



UvA-DARE (Digital Academic Repository)

Too young to lead? Role incongruity explains age bias against young leaders

Daldrop, C.; Homan, A.C.; Buengeler, C.

DOI

[10.1016/j.leaqua.2025.101878](https://doi.org/10.1016/j.leaqua.2025.101878)

Publication date

2025

Document Version

Final published version

Published in

Leadership Quarterly

License

CC BY

[Link to publication](#)

Citation for published version (APA):

Daldrop, C., Homan, A. C., & Buengeler, C. (2025). Too young to lead? Role incongruity explains age bias against young leaders. *Leadership Quarterly*, 36(4), Article 101878. <https://doi.org/10.1016/j.leaqua.2025.101878>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, P.O. Box 19185, 1000 GD Amsterdam, The Netherlands. You will be contacted as soon as possible.



Full length article

Too young to lead? Role incongruity explains age bias against young leaders

Christoph Daldrop^{a,*}, Astrid C. Homan^b, Claudia Buengeler^a

^a Department of Human Resource Management and Organization, Kiel University, Olshausenstr. 40, 24098 Kiel, Germany

^b Department of Work and Organizational Psychology, University of Amsterdam, Nieuwe Achtergracht 129B, 1018 WS Amsterdam, the Netherlands

ARTICLE INFO

Keywords:

Leadership
Ageism
Role congruity
Age stereotypes
Observer age

ABSTRACT

Although no evidence suggests that young leaders are less effective than older ones, lowered perceptions of leadership suitability may limit their career advancement. This research examines age bias against young leaders by investigating *why* they are perceived as less leader-like and identifying observers more likely to endorse these perceptions. Drawing on role congruity theory and age stereotypes, we argue that young adults are perceived as incongruent with leader roles because they are stereotyped as agentic-dominant (e.g., demanding, risky) while lacking agentic-competence (e.g., intelligent, dedicated) and communal qualities (e.g., caring, honest). From a lifespan perspective, we propose that stereotypes become more salient with observer age, amplifying the perceived incongruity between young adults and leader roles. We test these hypotheses in an experimental study with two independent samples: Sample 1 ($N = 201$) assessed attributes for typical and ideal leaders, while Sample 2 ($N = 711$) evaluated young, middle-aged, and older adults on the same attributes. Findings indicate that young adults are perceived as incongruent with both leader roles, with this effect being stronger among older observers. This research advances understanding of age bias by highlighting the distinct challenges young leaders face and the role of observer age in shaping leadership perceptions.

Introduction

Although over half of the U.S. population is under 40 (e.g., U.S. Census Bureau, 2021), young adults occupy only 21 % of the nearly 19 million management positions (U.S. Bureau of Labor Statistics, 2021). This statistic contrasts with young adults' 34 % representation in the workforce and highlights their significant underrepresentation in leader roles. Interestingly, this underrepresentation cannot be explained by a lack of qualified young individuals (U.S. Census Bureau, 2019), nor is there evidence to suggest that young adults are less effective leaders than older adults. Existing research even suggests that young leaders might be more effective than older leaders, at least in some situations, as they often exhibit more change-oriented and less passive leadership behaviors (e.g., Walter & Scheibe, 2013; Zacher, Rosing, & Frese, 2011). This aligns with previous findings that people prefer young leaders in times of change compared to stability (e.g., Spisak et al., 2014), and that revolutionary political leaders and entrepreneurs tend to be younger in age (e.g., Rudic et al., 2021; Spisak et al., 2014).

Given that young leaders are not necessarily less effective and are even preferred under certain conditions, young individuals should be

represented at least as much as middle-aged and older individuals in leader roles. Consequently, other factors must explain current leader demographics favoring middle-aged and older workers. We propose that *perceptions* of young adults' ineffectiveness or inability, rather than their actual performance, underlie their underrepresentation in leadership positions. This prediction is rooted in general age stereotypes and biases against young leaders. Past research provides evidence of *age-biased* perceptions of young leaders, which lead them to face more negative evaluations (Buengeler et al., 2016), more negative emotions from older subordinates (Kunze & Menges, 2016), higher demands with lower access to resources (Irehill et al., 2023), and more negative self-perceptions (Zhang & North, 2020) compared to middle-aged or older adults.

This *age bias* thus results in young leaders being undervalued because of their age, much like older employees (North, 2019). Age bias is largely "prevalent, unrecognized, [and] unchallenged" (World Health Organization, 2021), particularly against young adults. Some individuals and organizations may even explicitly endorse age bias (Martin & North, 2022). However, while older U.S. workers are legally protected against workplace discrimination under the Age

* Corresponding author at: Department of Human Resource Management and Organization, Kiel University, Olshausenstr. 40, 24098 Kiel, Germany.

E-mail address: daldrop@bwl.uni-kiel.de (C. Daldrop).

<https://doi.org/10.1016/j.leaqua.2025.101878>

Received 21 August 2023; Received in revised form 19 February 2025; Accepted 14 March 2025

Available online 15 May 2025

1048-9843/© 2025 The Author(s). Published by Elsevier Inc. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

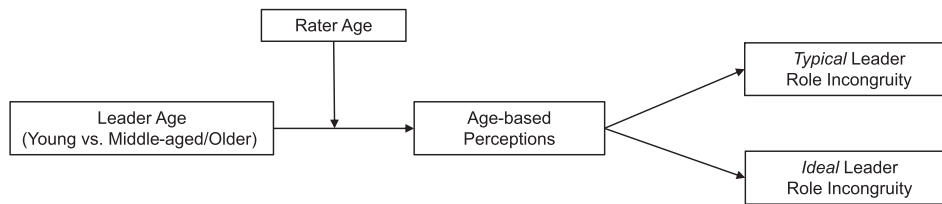


Fig. 1. Conceptual Model.

Discrimination in Employment Act of 1967, young adults under 40 lack such protections.¹ A relative dearth of scholarly attention parallels this situation (e.g., de la Fuente-Nunez et al., 2021). Although researchers have widely recognized the importance of preventing discrimination against older employees (e.g., Boehm et al., 2021; Hertel & Zacher, 2018), discrimination against young adults remains a blind spot in the literature. To better understand age discrimination, potential mechanisms and contingencies of age bias against young leaders need to be investigated.

First, we aim to uncover a potential mechanism of age bias against young leaders. To determine *why* young adults are perceived as less typical and less effective leaders, we examine whether they face greater perceptions of *role incongruity* in leader roles than middle-aged and older adults. Role incongruity refers to the mismatch between stereotypes based on social categories, such as age, and the expectations of a functional role, like being a leader (Eagly & Karau, 2002). In building our role incongruity hypothesis, we combine theorizing on leader role expectations (i.e., implicit leadership theories; Lord et al., 2020; Lord et al., 1984) and age-based stereotypes, drawing from social role theory (Eagly & Wood, 2012; Koenig & Eagly, 2014) and the stereotype content model (Fiske et al., 2002).

Second, we examine a potential contingency factor influencing age bias toward young leaders. As biases, including age bias, are in the eye of the beholder, we aim to determine *who* perceives young adults as less typical and ideal leaders. Given that biases develop over time, as we know from general stereotypes (e.g., Gorham, 1999; Sherman, 1996), *observer age* might be one of the most evident observer-specific characteristics that can influence perceptions of young adults in leader roles. As individuals age, they accumulate experiences with people at different stages of employment, thereby developing clearer societal expectations for themselves and others (e.g., Kornadt et al., 2017). Therefore, by employing a lifespan approach (e.g., Kornadt et al., 2020), our study examines how increased observer age may intensify age bias toward young leaders.

