Journal of Business Research 183 (2024) 114861

Contents lists available at ScienceDirect

Journal of Business Research

journal homepage: www.elsevier.com/locate/jbusres

Eyes that Lead: The charismatic influence of gaze signaling on employee approval and extra-effort

Simon Liegl [a,b,1], Thomas Maran [c,d,1], Sascha Kraus [c,e,*], Marco Furtner [a], Pierre Sachse [b]

[a] University of Liechtenstein, Liechtenstein Business School, Fürst-Franz-Josef-Straße, 9490 Vaduz, Liechtenstein
[b] University of Innsbruck, Department of Psychology, Universitätsstrasse 15, 6020 Innsbruck, Austria
[c] Free University of Bozen-Bolzano, Faculty of Economics & Management, Piazza Università 1, 39100 Bolzano, Italy
[d] LeadershipWerk, 9490 Vaduz, Liechtenstein
[e] University of Johannesburg, Department of Business Management, 2092 Johannesburg, South Africa

ARTICLE INFO

Keywords:
Charismatic Leadership
Charisma
Eye Gaze
Visual Attention
Communication

ABSTRACT

Charismatic leadership significantly influences organizational performance, with recent research emphasizing the pivotal role of leader behavior in conveying charisma to employees. In two studies we explore the under-explored concept of eye-directed gaze as a charismatic leadership signal and its impact on team leadership effectiveness. The first study employed mobile eye-tracking during interactive negotiations, while the second relied on observer reports in leader–follower groups. Consistently, our results indicate that leaders exhibiting more pronounced eye-directed gaze are perceived as charismatic, dominant, assertive, and competent by their employees. Furthermore, these leaders receive higher approval from their followers and inspire them to surpass performance expectations. In conclusion, our findings underscore the effectiveness of employing eye-directed gaze as a tactic for charismatic leadership, empowering leaders to amplify their influence and message reception within their teams.

1. Introduction

Eyes as figures of power have always carried a symbolic meaning in mythology and history, from the piercing gaze of Russian mystic Rasputin to the symbolic Eye of Providence as the all-seeing eye of God featured in the Great Seal of the United States (Potts, 1973). The eyes represent a cultural symbol for perception in general, yet their symbolic power goes beyond the perception of the mere physical environment. Religious scriptures, such as the books of Proverbs, Psalms, and Job, affirm the all-encompassing perception of a divine gaze that can penetrate even into our hearts. Hindu god Shiva is depicted with a third eye; for Hindus and Buddhists, a third eye symbolizes the gaining of a higher consciousness, a more profound perception, the state of enlightenment. Even in popular culture, the eye serves as a symbol of supreme power, such as the iconic Eye of Sauron in Peter Jackson's movie adaption of Tolkien's works: "[…] the Lord of Mordor sees all. His gaze pierces cloud, shadow, earth, and flesh. […]" (Jackson, 2001, 0:39:47). These cultural narratives are united by the depiction of not just any eye gaze, but rather that of powerful figures who preside over groups, armies, or entire nations. The idea of impressive leaders employing particularly piercing eyes even translates into organizations (Bryman, 1992), suggesting that their eye gaze might embody a charismatic aura when communicating with their followers (Maran, Furtner, Liegl, et al., 2019). The visionary founder and former CEO of Apple, Inc., Steve Jobs, exemplified this idea with his response to a questioner regarding the lack of a keyboard on the iPhone, stating "They'll get used to it", while piercingly staring at the questioner's eyes (Guglielmo, 2012). Therefore, the mystical nature of leaders' eyes seems not primarily to arise from their function to perceive information but from a social function that affects others – in other words, from the innate signaling that emanates from them (Risko et al., 2016).

The human eye seems to have evolved to fulfill such a communicative function. Humans possess among the most conspicuous eye whites among primates. Our eyes are uniquely horizontally elongated (Kobayashi & Kohshima, 1997), allowing us to fixate on others' gaze and have them become aware of our attention (Emery, 2000) and

* Corresponding author at: Free University of Bozen-Bolzano, Faculty of Economics & Management, Piazza Università 1, 39100 Bolzano, Italy.
E-mail addresses: simon.liegl@uni.li (S. Liegl), thomas.maran@unibz.it (T. Maran), sascha.kraus@zfke.de (S. Kraus), marco.furtner@uni.li (M. Furtner), pierre.sachse@uibk.ac.at (P. Sachse).

[1] Simon Liegl and Thomas Maran contributed equally and share first authorship.

https://doi.org/10.1016/j.jbusres.2024.114861
Received 6 September 2023; Received in revised form 20 July 2024; Accepted 21 July 2024
Available online 29 July 2024

transforming eye-directed gaze into a potent social cue (Gobel et al., 2015). Our ability to control gaze behavior and use it intentionally as a social tactic, as well as the influence of gaze behavior on others' thoughts and actions (Grossmann, 2017), make it a prime candidate to serve as an effective leadership tactic. The call for a more specific focus on leader behavior in leadership research (Banks et al., 2023) coincides with the growing interest in gaze behavior in organizational contexts (Cheng et al., 2022) and the efforts to disentangle the complexities of charismatic leadership into concrete behaviors (Antonakis et al., 2016). However, there is currently a lack of conclusive evidence on the impact of leaders' eye-directed gaze on their emergence or effectiveness.

This study examines the effect of leaders' eye-directed gaze on their employees' charisma perceptions and how both translate to leader approval and effectiveness. We designed two studies to attain both internal and external validity. In the first study, we used mobile eye-tracking to examine the impact of leaders' eye-directed gaze during a negotiation paradigm in an internally valid manner. In the second, we analyzed the self-reported eye-directed gaze of leaders and its effect on leaders of functional teams in organizational settings to provide externally valid insights.

We contribute to our state of research by recommending a firm place for eye-directed gaze in the behavioral repertoire of charismatic leadership, further emphasizing the specific impact of this concretely outlined behavior. In more specific terms, we contribute to the state of the research in three ways: First, we accumulated the dispersed but extensive findings on the effect of eye-directed gaze (Grossmann, 2017) and placed them in a bundled fashion in the stream of research on charismatic leadership (Antonakis et al., 2016). More specifically, we connect leaders' eye-directed gaze to the central criteria of leadership, leader emergence and leader effectiveness, and thus emphasize the potential role of this everyday behavior for leadership (Cheng et al., 2022; Shim et al., 2021). Second, we thereby contribute to the research stream following the signaling approach to charismatic leadership (Antonakis et al., 2016), thus helping to map the enigma of charismatic leadership onto observable behaviors (Fischer & Sitkin, 2023; van Knippenberg & Sitkin, 2013; Yukl, 1999). Third, we translate previous indicative evidence on eye-directed gaze and leadership (Maran, Furtner, Liegl, et al., 2019) into more ecologically valid designs, strengthening the external validity of the proposition on the impact of gaze behavior in leadership (Risko et al., 2016). We surpass this limitation and provide evidence of high external validity that allows us to make recommendations for managerial practice.

2. Theoretical background and hypothesis development

2.1. Searching for the signals of leaders' charisma

Throughout history, charismatic leadership has been ennobled as a transformative force that upends the shackles of bureaucratic authority (Conger & Kanungo, 1998; Ravet-Brown, Furtner & Kallmuenzer, 2024; Weber, 1982). This revered characteristic has been attributed to exceptional politicians, business leaders, and historical figures who have left a lasting impact. A comprehensive *meta*-analysis underscores the effectiveness of charismatic leadership, demonstrating its potency across various contexts, organizational levels, and outcomes (Banks et al., 2017). Furthermore, a growing body of experimental evidence supports the beneficial effects of charismatic leadership in organizations (Ernst et al., 2022; Fest et al., 2021; Meslec et al., 2020). In a seminal field experiment, Antonakis et al. (2022) established that charismatic speeches – as opposed to standard speeches or performance-contingent financial rewards – increased workers' output by 17 %. Thus, charisma can be seen as a veritable leadership vitamin that enhances the effectiveness of leaders.

However, if a junior leader in recent decades had inquired about concrete implementable behaviors to lead with charisma, leadership science would have only been able to provide a stuttering response. This failure was not due to a paucity of research on charismatic leadership but rather a fundamental flaw in its conceptualization: charisma had been defined and operationalized in terms of its impacts on followers rather than as an exogenous factor causing those impacts (Antonakis et al., 2016; Fischer & Sitkin, 2023; van Knippenberg & Sitkin, 2013; Yukl, 1999). The excessive use of questionnaires as the first choice for operationalizing charismatic leadership has long led to a blind spot in research when it comes to the concrete behaviors that actually form leaders' charisma (Banks et al., 2023). At its core, the weakness lay in the formulation of the items of established questionnaires. They capture what effect charismatic leaders have on those they lead, much in the style of the archaic "great man" theories of charismatic leaders. By positioning charismatic leadership as an exogenous variable rather than an endogenous variable in study designs, they conflate cause and effect (Antonakis et al., 2016). Research has proposed valuable cures to the endogeneity problem for charismatic leadership (Antonakis, 2017; Antonakis et al., 2010, 2014), suggesting different methodological approaches or putting the spotlight strictly on the very behaviors that cause the charismatic effect of leaders (Bastardoz et al., 2022; Jacquart & Antonakis, 2015; Lonati et al., 2018).

To solve this problem. Antonakis et al. (2016) proposed a conceptualization of charisma being "values-based, symbolic, and emotion-laden leader signaling" (p. 304), where signaling refers to the use of concrete behaviors that serve a signaling function in leadership. This conceptualization avoids the flaws of previous definitions and operationalizations and narrows the focus on leader behaviors. The signaling approach to leaders' charisma (Antonakis et al., 2016) connects charismatic leadership to the general concept of the signaling theory (Spence, 1974). In the context of leader selection in groups, aspirants aiming for a leader role in a group deploy signals to capture the attention of group members (Herrero & Bornay-Barrachina, 2024), who then use these signals to gauge the leadership aptitude of the aspiring leader. However, for a signal to effectively convey accurate information about the leadership abilities of the aspirant, it must be costly to produce and genuinely reflect the leader's abilities; hence it must be available only to those candidates who are viable to fulfill the required role (Antonakis et al., 2016; Grabo et al., 2017).

For example, the use of metaphors is thought to be a charismatic leader signal (e.g., Naidoo & Lord, 2008). The utilization of this signal allows an aspirant to make their message easily understandable and more memorable. However, only aspirants with high cognitive ability succeed in producing such figurative language (Silvia & Beaty, 2012). Potential followers should approve more strongly of such an aspirant, as a leader with higher cognitive abilities is more likely to make good decisions (Judge et al., 2004). The use of metaphors can therefore be seen as a signal of a leader's charisma because it is honest, costly to produce, and beneficial for both the sender and receivers (e.g., Higham, 2014).

Various further tactics of charismatic leadership have been recognized, serving the purpose of framing a message, increasing its substance, and enhancing its delivery through nonverbal means (Antonakis et al., 2011). These tactics are not arbitrary choices but serve a specific communicative purpose in leadership, signaling the sender's capabilities that qualify them for their position. Potential followers receive the signal and categorize the sender as a leader, attributing prototypical leader characteristics to them (Grabo et al., 2017).

Although a few nonverbal cues have been recognized as contributing to charismatic leadership, the most crucial of these has received little attention so far: *eye-directed gaze* (Emery, 2000; Grossmann, 2017; Senju & Johnson, 2009). This is rather surprising, since robust findings indicate eye gaze as a potent nonverbal cue; for example, it is innate for us to reflexively orient our attention to directed eyes (Farroni et al., 2002). Eye gaze acts like a pointer by which we communicate the focus of our attention to others (Kingstone et al., 2004) and regulates the course of our social interactions (Maran, Furtner, et al., 2021). Pioneering empirical work accurately translated these mechanisms into research on

charismatic leadership (Maran et al., 2020; Maran, Furtner, Kraus, et al., 2019; Maran, Furtner, Liegl, et al., 2019; Tskhay et al., 2017), but evidence from actual leadership practice in organizations remains scarce.

2.2. Eye-directed gaze impacts receivers' cognition

Eye-directed gaze holds a profound influence over the cognitive processes of those upon whom it is directed. First, our gaze captivates the attention of those at whom we look. This enables us to attract the attention of others. Actually, this hijacking of attention by eye-directed gaze is innate. For example, newborn babies tend to prefer looking at faces that are looking at them directly rather than faces displaying an averted gaze (Farroni et al., 2002). Second, our gaze triggers physiological arousal in others, including a response in heart rate (Kleinke & Pohlen, 1971) and skin conductance (Hietanen et al., 2020). The induction of higher arousal makes recipients of glances more vigilant for information from the environment and therefore more receptive. Third, gaze acts like a pointer (Kingstone et al., 2004), similar to calling someone's name (Kampe et al., 2003). When we look at others, we are figuratively touching their very selves (Conty et al., 2016). Evincing others with our gaze, stimulates their self-awareness (Argyle, 1988; Baltazar et al., 2014; Myllyneva & Hietanen, 2015), increases self-relevance of what is happening all around, and self-involvement into the present moment (Conty et al., 2010, 2012; Wirth et al., 2010). Interestingly, both perceived eye contact and self-referential processing converge in their neural underpinnings. Imaging studies show that both trigger increased activation in the medial prefrontal cortex, a brain region that supports social cognition (Northoff et al., 2006; Senju & Johnson, 2009). Put shortly, eye-directed gaze elicits self-involvement in those being looked at. Fourth, when eye contact is established, the brains of both sender and receiver synchronize, indicating a coupling in their thinking (Luft et al., 2022). It draws attention to what is happening in a conversation and blocks out everything else, thereby amplifying the perception of both the sender and their message (Wohltjen & Wheatley, 2021). Fifth, our gaze makes those we look at more receptive to information presented at the very moment we look at them. With children, eye contact is thought to open a window for learning new information (Bloom, 1974; Ishikawa et al., 2022). More specifically, eye contact strengthens memory for the looking face, but equally for what the gazing person is saying or showing (Csibra & Gergely, 2009). Last, our view of others shapes their perception of us. Looking at others makes us appear more likable (Kuzmanovic et al., 2009), more powerful (Dovidio & Ellyson, 1982), potent (Brooks et al., 1986), and dominant (Hall et al., 2005) in the eyes of others and causes others to judge us more favorably overall (Kleinke, 1986). Interestingly, this effect also translates to the message communicated while receiving eye-directed gaze: when communicating an advertising message, concurrent eye contact increases the purity and authenticity of that message as perceived by the recipients and shapes their attitudes toward the advertisement and the brand as a whole (Ilicic et al., 2016).

In summary, eye-directed gaze has a strong effect on the cognition of those being looked at. The audience focuses their attention on us, gets aroused, self-refers to what we say, remembers it better, and, moreover, eye contact allows us to reap more positive evaluations from others. Interestingly, many of these impressive effects consistently produced by eye contact in diverse contexts mirror mechanisms of action suspected to be responsible for the beneficial impact of leaders' charisma on desired outcomes in organizations (Banks et al., 2023). Yet, like leaders' charisma, the impact of eye-directed gaze extends beyond mere alterations in recipients' cognition; it also induces changes in their behavior.

