  $SD = 15.99$ ). They worked in different sectors, such as manufacturing (19.23%), finance (16.92%), public administration (10.77%), communications (10.00%) and health services (7.69%).

*Measures.* We used the same scales as in the general survey of Study 1 for *positive psychological capacities* ( $\alpha = 0.88$ ; Xanthopoulou *et al.*, 2009), *benevolent ethical organizational climate* ( $\alpha = 0.85$ ) and *principled ethical organizational climate* ( $\alpha = 0.82$ ; Victor and Cullen, 1988), *AL* ( $\alpha = 0.92$ ; Neider and Schriesheim, 2011; German translation by Hörner, Weisweiler and Braun, 2015) and *positive affect* ( $\alpha = 0.90$ ; Mackinnon *et al.*, 1999; German translation by Krohne, Egloff and Kohlmann, 1996). We assessed *work promotion focus* with nine items ( $\alpha = 0.91$ ; Neubert *et al.*, 2008), translated into German following a standard procedure (Brislin, 1980). An example item is: 'At work, I am motivated by my hopes and aspirations'. Participants responded on a five-point scale from 1 = does not apply at all to 5 = fully applies. The measure of positive affect was used to control for inter-individual differences that may affect promotion focus (Neubert *et al.*, 2008) and AL (Lenton *et al.*, 2013).

*Descriptive statistics, correlations and analytical strategy.* Table 3 displays descriptive statistics of the study variables.

We used confirmatory factor analysis implemented in the *lavaan* package (Rosseel, 2012) in R (R Core Team, 2017) to test the latent factor structure of AL, personal resources and the full measurement model in four steps. First, we tested the higher-order factor structure of the ALI (Credé and Harms, 2015), which pointed to the appropriateness of conceptualizing AL as

$= 0.85$ ,  $t(146) = -2.086$ ,  $p = 0.039$ , Cohen's  $d = 0.549$ ). An analysis of the full sample, including all 148 managers, yielded the same results when testing our hypotheses. Detailed results are available from the first author upon request.

Table 3. Study 2: descriptive statistics and correlations

Variable	M	SD	1	2	3	4	5	6
1 Positive psychological capacities <sub>1</sub>	4.12	0.61	(0.88)					
2 Benevolent ethical organizational climate <sub>1</sub>	3.36	0.82	0.46***	(0.85)				
3 Principled ethical organizational climate <sub>1</sub>	3.99	0.74	0.35***	0.46***	(0.82)			
4 Positive affect <sub>1</sub>	3.82	0.72	0.57***	0.60***	0.42***	(0.90)		
5 Promotion focus <sub>2</sub>	3.48	0.77	0.48**	0.41***	0.08	0.48***	(0.91)	
6 Authentic leadership <sub>2</sub>	3.98	0.53	0.64**	0.50***	0.43***	0.60***	0.51***	(0.92)

Note: N = 130. Subscripts indicate point of measurement. Internal consistency (Cronbach's alpha) in parentheses on the diagonal. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001 (two-tailed).

a higher-order factor with four first-order factors ( $\chi^2(73) = 149.02$ ,  $p < 0.001$ ; CFI = 0.911; TLI = 0.889; RMSEA = 0.091 (0.070, 0.111); SRMR = 0.056) (cf. Braun and Nieberle, 2017; Neider and Schriesheim, 2011; Steffens *et al.*, 2016). Detailed results are available from online supplement S1.

Second, we tested the factor structure of our positive psychological capabilities measure in line with the theoretical structure proposed by Xanthopoulou *et al.* (2007). We compared a higher-order factor of positive psychological capacities with three first-order factors (i.e. self-efficacy, self-esteem and optimism) ( $\chi^2(6) = 21.14$ ,  $p = 0.002$ ; CFI = 0.962; TLI = 0.904; RMSEA = 0.139 (90% CI: 0.078, 0.206); SRMR = 0.026) to a single-factor model (i.e. all indicators loading on one positive psychological capabilities factor) ( $\Delta\chi^2(3) = 26.836$ ,  $p < 0.001$ ) and an orthogonal, first-order model (i.e. three uncorrelated latent factors with indicators loading on their respective factor) ( $\Delta\chi^2(3) = 158.395$ ,  $p < 0.001$ ). Detailed results are available from online supplement S2. In line with these results, demonstrating the best fit for the theoretically proposed higher-order factor model, we used positive psychological capacities as a higher-order factor with three first-order factors in the analysis.