We tested our role incongruity hypothesis regarding young adults in leader roles by combining data from two samples in an experimental study ($N = 912$). In Sample 1 ($n = 201$), we established typical and ideal leader roles with an exhaustive list of leader attributes (Den Hartog et al., 1999; Offermann & Coats, 2018). Spanning dimensions of agency (competence, dominance) and communion (friendliness, morality), these attributes serve as a reference point for comparing age stereotypes. In Sample 2 ($n = 711$), we established age stereotypes for young, middle-

aged, and older adults using the same leader attributes as in Sample 1. Combining data from both samples, we evaluated role incongruity for young adults compared to middle-aged and older adults within typical and ideal leader roles. Furthermore, we identified the observer's age as a critical contextual factor. We present our conceptual model in Fig. 1.

Our manuscript offers three main contributions to the literature on leader roles (Lord et al., 2020; Lord et al., 1984) and role congruity theory (del Carmen Triana et al., 2023; Eagly & Karau, 2002). First, we examine typical and ideal leader roles, comparing them with age-related stereotypes for different age groups. Building on this, we introduce our role incongruity hypothesis, which specifically addresses young adults in leader roles. This perspective broadens previous research on the stereotypical perception of leadership, which has predominantly centered on social roles tied to gender (del Carmen Triana et al., 2023). Second, we enrich current theoretical insights into age stereotypes by emphasizing the distinct challenges young leaders face, which have often been overlooked in previous studies. We tie age stereotypes to different stages of employment and consider observer age as an important contextual factor in age stereotyping. Finally, we build upon and extend recent work on agentic stereotypes (e.g., Ma et al., 2022; Rosette et al., 2016). We argue that a clear distinction between *agentic-competence* and *agentic-dominance* is crucial for understanding the perceived incongruity of young adults with leader roles.

Theory and hypotheses development

Role congruity theory suggests that group stereotypes based on age, gender, or race can influence outcomes for individuals in functional roles (Eagly & Karau, 2002; Heilman, 1983). This theory is grounded in the central tenet of social role theory, which posits that group stereotypes arise from attitudes, values, and behaviors associated with typical social and occupational roles (Eagly & Steffen, 1984; Eagly & Wood, 2012; Koenig & Eagly, 2014). Role congruity theory expands upon social role theory by considering the congruity between group stereotypes and functional roles, such as being a leader (Eagly & Karau, 2002). When forming perceptions of leaders, people consider the congruity of two sets of expectations: group stereotypes and leader role expectations. Role congruity can foster positive outcomes due to anticipated success in the leader role, while role incongruity can have negative consequences due to lower expectations of success and higher expectations of failure.

Research has confirmed the negative consequences that leaders face due to role incongruity based on gender (Koenig et al., 2011; Paustian-Underdahl et al., 2014) and race (e.g., Rosette et al., 2018; Rosette et al., 2008). The largest body of work focuses on bias rooted in the incongruity of leader roles with gender stereotypes (del Carmen Triana et al., 2023). For instance, as compared to men, women tend to emerge less frequently as leaders (Badura et al., 2018), receive less endorsement for leader roles (Dwivedi et al., 2021), delegate tasks less often (Akinola et al., 2018), and be more prone to dismissal from leadership positions (Gupta et al., 2020). Further, scattered attention has been paid to the incongruity of leader roles with racial stereotypes. For example, compared to White individuals, Black and Asian individuals are less likely to emerge as leaders (e.g., Gündemir et al., 2019), are perceived to have less leadership potential, and are rated as less effective (Carton &

¹ We use the chronological age of 25 as a starting point because most adults have entered the workforce by this age. Given the U.S. Age Discrimination in Employment Act of 1967, we use 40 years as an upper boundary for young adults to address individuals at the beginning of their careers. According to the OECD's Directorate for Employment, Labor, and Social Affairs and the statistical office of the European Union (Eurostat, 2022; OECD, 2021), the boundary between middle-aged adults and older adults in the workplace is 55 years. Older age in the workplace ends at 69 years, as this boundary represents a person approaching retirement age. In line with recommendations for bias-free language, we use the term "older adults" instead of "old adults" (American Psychological Association, 2020).

Rosette, 2011; Sy et al., 2010). However, to our knowledge, role incongruity has not yet been studied as a potential source of age bias against young leaders. To investigate the potential incongruity of leader roles with young adults, we first focus on people's expectations of leader roles.

Leader roles: expectations about typical and ideal leaders

When people evaluate potential leaders, they use internal benchmarks defined by leader role expectations (Eagly & Karau, 2002; Heilman, 1983), which delineate characteristic attributes of leaders (Eden & Leviatan, 1975; Lord et al., 2020; Lord et al., 1984). Individuals develop these categories based on abstract characteristics of actual leaders, which are often influenced by socialization processes and past experiences.

Leader role expectations can be either descriptive or prescriptive, represented by distinct cognitive categories. The descriptive leader role, or "typical leader," reflects attributes that leaders typically possess, while the prescriptive leader role, or "ideal leader," reflects attributes that leaders ideally possess (Barsalou, 1985; Junker & van Dick, 2014; Lord et al., 1984). Although individual expectations regarding typical and ideal leaders may vary (Lord et al., 2001), there exist shared expectations about leader attributes that are generally stable across organizational settings (Epitropaki & Martin, 2004), cultures (Den Hartog & De Hoogh, 2024), rater genders, and professions (Offermann et al., 1994), as well as over time (Epitropaki & Martin, 2004; Offermann & Coats, 2018). Many of these typical and ideal leader attributes closely align with the fundamental stereotype dimensions of agency (i.e., competence, dominance) and communion (i.e., friendliness, morality; Abele et al., 2021).

Agency encompasses attributes like self-direction, competence, and proficiency (Bakan, 1966; Eagly, 1987). Building on recent studies on group stereotypes and functional roles (Koenig & Eagly, 2014; Ma et al., 2022; Rosette et al., 2016), we further decompose agency into two facets: *competence* and *dominance*. Competence represents functional and instrumental aspects of leaders, while dominance involves the pursuit of power, self-promotion, and ambition (Rosette et al., 2016).

Competence attributes, such as *intelligence* and *dedication*, are seen as typical and ideal for leaders (House et al., 1999; Offermann & Coats, 2018), given their crucial role in effective decision-making, problem-solving, and goal achievement. Dominance attributes, such as *strength* and *tyranny*, are traditionally linked with leaders due to their focus on power, authority, and control (Maner & Mead, 2010). While competence attributes seem universally valued in leaders (House et al., 1999), dominance attributes may not consistently lead to perceptions of leader effectiveness (Schyns & Schilling, 2010). Nonetheless, evidence suggests that during crises, such as economic uncertainty (Kakkar & Sivanathan, 2017), war and conflicts (Laustsen & Petersen, 2017; Spisak, 2012), or periods of economic inequality (Sprong et al., 2019), dominance seems to be desirable in leaders (see Lonati & Van Vugt, 2024, for an integrative review on ecological factors and implicit leadership theories). Other work has further contextualized these findings by illustrating that dominance without prestige or competence is insufficient for being perceived as an effective leader (e.g., Homan et al., 2024; Van Kleef et al., 2023). Signaling high dominance and low competence or friendliness through actions such as bullying (e.g., Ferris et al., 2007) or rule-breaking (Homan et al., 2024) may undermine leadership granting and might not be ideal for leaders in general.