2.3. Eye-directed gaze impacts receivers' behaviors

Just the mere presence of an image of eyes is enough to cause impressive changes in people's behavior. These changes are all group-promoting or prosocial by nature (Ekström, 2012; but see Northover et al., 2017). For example, relative to control images, people in a supermarket donated 48 % more into charity collection buckets when they saw a pair of eyes (Powell, Roberts, & Nettle, 2012). A pair of watching eyes on an online news website increased self-awareness and comment quality, which might help mitigate the negative consequences of anonymity in such forums (Park et al., 2022). Watchful eyes can also influence voting behavior: a field experiment found an increase in turnout of about 30 % relative to the control condition (Panagopoulos, 2014; Panagopoulos & van der Linden, 2019). Further, it was possible to nudge hygiene behavior during the critical period of the Covid-19 pandemic by simply putting a pair of eyes on paper dispensers and cleanser spray bottles, which increased washing behavior by up to 40 % (Mobekk et al., 2020; Pfattheicher et al., 2018). Similarly, attentive eyes motivate others to provide help to others working on dull tasks (Manesi et al., 2016).

In addition to triggering these impressive prosocial behaviors, being looked at reversely reduces deviant behaviors. Combined with a clear message, watching eye cues reduced the fare evasion rates observed by standard inspection operations in public transportation (Ayal et al., 2021). Bicycle thefts were reduced by approximately 60 % due to the presence of two eyes (Nettle et al., 2012). A *meta*-analysis shows a reduction in antisocial behavior of 35 % by eye cues, while surveillance cameras reduce crime by only about 16 % (Dear et al., 2019).

The presence of eyes appears to trigger feelings of being watched in individuals, which then leads them to be concerned about their reputation, act prosocially, and comply with social rules (Baillon et al., 2013; Oda et al., 2011). Thus, directed eye gaze shapes the behavior of the observed, aligning and coercing cooperative, group-enhancing conduct.

2.4. Eye-directed gaze acts as signal of leaders' charisma

Such evidence of how eye gaze guides the thinking and behavior of those being looked at renders this nonverbal behavior a promising candidate to act as a charismatic leadership tactic. Put more precisely, the effect of a leader's eye-directed gaze connects well with the profound theorizing on the motivational effects of charismatic leadership (Shamir et al., 1993). Charismatic leaders cultivate strong bonds between the followers' sense of self, the group or organization they lead, and the shared mission of that group through their words and symbolic actions. These actions tap into the followers' self-concept and align it with the leader's vision, thereby integrating the leader, group, and vision into the followers' sense of self (Howell & Shamir, 2005; Shamir et al., 1993). With this charismatic connection established, the leader gains approval among employees and wields greater influence over the group.

The effects of eye-directed gaze align with the hallmark characteristics of charismatic leadership: First, it lets leaders gain the attention of their employees, with capturing the gaze of other group members reliably predicting leader emergence in informal groups (Gerpott et al., 2018). Second, even triggering arousal in employees, as eye-directed gaze is capable of (Helminen et al., 2011), could be useful to subsequently channel this emotion to attach heightened significance to the leader's message and to increase their preparedness to take action (Sy et al., 2018). Arousal is also associated with more outward receptivity and therefore strengthens the perception and elaboration of the leader's message (Berger, 2011; Mather & Sutherland, 2011). Third, by tying the leader's message to the follower's self, eye-directed gaze strengthens the perceived influence of the leader, which is hypothesized to be the key motivational mechanism of action for charismatic leadership (Shamir et al., 1993; Conty et al., 2016). Fourth, once aroused and the message is linked to followers' selves, eye-directed gaze also appears to strengthen memory for what was said (Csibra & Gergely, 2009) and thus have an ongoing effect on followers' sensemaking or construal of situations that align with the leader's vision (Maran et al., 2022; but see Engelbert et al., 2022). Fifth, being hijacked by the leader's eye-directed gaze is likely to make a leader earn exactly those attributions that simultaneously constitute the charismatic impression in the eyes of employees,

that of a prototypical leader: powerful (Dovidio & Ellyson, 1982), potent (Brooks et al., 1986), intelligent and trustworthy (Maran, Furtner, Liegl, et al., 2019). All effects bundled together should then culminate in what followers perceive as a leader's charismatic aura, making them captivated, fascinated, feeling fully engaged (Menges et al., 2015), and thus leading to the perceptions that are then measurable in followers as charisma impressions.

The leader's eye-directed gaze, although admittedly not solely responsible for it, is thus likely to strongly support the emergence of leaders' charismatic aura (Maran, Furtner, Liegl, et al., 2019), thereby serving as an indispensable tactic in charismatic leadership. This eye-directed gaze, when properly executed, should create a durable imprint in the minds of employees, marking the leader as a prototypical figure and inspiring approval. Consequently, employees accord the leader credibility and legitimacy, affirming their status through loyal support.

Hypothesis 1: *The more frequently leaders gaze towards their followers' eyes, the more charisma is ascribed to them by those followers.*

Hypothesis 2*: The more frequently leaders gaze towards their followers' eyes, the more approval they gain from those followers.*

However, a social cue does not function as a signal unless someone acts upon it. Putting behavior in the spotlight, the relationship between eye-directed gaze and charismatic leadership is amplified by a convergence of their effects. Charismatic leadership has been theorized to initiate cooperative behavior in groups (Grabo et al., 2017; Van Vugt & Smith, 2019). Research supports the "charismatic prosociality" hypothesis, demonstrating that exposure to charismatic leaders increases cooperative behavior (Grabo & van Vugt, 2016). Perceiving the group as an integral part of one's self and the leaders' vision as an avenue toward a possible future self could be a driving motivational force in this regard (Guo et al., 2022; Howell & Shamir, 2005; Stam et al., 2014). Self-sacrifice for the group and the vision thereby serve as a manifestation of one's own self-concept (Shamir et al., 1993) and then might translate into what is widely touted as the outcome of charismatic leadership: "performance beyond expectations" (Bass, 1985).

One signal leaders use to achieve group-oriented behavior in employees might be the exhibiting of eye-directed gaze. The perception of being watched elicited more prosocial and cooperative behavior (Powell et al., 2012) but also inhibited deviant, group-harming behavior (Dear et al., 2019). Recently, it has also been shown that by simply directing their own eye gaze behavior, leaders can orchestrate follower participation and engagement in groups (Cazzato et al., 2015; Liuzza et al., 2011; Shim et al., 2021). Therefore, leaders who exhibit higher levels of eye-directed gaze towards their employees are not only likely to be perceived as more charismatic and earn greater approval from them, but employees are also likely to exert more extra efforts in the workplace as a result.

Hypothesis 3 *The more frequently leaders gaze towards their followers' eyes the more extra-effort their followers show.*

3. Study overview

To test our hypotheses, we developed two designs that examine the effect of leaders' eye-directed gaze on their audience. The first study aimed to determine how objectively assessed gaze behavior during a naturalistic leadership scenario influences the degree to which they are perceived as charismatic (H1) and approved of by their audience (H2). Participants were assigned the role of a leader with decision-making authority in an economic negotiation task (Pinkley et al., 1994). They had to convince three arguing conferees of their solutions in a naturalistic face-to-face setting. Their gaze behavior was monitored with mobile eye-tracking and the number of eye-directed gazes was counted frame-to-frame. The second study, employing a multilevel design within firms, investigated the gaze behavior of managers in their teams. We tested not only how leaders' eye-directed gaze translated to employees' charisma perceptions (H1) and influenced their approval of the leader (H2), but also whether more eye-directed gaze enabled leaders to incite extra efforts in their employees (H3). Both study designs allowed us to test the hypotheses via different methodological approaches in different contexts, providing complementary levels of internal and external validity (Chatman & Flynn, 2005).

To extend the hypothesis testing, we tested the assumption that leaders' eye-directed gaze acts as a signal for leaders' charisma by drawing on established methods for investigating nonverbal behavior in interpersonal perception and designing a lens model (Brunswik, 1956; Hall et al., 2019; Nestler & Back, 2013) for both studies. The lens models examined whether leaders' self-perceptions of charisma via eye-directed gaze translated to employees' external perceptions of the leader's charisma (Hirschmüller et al., 2018). This allowed us to not only affirm the validity of eye-gaze as a cue for a leader's charisma, but also demonstrate how eye-gaze is employed as a cue for the leader's charisma by members of the groups they lead, thus explaining the interindividual agreement in the perception of charisma between leader and follower.

4. Study 1: Leaders' eye-directed gaze earns charismatic impressions and approval

In our initial study, we focused on assessing the effects of leaders' eye-directed gaze behavior on observers' perceptions of charisma and prototypical leader attributes (H1), as well as on their approval and thus emergence (H2 and H3). To achieve this, we designed a naturalistic laboratory study in which a participant was assigned as the leader of a negotiation task based on the *New Recruit* negotiation paradigm (Pinkley et al., 1994). The other participants, being confederates and acting as negotiators that worked for the leader's organization, provided arguments for their own position on receiving a larger salary, more vacation days, better insurance, or higher bonus payments in their current job. The participant was tasked to lead the negotiation, listen to each negotiator's arguments, suggest a distribution of the company's resources to each of the four types of compensation and persuade the negotiators that this distribution was legitimate and to the best of their interests. Throughout this negotiation, we measured the leader's gaze behavior using the Tobii Glasses 2, a mobile eye-tracking device that allowed for an unobtrusive measurement of gaze allocation. Once the negotiation was completed, both the participant and the negotiators completed self- and observer-rating questionnaires, respectively.

In more detail, at the beginning of the experiment the participant was seated at a table, opposite of the three negotiators (see Fig. 1). They received a short overview on the following procedure and were instructed to take on the role of the leader with decision-making authority in the negotiation and act as an observer by recording the negotiation with the camera in Tobii Pro Glasses 2, since no study administrator would be present later on. To keep the situation constant across all negotiations and simultaneously to ensure a genuine naturalistic interactive experience for the participants, three trained confederates were used as negotiators (Maran, Furtner, et al., 2021). After the calibration of the eye-tracking device, the confederates were called into the room, introduced as fellow participants and randomly assigned to a seat. The same confederates participated in all 62 negotiations. After the participants chose a topic, the study administrator started the eye-tracking recording, instructed the leader to take charge over the negotiation, and left the room. When the negotiation was over, the confederates and the subject completed questionnaires in separate rooms. Participants were debriefed about the function of the glasses as an eye-tracker at the debriefing at the end of the experiment. None of them reported experiencing the interaction as unnatural or perceiving the staging of the study situation with confederates as deceptive or triggering negative emotions. The research institutions at which the study was conducted do not practice research involving scripted social interactions, so it can be assumed that participants did not participate in the study with the expectation that the negotiators would be

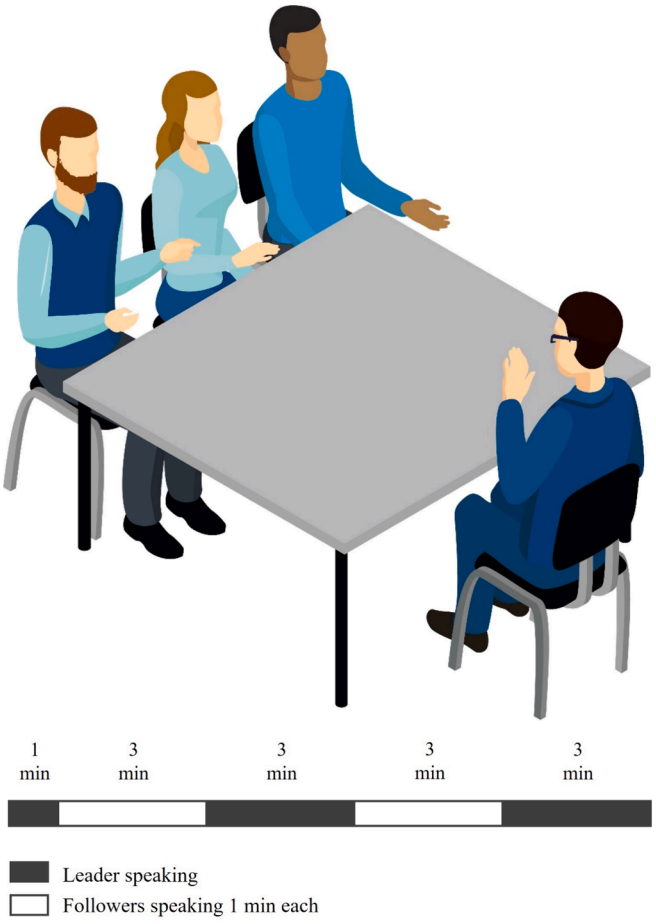

Fig. 1. Schematic depiction of the negotiation setting including the distribution of the leader's and followers' speaking time Note: Image adapted from: macrovector). Throughout this negotiation, we observed the leader's (sitting opposite of the three followers) gaze behavior using mobile eye-tracking (for a picture of the eye-tracking glasses in use see Krogh-Jespersen et al. (2020), Fig. 1)

confederates. Participants who recognized the negotiators as confederates were excluded from data analyses.

By employing eye-tracking technology, we heed the urgent call in leadership science to investigate leadership beyond self-report questionnaire data and bring actual behavior to the forefront (Banks et al., 2023). Indeed, this call has already yielded valuable new insights in the field. For instance, the tracking of gaze behavior in team interactions reveals that the frequency of gazes, directed at individual team members, reliably predicts who emerges as the group leader (Gerpott et al., 2018). Conversely, findings that manipulate gaze behavior intentionally demonstrate that leaders can influence team members' participation and performance simply by directing their gazes and signaling attention to them (Shim et al., 2021). The present work directly builds up on previous findings, linking charisma and prototypical leader attributions of study participants to increased eye-directed gaze when attempting to persuade others (Maran, Furtner, Liegl, et al., 2019). Collectively, the analysis of social gaze behavior is gaining a firm foothold in leadership research, enabling insights into team leadership interaction dynamics that were previously unattainable (Cheng et al., 2022).

4.1. Sample

Our initial sample consisted of 62 healthy, German-speaking adults (38 female; 24 male) with an age range from 19 to 38 years ($M = 23.47$, $SD = 4.40$). We recruited participants via open tendering in the urban areas surrounding the authors' universities and restricted participation to subjects that reported to have normal or corrected-to-normal (via soft contact lenses) visual ability. When recruiting participants, we only provided information that the study involved participation in a game-theoretic negotiation, but we did not share any information about the use of eye-tracking technology. Furthermore, we controlled whether participants recognized the other negotiators to be confederates via self-report. Nine participants met the latter criteria and were subsequently removed from further analyses. Their data were not considered, resulting in a final sample of 53 (32 female; 21 male) with an age range from 19 to 38 years, $M = 23.58$, $SD = 4.54$. All participants were currently enrolled in either a bachelor's or master's program and provided informed consent.

4.2. Confederates

Three participants (1 female, 24 years old; 2 male, 22 and 24 years old, respectively) took part in each negotiation. They were extensively trained to appear as naturalistic as possible in the negotiation while employing limited gestures, facial and especially emotional expressions, and displaying an equal amount of eye contact to each participant, in order to maintain a high amount of standardization between the negotiations. They prepared verbatim scripts for the negotiation, that included pauses, speech disfluencies and fillers and learned them by heart. After each negotiation the confederates rated the subject on the observer-rated measures of everyday charisma, charismatic leadership, leader prototypicality, leader outcomes, dominance, and whether they would vote for the participant as their own leader.