Third, we tested the full measurement model underlying this study. The hypothesized model with six factors (i.e. positive psychological capacities, positive affect, promotion focus, benevolent and principled ethical organizational climate, and AL) showed an acceptable fit ( $\chi^2(794) = 1189.10$ ,  $p < 0.001$ ; CFI = 0.886; TLI = 0.876; RMSEA = 0.062 (90% CI: 0.054, 0.069); SRMR = 0.068) and fitted the data significantly better ( $\Delta\chi^2(25) = 1191.06$ ,  $p < 0.001$ ) than a one-factor model ( $\chi^2(819) = 2380.16$ ,  $p < 0.001$ ; CFI = 0.548; TLI = 0.525; RM-

SEA = 0.121 (90% CI: 0.115, 0.127); SRMR = 0.109).

Finally, for hypotheses testing, we applied latent structural equation modelling with bootstrapping to determine 95% confidence intervals for each parameter (Kline, 2015).

*Hypotheses testing.* Table 4 provides the effect estimates of the hypothesized structural model.

Positive psychological capacities were positively related to AL ( $\beta = 0.369$ , SE = 0.140,  $p = 0.002$ ), supporting H1. Only principled ethical organizational climate displayed a significant positive relationship with AL ( $\beta = 0.232$ , SE = 0.072,  $p = 0.008$ ). For benevolent ethical organizational climate, the relationship was not significant ( $\beta = 0.008$ , SE = 0.096,  $p = 0.946$ ). Thus, parallel to Study 1, data supported H2b but not H2a.

In addition, H3 proposed an indirect effect of managers' positive psychological capacities on AL through managers' promotion focus. Positive psychological capacities were positively related to promotion focus ( $\beta = 0.422$ , SE = 0.160,  $p = 0.002$ ), which in turn related positively to AL ( $\beta = 0.291$ , SE = 0.109,  $p = 0.007$ ). The indirect effect was significant ( $\beta = 0.123$ , SE = 0.063,  $p = 0.023$ ). Thus, data supported H3.<sup>3</sup>

<sup>3</sup>For exploratory purposes (cf. To *et al.*, 2018), we also assessed managers' *work prevention focus* (Neubert *et al.*, 2008; nine items,  $\alpha = 0.92$ ). As in previous studies (e.g. Neubert, Wu and Roberts, 2013; Neubert *et al.*, 2008), prevention and promotion focus were positively correlated ( $r = 0.354$ ,  $p < 0.001$ ). However, when testing the proposed structural model with *prevention focus* as mediating variable, the relationship of positive psychological capacities with prevention focus was non-significant ( $\beta = 0.237$ , SE = 0.224,  $p = 0.091$ ) and so was the indirect effect ( $\beta = 0.063$ , SE = 0.046,  $p = 0.114$ ).

Table 4. Study 2: effect estimates of structural model

Structural paths	B [95% CI]	$\beta$	SE	CR	p
Positive psychological capacities <sub>1</sub> → Promotion focus <sub>2</sub>	0.490 [0.177, 0.804]	0.422	0.16	3.06	0.002
Positive psychological capacities <sub>1</sub> → Authentic leadership <sub>2</sub>	0.432 [0.158, 0.707]	0.369	0.14	3.09	0.002
Benevolent ethical organizational climate <sub>1</sub> → Authentic leadership <sub>2</sub>	0.007 [-0.182, 0.195]	0.008	0.10	0.07	0.946
Principled ethical organizational climate <sub>1</sub> → Authentic leadership <sub>2</sub>	0.190 [0.049, 0.331]	0.232	0.07	2.64	0.008
Positive affect <sub>1</sub> → Promotion focus <sub>2</sub>	0.253 [0.060, 0.446]	0.319	0.10	2.57	0.010
Positive affect <sub>1</sub> → Authentic leadership <sub>2</sub>	0.093 [-0.094, 0.279]	0.116	0.10	0.98	0.329
Promotion focus <sub>2</sub> → Authentic leadership <sub>2</sub>	0.293 [0.080, 0.507]	0.291	0.11	2.69	0.007
Positive psychological capacities <sub>1</sub> → Promotion focus <sub>2</sub> → Authentic leadership <sub>2</sub>	0.144 [0.020, 0.268]	0.123	0.06	2.27	0.023

Note: Subscripts indicate point of measurement. 95% CI = 95% confidence intervals; B = unstandardized coefficients; CR = critical ratio; SE = standard error;  $\beta$  = standardized coefficients. Global fit indices:  $\chi^2(796) = 1198.34$ ,  $p < 0.001$ , CFI = 0.883, TLI = 0.874, RMSEA = 0.062 [90% CI = 0.055, 0.069], SRMR = 0.071.