Adding to the more traditional dimensions of competence and dominance (Lord et al., 1986), modern conceptualizations of leader roles emphasize more collaborative, inclusive, and empowering qualities that promote communication, trust, and teamwork (Junker & van Dick, 2014). Consequently, recent work has highlighted the relevance of *communion* for leader roles (e.g., Ponce de Leon & Bailey, 2025), which encompasses the two facets of *friendliness* and *morality* (Abele et al., 2021). In leadership, friendliness represents elements of a leader's role

that are relationship-oriented, team-focused, and participatory (e.g., McCauley, 2004). Morality, on the other hand, embodies the attributes typically associated with ethical leaders, such as principled decision-making and altruistic motivations (e.g., Brown & Treviño, 2006). However, studies have indicated that the facet of morality, which includes attributes like fairness, honesty, and trustworthiness, is more closely associated with people's perception of a sensitive leader—one who is sympathetic, understanding, and caring—rather than being recognized as a distinct facet (Offermann & Coats, 2018). Consequently, we consider friendliness and morality in the broader dimension of communion.² Whereas these qualities are often perceived as less characteristic of typical leaders (e.g., Offermann & Coats, 2018), they are viewed as desirable and ideal in leaders (e.g., Schyns & Schilling, 2010; Vial & Napier, 2018).

In conclusion, the attributes that characterize typical and ideal leaders align well with the dimensions of competence, dominance, and communion (e.g., Johnson et al., 2008; Sy et al., 2010). The agentic dimensions of competence and dominance are characteristic of typical leaders, while competence and communion characterize ideal leaders. After delineating the expectations for typical and ideal leader roles, we now turn to the theorization of work-related age stereotypes toward young, middle-aged, and older adults. We employ the underlying framework of competence, dominance, and communion to speak to the idea that young individuals do not match typical and ideal leader role expectations, which forms the basis of our role incongruity hypothesis.

Occupational roles and (work-related) age stereotypes

Age stereotypes serve as cognitive categories used to evaluate others based on their age (e.g., Hummert, 1990). To understand age stereotypes in the dimensions of competence, dominance, and communion, we build on insights from social role theory (Eagly, 1987; Koenig & Eagly, 2014) and the stereotype content model (Fiske et al., 2002). Stereotypes regarding competence, dominance, and communion are likely to be linked to distinct stages of employment, which typically align with different age groups (Bedeian et al., 1991). These stages of employment carry specific expectations about the attitudes, values, and behaviors appropriate for each age group, thereby shaping the associated stereotype content (Koenig & Eagly, 2014). Consequently, we anticipate that age stereotypes for various age groups will correspond with these distinct employment stages.

We categorize young adults as those aged 25 to 39 years (representing the early-career stage), middle-aged adults as those aged 40 to 54 years (representing the mid-career stage), and older adults as those aged 55 to 69 years (representing the late-career stage; in line with DeArmond et al., 2006; Super, 1980). Young adults, typically associated with early-career roles (North, 2025), are often found in entry-level positions, service-related subordinate jobs, and roles involved with education or training (U.S. Bureau of Labor Statistics, 2021). Such roles include *servers*, *retail and sales associates*, and *food service workers* (Koenig & Eagly, 2014). In contrast, middle-aged adults are commonly seen in mid-career stage roles, and older adults in late-career stage roles (North, 2025). These age groups are often overrepresented in senior employee and management positions (U.S. Bureau of Labor Statistics, 2021). For instance, occupations such as *doctors*, *lawyers*, *researchers*, and *engineers* are usually associated with middle-aged and older adults (Koenig & Eagly, 2014; Reeves et al., 2021).

There are reasons to assume that age stereotypes associated with the

² In many cases, evaluating friendliness and morality as a unified dimension of communion might be sufficient. In specific contexts like self-efficacy assessments and life-satisfaction ratings, it becomes relevant to differentiate between the facets of friendliness and morality (e.g., Abele, 2022). However, as we noted in the context of leadership, these facets are seen as integral to communion.

occupational roles of the early-, mid-, and late-career stages differ in terms of competence, dominance, and communion. Whereas competence and communion might be associated more strongly with the mid- and late-career stages, dominance might be associated more with the early-career stage. As we argue, distinguishing age stereotypes by employment stage requires decomposing agency into a competence facet and a dominance facet. The subsequent task is to identify *which* specific age stereotypes can be derived from the characteristics tied to these typical occupational roles at different employment stages. Furthermore, *why* would these specific age stereotypes emerge from the characteristics associated with these typical occupational roles at different employment stages?

First, we argue that young adults are typically perceived as less *competent* due to the entry-level positions they commonly hold. These roles often involve fewer responsibilities, manual labor, and knowledge-receiving behavior (e.g., Burmeister et al., 2018; Reeves et al., 2021; Strinić et al., 2021). In contrast, middle-aged and older adults may frequently be perceived as more competent because they are typically seen in roles with greater responsibilities and required expertise, roles that require extensive training or education, and roles that involve knowledge-sharing behavior. Preliminary findings portraying young adults as inexperienced (Chasteen et al., 2002) and unseasoned (Francioli & North, 2021) support our reasoning.

Second, we suggest that the typical occupational roles of young adults are more likely to be associated with stereotypes of *dominance*, characterized by attributes such as self-direction, ambition, and motivation. Given that young adults are often in the early-career stage, which emphasizes self-development and career advancement (e.g., through exploring educational choices and work experiences; Arnett, 2000) rather than nurturing others, they might be perceived as more self-directed, competitive, and bold. As older adults move toward retirement (i.e., the late-career stage), they may be seen as less dominant, exhibiting attributes such as lower motivation and ambition, a stereotype that may not apply to middle-aged adults in their mid-career stage. Existing research supports these assumptions, portraying young adults as motivated, energetic, and ambitious (e.g., Francioli & North, 2021; Posthuma & Campion, 2009), while older adults are frequently seen as less dominant (e.g., Kite et al., 2005; Sng et al., 2020).

Finally, we suggest that the occupational roles typically held by young adults, which demand greater self-direction and entail fewer responsibilities, may lead to perceptions of lower *communion*. These roles do not require high cooperation, relationship-building, or interpersonal skills. In contrast, middle-aged adults, who are often observed in senior employee and management roles, may be associated with higher interpersonal skills compared to young adults. We further argue that people typically associate older adults with communal attributes such as consideration, warmth, and friendliness. This perception likely stems from the diminished need for competition, increased generativity, and altruistic or prosocial tendencies prevalent in the late-career stage (e.g., Zacher, Rosing, Henning et al., 2011). In line with these assumptions, preliminary evidence indicates that young adults are often perceived as less respectful, reliable, and trustworthy (e.g., de la Fuente-Nunez et al., 2021), while older adults are believed to exhibit greater warmth (e.g., Krings et al., 2011).

In conclusion, we posit that young adults will be perceived as less competent and communal than middle-aged and older adults, yet potentially more dominant. Middle-aged adults, conversely, will be perceived as more competent than young adults and more dominant but less communal than older adults. Finally, we predict that older adults will be perceived as more competent and communal than young adults, yet less dominant than young and middle-aged adults.

The incongruity of leader roles and age stereotypes

Combining the derived insights into leader roles and age stereotypes, we propose that young adults face a perceived incongruity with typical

and ideal leader roles due to three main aspects of these roles. First, and primarily, competence is characteristic of both typical and ideal leaders (Den Hartog et al., 1999; Offermann & Coats, 2018). Thus, the stereotype that young adults are less competent than middle-aged and older adults should contribute to the perceived leader role incongruity of young individuals. Second, dominance is characteristic of typical leaders but uncharacteristic of ideal leaders. Thus, although observers might view young adults as equally or more dominant than middle-aged or older adults, attributions of lack of competence should outweigh those of dominance in determining perceived incongruity with the leader role. Third, communion is associated with leaders, and particularly with the ideal leader. The perception of young adults as less communal could accentuate their perceived leader role incongruity, especially with the ideal leader role. In sum, for these reasons, people are likely to perceive young adults as less similar to typical and ideal leaders than middle-aged or older adults. Therefore, we hypothesize:

Hypothesis 1a/b. Leader role incongruity exists for young adults, such that age stereotypes of young adults are more incongruent with (a) typical and (b) ideal leader roles compared to age stereotypes of middle-aged or older adults.