4.3. Measures

4.3.1. Leaders' charisma

Everyday charisma. The General Charisma Inventory (GCI; Tskhay et al., 2018) is a 6-item measure of everyday charisma, composed of the subscales influence, i.e., the ability to persuade and guide others, and affability, i.e., the ability to make other people feel at ease around oneself. An example item reads "Has the ability to influence others"[2] for the former and "Makes people feel comfortable" for the latter dimension. Ratings were indicated on a 5-point Likert-scale (1 = strongly disagree, 5 = strongly agree). We calculated McDonald's ω values including 95 % confidence intervals at 5,000 bootstrapping samples to assess the scales' internal consistency following the approach by Hancock and An (2020) implemented in the OMEGA macro for SPSS (beta 0.2; Hayes & Coutts, 2020). Coefficients were at ω = 0.79 (95 % CI = 0.68 to 0.88) for the self- and at ω = 0.94 (95 % CI = 0.91 to 0.96) for the negotiator-ratings of the influence and at ω = 0.66 (95 % CI = 0.52 to 0.86; self-ratings), ω = 0.92 (95 % CI = 0.86 to 0.95; negotiator-ratings) for the affability subscale, respectively.

Charismatic leadership. Following the research of Towler (2003) on charismatic leadership behaviors, we selected the twelve items of the idealized influence attributed, behavior, and inspirational motivation subscales from the Multifactor Leadership Questionnaire, that are specifically designed to capture a leader's charismatic aura and their emotional effect on followers (MLQ Form 5X-Short; Avolio & Bass, 1991). However, reliability analyses revealed that the item regarding the leader's tendency to go beyond their own interests for the benefit of the group from the idealized influence attributed subscale did not load on the compound scale (0.04) and possessed a negative item-scale correlation ($r = -0.12$). This is potentially contingent on our negotiation paradigm, as leaders were incentivized to enforce their organization's interests and influence their followers to accept these as justified. We therefore excluded both leader- and negotiator-ratings of this item in

[2] We provide the item from each scale with the highest corrected item-total correlation according to the observer ratings.

further analyses, resulting in the final scale to consist of eleven items. An example item reads: "This person displays a sense of power and confidence". Agreement with the statements was captured on a 5-point Likert-Scale (1 = strongly disagree, 5 = strongly agree). Reliability for participants' self-ratings was at ω = 0.81 (95 % CI = 0.69 to 0.88), for negotiator-ratings at ω = 0.94 (95 % CI = 0.91 to 0.96).

4.3.2. Prototypical leader attributes

Leader prototypicality. Leader prototypicality was assessed utilizing a three-item adaptation of the prototypicality questionnaire by Antonakis, Fenley, and Liechti (2011). This scale allowed us to measure the extent participants' behavior in the negotiation corresponded with the negotiators' expectations of a typical leader. An example item is: "The person I am rating acts like a typical leader" and ratings were given on a 9-point Likert-Scale (1 = strongly disagree, 9 = strongly agree). Reliability was measured at ω = 0.98.

Leader outcomes. We captured the subjects' effectiveness as a charismatic leader using four single-item outcome measures composed by Antonakis, Fenley, and Liechti (2011), assessing the amount of affect, trust, competence, and influencing ability associated with the leader on a 9-point Likert-Scale (1 = strongly disagree, 9 = strongly agree).

Dominance. The perceived dominance of the leader was assessed using a single item in order to capture the negotiators' holistic first impression (Oosterhof & Todorov, 2008). The negotiators were asked to rate the statement "How dominant is this person?" on a 9-point Likert-Scale (1 = not at all, 9 = extremely).

4.3.3. Outcome

Leader approval. To assess whether the subject was approved of in their role as leader, negotiators indicated if they would vote for them as their own leader using a dichotomous (no/yes) single item (Liegl & Furtner, 2024; Maran, Liegl, et al., 2021).

4.3.4. Leaders' eye-directed gaze behavior

We unobtrusively recorded leaders' gaze behavior using the mobile eye-tracking device Tobii Pro Glasses 2. A central front-facing camera captures the visual field of the wearer (25 frames per second, 1920 × 1080 pixels resolution). The carrier's focal point is simultaneously being logged and tracked onto the visual field by illuminating the eyes with near-infrared light and recording them with four high-definition cameras inside the glasses at a sampling rate of 100 Hz. We chose a distance of approximately 1.5 m between the participant and the confederates at which the eye-tracker provides a spatial accuracy of 0.62 degrees (Tobii, 2020).

To define the gaze locations recorded by the mobile eye-tracking device, we used an algorithm provided by Tobii Pro AB, which automatically transfers the recorded gaze points displayed in the dynamic scene onto a static snapshot of the scene and thus allowed us to define highly standardized areas of interest for confederates' eye regions across all trials. This algorithm, however, only accurately transfers gaze points in about 50 % of occurrences and must therefore be manually corrected. To ensure the highest quality of our data, the first authors and ten research assistants went through each recording frame-by-frame and controlled and corrected each gaze point separately, which took about 10–20 h per recording, totaling in a preprocessing time of about 800 h. After correcting the raw data, gaze points were classified as fixations via the Tobii I-VT Attention filter. For our analyses, we resorted to the frequency (gaze points per second) of gazes on the confederates' eye region.

4.4. Data analysis

We first calculated Pearson's product-moment correlation coefficients to assess the relationship between the frequency of eye contact, and the self-ratings of everyday charisma and charismatic leadership, as well as with the negotiator-ratings of everyday charisma and charismatic leadership (H1), prototypical leader attributes, and leader approval (H2). As a robustness check, we further computed partial correlation coefficients with subjects' age and gender being set as the control variables. Correlation analyses were two-tailed, and coefficients are reported as r [±.10 = small effect; ±.30 = medium effect; ±.50 = large effect]. Our specific model testing procedures were twofold: Firstly, following the Lens Model Perspective (Brunswik, 1956) to test H1, i.e., whether variations in the leaders' eye-directed gaze behavior acted as a valid cue for an individual's charisma and get utilized to form corresponding impressions, we computed mediation analyses including the two dimensions of self-rated everyday charisma and charismatic leadership as predictor variables, with the negotiator-rated measures of charisma and prototypical leader attributes (prototypicality, leader outcomes, dominance) acting as dependent variables and the frequency of eye-directed gaze fixations as the mediator. Secondly, to test H2, i.e., the signaling function of eye-directed gaze, we specified participants' gaze behavior as the independent predictor variable for receivers' feedback (leader approval), mediated by their evaluation of the leader as being charismatic and possessing prototypical leader attributes, thus following the signaling model described by Ernst et al. (2022). Instead of analyzing the effects on the aggregated follower approval, we calculated logistic regression and mediation analyses to predict each rater's response on our dichotomous approval scale. Due to missing data from some of the ratings, these analyses are based on a sample of 145 separate ratings. We report odds ratios (*OR*) including 95 % confidence intervals for these analyses.

We conducted mediation analyses on the standardized variables in accordance with the procedures outlined by Hayes (2022) by performing Preacher and Hayes' bias-corrected bootstrapping techniques (5,000 samples) utilizing the PROCESS v4.0 macro (Hayes, 2022). Robust standard errors were calculated using the heteroskedasticity consistent estimator 3 (HC3; Davidson & MacKinnon, 1993). Age and gender were included as covariates to all models. Standardized coefficients for the effects on continuous outcomes are reported as γ, or *OR* for logistic mediation analyses, respectively. The indirect effects were considered statistically significant if the 95 % confidence intervals did not intersect with zero (or one in case of odds ratios). Data analyses were conducted using SPSS (Version 29).

4.5. Results and discussion

4.5.1. Lens model approach: Leaders' gaze conveys their charisma

Correlation analyses. Our analyses confirmed the expected positive link between the frequency of eye-directed gaze fixations and both the influence (r = 0.34, p = 0.013) and affability (r = 0.30, p = 0.032) dimension of self-rated everyday charisma (see Table 1 and Fig. 2). Furthermore, higher self-rated charismatic leadership coincided with more frequent fixations ($r = 0.33, p = 0.015$). This supports the notion of eye-directed gaze behavior acting as a valid cue for an individual's charisma, both in everyday life and in the leadership context (H1).

Our analyses of the impressions formed by the negotiators reiterated these interrelations. The influence dimension of charisma again was associated with an increased frequency of eye fixations (r = 0.47, $p <$ 0.001), as were the ratings of affability (r = 0.31, p = 0.026) and perceived charismatic leadership abilities ($r = 0.45, p = 0.001$). Self- and negotiator-ratings of charismatic influence corresponded with one another (r = 0.39, p = 0.004), as did the ratings of charismatic leadership (r = 0.31, p = 0.026), but not those of the affability dimension of charisma (r = 0.24, p = 0.086).

Additionally, subjects who gazed more frequently at their followers' eyes were perceived as more prototypical of a leader (r = 0.38, p = 0.005), more competent (r = 0.38, p = 0.006), more capable of influencing others (r = 0.42, p = 0.002), and more dominant (r = 0.47, p = 0.001). On the other hand, they did not elicit more affect ($r = 0.19, p =$ 0.184) or trust (r = 0.00, p = 0.979) in the negotiators. Partial correlation analysis controlling for participants' gender and age replicated

Table 1
Means, standard deviations, and Pearson product-moment correlations among leaders' gender, age, the frequency of eye-directed gaze fixations and the leader- and aggregated follower-ratings of charisma influence, charisma affability, charismatic leadership, prototypicality, affect, trust, competence, influencing ability, dominance, and leader approval.

	M	*SD*	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Gender[a]	0.40	0.49															
2. Age	23.58	4.54	−0.02														
3. Frequency of eye fixations	0.25	0.18	0.03	0.21													
4. Charisma influence (leader)	2.99	0.81	0.40**	0.23	0.34*	(0.79)											
5. Charisma affability (leader)	3.93	0.65	−0.13	−0.02	0.30*	0.34	(0.66)										
6. Charismatic leadership (leader)	3.51	0.57	0.11	0.23	0.33*	0.52	0.45***	(0.81)									
7. Charisma influence (follower)	2.83	0.82	0.28*	0.10	0.47***	0.39	0.18	0.23	(0.94)								
8. Charisma affability (follower)	3.27	0.64	−0.10	0.22	0.31*	0.19	0.24	0.24	0.37**	(0.92)							
9. Charismatic leadership (follower)	2.95	0.49	0.24	0.16	0.45**	0.40	0.25	0.31*	0.88***	0.62***	(0.94)						
10. Prototypicality (follower)	4.42	1.45	0.29*	0.08	0.38**	0.39	0.12	0.20	0.92***	0.33*	0.85***	(0.98)					
11. Affect (follower)	5.42	1.23	−0.09	0.08	0.19	0.18	0.32*	0.20	0.51***	0.82***	0.70***	0.53***					
12. Trust (follower)	5.94	1.17	−0.33*	0.20	0.00	−0.05	0.10	0.08	0.04	0.82***	0.32*	0.05	0.73***				
13. Competence (follower)	5.15	1.51	0.19	0.06	0.38**	0.32	0.13	0.20	0.90***	0.40**	0.84***	0.93***	0.60***	0.17			
14. Influencing ability (follower)	4.35	1.71	0.32*	0.03	0.42**	0.46	0.20	0.26	0.94***	0.26	0.84***	0.93***	0.46***	−0.05	0.91***		
15. Dominance (follower)	4.67	1.48	0.26	0.07	0.47***	0.40	0.19	0.18	0.84***	0.14	0.74***	0.86***	0.34*	−0.16	0.77***	0.86***	
16. Leader approval (follower)	0.31	0.30	0.18	0.08	0.35*	0.25	0.11	0.26	0.79***	0.55***	0.86***	0.78***	0.66***	0.31*	0.81***	0.75***	0.63***

Note. $N = 53$ participants, follower-ratings based on three negotiators. Reliabilities are presented along the diagonal in parentheses.
*$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.
[a] Dummy variable (0 = male, 1 = female).

these results.

To conclude, the findings support H1, demonstrating that charismatic individuals employ frequent eye-directed gazes which observers use as a cue to form favorable impressions of the sender. Further analyses and testing through a lens model and a signaling model is necessary to deepen our understanding.

Lens model perspective. To provide further insight into the function of eye-directed gaze behavior as a valid cue for charisma (H1), we combined the self- and negotiator-ratings of charisma and prototypical leader attributes in mediation models to analyze whether they were directly related or rather mediated by the cue of eye-directed gaze behavior (Hirschmüller et al., 2018).

Analyses revealed the relation between self-rated and observed charismatic influence (total effect: $\gamma = 0.33$, $SE = 0.15$, $p = 0.029$; direct effect: $\gamma = 0.18$, $SE = 0.15$, $p = 0.219$; indirect effect: $\gamma = 0.14$, $SE = 0.07$, 95 % CI = 0.019 to 0.307) as well as charismatic leadership (total effect: $\gamma = 0.26$, $SE = 0.15$, $p = 0.095$; direct effect: $\gamma = 0.14$, $SE = 0.15$, $p = 0.347$; indirect effect: $\gamma = 0.12$, $SE = 0.07$, 95 % CI = 0.003 to 0.269) to be mediated by the frequency of eye fixations. This, however, was not the case for the affability dimension of everyday charisma (indirect effect: $\gamma = 0.07$, $SE = 0.06$, 95 % CI = -0.008 to 0.198).

When it comes to prototypical leader attributes, we found the pathway of self-rated charismatic influence on general leader prototypicality (total effect: $\gamma = 0.32$, $SE = 0.16$, $p = 0.053$; direct effect: $\gamma = 0.22$, $SE = 0.16$, $p = 0.186$; indirect effect: $\gamma = 0.11$, $SE = 0.07$, 95 % CI = 0.003 to 0.256), competence (total effect: $\gamma = 0.30$, $SE = 0.15$, $p = 0.059$; direct effect: $\gamma = 0.18$, $SE = 0.15$, $p = 0.230$; indirect effect: $\gamma = 0.11$, $SE = 0.07$, 95 % CI = 0.003 to 0.271), influencing ability (total effect: $\gamma = 0.41$, $SE = 0.14$, $p = 0.007$; direct effect: $\gamma = 0.29$, $SE = 0.15$, $p = 0.056$; indirect effect: $\gamma = 0.12$, $SE = 0.07$, 95 % CI = 0.012 to 0.273), and dominance (total effect: $\gamma = 0.35$, $SE = 0.15$, $p = 0.024$; direct effect: $\gamma = 0.21$, $SE = 0.16$, $p = 0.185$; indirect effect: $\gamma = 0.14$, $SE = 0.08$, 95 % CI = 0.017 to 0.323) to be mediated by the participants' eye-directed gaze behavior as well. This, however, was not the case for the ratings of affect (indirect effect: $\gamma = 0.04$, $SE = 0.06$, 95 % CI = -0.062 to 0.180) or trust (indirect effect: $\gamma = -0.02$, $SE = 0.05$, 95 % CI = -0.121 to 0.072).