### Discussion

Study 2 supported and extended our previous findings. Pointing to homologous effects on within- and between-person levels (Chen, Blieses and Mathieu, 2005; McCormick *et al.*, 2018), managers with higher levels of positive psychological capacities reported more AL. Managers' promotion focus was an underlying mediator of this relationship (Brockner and Higgins, 2001; Halbesleben *et al.*, 2014). The findings help to better understand reasons *why* personal resources facilitate managers' AL from the perspective of COR theory. Positive psychological capacities are resources through which managers can invest in self-regulation processes towards growth, aspirations and ideals to then attain AL (Halbesleben *et al.*, 2014; Hobfoll *et al.*, 2018; Kark and van Dijk, 2007). Results also replicated findings from Study 1 for ethical organizational climates, confirming that managers draw from ethical guidelines and codes of conduct for AL (Lemoine, Hartnell and Leroy, 2019; May *et al.*, 2003), while norms of care and consideration appear less relevant.

### General discussion

The present research advances current theorizing of AL in light of COR theory. In Study 1, AL varied from day to day, and these fluctuations were significantly predicted by managers' personal resources (i.e. self-esteem, self-efficacy, optimism) on a given day. Results also provided initial results to suggest that only principled, but not benevolent ethical organizational climates represent a stable, contextual resource for AL. Study 2 extended these initial results, showing an indirect relationship between personal resources and AL via promotion

focus, and replicated that only a principled ethical organizational climate positively predicted AL.

Taken together, findings from the two studies make three key contributions to the management literature. First, we demonstrated that AL varies from day to day, and that these changes were contingent on fluctuations in levels of personal resources. This is a genuinely new insight for AL; aligning with suggestions that incorporating time-based theorizing and within-person variation in measurement approaches advances management research (Kelemen, Matthews and Breevaart, 2019; McClean *et al.*, 2019; McCormick *et al.*, 2018).

Moreover, we contribute to the understanding of some of the underlying processes linking personal resources to AL, which is a crucial albeit largely untested element of AL theory (Gardner *et al.*, 2005; Luthans and Avolio, 2003; Sparrowe, 2005). We show that managers with higher levels of personal resources are more likely to regulate behaviour towards their ideal selves (i.e. promotion focus; Kark and van Dijk, 2019). Focusing on personal hopes and aspirations enables managers to accumulate further resources (Halbesleben *et al.*, 2014). We thus found evidence of a 'gain spiral' for AL, as described in COR theory (Hobfoll, 2001, 2011).

Our work also speaks to the importance of virtue ethics for AL (Lemoine, Hartnell and Leroy, 2019), positioning them as part of a resource caravan from the perspective of COR theory (Hobfoll *et al.*, 2018). Principled ethical organizational climates incorporate moral reference points to establish ethical guidelines and standards in organizations (Victor and Cullen, 1988). Interestingly, managers' perceptions of a benevolent ethical organizational climate were not related

to AL across the two studies. Benevolent ethical organizational climates attune employees to the good of individuals within the organization and the collective as the basis for ethical judgements (Kish-Gephart, Harrison and Treviño, 2010; Martin and Cullen, 2006). Focusing on what is 'good for us' as opposed to what is 'the right thing to do' may create moral tensions for managers who seek to attain AL (Hewlin, Dumas and Burnett, 2017; Koerner, 2014). AL differs from other positive leadership styles by being 'a markedly distinct theoretical approach to normative morality' (Lemoine, Hartnell and Leroy, 2019, p. 159). Compared to being a servant leader, for example, AL is less focused on caring for others and more about acting on the basis of one's personal values (Lemoine, Hartnell and Leroy, 2019).