The role of observer age in the perceived incongruity of young adults with leader roles

Having highlighted why young adults are often perceived as less typical and ideal leaders, we now consider which observers are most likely to hold these age-biased perceptions. According to the lifespan approach (Kornadt et al., 2020), people's views on aging, including the age stereotypes they hold, are by definition linked to their own aging and the age-related experiences they collect as they get older. Consequently, we investigate *observers' age* as a crucial contingency factor that may influence age bias toward young leaders. Specifically, we examine whether age bias against young leaders increases with observers' age, driven by more entrenched age stereotypes about young adults.

A lifespan approach to age stereotypes considers not only an individual's anticipation of their future but also their understanding of their present and past (Kornadt et al., 2020). In other words, the extent of an observer's stereotyping may depend on their exposure to and experience with the stereotyped group (e.g., Bordalo et al., 2016; Gorham, 1999; Sherman, 1996). Young adults' perceptions of aging and age stereotypes may be rooted in their early-career experiences, such as entering the workforce and, for example, paying taxes (North & Fiske, 2012). As they transition to mid-career, their application of an "age lens" is expected to intensify due to increased exposure to and accumulation of *age-related experiences* (Kornadt et al., 2020). During the mid-career stage, age-related experiences and fears may be heightened by the prospect of aging and transitioning to the late-career stage (e.g., Kornadt et al., 2016). Further, experiences in the mid- and late-career stages, such as shifts in family dynamics and aging markers (e.g., becoming an "empty nester," having aging parents, experiencing menopause; Kornadt et al., 2019), become more prevalent and difficult to ignore (Kornadt et al., 2020).

We argue that these age-based experiences throughout the lifespan not only influence but also intensify the use of an "age lens" by middle-aged and especially older observers compared to younger observers. This process likely fuels and reinforces middle-aged and older observers' age stereotypes about young adults. Specifically, middle-aged and older individuals may rely more heavily on stereotypical attributes of young adults in entry-level roles, forming stereotypes of lower competence and communion toward them. This may involve viewing young adults as less experienced, knowledgeable, and unreliable over time. Further, middle-aged and older observers might feel their tangible resources threatened by young adults (North & Fiske, 2012). This, in turn, could lead middle-aged and older adults to attribute stronger dominance stereotypes to young adults, perceiving them as more self-directed or even as entitled

and spoiled (e.g., Francioli & North, 2021). These stereotypes toward young adults should further amplify the incongruity that middle-aged and older adults perceive between young adults and typical and ideal leader roles. This leads us to hypothesize that:

Hypothesis 2a/b. The role incongruity of young adults with (a) typical and (b) ideal leader roles is greater among relatively older compared to younger observers.

Methods

We conducted an experimental study with two samples to test our role incongruity hypotheses. Using two separate samples allowed us to independently assess leader attribute ratings (Sample 1) and age stereotypes (Sample 2), ensuring that the beliefs about either typical/ideal leaders or age-specific attributes were not cross-contaminated by responding to questions about the respective other (this approach is further explained under “procedure and design”). Based on our original analysis plan (which was changed during the review process; the originally planned analyses are reported as robustness check), we determined the sample sizes a priori to ensure covariate balance and robust statistical power (Lonati et al., 2018). In Sample 1, we aimed to collect data from 100 participants per target condition (i.e., 200 participants in two conditions). For Sample 2, we aimed to collect data from 75 participants per Target x Rater group condition (i.e., 675 participants in nine conditions).

Participants

Using panel pre-selection through a third-party provider, we recruited 912 U.S. participants online via Amazon Mechanical Turk (Aguinis et al., 2021; Litman et al., 2017). Of these, 201 participants comprised Sample 1, and 711 participants comprised Sample 2. All participants met general eligibility criteria, including U.S. citizenship, ages 25 to 69, and employment of at least 26 h per week across various industries. Additionally, Sample 2 was stratified by age quotas to ensure a balanced age distribution representative of the U.S. workforce (U.S. Bureau of Labor Statistics, 2021). This stratification allowed us to test the moderating effect of rater age on age stereotypes, as specified in Hypotheses 2a and 2b.

To evaluate the statistical power following the revised analysis plan, we performed a sensitivity analysis to determine the minimum detectable effect size for a multiple regression model with nine predictors (Faul et al., 2009). With a total (combined) sample size of 912, a power level of 0.90, and an alpha level of 0.05, the analysis revealed that this model could detect an effect size as small as $f^2 = .02$. This indicates that the study is adequately powered to detect even small effects across all predictors in the model.

Participants were compensated based on an estimated average completion time at a rate of \$0.15 to \$0.20 per minute. All participants confirmed adequate English proficiency. To further ensure data quality, we required participants to have an approval rate of 95 % or higher on prior tasks (Gloor et al., 2020). Additionally, we screened for non-serious responses using a self-report item (Meade & Craig, 2012) that asked participants whether their data could be used for scientific purposes, with the clarification that their response would not impact payment. Thirteen participants (four from Sample 1 and nine from Sample 2) reported careless responses (Arthur et al., 2021); however, no participants were excluded from our analyses. By retaining all participants in our analyses, we minimized potential biases from selective exclusion and captured the natural variability in the sample; sensitivity analyses excluding inattentive participants produced similar results (see Online Supplements, section 2.2). Table 1 provides detailed demographic characteristics of both samples.

Table 1
Participant Demographics for Sample 1 and Sample 2.

Demographic	Sample 1: Leader Roles (N = 201)	Sample 2: Age Stereotypes (N = 711)
Conditions	Typical Leader (99) Ideal Leader (102)	Young Target (240) Middle-aged Target (235) Older Target (236)
Gender	38.3 % Women 61.7 % Men	50.9 % Women 48.4 % Men 0.6 % Other 0.1 % Not disclosed
Race	69.7 % European American 8.0 % African American 8.0 % Asian American 14.5 % Other	79.9 % European American 9.4 % African American 5.1 % Asian American 5.4 % Other 0.3 % Not disclosed
Age	38.71 years (SD = 9.47)	46.23 years (SD = 11.97)
Work Hours per Week	41.67 years (SD = 6.57)	40.95 years (SD = 5.94)
Tenure	6.83 years (SD = 5.22)	9.75 years (SD = 8.26)
Work Experience	16.06 years (SD = 11.08)	23.67 years (SD = 12.78)
Supervisory Roles	45.8 % Supervisors 54.2 % Non-supervisors	42.5 % Supervisors 57.5 % Non-supervisors
Education Level	74.1 % with bachelor's degree or higher	73.9 % with bachelor's degree or higher
Political Ideology	44.8 % Liberal 35.8 % Moderate 19.4 % Conservative	31.1 % Liberal 46.1 % Moderate 22.8 % Conservative

Note. Percentages may not add up to exactly 100% due to rounding. “Other” in Race includes participants who identified with racial groups not listed individually.

We acknowledge that Sample 1 comprises a somewhat politically liberal-leaning demographic, consistent with previous research on political ideology in crowdsourcing pools (e.g., Clifford et al., 2015; Levay et al., 2016). However, research indicates that leader role expectations remain relatively stable across demographic contexts (Junker & van Dick, 2014). Furthermore, if a potential mismatch between leader roles and young adults is observed in this liberal-leaning sample, it would provide a conservative test of our hypotheses. A more politically conservative sample might hold more traditional leader expectations, emphasizing competence and status, whereas a liberal-leaning sample may exhibit less bias against young leaders (e.g., Daldrop et al., 2023). Notably, Sample 2's characteristics closely mirror the U.S. population in terms of political orientation (e.g., Hawkins et al., 2019). We report findings related to the influence of political attitudes on age stereotypes in the Online Supplements, section 2.4.