Similarly, leaders' self-rated affability indirectly, rather than directly, shaped perceived leader influencing ability (total effect: $\gamma = 0.25$, $SE = 0.15$, $p = 0.106$; direct effect: $\gamma = 0.13$, $SE = 0.13$, $p = 0.308$; indirect effect: $\gamma = 0.12$, $SE = 0.07$, 95 % CI = 0.000 to 0.257), and dominance (total effect: $\gamma = 0.22$, $SE = 0.15$, $p = 0.132$; direct effect: $\gamma = 0.09$, $SE = 0.12$, $p = 0.458$; indirect effect: $\gamma = 0.13$, $SE = 0.08$, 95 % CI = 0.005 to 0.297), transmitted through the leaders' eye-directed gaze behavior. This was not the case for prototypicality (indirect effect: $\gamma = 0.11$, $SE = 0.07$, 95 % CI = -0.001 to 0.253), competence (indirect effect: $\gamma = 0.11$, $SE = 0.07$, 95 % CI = 0.000 to 0.251), affect (indirect effect: $\gamma = 0.03$, $SE = 0.05$, 95 % CI = -0.052 to 0.155), or trust (indirect effect: $\gamma = -0.02$, $SE = 0.04$, 95 % CI = -0.107 to 0.063).

Lastly, and similarly, the relationship of charismatic leadership and perceived influencing ability (total effect: $\gamma = 0.23$, $SE = 0.18$, $p = 0.207$; direct effect: $\gamma = 0.11$, $SE = 0.18$, $p = 0.540$; indirect effect: $\gamma = 0.12$, $SE = 0.07$, 95 % CI = 0.004 to 0.272), and dominance (total effect: $\gamma = 0.14$, $SE = 0.16$, $p = 0.363$; direct effect: $\gamma = 0.01$, $SE = 0.15$, $p = 0.971$; indirect effect: $\gamma = 0.14$, $SE = 0.08$, 95 % CI = 0.006 to 0.310) could be explained via the pathway of eye-directed gaze, while its indirect effect on prototypicality (indirect effect: $\gamma = 0.11$, $SE = 0.07$, 95 % CI = -0.002 to 0.259), affectivity (indirect effect: $\gamma = 0.04$, $SE = 0.05$, 95 % CI = -0.043 to 0.154), trustworthiness (indirect effect: $\gamma = -0.02$, $SE = 0.04$, 95 % CI = -0.102 to 0.056), and competence (indirect effect: $\gamma = 0.11$, $SE = 0.07$, 95 % CI = -0.002 to 0.256) was not significant.

These findings corroborate Hypothesis 1, revealing that charisma is transmitted from leader to follower via leaders' frequent eye-directed gaze, thus shaping followers' perceptions of the leader's charisma, leadership competency, and prototypical leader attributes.

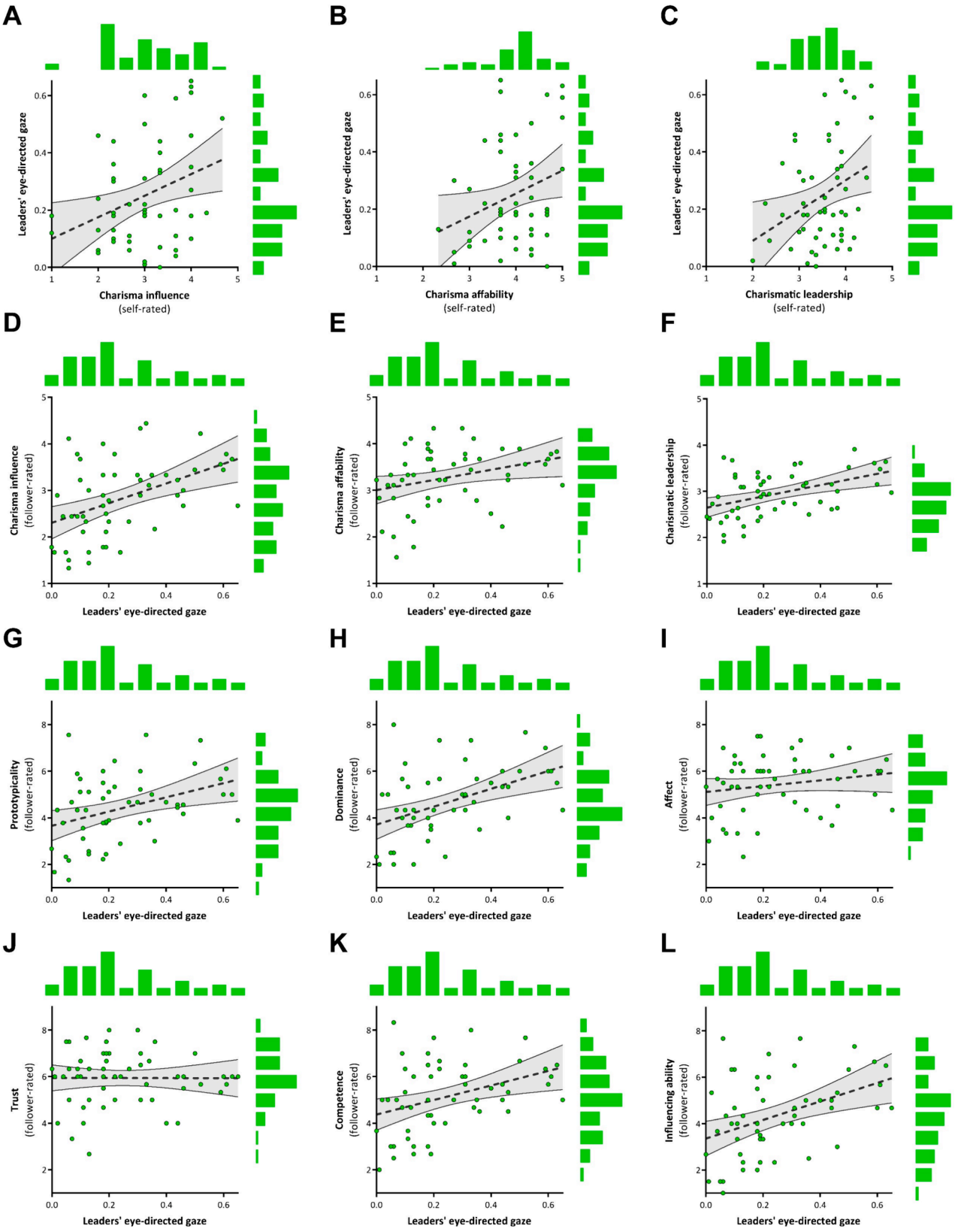

Fig. 2. Correlations between the frequency of eye-directed gaze fixations and self-rated (A-C), as well as observer-rated (D-L) charismatic influence (A, D), affability (B, E), charismatic leadership (C, F), and prototypical leader attributes (G-L). *Note: The scatter plots display individual unstandardized values (N = 53), linear regression lines, and their respective 95 % confidence interval. Histograms on the top and to the right of the scatter plots denote relative frequency distributions.*

4.5.2. Signaling approach: Leaders' frequent gaze earns followers' approval

Logistic regression. When switching our focus to the outcome of heightened eye-directed gaze behavior, i.e., leader approval (H2), logistic regression analyses revealed leaders that displayed a by one standard deviation increased frequency of eye-directed gazes increased their odds of being approved of by their followers by 62 % ($OR = 1.62$, $p = 0.007$; see Fig. 3).

Signaling model perspective. Examining signaling models for the effect of eye-directed gaze behavior on leader approval, we find indirect effects flowing through the followers' evaluations of the leader's charismatic influence (direct effect: $OR = 0.62$, $p = 0.861$, 95 % CI = 0.557 to 1.630; indirect effect: $OR = 2.89$, 95 % CI = 1.844 to 6.711), affability (direct effect: $OR = 1.51$, $p = 0.085$, 95 % CI = 0.944 to 2.428; indirect effect: $OR = 1.42$, 95 % CI = 1.033 to 2.183), charismatic leadership (direct effect: $OR = 0.99$, $p = 0.972$, 95 % CI = 0.510 to 1.915; indirect effect: $OR = 3.21$, 95 % CI = 1.792 to 11.428), prototypicality (direct effect: $OR = 1.42$, $p = 0.175$, 95 % CI = 0.857 to 2.343; indirect effect: $OR = 2.03$, 95 % CI = 1.347 to 3.876), dominance (direct effect: $OR = 1.23$, $p = 0.313$, 95 % CI = 0.822 to 1.844; indirect effect: $OR = 1.45$, 95 % CI = 1.167 to 2.182), competence (direct effect: $OR = 1.62$, $p = 0.140$, 95 % CI = 0.853 to 3.086; indirect effect: $OR = 2.87$, 95 % CI = 1.525 to 10.507), and influencing ability (direct effect: $OR = 1.22$, $p = 0.353$, 95 % CI = 0.804 to 1.841; indirect effect: $OR = 1.61$, 95 % CI = 1.255 to 2.443). As leaders' gaze behavior was not directly connected to followers' ascriptions of affect and trust, these attributes did not meet the prerequisites for mediation analyses following the signaling approach and were therefore not computed.

These results indicate leaders' eye-directed gaze behavior to signal certain qualities that shape observers' evaluations of the leader as being charismatic, competent, dominant and being both influential and prototypical for their station, thus ultimately affecting their feedback in the form of increased leader approval (H2).

To conclude, we found eye-directed gaze fixations to be related to both leader- and follower-ratings of the influence and affability dimensions of everyday charisma, as well as to charismatic leadership and attributions of prototypical leader attributes. This lends first evidence to Hypothesis 1, which is extended on by the mediation analyses confirming the notion that eye-directed gaze serves as a signal for charisma, allowing individuals to accurately judge the sender's charisma and leadership ability as expressed by higher ratings in regard to several prototypical leader attributes. Furthermore, through the pathway of these attributions, signaling their charisma through eye-directed gaze behavior also aided leaders in their emergence, resulting in increased approval by their followers, thus supporting Hypothesis 2.

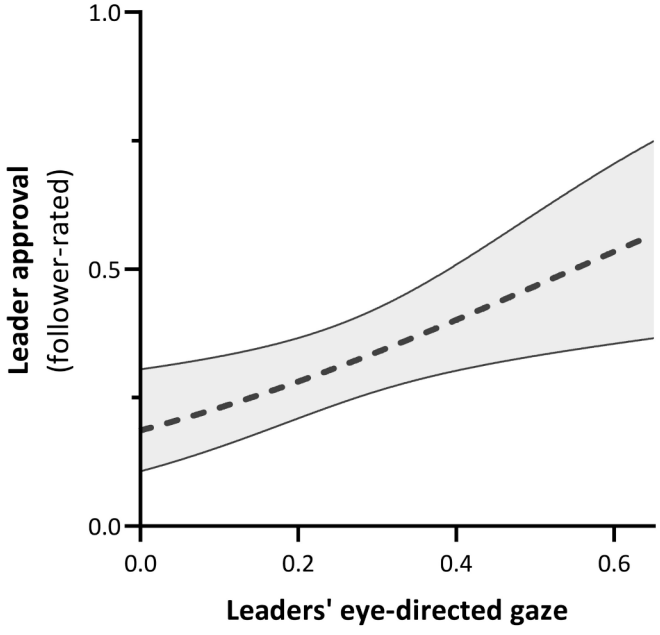

Fig. 3. Logistic regression curve representing the relation between leaders' eye-directed gaze behavior and their approval rate. *Note: N = 145 follower-ratings.*

Interestingly, we found no mediation effect for the affability dimension of everyday charisma on observer-ratings on the same measure. As a potential explanation for this observation, we reiterate the notion presented in earlier research, that leaders' gaze might be a cue specific for those who aim to influence others but not those seeking affiliation (see Maran, Furtner, Liegl, et al., 2019). Our congruent findings on the mediating effects of gaze behavior not being present for the prototypical leader attributes of eliciting affect but being present for their influencing ability match with this assumption and further support it.

5. Study 2: Leaders' social gaze inspires extra efforts

To extend our initial findings within a naturalistic yet standardized negotiation setting to the workplace, and to investigate our third hypothesis, we conducted a multilevel field study. Managers were invited to complete questionnaires regarding their gaze behavior in interactions and their charisma and charismatic leadership abilities. Additionally, they were asked to distribute external assessment questionnaires to two of their direct subordinates with whom they frequently interacted. In cases where more employees responded, we randomly selected two ratings for each manager. Participants were provided personalized, anonymous feedback on their self-ratings and their employees' aggregated ratings as an incentive to participate in the study. Due to privacy regulations in the country of one participating organization, the provision of sociodemographic data was optional, resulting in missing descriptives for 17 of the 72 participating managers and 19 of the 144 employees in our final dataset.

5.1. Sample

Our sample consisted of 72 managers (16 female, 39 male, 17 undisclosed), with a mean age of 44.67 years ($SD = 10.64$, ranging between 22 and 60 years; due to privacy regulations within their organizations, 17 participating managers opted to not disclose information about their age, gender, and other personal data), a mean management experience of 13.45 years ($SD = 9.81$) and a mean number of subordinates of 11.11 ($SD = 13.73$), each of whom was rated by two of their immediate subordinates (64 female, 61 male, 19 provided no answer on their gender identification). Participants were predominantly working in the building and real estate, health, and technology sectors. The alumni networks of three business schools in Switzerland, Liechtenstein and Austria were used and specifically small to medium-sized firms were contacted by email. The participating organizations were instructed to forward the information about the study to managers with team leadership responsibilities. The recruitment email announced that we were examining the managers' self-perception and the way they were perceived by others, but without providing any information about the fact that nonverbal behavior, or specifically gaze behavior, was the focus of the study. Participating managers were also offered a detailed report of the results of their individual assessments and the research findings in general, both in accordance with strict data protection policies. All participants provided informed consent.

5.2. Measures

We employed a streamlined questionnaire compared to study 1, reduced to encompass self- and observer-ratings of the influence (manager self-rating: $\omega = 0.81$, 95 % CI = 0.71 to 0.88; employee observer-rating: $\omega = 0.57$, 95 % CI = 0.43 to 0.80) and affability (manager-rating: $\omega = 0.62$, 95 % CI = 0.49 to 0.89; employee-rating: $\omega = 0.74$, 95 %

CI = 0.61 to 0.83) dimension of everyday charisma (Tskhay et al., 2018), managers' charismatic leadership ability, as measured by a selection of 12 items from the MLQ 5X Short (Avolio & Bass, 1991; item selection based on Towler, 2003; manager-rating: ω = 0.81, 95 % CI = 0.72 to 0.87; employee-rating: ω = 0.82, 95 % CI = 0.68 to 0.89), as well as managers' self-rated gaze behavior. Additionally, we assessed employees' extra effort as a real-world performance outcome.