#### *Limitations and directions for future research*

The research presented here has limitations, which need to be considered when interpreting the results. We adapted an eight-item version of the ALI (Neider and Schriesheim, 2011) to measure AL as a day-level construct which captured significant variations across days (37% within-person variance). A positive correlation between the ALI (i.e. measuring AL as a relatively stable inter-individual difference factor) and the day-level measure ( $r = 0.33$ ,  $p < 0.01$ ) was observed. While we found initial evidence for the validity of the day-level measure (Gabriel *et al.*, 2018; Ohly *et al.*, 2010), future research should refine and validate it further.

Self-reports were an appropriate data source for personal resources and AL (Hewlin, Dumas and Burnett, 2017; Weiss *et al.*, 2018). Weiss *et al.* (2018) pointed out that core aspects of AL, such as the consistency of thoughts and behaviours, cannot be evaluated by other persons (see also Hewlin, Dumas and Burnett, 2017; Knoll *et al.*, 2015). Research found significant positive correlations between leader and follower ratings of AL (Nübold, van Quaquebeke and Hülshager, 2019). Also, the level of granularity (i.e. observing managers' behaviours on a specific day) in experience sampling studies puts the manager 'in the best position to evaluate her/his own behaviors' (McClellan *et al.*, 2019, p. 493). The use of online panels is common in organizational research (Buhrmester, Kwang and Gosling, 2011; Peer *et al.*, 2017). Non-naivety among frequent participants and self-selection into panels may pose threats to

the generalizability of results (Chandler, Mueller and Paolacci, 2014). While this concern applies to many forms of sampling (e.g. snowball or network samples), we readily acknowledge this limitation.

We took measures to address method biases (Podsakoff, MacKenzie and Podsakoff, 2012). Study 1 assessed the predictor and criterion variables across 10 days, and level-1 variables were person-mean centred (Gabriel *et al.*, 2018). In Study 2, we separated predictor and criterion variables via two points of measurement. In both studies, we followed recommendations for data screening to enhance quality (DeSimone and Harms, 2018; DeSimone, Harms and DeSimone, 2015). Future longitudinal research could study different forms of dynamics in AL behaviour, such as growth through interventions (Nübold, van Quaquebeke and Hülshager, 2019), and include follower outcomes in response to short-term fluctuations of AL (Gill and Caza, 2018) as well as carry-over effects on following days.

Finally, we suggest for future work to incorporate other personal resources such as courage (May *et al.*, 2003). This could also include investigating the interactions of different resources and how organizational culture in a broader sense affects these processes (Hobfoll *et al.*, 2018). We did not conceptualize promotion focus as a mediator in the relationship of organizational climate and AL on the grounds that mediating processes are likely to differ between personal and contextual resources. For example, ethical work climates might facilitate managers' AL through heightened levels of moral awareness (van Sandt, Shepard and Zappe, 2006) or moral efficacy (May *et al.*, 2003). However, this is an issue for future research to resolve.

#### *Practical implications*

The research presented here has important implications for management practice. Managers' positive psychological capacities matter for AL, not only generally, but also on a day-to-day basis. Hence, organizations are called upon to foster managers' personal resources consistently. We recommend that businesses introduce daily interventions (e.g. reflection exercises) to strengthen managers' positive psychological capacities throughout the working week (Lanaj, Foulk and Erez, 2019; Luthans *et al.*, 2006).

The finding that promotion focus links positive psychological capacities to AL suggests that interventions targeting self-regulation towards ideal selves will benefit managers' AL. Promotion focus can be fostered through priming of gains and positive behavioural role modelling (Kark and van Dijk, 2007). Managers who act in line with their ideal selves can also be role models for others in the organization to speak up when they witness unethical behaviour (Monzani, Braun and van Dick, 2016). The finding that principled ethical organizational climates facilitate AL supports the role of compliance management (Treviño *et al.*, 1999). We recommend that businesses reinforce ethical guidelines and standards through a consistent agenda for internal stakeholders (Kish-Gephart, Harrison and Treviño, 2010).

## Conclusion

While AL is highly valued in today's business world, scholars and practitioners must acknowledge that managers often struggle to act in line with their authentic selves at work. Positive psychological capacities and principled ethical organizational climates are important resources to guide managers on the path towards AL. We call for a stronger integration of COR and leadership theory, as well as studies of the day-to-day dynamics that managers experience.

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## **Supporting Information**

Additional supporting information may be found online in the Supporting Information section at the end of the article.

**Table S1:** Study 2: Test of higher-order structure of authentic leadership

**Table S1:** Study 2: Test of higher-order factor structure of positive psychological capacities