Procedure and design

We employed a between-participant design using two separate samples to compare leader attributes with age stereotypes while avoiding cross-contamination. In Sample 1, participants were randomly assigned to rate how characteristic different attributes are of either a *typical* or an *ideal* leader. In Sample 2, a different group of participants rated the same leader attributes, but in relation to individuals from one of three target age groups: *young* (25–39 years), *middle-aged* (40–54 years), or *older* (55–69 years). By separating the two samples, we could measure whether the beliefs that participants have about attributes of typical and ideal leaders are similar to or different from the beliefs about attributes of members of the three age groups.

In all conditions, participants rated the same list of leader attributes; however, instructions varied by target condition. In the leader conditions, raters in the typical leader group were asked to consider *leaders in general*, whereas those in the ideal leader group were prompted to envision an *ideal leader*. In the age group conditions, participants were instructed to consider the respective age group of the target person (young, middle-aged, or older) as if they were meeting a person for the first time and only knew the person's age group (Schein, 1973; 1975; see

Online Supplements sections 1.1 and 1.2 for stimuli texts). Consistent with Offermann and Coats (2018), we did not provide definitions for our target groups (e.g., “ideal leader”). This study design has been effectively used in studies of incongruity between leader roles and stereotypes (e.g., Morgenroth et al., 2020; Ryan et al., 2011).

Measures

Leader attributes

To assess the incongruity between established leader roles and age stereotypes, participants in both samples rated target groups on 46 attributes drawn from the most recent leader attribute scales (Offermann & Coats, 2018). Using the same leader attribute measures across both samples allowed us to assess incongruity between ratings about leaders (Sample 1) with those about age groups (Sample 2). The scale encompasses a broad range of attributes organized into nine leadership dimensions: *sensitivity*, *dedication*, *tyranny*, *charisma*, *strength*, *creativity*, *well-groomed*, *masculinity*, and *intelligence*. To capture the dimension of integrity, which is not included in the original scale, we added three additional items (Den Hartog & De Hoogh, 2024; House et al., 1999).³

These ten dimensions reflect key aspects of leadership as conceptualized in agency–communion frameworks: *dominance* (strength, tyranny, masculinity) and *competence* (dedication, intelligence) capture agency-related traits, while sensitivity and integrity capture communion-related traits. In addition, charisma, creativity, and being well-groomed represent further leadership characteristics that do not map directly onto the agency–communion distinction. Participants indicated the extent to which each attribute was characteristic of the specified target on a 5-point scale (1 = *not characteristic*; 5 = *characteristic*). Attributes were presented in blocks, with the order of attributes within each block and the order of blocks randomized. The list of attributes is presented in Table 3.

Rater age (moderator)

Participants were asked to report their chronological age in years.

Control variables

Age group identification may account for differences in age-based stereotypical beliefs across rater ages, serving as an alternative explanatory factor (e.g., Finkelstein & Burke, 1998). To control for potential in-group bias, we thus included group identification as a variable in our analyses. Participants rated their identification with their respective target group using a four-item scale (Steffens et al., 2018). Responses were recorded on a 5-point Likert scale (1 = *completely disagree*; 5 = *completely agree*).

Further, gendered aspects might influence how age-related experiences affect age stereotypes (Kornadt et al., 2020). Therefore, we included rater gender as a control variable (*men*, *women*, *others*, *I prefer not to answer this question*) and recoded it as a dichotomous variable (*men* vs. *women*).

Additional measures (exploratory)

In our initial plan, we intended to use Intraclass Correlation Coefficients (ICCs; e.g., Koenig et al., 2011) to assess the degree of incongruity between leader roles and age stereotypes. Because ICCs treat the number of attributes as the sample size, we needed a large set of

³ Offermann and Coats (2018) did not identify integrity as a distinct dimension, as they collapsed ratings for typical and ideal leaders (originally labelled “leaders” and “effective leaders”) in their scale development into a single scale. While some ethical attributes (e.g., fairness, honesty) showed associations with *sensitivity* in their research, they were not formally categorized within it. Because our study distinguishes between typical and ideal leaders, we treated integrity as a separate dimension to capture its unique role in perceptions of ideal leaders (e.g., Ponce de Leon & Bailey, 2025).

attributes. To achieve this, we added 27 leader attributes from the GLOBE scale (House et al., 1999), three integrity items, and 42 items from an extended version of the Schein Descriptive Index (Schein, 1973, 1975), which is commonly used to examine gendered perceptions of leadership (Duehr & Bono, 2006). As we deviated from our initial plan, these additional items are not discussed further here, but all data are available on OSF (<https://osf.io/bc59v/>).

Further, given established links between political attitudes and age-based perceptions (Asbrock et al., 2010; Francioli et al., 2024), we explored whether political attitudes influence age stereotypes. Our supplemental analyses focus on right-wing authoritarianism (RWA) and social dominance orientation (SDO), as these well-validated measures specifically tap into hierarchical beliefs and leadership-related attitudes, which are theoretically relevant to age stereotypes. RWA and SDO were measured using established scales (i.e., Aichholzer & Zeglövits, 2015; Ho et al., 2015). Detailed information on the measurements and results is available in the Online Supplements, sections 1.3 and 2.4.

Manipulation check

To verify the effectiveness of the age manipulation in Sample 2, participants indicated the age they envisioned for “young,” “middle-aged,” or “older” adults (i.e., instructional manipulation check; Oppenheimer et al., 2009). This check was placed at the end of the survey, before the demographic questions, to minimize potential bias (Lonati et al., 2018). An ANOVA confirmed significant differences in perceived age across the three conditions: $F(2, 710) = 2366.76, p < .001$, with means of 28.66 ($SD = 4.55$) for the young target, 47.39 ($SD = 4.14$) for the middle-aged target, and 61.06 ($SD = 6.49$) for the older target.

Transparency and openness

Our study complies with ethical regulations and was approved by the University of Amsterdam’s Economics & Business Ethics Committee (protocol number: 20200526100524). In line with open science practices, our data, analysis code, and Online Supplements are publicly available on the Open Science Framework (<https://osf.io/bc59v/>). No participants were excluded from the analyses, and data collection was completed before any statistical analysis was conducted. Although we did not preregister our hypotheses or analysis plan, our initial strategy involved using Intraclass Correlation Coefficients (ICCs; e.g., Koenig et al., 2011) to test both our role incongruity hypotheses and the moderating effect of rater age. Informed by insights from the review process, we ultimately applied a regression-based approach separately to each of the ten leader attribute dimensions (e.g., intelligence, integrity). Compared to ICCs, this approach allows identifying which leader attribute dimensions drive role incongruity and enhances clarity by treating rater age as a continuous moderator (Lauritsen, 2023). To ensure the robustness of our findings, we also conducted the planned ICC analyses on the same 49 leader attributes used in the regression-based approach. All statistical analyses were conducted using IBM SPSS Statistics (Version 30), and visualizations were created using RStudio (Version 2024.12.0).

Results

We report our findings on the role incongruity hypothesis and the moderating effects of rater age in four steps: (1) descriptive statistics, (2) establishing typical and ideal leader ratings per dimensions as reference scores, (3) regression analyses, and (4) robustness checks using ICCs.

Descriptive statistics

Table 2 provides the means, standard deviations, and correlations for all variables, including demographic characteristics, leader roles, age groups, and perceived leader attributes.

Table 2
Descriptive Statistics and Correlation Matrix.