5.2.1. Mangers' gaze behavior

Based on a measure previously employed to assess observers' sensitivity towards eye-directed gaze (Maran, Furtner, Liegl, et al., 2019), managers' gaze behavior was assessed using three questions describing different aspects of managers' gaze behavior shown in everyday interactions ("I keep eye contact in conversations", "I have a focused gaze", and "I look at others in a focused way"). Answers were given on a 5-point Likert-scale (1 = almost never, 5 = almost always). These questions were also part of participants' self-ratings (ω = 0.84; 95 % CI = 0.72 to 0.90) as well as the observer-ratings (ω = 0.92; 95 % CI = 0.87 to 0.95) provided in study 1. Participants' actual gaze behavior in the negotiation task corresponded with both the self- ($r = 0.37$, $p = 0.006$) and observer-ratings ($r = 0.35$, $p = 0.011$). Since this measure could not interfere with everyday interactions as eye-tracking devices might (Gobel et al., 2015; Risko et al., 2016), we deemed it an appropriate and economically valid measure of gaze behavior for the aim of our study. The reliability for the manager self-ratings in this study was at ω = 0.67 (95 % CI = 0.53 to 0.82).

We employed this measure to assess leaders' eye-directed gaze due to its demonstrated correspondence to objectively measured gaze behavior as evidenced in a previous study (Maran, Furtner, Liegl, et al., 2019). Furthermore, this same study revealed that gaze behavior assessed in this manner exhibits minimal correlations with self-reported use of other charismatic cues, thus enabling us to distinctly test our hypotheses regarding the impact of eye-directed gaze without the substantial risk of confounding the measure with the occurrence of other tactics.

5.2.2. Employees' extra effort

To specifically assess the extra effort directed at the organization as a result of the employees' manager, we selected two items each from the extra effort subscale of the MLQ 5X-Short (Avolio & Bass, 1991; "My manager gets others to do more than they expected to do" and "My manager regularly motivates others to accomplish more than they actually have to") and the organizational citizenship behavior checklist (OCB-C-10; Spector et al., 2010; "I volunteered for extra work assignments. and "I gave up meals and other breaks to complete work"). Employees provided ratings of their individual extra effort on a 5-point Likert-scale (1 = never, 5 = almost always; ω = 0.67; 95 % CI = 0.49 to 0.78).

5.3. Data analysis

As in study 1, we calculated Pearson's product-moment correlation coefficients, followed by mediation analyses for both the Lens Model (Brunswik, 1956) and the signaling (Ernst et al., 2022) perspective. The lens model again allowed us to evaluate a transferal of charisma from the managers onto their employees, thus indicating whether eye-directed gaze gets utilized by receivers to form accurate impressions of the sender (H1). The signaling model, on the other hand, allowed us to connect eye-directed gaze behavior, via employees' attributions of charisma, to the managers' effectiveness as indicated by their employees' extra effort, and thus to investigate the function of gaze behavior as a signal (H3). To ensure the robustness of our data and to address potential issues stemming for the utilization of questionnaire measures for both independent and dependent variables, we computed Harman's one factor test, which indicated a common method variance of 18 %, well below the critical threshold of 50 % (Fuller et al., 2016).

We again conducted analyses using SPSS (Version 29) and the PROCESS v4.0 macro (Hayes, 2022), following the procedures outlined in study 1.

5.4. Results and discussion

5.4.1. Lens model approach: Managers' gaze conveys their charisma

Correlation analyses. Managers' eye-directed gaze behavior was positively related to both their self- ($r = 0.33$, $p = 0.005$; see Table 2 and Fig. 4) and employee-ratings ($r = 0.31$, $p = 0.008$) of charismatic influence, to self-ratings of charismatic affability ($r = 0.33$, $p = 0.005$), to self- ($r = 0.55$, $p < 0.001$) and employee-ratings ($r = 0.40$, $p = 0.001$) of charismatic leadership, but not to employees' evaluation of their manager's affability ($r = 0.15$, $p = 0.195$). Again, we next analyzed the utilization of eye-directed gaze behavior and its relation to self-assessed and perceived charismatic leadership abilities in accordance with the lens model perspective.

Lens model perspective. Our analyses confirm leaders' gaze behavior to mediate (indirect effect: γ = 0.19, *SE* = 0.11, 95 % CI = 0.016 to 0.438) the relationship between their self- and employee-rated charismatic leadership abilities (total effect: γ = 0.27, *SE* = 0.12, $p = 0.022$; direct effect: γ = 0.08, *SE* = 0.15, $p = 0.606$), thus providing further evidence for Hypothesis 1. On the other hand, neither managers' charismatic influence (indirect effect: γ = 0.07, *SE* = 0.05, 95 % CI = -0.024 to 0.164), nor affability (indirect effect: γ = 0.04, *SE* = 0.04, 95 % CI = -0.035 to 0.137) was conveyed to employees through their gaze behavior.

5.4.2. Signaling approach: Managers' frequent gaze incites followers' extra efforts

Correlation analyses. Managers' eye-directed gaze behavior showed a positive link to their employees' extra effort ($r = 0.48$, $p < 0.001$; see Fig. 5). Similarly manager's self- ($r = 0.43$, $p < 0.001$) and employee-ratings ($r = 0.39$, $p = 0.001$) of the influence dimension of everyday charisma, as well as both self- ($r = 0.40$, $p = 0.001$) and employee-ratings ($r = 0.40$, $p = 0.001$) of charismatic leadership abilities, were connected to extra effort, whereas self- ($r = 0.16$, $p = 0.185$) and employee-ratings ($r = 0.04$, $p = 0.743$) of affability were not.

Signaling model perspective. When shifting to a signaling point-of-view to analyze the impact of managers' gaze behavior on followers' behavior (H3), we found the relationship between eye-directed gaze behavior and employees' extra effort to flow through employees' evaluation of their manager's charismatic influence (total effect: γ = 0.48, *SE* = 0.10, $p < 0.001$; direct effect: γ = 0.39, *SE* = 0.10, $p < 0.001$; indirect effect: γ = 0.08, *SE* = 0.04, 95 % CI = 0.010 to 0.172), as well as charismatic leadership abilities (total effect: γ = 0.48, *SE* = 0.10, $p < 0.001$; direct effect: γ = 0.38, *SE* = 0.11, $p = 0.001$; indirect effect: γ = 0.10, *SE* = 0.06, 95 % CI = 0.002 to 0.232), providing support for Hypothesis 3. This was not the case for the affability dimension of everyday charisma (indirect effect: γ = -0.01, *SE* = 0.02, 95 % CI = -0.044 to 0.038).

This study replicated the findings from study 1 in a field setting unencumbered by the potential influence of standardized conditions or lab effects. We substantiated the link between managers' charisma, their eye-directed gaze behavior, and their employees' attributions of charisma (H1). Furthermore, due to this study gathering field data, we were further able to successfully model the process of managers' gaze behavior shaping followers' extra effort through the pathway of these attributions. These results correspond with Hypothesis 3 and expand upon our previous findings on the beneficial outcomes of managers' eye-directed gaze to encompass an effective increase in employees' extra effort beyond the facilitation of leader approval discovered in study 1. All analyses were robust against the influence of managers' age, team size, and leadership experience, producing consistent findings when controlling for these potentially confounding factors.

Table 2
Means, standard deviations, and Pearson product-moment correlations among managers' gender, age, gaze behavior and the manager- and aggregated employee-ratings of charisma influence, charisma affability, charismatic.

	M	*SD*	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Gender[a,b]	0.71	0.46										
2. Age[b]	44.67	10.64	0.13									
3. Gaze behavior (manager)	3.75	0.73	−0.07	0.17								
4. Charisma influence (manager)	3.87	0.70	0.25	0.21	0.33**	(0.81)						
5. Charisma affability (manager)	4.16	0.56	−0.11	−0.09	0.33**	0.32**	(0.62)					
6. Charismatic leadership (manager)	4.01	0.45	0.17	0.19	0.55***	0.63***	0.45***	(0.81)				
7. Charisma influence (employee)	4.06	0.42	0.13	0.29*	0.31**	0.36**	0.01	0.36**	(0.57)			
8. Charisma affability (employee)	4.24	0.55	−0.19	−0.18	0.15	−0.19	0.14	0.02	0.23*	(0.74)		
9. Charismatic leadership (employee)	4.05	0.36	−0.19	−0.08	0.40**	0.13	0.15	0.27*	0.53***	0.59***	(0.82)	
10. Extra effort (employee)	3.35	0.52	0.11	0.25	0.48***	0.43***	0.16	0.40***	0.39**	0.04	0.40**	(0.67)

Note. $N = 72$ managers, rated by two employees each. Reliabilities are presented along the diagonal in parentheses.
*$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.
[a] Dummy variable (0 = male, 1 = female).
[b] 17 managers did not provide data on their gender and age, correlations with these variables are therefore based on a sample of $N = 55$.

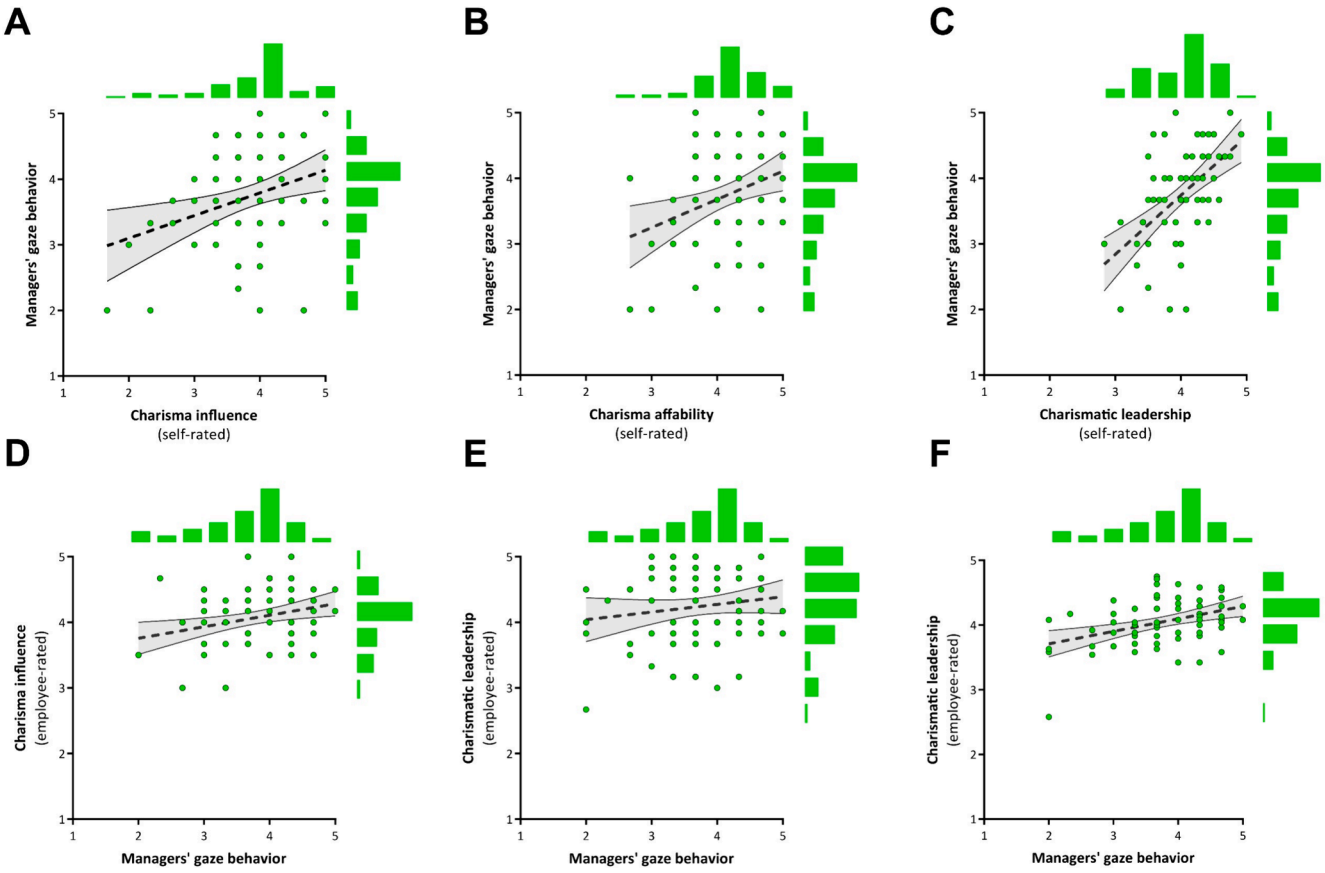

Fig. 4. Correlations between managers' eye-directed gaze behavior and self-rated (A-C), as well as observer-rated (D-F) charisma influence (A, D), affability (B, E), and charismatic leadership (C, F). *Note: The scatter plots display individual unstandardized values (N = 72), linear regression lines and their respective 95 % confidence interval. Histograms on the top and to the right of the scatter plots denote relative frequency distributions.*

6. Discussion and conclusion

6.1. Discussion

Our findings, derived from two studies employing different methodological approaches, consistently demonstrate that leaders who exhibit greater levels of eye-directed gaze are perceived as more charismatic by their followers (*H1*), attain higher levels of approval (*H2*), and elicit greater levels of effort beyond expectations from their followers (*H3*). Specifically, the heightened charismatic appeal achieved by leaders through their gaze behavior mediates the direct beneficial impact of eye-directed gaze on their followers' approval and follower performance. Moreover, lens models illustrate that eye-directed gaze serves as a nonverbal cue transmitting leader charisma, and followers utilize this gaze to infer leader charisma. Having shown that a leader's eye-directed gaze not only informs followers of leader charisma but also elicits increased effort, we conclude that eye-directed gaze acts as a signal of leaders' charisma.

To understand the charismatic impact of leaders' eye-directed gaze in team leadership, we examine our findings through the lens of the signaling approach to charismatic leadership (Antonakis et al., 2016). According to this approach, leaders communicate costly and honest

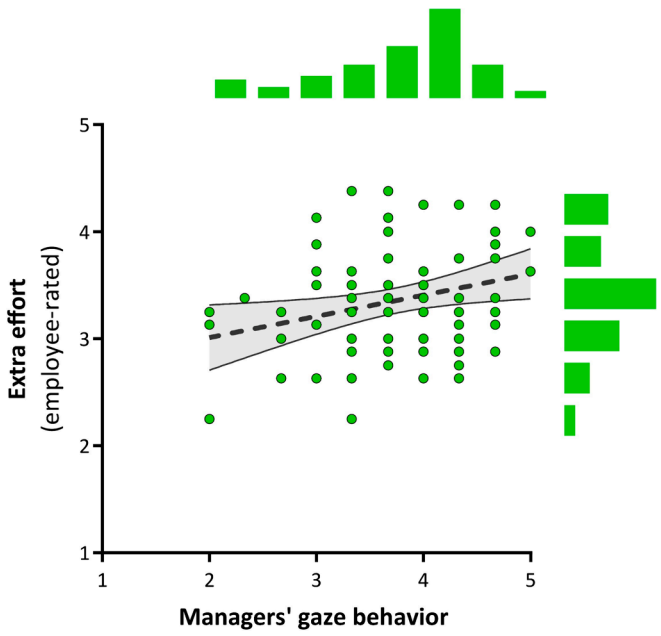

Fig. 5. Correlations between managers' eye-directed gaze behavior and their employees' extra effort. *Note: The scatter plot displays individual unstandardized values (N = 72), a linear regression line and its 95 % confidence interval. Histograms on the top and to the right of the scatter plot denotes relative frequency distributions.*

signals to their followers. These signals reliably reveal a capability that leaders possess and that enables them to be effective leaders, thereby letting them garner the approval of their followers. Frequent or prolonged eye-directed gaze might act as such a costly and honest signal. More specifically, it might reveal leaders' cognitive abilities, which actually are a critical predictor for leader effectiveness (Judge et al., 2004). While leaders' eye-directed gaze shows followers, that leaders' attention and their message is directed specifically towards them, it also impedes active thinking (Conty et al., 2010), particularly during speaking (Kajimura & Nomura, 2016), because it occupies cognitive resources. However, leaders with superior cognitive abilities (von Hippel et al., 2016) or expertise (Brown et al., 2016; Dovidio et al., 1988) may be better equipped to overcome these distractions and maintain eye-directed gaze with their audience, while simultaneously conveying their message. If only leaders with high cognitive abilities or expertise exhibit a high frequency of eye-directed gaze, then this gaze behavior can be considered a costly and honest signal. It is costly because only leaders high in cognitive ability can afford to display frequent eye-directed gaze while interacting and thereby honestly reveals if a leader possesses this ability or not. Our findings on leaders' eye-directed gaze might reflect this theorizing, hence supporting the point that eye-directed gaze acts as a signal of leaders' charisma.