Variable	M	SD	π	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Rater Age	44.57	11.88	912																	
2. In-Group Identification	3.63	1.07	912	.08*	(.92)															
3. Rater Gender ^a	0.48	0.50	907	.22**	.13**															
4. Typical vs Ideal Leader ^b	0.51	0.50	201	.04	.09	.12														
5. Young Targets ^c	0.34	0.47	711	.02	-.02	.05	.d													
6. Middle-aged Targets ^c	0.33	0.47	711	.00	-.02	-.07	.d	-.50**												
7. Older Targets ^c	0.33	0.47	711	-.03	.04	.02	.d	-.50**	-.50**											
8. Intelligence	3.89	0.77	912	-.07*	.19**	.10**	.13	-.17**	.12**	.05	(.82)									
9. Dedication	3.82	0.80	912	-.11**	.15**	.02	.08	-.35**	.25**	.11**	.73**	(.91)								
10. Tyranny	2.97	0.80	912	-.14**	.10**	-.03	-.42**	.16**	-.02	-.15**	-.08*	-.07*	(.86)							
11. Strength	3.54	0.72	912	-.11**	.12**	.03	-.24**	-.30**	.19**	.11**	.48**	.64**	.44**	(.80)						
12. Masculinity	3.14	0.61	912	-.06	.11**	-.06	-.18*	.10**	.05	-.15**	.24**	.22**	.36**	.35**	(.70)					
13. Sensitivity	3.63	0.73	912	.00	.29**	.06	.43**	-.17**	.01	.16**	.53**	.53**	-.39**	.14**	.11**	(.90)				
14. Integrity	3.74	0.81	912	.00	.24**	.05	.44**	-.29**	.06	.24**	.61**	.66**	-.36**	.29**	.06	.74**	(.81)			
15. Well-groomed	3.66	0.80	912	-.03	.14**	.05	-.23**	-.10**	.10**	-.01	.45**	.48**	.14	.44**	.37**	.33**	.31**	(.81)		
16. Creativity	3.61	0.79	912	-.04	.24**	.04	.26**	.10**	-.01	-.10**	.67**	.70**	-.02	.47**	.29**	.57**	.57**	.44**	(.80)	
17. Charisma	3.66	0.70	912	-.12**	.19**	.00	.05	.16**	-.04	-.11**	.56**	.60**	-.13**	.46**	.28**	.42**	.42**	.46**	.73**	(.70)

Notes. Sample sizes vary as data were drawn from two distinct samples, with some variables from Sample 1, others from Sample 2, and some from the merged dataset. a Women coded as 1, men as 0. b Typical leader coded as 0, ideal leader as 1. c Target age groups coded as 1, with the other two groups coded as 0 (e.g., young adults = 1, middle-aged and older adults = 0). d Cannot be computed as these variables come from two separate samples. Cronbach's alpha reliability coefficients are reported on the diagonal.

* $p < .05$; ** $p < .01$.

Table 3
Means, Standard Deviations, and *t*-Test Results for Leader Attributes by Leader Role.

Dimension	Attributes	Typical Leader	Ideal Leader	<i>t</i> (199)	<i>p</i>
Perceived Competence	Intelligence	4.25 (0.72)	4.42 (0.62)	-1.78	.08
	Dedication	4.45 (0.62)	4.55 (0.56)	-1.16	.25
Perceived Dominance	Tyranny	3.56 (0.76)	2.78 (0.94)	6.45	<.001
	Strength	4.21 (0.62)	3.88 (0.72)	3.47	<.001
Perceived Communion	Masculinity	3.38 (0.72)	3.08 (0.91)	2.59	.01
	Sensitivity	3.41 (0.75)	4.06 (0.66)	-6.63	<.001
Integrity	Integrity	3.78 (0.84)	4.46 (0.64)	-7.00	<.001
	Other Dimensions	4.03 (0.73)	3.66 (0.81)	3.34	<.001
Well-groomed	Creativity	4.04 (0.66)	4.37 (0.55)	-3.85	<.001
	Charisma	4.16 (0.60)	4.23 (0.62)	-0.74	.46

Notes. $N = 201$. Independent-samples *t*-tests compare mean differences between typical and ideal leaders. Later regression analyses examine age group differences relative to these reference scores, accounting for covariates. Minor discrepancies between *t*-test and regression results reflect these adjustments.

Establishing reference scores for leader roles

Using ratings from Sample 1, we established reference scores for typical and ideal leaders across ten leader attribute dimensions (e.g., intelligence, tyranny, integrity). We performed independent-samples *t*-tests to compare ratings of typical versus ideal leaders for each dimension (see Table 3). Further, we grouped these dimensions into three overarching categories informed by agency-communion frameworks (e.g., Abele et al., 2021): competence (intelligence, dedication), dominance (strength, tyranny, masculinity), and communion (sensitivity, integrity).

Our results indicate that typical leaders received higher ratings on dominance-related attributes (i.e., tyranny, strength, and masculinity) and were perceived as more well-groomed, whereas ideal leaders were rated more highly on communion-related attributes (e.g., sensitivity and integrity) as well as on creativity. Our results did not reveal significant differences in competence-related attributes (intelligence, dedication) or charisma between typical and ideal leader ratings. These leader attribute ratings serve as fixed reference points for examining our role incongruity hypothesis in subsequent analyses. Specifically, we compared ratings of young, middle-aged, and older adults on the same ten leader dimensions to the fixed reference of typical and ideal leaders using a regression-based approach.

A regression-based approach to role incongruity for young adults with leader roles

Our overarching goal was to determine role incongruity by comparing ratings of a leader reference category (i.e., typical or ideal leader) with ratings of three target age groups (young, middle-aged, and older adults) using data from two sources ($N = 912$). Sample 1 rated leader roles ($n_{\text{typical}} = 99$, $n_{\text{ideal}} = 102$), while Sample 2 rated age groups ($N = 711$). Because both samples used identical measures, we merged them into a single dataset with a categorical variable for the five conditions (typical/ideal leaders, young/middle-aged/older adults). We created dummy variables to compare the three age groups with each leader reference category, coding the respective age group as 1 and the leader reference category as 0. As a result, we generated three age group–typical leader dummy variables and three age group–ideal leader dummy variables.

We ran two sets of hierarchical regression analyses, one focusing on the comparison to the typical leader (H1a/H2a) and one on the comparison to the ideal leader (H1b/H2b). For each set, we first entered control variables (i.e., age-group identification, rater gender, rater age), followed by three age group–leader dummy variables (Step 1) and their interaction terms with rater age (Step 2). Consequently, three age groups plus one leader reference category were included in each set, resulting in different sample sizes for the typical ($n = 805$, see Table 4) and ideal ($n = 808$, see Table 5) leader comparisons.⁴

In each regression analysis, the intercept represents the perceived mean rating for the respective leader reference (typical or ideal). Each unstandardized coefficient estimates the mean difference between an age-group rating and that leader reference and serves as a direct indicator of role incongruity. Specifically, negative coefficients suggest a perceived “lack-of-fit” and positive coefficients imply an “over-fit” (i.e., exceeding the perceived leader reference score). For instance, a coefficient of -0.75 for the “Young–Typical Leader” dummy on intelligence suggests that young adults are, on average, perceived as 0.75 points less intelligent than the typical leader (e.g., $M_{\text{Young}} = 3.50$ vs. $M_{\text{Typical}} = 4.25$).

To formally test Hypotheses 1a/b (i.e., whether young adults are

perceived as more incongruent with the typical or ideal leader than middle-aged or older adults), we conducted pairwise *z*-tests comparing the coefficients for the “Young–Typical/Ideal Leader” dummy variable with those for the “Middle-aged–Typical/Ideal Leader” and “Older–Typical/Ideal Leader” dummy variables (e.g., Cohen et al., 2003).⁵ Finally, to test Hypotheses 2a/b (i.e., whether the role incongruity of young adults with leader roles is stronger for relatively older compared to younger observers), we examined whether the interaction between the “Young–Typical/Ideal Leader” dummy variable and rater age was significant, indicating differential perceptions among younger versus older raters in young adults’ leader role incongruity.

Role incongruity for young adults with typical leaders

In general, the negative regression coefficients for the “Young–Typical Leader” dummy variable indicate that young adults were perceived as incongruent with the typical leader role on nine out of ten dimensions (i.e., all except sensitivity; see Table 4).

Comparison: young versus middle-aged adults. In line with Hypothesis 1a, direct comparisons between young and middle-aged adults further revealed that young adults were rated as more incongruent with typical leaders on five dimensions (intelligence: $z = -4.55$, $p < .001$; dedication: $z = -11.65$, $p < .001$; strength: $z = -7.96$, $p < .001$; integrity: $z = -6.52$, $p < .001$; well-groomed: $z = -3.21$, $p = .001$), but less incongruent on two dimensions (tyranny: $z = 2.96$, $p = .003$; charisma: $z = 3.06$, $p = .002$), with no significant differences on two other dimensions (masculinity: $z = 0.67$, $p = .50$; creativity: $z = 1.38$, $p = .17$).

Comparison: young versus older adults. Comparing ratings of young and older adults on role incongruity with a typical leader yielded mixed results. Young adults were perceived as more incongruent on four dimensions (intelligence: $z = -2.96$, $p = .003$; dedication: $z = -8.43$, $p < .001$; strength: $z = -6.37$, $p < .001$; integrity: $z = -9.25$, $p < .001$), but less incongruent on four other dimensions (tyranny: $z = 5.03$, $p < .001$; masculinity: $z = 3.55$, $p < .001$; charisma: $z = 4.71$, $p < .001$; creativity: $z = 3.44$, $p < .001$). No significant difference emerged for being well-groomed ($z = -1.21$, $p = .23$).

Overall, this pattern indicates support for our role incongruity hypothesis of young adults with the typical leader when compared with middle-aged adults (H1a), whereas the young–older comparison yielded mixed results as older adults were more distant to the typical leader reference as well. Fig. 2 presents a forest plot of the unstandardized regression coefficients, illustrating how each age group’s ratings differ from the typical leader reference across the dimensions.

Role incongruity for young adults with ideal leaders

When examining role incongruity with an ideal leader, our regression analyses indicated that young adults were perceived as incongruent on eight of the ten leadership dimensions (except for masculinity and being well-groomed; see Table 5).

Comparison: young versus middle-aged adults. In line with Hypothesis 1b, direct comparisons between young and middle-aged adults showed that young adults were rated as more incongruent with the ideal leader on six of the eight focal dimensions—intelligence ($z = -4.87$, $p < .001$), dedication ($z = -7.92$, $p < .001$), strength ($z = -7.94$, $p < .001$), sensitivity ($z = -3.69$, $p < .001$), integrity ($z = -5.99$, $p < .001$), and tyranny ($z = 2.45$, $p = .014$; higher tyranny scores indicate greater deviation from the ideal leader). In contrast, young adults were rated as less incongruent with the ideal leader on charisma compared to middle-aged adults ($z = 3.26$, $p = .001$), whereas no significant differences

⁵ To test whether two regression coefficients (b_1 and b_2) estimated within the same model differ significantly, we calculate a *z*-value as $z = \frac{b_1 - b_2}{\sqrt{SE(b_1)^2 + SE(b_2)^2 - 2 \text{Cov}(b_1, b_2)}}$ where $SE(b_1)$ and $SE(b_2)$ are the standard errors of the coefficients and $\text{Cov}(b_1, b_2)$ is the covariance between them.

⁴ Five participants who identified as “other” or did not specify their gender were excluded from regression analyses that included rater gender as a control variable, due to the small size of this group.

Table 4
Regression Analyses Comparing Age Group Ratings to Typical Leader Ratings as Indicators of Role Incongruity.

Variable	Perceived Competence		Perceived Dominance		
	Intelligence	Dedication	Tyranny	Strength	Masculinity
Constant (Typical Leader Rating)	4.25** (.08)	4.47** (.07)	3.52** (.08)	4.20** (.07)	3.42** (.06)
Rater Age (centered)	0.00 (.00)	0.00 (.00)	-0.01** (.00)	0.00 (.00)	0.00 (.00)
Group Identification (centered)	0.17** (.02)	0.17** (.02)	0.01 (.03)	0.10** (.02)	0.08** (.02)
Rater Gender (women = 1)	0.18** (.05)	0.11* (.05)	0.01 (.05)	0.11* (.05)	-0.06 (.04)
Young-Typical Leader (H1a)	-0.75** (.09)	-1.28** (.08)	-0.41** (.09)	-1.14** (.08)	-0.19** (.07)
Middle-aged-Typical Leader	-0.43** (.09)	-0.63** (.08)	-0.61** (.09)	-0.67** (.08)	-0.23** (.07)
Older-Typical Leader	-0.54** (.09)	-0.81** (.08)	-0.75** (.09)	-0.76** (.08)	-0.39** (.07)
R ²	.146**	.289**	.114**	.245**	.068**
Young-Typical Leader × Rater Age (H2a)	-0.02* (.01)	-0.03** (.01)	0.02* (.01)	-0.01 (.01)	0.01* (.01)
Middle-aged-Typical Leader × Rater Age	-0.01 (.01)	-0.01 (.01)	-0.003 (.01)	-0.01 (.01)	0.01 (.01)
Older-Typical Leader × Rater Age	-0.01 (.01)	-0.01 (.01)	-0.01 (.01)	-0.01 (.01)	0.01 (.01)
R ²	.153**	.311**	.139**	.248**	.074**

Variable	Perceived Communion		Other Dimensions		
	Sensitivity	Integrity	Well-groomed	Creativity	Charisma
Constant (Typical Leader Rating)	3.46** (.07)	3.75** (.08)	4.04** (.08)	4.11** (.07)	4.19** (.06)
Rater Age (centered)	0.00 (.00)	0.00 (.00)	0.00 (.00)	0.00 (.00)	0.00 (.00)
Group Identification (centered)	0.21** (.02)	0.21** (.02)	0.14** (.03)	0.23** (.02)	0.17** (.02)
Rater Gender (women = 1)	0.06 (.05)	0.08 (.05)	0.06 (.06)	0.08 (.05)	0.06 (.04)
Young-Typical Leader (H1a)	-0.08 (.08)	-0.48** (.09)	-0.58** (.09)	-0.62** (.09)	-0.59** (.07)
Middle-aged-Typical Leader	0.12 (.08)	-0.08 (.09)	-0.34** (.09)	-0.71** (.09)	-0.75** (.07)
Older-Typical Leader	0.24** (.08)	0.09 (.09)	-0.49** (.09)	-0.85** (.08)	-0.84** (.07)
R ²	.144**	.175**	.078**	.188**	.203**
Young-Typical Leader × Rater Age (H2a)	-0.01 (.01)	-0.03** (.01)	-0.02* (.01)	-0.02** (.01)	-0.02* (.01)
Middle-aged-Typical Leader × Rater Age	0.01 (.01)	-0.01 (.01)	-0.01 (.01)	0.00 (.01)	0.00 (.01)
Older-Typical Leader × Rater Age	0.02* (.01)	-0.01 (.01)	-0.01 (.01)	-0.00 (.01)	-0.00 (.01)
R ²	.173**	.190**	.083**	.212**	.216**

Notes. N = 805. Unstandardized coefficients are displayed with standard errors in parentheses. Coefficients for the constant, rater age, group identification, rater gender, and leader-age group dummies are reported from the step in which these variables were included for the first time (main effect-model; see Aiken & West, 1991). Interaction terms are reported from the final step of the regression analysis where interaction terms were added. Extended stepwise regression models are available in the Online Supplements (see section 2.1, Tables S1-S10). *p < .05, **p < .01.