While the signaling approach to leaders' charisma offers appropriate theorizing on the conceptual underpinnings of the nature of leaders' eye-directed gaze and charisma, a different perspective may be required to properly explain the motivational processes behind the beneficial performance effects of this leadership tactic. Charismatic leaders enhance employee performance by influencing the self-concept of their subordinates; followers internalize the leader's vision as a value within their self-concept (Howell & Shamir, 2005; Shamir et al., 1993). By linking their message to valued aspects of the follower's self-concept, charismatic leaders increase the intrinsic value of their message to employees and successfully align their employees' sense of self with the leader's vision (Boehm et al., 2015). In turn, employees' efforts to implement this vision are motivated by the pursuit of self-expression, self-consistency, self-esteem, and self-worth. This mechanism should lead to a greater willingness among employees to make personal sacrifices and exhibit "extra-role" behaviors, both of which exceed expectations (Shamir et al., 1993). Congruently, this study demonstrates that leaders' eye-directed gaze not only increases the charismatic impression in their audience but also earns them greater approval and motivates employees' extra efforts.

6.2. Managerial implications

Our research demonstrates that managers' eye-directed gaze has a beneficial effect on the effectiveness of their leadership. Our findings therefore raise the question of whether managers should intentionally show more gaze behavior in their leadership practice in order to gain more approval and encourage their employees to exert extra effort. Actually, people show more eye contact with others when they have more expertise on a topic they are talking about (e.g., Dovidio & Ellyson, 1985; Koch et al., 2010) or try to persuade (e.g., Maran, Furtner, Liegl, et al., 2019; Mehrabian & Williams, 1969; Riggio & Friedman, 1983) others. This is consistent with our findings, which show that more eye-directed gaze results in more approval from employees. Eye-directed gaze is under our volitional control, allowing managers to employ this behavior intentionally. Maintaining well-dosed consistent eye contact can make followers more attentive and receptive to the leader's idea and invigorate their pursuit of it. We therefore conclude that managers can indeed increase the effectiveness of their team leadership through their use of more eye-directed gaze.

However, it is still unknown what "less" or "more" eye contact actually means in concrete terms. While we can conclude that managers should avoid too few social gazes in team leadership, there is a risk of a "too-much" effect (Pierce & Aguinis, 2013). For example, unnatural staring or excessive eye contact can potentially change the perception of a manager from genuine to artificial or even confrontational (Giacomantonio et al., 2018). Therefore, exploring these curvilinear or "too-much" effects is critical before considering interventions aimed at instructing and training managers to instrumentalize their gaze behavior.

6.3. Limitations and future research directions

While our results echo prior studies (Maran, Furtner, Liegl, et al., 2019; Tskhay et al., 2017), this research is not without limitations, which present valuable opportunities for future investigations. First, while we approach the research question of this work through multiple methods in both studies, we recommend future research to adopt more controlled approaches based on these findings. For example, the measurements of leaders' charisma and extra effort among followers via self-report instruments in study 2 may be susceptible to endogeneity bias. Moreover, the agreement between self-report measures of eye-directed gaze and eye-tracking data on eye-directed gaze is valid yet somewhat limited (see study 1, and Maran, Furtner, Liegl, et al., 2019). Future research might consider applying mobile eye-tracking technology as we did in study one to interactions among teams in organizations (Gerpott, et al., 2018; Maran, Furtner, et al., 2021).

Second, eye-directed gaze as a charismatic leadership tactic is particularly promising because it is under volitional control and can be used intentionally by leaders, prompting future research to experimentally manipulate leaders' eye-directed gaze and study its effectiveness more systematically (e.g., Shim et al., 2021). Experimental manipulations offer the opportunity to investigate the differential impact of various charismatic tactics on leader effectiveness. In all previous experimental studies charismatic tactics were presented in combination. Hence, the individual effects of these tactics are poorly understood, leaving open the question of whether these tactics operate independently in the same manner as they do when combined. Also, the question arises whether eye-directed gaze, along with other charismatic cues, co-occur naturally in leaders, or whether leaders exhibit distinct profiles in their utilization of these tactics.

Third, culture shapes the perception of gaze (Uono & Hietanen, 2015), the physiological response to it (Akechi et al., 2013), and the mere display of it (Haensel et al., 2022). Most likely, the effects we observe through leaders' gaze behavior in this work represent the Western way of responding to this social signal.

Fourth, the studies' results provide only limited evidence to construct a comprehensive theory of the effect of gaze behavior in leadership. Shamir and colleagues' (Howell & Shamir, 2005; Shamir et al., 1993) self-concept approach to the impact of charismatic leadership offers a profound explanation of the underlying motivational mechanisms that might also be valid for the effects of managers' eye-directed gaze toward their employees. To provide a sound theoretical explanation of the impact of eye-directed gaze, further investigation of these mediating variables is imperative.

Fifth, social gaze signaling in leadership is not a one-way channel but embedded in a reciprocal interaction between leaders and those being led. The way team members respond to signals is as important as the signaling of the leaders themselves. When exploring the impact of leaders' eye-directed gaze, future research should not only utilize eye-tracking technology to gauge leaders' gaze behaviors but also capture the gaze patterns of those being led to assess actual eye contact beyond mere eye-directed gaze (e.g., Hoffmann et al., 2024). In addition, there are specific conditions that impair the establishment of eye contact. For example, the transition of team leadership into the virtual realm could fundamentally hinder the making of genuine eye contact, potentially diminishing the effectiveness of leadership in this context (e.g., Bohannon et al., 2013) and necessitating alternative means of signaling charisma (Liegl & Furtner, 2024).

Sixth, echoing this notion, additional research should also be conducted on the biological processes underlying the impact of charismatic leadership in organizations. Such research could reveal similarities in biological responses to specific behaviors and those to charismatic leaders, thus informing theory-building or supporting hypothesis development. This perspective arises from the observation that eye-directed gaze and charismatic leadership effects also seem to share a common biological mechanism: the release of oxytocin (Prinsen et al., 2018). This neurohormone increases cooperative behaviors toward ingroup members (De Dreu et al., 2011), and interestingly strengthens both the emergence of eye contact (Auyeung et al., 2015) and relationships with charismatic leaders (Gordon & Berson, 2018).

Finally, social gazing, like other nonverbal and verbal tactics in the repertoire of charismatic cues, is also applicable to other leadership styles. For instance, in directive leadership, where managers exert control, they could employ more social gazing to enhance compliance with their directives, commitment to the prescribed goals, and overall leadership effectiveness. This interactive interplay between charismatic cues, particularly eye-directed gaze, and leadership techniques of other styles represents a research gap that warrants exploration in future studies.

6.4. Conclusion

The power of a gaze that is directed towards the eyes has long been revered as a hallmark of exceptional leaders, steeped in cultural and historical significance. Despite its significant influence on interpersonal interactions, the intentional utilization of gaze behavior in leadership has long been overlooked. Our research demonstrated through two empirical studies that leaders who directed their gaze towards their followers were perceived as more charismatic, garnered higher levels of follower approval, and incited extraordinary effort in their followers. Providing a missing piece of the puzzle, these findings fit leaders' eye-directed gaze into the set of tactics that constitute leaders' charisma and reveal actionable implications for managerial practice.

CRediT authorship contribution statement

Simon Liegl: Writing – review & editing, Writing – original draft, Conceptualization, Methodology, Investigation, Validation, Formal analysis, Visualization, Data curation, Resources, Supervision, Project Administration. **Thomas Maran:** Writing – review & editing, Writing – original draft, Conceptualization, Methodology, Investigation, Validation, Formal analysis, Visualization, Data curation, Resources, Supervision, Project administration. **Sascha Kraus:** Writing – review & editing, Writing – original draft, Supervision. **Marco Furtner:** Writing – review & editing, Writing – original draft, Methodology, Supervision. **Pierre Sachse:** Writing – review & editing, Writing – original draft, Project administration, Resources, Supervision.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data available on request from the authors.

References

Akechi, H., Senju, A., Uibo, H., Kikuchi, Y., Hasegawa, T., & Hietanen, J. K. (2013). Attention to Eye Contact in the West and East: Autonomic Responses and Evaluative Ratings. *PLoS ONE, 8*(3), e59312.

Antonakis, J. (2017). On doing better science: From thrill of discovery to policy implications. *The Leadership Quarterly, 28*(1), 5–21. https://doi.org/10.1016/j.leaqua.2017.01.006

Antonakis, J., Bastardoz, N., Jacquart, P., & Shamir, B. (2016). Charisma: An Ill-Defined and Ill-Measured Gift. *Annual Review of Organizational Psychology and Organizational Behavior, 3*(1), 293–319. https://doi.org/10.1146/annurev-orgpsych-041015-062305

Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2010). On making causal claims: A review and recommendations. *The Leadership Quarterly, 21*(6), 1086–1120. https://doi.org/10.1016/J.LEAQUA.2010.10.010

Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2014). Causality and endogeneity: Problems and solutions. In D. V. Day (Ed.), *The Oxford Handbook of Leadership and Organizations* (pp. 93–117). Oxford University Press.

Antonakis, J., D'Adda, G., Weber, R. A., & Zehnder, C. (2022). "Just Words? Just Speeches?" On the Economic Value of Charismatic Leadership. *Management Science, 68*(9), 6355–7064. https://doi.org/10.1287/MNSC.2021.4219

Antonakis, J., Fenley, M., & Liechti, S. (2011). Can Charisma Be Taught? Tests of Two Interventions. *Academy of Management Learning and Education, 10*(3), 374–396. https://doi.org/10.5465/amle.2010.0012

Argyle, M. (1988). Bodily Communication. In *Bodily Communication* (2nd ed.). Routledge. doi: 10.4324/9780203753835.

Auyeung, B., Lombardo, M. V., Heinrichs, M., Chakrabarti, B., Sule, A., Deakin, J. B., Bethlehem, R. A. I., Dickens, L., Mooney, N., Sipple, J. A. N., Thiemann, P., & Baron-Cohen, S. (2015). Oxytocin increases eye contact during a real-time, naturalistic social interaction in males with and without autism. *Translational Psychiatry, 5*(2), e507–e. https://doi.org/10.1038/tp.2014.146

Avolio, B. J., & Bass, B. M. (1991). *The full range of leadership development: Basic and advanced manuals*.

Ayal, S., Celse, J., & Hochman, G. (2021). Crafting messages to fight dishonesty: A field investigation of the effects of social norms and watching eye cues on fare evasion. *Organizational Behavior and Human Decision Processes, 166*, 9–19. https://doi.org/10.1016/J.OBHDP.2019.10.003

Baillon, A., Selim, A., & van Dolder, D. (2013). On the social nature of eyes: The effect of social cues in interaction and individual choice tasks. *Evolution and Human Behavior, 34*(2), 146–154. https://doi.org/10.1016/J.EVOLHUMBEHAV.2012.12.001

Baltazar, M., Hazem, N., Vilarem, E., Beaucousin, V., Picq, J.-L., & Conty, L. (2014). Eye contact elicits bodily self-awareness in human adults. *Cognition, 133*(1), 120–127. https://doi.org/10.1016/J.COGNITION.2014.06.009

Banks, G. C., Engemann, K. N., Williams, C. E., Gooty, J., McCauley, K. D., & Medaugh, M. R. (2017). A meta-analytic review and future research agenda of charismatic leadership. *The Leadership Quarterly, 28*(4), 508–529. https://doi.org/10.1016/j.leaqua.2016.12.003

Banks, G. C., Woznyj, H. M., & Mansfield, C. A. (2023). Where is "behavior" in organizational behavior? A call for a revolution in leadership research and beyond. *The Leadership Quarterly, 34*(6), Article 101581. https://doi.org/10.1016/J.LEAQUA.2021.101581

Bass, B. M. (1985). *Leadership performance beyond expectations*. Academic Press.

Bastardoz, N., Jacquart, P., & Antonakis, J. (2022). Effect of crises on charisma signaling: A regression discontinuity design. *The Leadership Quarterly, 101590*. https://doi.org/10.1016/J.LEAQUA.2021.101590

Berger, J. (2011). Arousal Increases Social Transmission of Information. *Psychological Science, 22*(7), 891–893. https://doi.org/10.1177/0956797611413294

Bloom, K. (1974). Eye contact as a setting event for infant learning. *Journal of Experimental Child Psychology, 17*(2), 250–263. https://doi.org/10.1016/0022-0965(74)90070-8

Boehm, S. A., Dwertmann, D. J. G., Bruch, H., & Shamir, B. (2015). The missing link? Investigating organizational identity strength and transformational leadership climate as mechanisms that connect CEO charisma with firm performance. *The Leadership Quarterly, 26*(2), 156–171. https://doi.org/10.1016/j.leaqua.2014.07.012

Bohannon, L. S., Herbert, A. M., Pelz, J. B., & Rantanen, E. M. (2013). Eye contact and video-mediated communication: A review. *Displays, 34*(2), 177–185. https://doi.org/10.1016/J.DISPLA.2012.10.009

Brooks, C. I., Church, M. A., & Fraser, L. (1986). Effects of Duration of Eye Contact on Judgments of Personality Characteristics. *The Journal of Social Psychology, 126*(1), 71–78. https://doi.org/10.1080/00224545.1986.9713572

Brown, C. E., Dovidio, J. F., & Ellyson, S. L. (2016). Reducing Sex Differences in Visual Displays of Dominance. *Personality and Social Psychology Bulletin, 16*(2), 358–368. https://doi.org/10.1177/0146167290162015

Brunswik, E. (1956). *Perception and the representative design of psychological experiments*. University of California Press.

Bryman, A. (1992). Charisma and leadership in organizations. *Sage*. Publications.

Cazzato, V., Liuzza, M. T., Caprara, G. V., Macaluso, E., & Aglioti, S. M. (2015). The attracting power of the gaze of politicians is modulated by the personality and ideological attitude of their voters: A functional magnetic resonance imaging study. *European Journal of Neuroscience, 42*(8), 2534–2545. https://doi.org/10.1111/ejn.13038

Chatman, J. A., & Flynn, F. J. (2005). Full-Cycle Micro-Organizational Behavior Research. *Organization Science, 16*(4), 434–447. https://doi.org/10.1287/ORSC.1050.0136

Cheng, J. T., Gerpott, F. H., Benson, A. J., Bucker, B., Foulsham, T., Lansu, T. A. M., Schülke, O., & Tsuchiya, K. (2022). Eye gaze and visual attention as a window into leadership and followership: A review of empirical insights and future directions. *The Leadership Quarterly, 101654*. https://doi.org/10.1016/J.LEAQUA.2022.101654

Conger, J. A., & Kanungo, R. (1998). *Charismatic leadership in organizations*. Sage Publications Inc.

Conty, L., Dezecache, G., Hugueville, L., & Grèzes, J. (2012). Early Binding of Gaze, Gesture, and Emotion: Neural Time Course and Correlates. *Journal of Neuroscience, 32*(13), 4531–4539. https://doi.org/10.1523/JNEUROSCI.5636-11.2012

Conty, L., George, N., & Hietanen, J. K. (2016). Watching Eyes effects: When others meet the self. *Consciousness and Cognition, 45*, 184–197. https://doi.org/10.1016/j.concog.2016.08.016

Conty, L., Gimmig, D., Belletier, C., George, N., & Huguet, P. (2010). The cost of being watched: Stroop interference increases under concomitant eye contact. *Cognition, 115*(1), 133–139. https://doi.org/10.1016/J.COGNITION.2009.12.005

Csibra, G., & Gergely, G. (2009). Natural pedagogy. *Trends in Cognitive Sciences, 13*(4), 148–153. https://doi.org/10.1016/J.TICS.2009.01.005

Davidson, R., & MacKinnon, J. G. (1993). *Estimation and Inference in Econometrics*. Oxford University Press.

De Dreu, C. K. W., Greer, L. L., Van Kleef, G. A., Shalvi, S., & Handgraaf, M. J. J. (2011). Oxytocin promotes human ethnocentrism. *Proceedings of the National Academy of Sciences, 108*(4), 1262–1266. https://doi.org/10.1073/PNAS.1015316108

Dear, K., Dutton, K., & Fox, E. (2019). Do 'watching eyes' influence antisocial behavior? A systematic review & meta-analysis. *Evolution and Human Behavior, 40*(3), 269–280. https://doi.org/10.1016/J.EVOLHUMBEHAV.2019.01.006

Dovidio, J. F., & Ellyson, S. L. (1982). Decoding Visual Dominance: Attributions of Power Based on Relative Percentages of Looking While Speaking and Looking While Listening. *Social Psychology Quarterly, 45*(2), 106–113. https://doi.org/10.2307/3033933

Dovidio, J. F., & Ellyson, S. L. (1985). Pattern of Visual Dominance Behavior in Humans. In *Power, Dominance, and Nonverbal Behavior* (pp. 129–149). New York: Springer. https://doi.org/10.1007/978-1-4612-5106-4_7.

Dovidio, J. F., Brown, C. E., Heltman, K., Ellyson, S. L., & Keating, C. F. (1988). Power Displays Between Women and Men in Discussions of Gender-Linked Tasks: A Multichannel Study. *Journal of Personality and Social Psychology, 55*(4), 580–587. https://doi.org/10.1037/0022-3514.55.4.580

Ekström, M. (2012). Do watching eyes affect charitable giving? Evidence from a field experiment. *Experimental Economics, 15*(3), 530–546. https://doi.org/10.1007/s10683-011-9312-6

Emery, N. J. (2000). The eyes have it: The neuroethology, function and evolution of social gaze. *Neuroscience & Biobehavioral Reviews, 24*(6), 581–604. https://doi.org/10.1016/S0149-7634(00)00025-7

Engelbert, L. H., van Elk, M., Kandrik, M., Theeuwes, J., & van Vugt, M. (2022). The effect of charismatic leaders on followers' memory, error detection, persuasion and prosocial behavior: A cognitive science approach. *The Leadership Quarterly, 101656*. https://doi.org/10.1016/J.LEAQUA.2022.101656

Ernst, B. A., Banks, G. C., Loignon, A. C., Frear, K. A., Williams, C. E., Arciniega, L. M., Gupta, R. K., Kodydek, G., & Subramanian, D. (2022). Virtual charismatic leadership and signaling theory: A prospective meta-analysis in five countries. *The Leadership Quarterly, 33*(5), Article 101541. https://doi.org/10.1016/J.LEAQUA.2021.101541

Farroni, T., Csibra, G., Simion, F., & Johnson, M. H. (2002). Eye contact detection in humans from birth. *Proceedings of the National Academy of Sciences of the United States of America, 99*(14), 9602–9605. https://doi.org/10.1073/pnas.152159999

Fest, S., Kvaløy, O., Nieken, P., & Schöttner, A. (2021). How (not) to motivate online workers: Two controlled field experiments on leadership in the gig economy. *The Leadership Quarterly, 32*(6), Article 101514. https://doi.org/10.1016/j.leaqua.2021.101514

Fischer, T., & Sitkin, S. B. (2023). Leadership styles: A comprehensive assessment and way forward. *Academy of Management Annals, 17*(1). https://doi.org/10.5465/annals.2020.0340

Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research, 69*(8), 3192–3198. https://doi.org/10.1016/J.JBUSRES.2015.12.008

Gerpott, F. H., Lehmann-Willenbrock, N., Silvis, J. D., & van Vugt, M. (2018). In the eye of the beholder? An eye-tracking experiment on emergent leadership in team interactions. *The Leadership Quarterly, 29*(4), 523–532. https://doi.org/10.1016/j.leaqua.2017.11.003

Giacomantonio, M., Jordan, J., Federico, F., van den Assem, M. J., & van Dolder, D. (2018). The evil eye: Eye gaze and competitiveness in social decision making. *European Journal of Social Psychology, 48*(3), 388–396. https://doi.org/10.1002/EJSP.2336

Gobel, M. S., Kim, H. S., & Richardson, D. C. (2015). The dual function of social gaze. *Cognition, 136*, 359–364. https://doi.org/10.1016/j.cognition.2014.11.040

Gordon, I., & Berson, Y. (2018). Oxytocin modulates charismatic influence in groups. *Journal of Experimental Psychology: General, 147*(1), 132–138. https://doi.org/10.1037/xge0000375

Grabo, A., & van Vugt, M. (2016). Charismatic leadership and the evolution of cooperation. *Evolution and Human Behavior, 37*(5), 399–406. https://doi.org/10.1016/j.evolhumbehav.2016.03.005

Grabo, A., Spisak, B. R., & van Vugt, M. (2017). Charisma as signal: An evolutionary perspective on charismatic leadership. *The Leadership Quarterly, 28*(4), 473–485. https://doi.org/10.1016/J.LEAQUA.2017.05.001

Grossmann, T. (2017). The Eyes as Windows Into Other Minds. *Perspectives on Psychological Science, 12*(1), 107–121. https://doi.org/10.1177/1745691616654457

Guglielmo, C. (2012). Untold Stories About Steve Jobs: Friends and Colleagues Share Their Memories. *Forbes*. https://www.forbes.com/sites/connieguglielmo/2012/10/03/untold-stories-about-steve-jobs-friends-and-colleagues-share-their-memories.

Guo, L., Mao, J. Y., Huang, Q., & Zhang, G. (2022). Polishing followers' future work selves! The critical roles of leader future orientation and vision communication. *Journal of Vocational Behavior, 137*, Article 103746. https://doi.org/10.1016/J.JVB.2022.103746

Haensel, J. X., Smith, T. J., & Senju, A. (2022). Cultural differences in mutual gaze during face-to-face interactions: A dual head-mounted eye-tracking study. *Visual Cognition, 30*(1–2), 100–115. https://doi.org/10.1080/13506285.2021.1928354

Hall, J. A., Coats, E. J., & LeBeau, L. S. (2005). Nonverbal Behavior and the Vertical Dimension of Social Relations: A Meta-Analysis. *Psychological Bulletin, 131*(6), 898–924. https://doi.org/10.1037/0033-2909.131.6.898

Hall, J. A., Horgan, T. G., & Murphy, N. A. (2019). Nonverbal Communication. *Annual Review of Psychology, 70*(1), 271–294. https://doi.org/10.1146/annurev-psych-010418-103145

Hancock, G. R., & An, J. (2020). A closed-form alternative for estimating ω reliability under unidimensionality. *Measurement: interdisciplinary research and perspectives, 18*(1), 1–14. https://doi.org/10.1080/15366367.2019.1656049

Hayes, A. F. (2022). Introduction to Mediation, Moderation, and Conditional Process Analysis. In *Safety and Health at Work* (3rd ed., Issue 3). Guildford Press.

Hayes, A. F., & Coutts, J. J. (2020). Use omega rather than Cronbach's alpha for estimating reliability. But…. *Communication Methods and Measures, 14*(1), 1–24. https://doi.org/10.1080/19312458.2020.1718629

Helminen, T. M., Kaasinen, S. M., & Hietanen, J. K. (2011). Eye contact and arousal: The effects of stimulus duration. *Biological Psychology, 88*(1), 124–130. https://doi.org/10.1016/J.BIOPSYCHO.2011.07.002

Herrero, I., & Bornay-Barrachina, M. (2024). Leadership in a different light: understanding co-worker exchange in a triad. *Review of Managerial Science, 18*(5), 1253–1280.

Hietanen, J. O., Peltola, M. J., & Hietanen, J. K. (2020). Psychophysiological responses to eye contact in a live interaction and in video call. *Psychophysiology, 57*(6), e13587.

Higham, J. P. (2014). How does honest costly signaling work? *Behavioral Ecology, 25*(1), 8–11. https://doi.org/10.1093/BEHECO/ART097

Hirschmüller, S., Schmukle, S. C., Krause, S., Back, M. D., & Egloff, B. (2018). Accuracy of Self-Esteem Judgments at Zero Acquaintance. *Journal of Personality, 86*(2), 308–319. https://doi.org/10.1111/jopy.12316

Hoffmann, A., Schiestl, S., Sinske, P., Gondan, M., Sachse, P., & Maran, T. (2024). Sharing and Receiving Eye-Contact Predicts Mate Choice After a 5-Minute Conversation: Evidence from a Speed-Dating Study. *Archives of Sexual Behavior, 53*(3), 959–968. https://doi.org/10.1007/S10508-023-02806-0/TABLES/5

Howell, J. M., & Shamir, B. (2005). The role of followers in the charismatic leadership process: Relationships and their consequences. *Academy of Management Review, 30*(1), 96–112. https://doi.org/10.5465/AMR.2005.15281435

Ilicic, J., Baxter, S. M., & Kulczynski, A. (2016). White eyes are the window to the pure soul: Metaphorical association and overgeneralization effects for spokespeople with limbal rings. *International Journal of Research in Marketing, 33*(4), 840–855. https://doi.org/10.1016/J.IJRESMAR.2016.02.001

Ishikawa, M., Senju, A., Kato, M., & Itakura, S. (2022). Physiological arousal explains infant gaze following in various social contexts. *Royal Society Open Science, 9*(8). https://doi.org/10.1098/RSOS.220592/

Jackson, P. (2001). *The Lord of the Rings: The Fellowship of the Ring*. New Line Cinema.

Jacquart, P., & Antonakis, J. (2015). When does Charisma matter for top-level leaders? Effect of attributional ambiguity. *Academy of Management Journal, 58*(4), 1051–1074. https://doi.org/10.5465/amj.2012.0831

Judge, T. A., Colbert, A. E., & Ilies, R. (2004). Intelligence and leadership: A quantitative review and test of theoretical propositions. *Journal of Applied Psychology, 89*(3), 542–552. https://doi.org/10.1037/0021-9010.89.3.542

Kajimura, S., & Nomura, M. (2016). When we cannot speak: Eye contact disrupts resources available to cognitive control processes during verb generation. *Cognition, 157*, 352–357. https://doi.org/10.1016/J.COGNITION.2016.10.002

Kampe, K. K. W., Frith, C. D., & Frith, U. (2003). "Hey John": Signals Conveying Communicative Intention toward the Self Activate Brain Regions Associated with "Mentalizing", Regardless of Modality. *The Journal of Neuroscience, 23*(12), 5258–5263. https://doi.org/10.1523/JNEUROSCI.23-12-05258.2003

Kingstone, A., Tipper, C., Ristic, J., & Ngan, E. (2004). The eyes have it!: An fMRI investigation. *Brain and Cognition, 55*(2), 269–271. https://doi.org/10.1016/J.BANDC.2004.02.037

Kleinke, C. L. (1986). Gaze and eye contact: A research review. *Psychological Bulletin, 100*(1), 78–100. https://doi.org/10.1037/0033-2909.100.1.78

Kleinke, C. L., & Pohlen, P. D. (1971). Affective and emotional responses as a function of other person's gaze and cooperativeness in a two-person game. *Journal of Personality and Social Psychology, 17*(3), 308–313. https://doi.org/10.1037/H0030600

Kobayashi, H., & Kohshima, S. (1997). Unique morphology of the human eye. *Nature, 387*(6635), 767–768. https://doi.org/10.1038/42842

Koch, S. C., Baehne, C. G., Kruse, L., Zimmermann, F., & Zumbach, J. (2010). Visual Dominance and Visual Egalitarianism: Individual and Group-Level Influences of Sex and Status in Group Interactions. *Journal of Nonverbal Behavior, 34*(3), 137–153. https://doi.org/10.1007/s10919-010-0088-8

Krogh-Jespersen, S., Quinn, K. A., Krenzer, W. L. D., Nguyen, C., Greenslit, J., & Price, C. A. (2020). Exploring the awe-some: Mobile eye-tracking insights into awe in a science museum. *PLOS ONE, 15*(9), e0239204.

Kuzmanovic, B., Georgescu, A. L., Eickhoff, S. B., Shah, N. J., Bente, G., Fink, G. R., & Vogeley, K. (2009). Duration matters: Dissociating neural correlates of detection and evaluation of social gaze. *NeuroImage, 46*(4), 1154–1163. https://doi.org/10.1016/J.NEUROIMAGE.2009.03.037

Liegl, S., & Furtner, M. R. (2024). Emotional leader communication in the digital age: An experimental investigation on the role of emoji. *Computers in Human Behavior, 154*, Article 108148. https://doi.org/10.1016/J.CHB.2024.108148

Liuzza, M. T., Cazzato, V., Vecchione, M., Crostella, F., Caprara, G. V., & Aglioti, S. M. (2011). Follow My Eyes: The Gaze of Politicians Reflexively Captures the Gaze of Ingroup Voters. *PLoS ONE, 6*(9), e25117.

Lonati, S., Quiroga, B. F., Zehnder, C., & Antonakis, J. (2018). On doing relevant and rigorous experiments: Review and recommendations. *Journal of Operations Management, 64*, 19–40. https://doi.org/10.1016/J.JOM.2018.10.003

Luft, C. D. B., Zioga, I., Giannopoulos, A., Di Bona, G., Binetti, N., Civilini, A., Latora, V., & Mareschal, I. (2022). Social synchronization of brain activity increases during eye-contact. *Communications Biology 2022 5:1, 5*(1), 1–15. doi: 10.1038/s42003-022-03352-6.

Manesi, Z., Van Lange, P. A. M., & Pollet, T. V. (2016). Eyes wide open: Only eyes that pay attention promote prosocial behavior. *Evolutionary Psychology, 14*(2), 1–15. https://doi.org/10.1177/1474704916640780

Maran, T. K., Baldegger, U., & Klösel, K. (2022). Turning visions into results: Unraveling the distinctive paths of leading with vision and autonomy to goal achievement. *Leadership and Organization Development Journal, 43*(1), 133–154. https://doi.org/10.1108/LODJ-06-2021-0268

Maran, T. K., Furtner, M. R., Kraus, S., Liegl, S., & Jones, P. (2019). Leaders' Eye Contact enhances Motivation: An Experimental Approach. *Journal of Small Business Strategy, 29*(3), 16–32.

Maran, T. K., Furtner, M. R., Liegl, S., Kraus, S., & Sachse, P. (2019). In the eye of a leader: Eye-directed gazing shapes perceptions of leaders' charisma. *The Leadership Quarterly, 30*(6), Article 101337. https://doi.org/10.1016/j.leaqua.2019.101337

Maran, T. K., Furtner, M. R., Liegl, S., Ravet-Brown, T., Haraped, L., & Sachse, P. (2021). Visual Attention in Real-World Conversation: Gaze Patterns Are Modulated by Communication and Group Size. *Applied Psychology, 70*(4), 1602–1627. https://doi.org/10.1111/apps.12291

Maran, T. K., Liegl, S., Moder, S., Kraus, S., & Furtner, M. R. (2021). Clothes make the leader! How leaders can use attire to impact followers' perceptions of charisma and approval. *Journal of Business Research, 124*, 86–99. https://doi.org/10.1016/j.jbusres.2020.11.026

Maran, T. K., Moder, S., Furtner, M. R., Ravet-Brown, T., & Liegl, S. (2020). From self-report to behavior: Mapping charisma onto naturalistic gaze patterns. *Personality and Individual Differences, 152*, Article 109562. https://doi.org/10.1016/j.paid.2019.109562

Mather, M., & Sutherland, M. R. (2011). Arousal-Biased Competition in Perception and Memory. *Perspectives on Psychological Science, 6*(2), 114–133. https://doi.org/10.1177/1745691611400234

Mehrabian, A., & Williams, M. (1969). Nonverbal concomitants of perceived and intended persuasiveness. *Journal of Personality and Social Psychology, 13*(1), 37–58. https://doi.org/10.1037/h0027993

Menges, J. I., Kilduff, M., Kern, S., & Bruch, H. (2015). The awestruck effect: Followers suppress emotion expression in response to charismatic but not individually considerate leadership. *The Leadership Quarterly, 26*(4), 626–640. https://doi.org/10.1016/j.leaqua.2015.06.002

Meslec, N., Curseu, P. L., Fodor, O. C., & Kenda, R. (2020). Effects of charismatic leadership and rewards on individual performance. *The Leadership Quarterly, 31*(6), Article 101423. https://doi.org/10.1016/j.leaqua.2020.101423

Mobekk, H., Hessen, D. O., Fagerstrøm, A., & Jacobsen, H. (2020). For Your Eyes Only: A Field Experiment on Nudging Hygienic Behavior. *Frontiers in Psychology, 11*, 3489. https://doi.org/10.3389/FPSYG.2020.603440/BIBTEX

Myllyneva, A., & Hietanen, J. K. (2015). There is more to eye contact than meets the eye. *Cognition, 134*, 100–109. https://doi.org/10.1016/J.COGNITION.2014.09.011

Naidoo, L. J., & Lord, R. G. (2008). Speech imagery and perceptions of charisma: The mediating role of positive affect. *The Leadership Quarterly, 19*(3), 283–296. https://doi.org/10.1016/j.leaqua.2008.03.010

Nestler, S., & Back, M. D. (2013). Applications and Extensions of the Lens Model to Understand Interpersonal Judgments at Zero Acquaintance. *Current Directions in Psychological Science, 22*(5), 374–379. https://doi.org/10.1177/0963721413486148

Nettle, D., Nott, K., & Bateson, M. (2012). 'Cycle Thieves, We Are Watching You': Impact of a Simple Signage Intervention against Bicycle Theft. *PLoS ONE, 7*(12), e51738.

Northoff, G., Heinzel, A., de Greck, M., Bermpohl, F., Dobrowolny, H., & Panksepp, J. (2006). Self-referential processing in our brain—A meta-analysis of imaging studies on the self. *NeuroImage, 31*(1), 440–457. https://doi.org/10.1016/J.NEUROIMAGE.2005.12.002

Northover, S. B., Pedersen, W. C., Cohen, A. B., & Andrews, P. W. (2017). Artificial surveillance cues do not increase generosity: Two meta-analyses. *Evolution and Human Behavior, 38*(1), 144–153. https://doi.org/10.1016/J.EVOLHUMBEHAV.2016.07.001

Oda, R., Niwa, Y., Honma, A., & Hiraishi, K. (2011). An eye-like painting enhances the expectation of a good reputation. *Evolution and Human Behavior, 32*(3), 166–171. https://doi.org/10.1016/J.EVOLHUMBEHAV.2010.11.002

Oosterhof, N. N., & Todorov, A. (2008). The functional basis of face evaluation. *Proceedings of the National Academy of Sciences of the United States of America, 105*(32), 11087–11092. https://doi.org/10.1073/pnas.0805664105

Panagopoulos, C. (2014). I've Got My Eyes on You: Implicit Social-Pressure Cues and Prosocial Behavior. *Political Psychology, 35*(1), 23–33. https://doi.org/10.1111/POPS.12074

Panagopoulos, C., & van der Linden, S. (2019). Political identity moderates the effect of watchful eyes on voter mobilization: A reply to Matland and Murray (2019). *Social Influence, 14*(3–4), 152–158. https://doi.org/10.1080/15534510.2019.1698123

Park, I., Lee, D., & Sah, Y. J. (2022). Under watching eyes in news comment sections: Effects of audience cue on self-awareness and commenting behaviour. *Behaviour & Information Technology*. https://doi.org/10.1080/0144929X.2022.2114937

Pfattheicher, S., Strauch, C., Diefenbacher, S., & Schnuerch, R. (2018). A field study on watching eyes and hand hygiene compliance in a public restroom. *Journal of Applied Social Psychology, 48*(4), 188–194. https://doi.org/10.1111/jasp.12501

Pierce, J. R., & Aguinis, H. (2013). The Too-Much-of-a-Good-Thing Effect in Management. *Journal of Management, 39*(2), 313–338. https://doi.org/10.1177/0149206311410060

Pinkley, R. L., Neale, M. A., & Bennett, R. J. (1994). The Impact of Alternatives to Settlement in Dyadic Negotiation. *Organizational Behavior and Human Decision Processes, 57*(1), 97–116. https://doi.org/10.1006/OBHD.1994.1006

Potts, A. M. (1973). The eye of providence. *Documenta Ophthalmologica, 34*(1), 327–334. https://doi.org/10.1007/BF00151819

Powell, K. L., Roberts, G., & Nettle, D. (2012). Eye Images Increase Charitable Donations: Evidence From an Opportunistic Field Experiment in a Supermarket. *Ethology, 118*(11), 1096–1101. https://doi.org/10.1111/ETH.12011

Prinsen, J., Brams, S., & Alaerts, K. (2018). To mirror or not to mirror upon mutual gaze, oxytocin can pave the way: A cross-over randomized placebo-controlled trial. *Psychoneuroendocrinology, 90*, 148–156. https://doi.org/10.1016/J.PSYNEUEN.2018.02.016

Ravet-Brown, T.É., Furtner, M., & Kallmuenzer, A. (2024). Transformational and entrepreneurial leadership: A review of distinction and overlap. *Review of Managerial Science, 18*(2), 493–538. https://doi.org/10.1007/s11846-023-00649-6

Riggio, R. E., & Friedman, H. S. (1983). Individual differences and cues to deception. *Journal of Personality and Social Psychology, 45*(4), 899–915. https://doi.org/10.1037/0022-3514.45.4.899

Risko, E. F., Richardson, D. C., & Kingstone, A. (2016). Breaking the Fourth Wall of Cognitive Science. *Current Directions in Psychological Science, 25*(1), 70–74. https://doi.org/10.1177/0963721415617806

Senju, A., & Johnson, M. H. (2009). The eye contact effect: Mechanisms and development. *Trends in Cognitive Sciences, 13*(3), 127–134. https://doi.org/10.1016/j.tics.2008.11.009

Shamir, B., House, R. J., & Arthur, M. B. (1993). The Motivational Effects of Charismatic Leadership: A Self-Concept Based Theory. *Organization Science, 4*(4), 577–594. https://doi.org/10.1287/orsc.4.4.577

Shim, S.-H., Livingston, R. W., Phillips, K. W., & Lam, S. S. K. (2021). The Impact of Leader Eye Gaze on Disparity in Member Influence: Implications for Process and Performance in Diverse Groups. *Academy of Management Journal, 64*(6), 1873–1900. https://doi.org/10.5465/AMJ.2017.1507

Silvia, P. J., & Beaty, R. E. (2012). Making creative metaphors: The importance of fluid intelligence for creative thought. *Intelligence, 40*(4), 343–351. https://doi.org/10.1016/J.INTELL.2012.02.005

Spector, P., Bauer, J., & Fox, S. (2010). Measurement artifacts in the assessment of counterproductive work behavior and organizational citizenship behavior: Do we know what we think we know? *Journal of Applied Psychology, 95*(4), 781–790. https://doi.org/10.1037/a0019477

Spence, M. (1974). Competitive and optimal responses to signals: An analysis of efficiency and distribution. *Journal of Economic Theory, 7*(3), 296–332. https://doi.org/10.1016/0022-0531(74)90098-2

Stam, D., Lord, R. G., van Knippenberg, D., & Wisse, B. (2014). An Image of Who We Might Become: Vision Communication, Possible Selves, and Vision Pursuit. *Organization Science, 25*(4), 1172–1194. https://doi.org/10.1287/orsc.2013.0891

Sy, T., Horton, C., & Riggio, R. (2018). Charismatic leadership: Eliciting and channeling follower emotions. *The Leadership Quarterly, 29*(1), 58–69. https://doi.org/10.1016/j.leaqua.2017.12.008

Tobii, A. (2020). *Tobii Pro Glasses 2 User's Manual.*
Towler, A. J. (2003). Effects of charismatic influence training on attitudes, behavior, and performance. *Personnel Psychology, 56*(2), 363–381. https://doi.org/10.1111/j.1744-6570.2003.tb00154.x
Tskhay, K. O., Zhu, R., & Rule, N. O. (2017). Perceptions of charisma from thin slices of behavior predict leadership prototypicality judgments. *The Leadership Quarterly, 28*(4), 555–562. https://doi.org/10.1016/j.leaqua.2017.03.003
Tskhay, K. O., Zhu, R., Zou, C., & Rule, N. O. (2018). Charisma in Everyday Life: Conceptualization and Validation of the General Charisma Inventory. *Journal of Personality and Social Psychology, 114*(1), 131–152. https://doi.org/10.1037/pspp0000159
Uono, S., & Hietanen, J. K. (2015). Eye Contact Perception in the West and East: A Cross-Cultural Study. *PLOS ONE, 10*(2), e0118094.
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/10.5465/19416520.2013.759433
Van Vugt, M., & Smith, J. E. (2019). A Dual Model of Leadership and Hierarchy: Evolutionary Synthesis. *Trends in Cognitive Sciences, 23*(11), 952–967. https://doi.org/10.1016/J.TICS.2019.09.004
von Hippel, W., Ronay, R., Baker, E., Kjelsaas, K., & Murphy, S. C. (2016). Quick Thinkers Are Smooth Talkers: Mental Speed Facilitates Charisma. *Psychological Science, 27*(1), 119–122. https://doi.org/10.1177/0956797615616255/
Weber, M. (1982). Die drei reinen Typen der legitimen Herrschaft. In J. Winckelmann (Ed.), *Gesammelte Aufsätze zur Wissenschaftslehre* ((5th ed.,, pp. 475–488). Mohr.
Wirth, J. H., Sacco, D. F., Hugenberg, K., & Williams, K. D. (2010). Eye Gaze as Relational Evaluation: Averted Eye Gaze Leads to Feelings of Ostracism and Relational Devaluation. *Personality and Social Psychology Bulletin, 36*(7), 869–882. https://doi.org/10.1177/0146167210370032
Wohltjen, S., & Wheatley, T. (2021). Eye contact marks the rise and fall of shared attention in conversation. *Proceedings of the National Academy of Sciences of the United States of America, 118*(37). https://doi.org/10.1073/PNAS.2106645118/. e2106645118.
Yukl, G. (1999). An evaluation of conceptual weaknesses in transformational and charismatic leadership theories. *The Leadership Quarterly, 10*(2), 285–305. https://doi.org/10.1016/S1048-9843(99)00013-2

Simon Liegl completed a master's degree in psychology at the University of Innsbruck and is currently enrolled in the PhD in Business Economics – Entrepreneurship and Management at the University of Liechtenstein and the PhD in Psychology at the University of Innsbruck, Austria. His research focuses on charismatic leadership behaviors, gaze behavior, affective displays, self-leadership, and leaders' personality.

Thomas Maran is Assistant Professor at the Free University of Bozen-Bolzano, Italy. In his previous positions he worked at the Universities of Liechtenstein, Innsbruck and Klagenfurt. The focus of his work lies in the areas of leadership, strategy and innovation. He consults firms, industry associations, public institutions and governmental agencies on strategic issues and leadership development. He is also active in various start-up programs and supports founders in the development of competitive business models.

Sascha Kraus is Full Professor of Management at the Free University of Bozen-Bolzano, Italy, and Distinguished Visiting Professor (SARChI Entrepreneurship Education) at the University of Johannesburg, South Africa. He holds a doctorate in Social and Economic Sciences from Klagenfurt University, Austria, a Ph.D. in Industrial Engineering and Management from Helsinki University of Technology and a Habilitation (Venia Docendi) from Lappeenranta University of Technology, both in Finland. Before, he held Full Professor positions at Utrecht University, The Netherlands, the University of Liechtenstein, École Supérieure du Commerce Extérieur Paris, France, and Durham University, United Kingdom, as well as Visiting Professor positions at Copenhagen Business School, Denmark and at the University of St. Gallen, Switzerland.

Marco Furtner holds the Chair for Entrepreneurship and Leadership at the University of Liechtenstein. He is Vice-Dean of the Liechtenstein Business School and Academic Director for the MSc Entrepreneurship & Management as well as the DAS Digital Business Leader at the University of Liechtenstein. His current research focuses on leadership, self-leadership, mindfulness, entrepreneurship, and innovation.

Pierre Sachse holds the Chair of General and Experimental Psychology at the University of Innsbruck, Austria. His main research interests include eye-movement research (macrocognition).