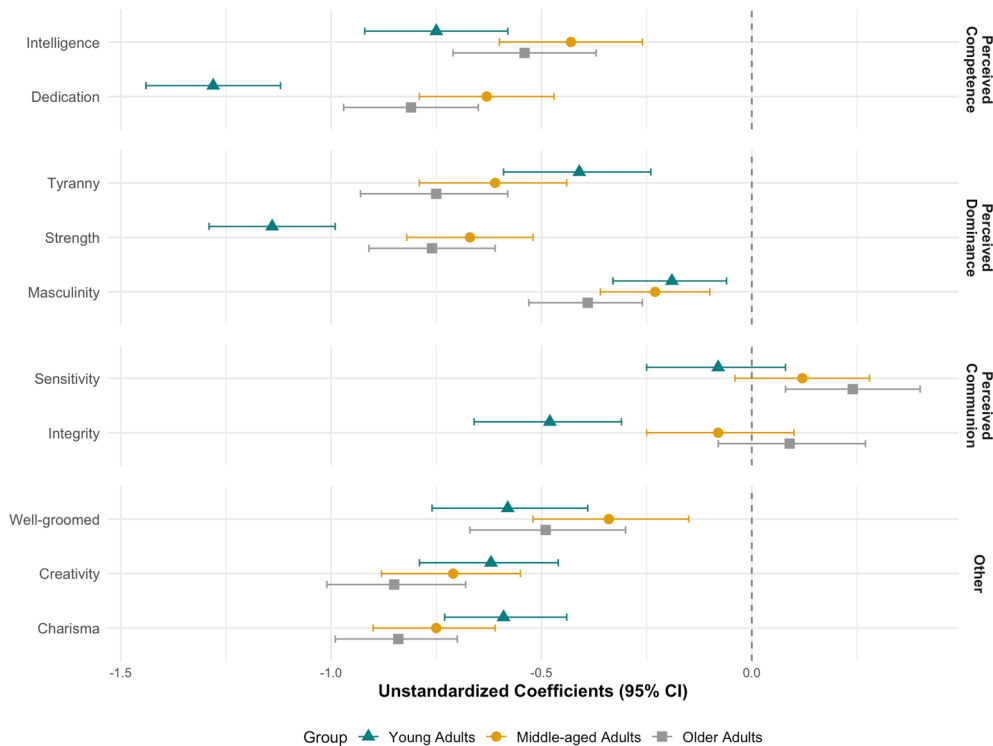


Fig. 2. Forest Plot of Mean Differences from the Typical Leader Rating across Leadership Dimensions.

Notes. Unstandardized regression coefficients, as direct indicators of role incongruity, and 95% confidence intervals are presented for each age group, indicating deviations from the typical leader (represented by the zero line).

emerged for creativity ($z = 1.55, p = .12$).

Comparison: young versus older adults. Direct comparisons between young and older adults indicated that young adults were perceived as more incongruent with the ideal leader on the same six dimensions—intelligence ($z = -3.25, p = .001$), dedication ($z = -5.80, p < .001$), strength ($z = -6.44, p < .001$), tyranny ($z = 4.26, p < .001$), sensitivity ($z = -5.93, p < .001$), and integrity ($z = -8.86, p < .001$). In contrast, young adults were viewed as less incongruent with the ideal leader on creativity ($z = 3.82, p < .001$) and charisma ($z = 4.98, p < .001$) compared to older adults.

Overall, these findings support Hypothesis 1b, showing that young adults are perceived as more incongruent with the ideal leader role compared to both middle-aged and older adults on most leadership dimensions. These dimensions include competence (intelligence, dedication), communion (sensitivity, integrity), and dominance-related attributes (strength, tyranny). Besides, the results also reveal certain attributes where young adults are perceived as less incongruent with the ideal leader compared to middle-aged (i.e., charisma) and older adults (i.e., creativity, charisma). Fig. 3 presents a forest plot illustrating how each age group's ratings differ from the ideal leader reference.

The role of the observer in perceived incongruity of young adults with leader roles

To test Hypothesis 2a, which posits that older raters perceive young adults as more incongruent with typical leader roles than younger raters, we examined the interaction between the “Young–Typical Leader” dummy variable and rater age (see Table 4). Across the six dimensions intelligence ($b = -0.02, p = .015$), dedication ($b = -0.03, p < .001$), integrity ($b = -0.03, p = .003$), well groomed ($b = -0.02, p = .047$), creativity ($b = -0.02, p = .004$), and charisma ($b = -0.02, p = .038$), the interaction terms were negative as expected. In contrast, the interaction term for tyranny ($b = 0.02, p = .035$) was positive, consistent with the negative valence of tyranny. Fig. 4 presents simple slopes for four exemplar key dimensions: intelligence, dedication, integrity, and tyranny (additional attributes are presented in the Online Supplements, section 2.3).

Conditional effects analysis showed that for intelligence, relatively older raters (+1 *SD*) perceived young adults as incongruent with the typical leader ($b = -1.08, SE = 0.17, p < .001$), with a weaker effect among relatively younger raters (−1 *SD*; $b = -0.60, SE = 0.11, p < .001$). A similar pattern emerged for dedication, where older raters rated young adults as incongruent with the typical leader ($b = -1.77, SE = 0.15, p < .001$), with a smaller effect among younger raters ($b = -1.01, SE = 0.10, p < .001$). For integrity, relatively older raters perceived young adults as incongruent with the typical leader ($b = -0.86, SE = 0.17, p < .001$), while the effect was weaker among younger raters ($b = -0.26, SE = 0.11, p = .017$). For tyranny, the effect was not significant for older raters, ($b = -0.20, SE = 0.17, p = .244$). In contrast, younger raters perceived young adults as more incongruent with the typical leader ($b = -0.42, SE = 0.10, p < .001$).

Overall, these findings support Hypothesis 2a, showing that relatively older raters perceived young adults as more incongruent with the typical leader role than younger raters, particularly in terms of competence (i.e., intelligence, dedication) and communion (integrity), with the exception of tyranny. Notably, rater age did not moderate the comparisons of middle aged or older adults to the typical leader role in any dimension, except for sensitivity among older targets. Here, the interaction revealed differences in how older and younger raters evaluated older adults relative to the typical leader role ($b = 0.02, p = .043$), such that older raters perceived older adults as incongruent relative to the typical leader ($b = 0.46, SE = 0.16, p = .003$), whereas the effect for younger raters was nonsignificant ($b = 0.09, SE = 0.10, p = .358$).

To test Hypothesis 2b, which posits that older raters perceive young adults as more incongruent with the ideal leader than do younger raters, we examined the interaction between the “Young–Ideal Leader” dummy variable and rater age (see Table 5). For most dimensions, the

interaction effects were nonsignificant, indicating that rater age did not consistently moderate perceptions of young adults' incongruity with the ideal leader. However, significant interactions emerged for tyranny ($b = 0.022, p = .014$) and sensitivity ($b = -0.023, p = .005$), suggesting that older raters view young adults as more incongruent with the ideal leader on these dimensions than younger raters. These results provide partial support for Hypothesis 2b. Fig. 5 presents the simple slopes for these interactions, illustrating how perceived incongruity varies as a function of rater age.

Conditional effects analysis showed that for tyranny, older raters (+1 *SD*) perceived young adults as more tyrannical relative to the ideal leader ($b = 0.65, SE = 0.18, p < .001$), whereas the effect was nonsignificant among younger raters (−1 *SD*; $b = 0.12, SE = 0.11, p = .308$). For sensitivity, older raters perceived young adults as less sensitive relative to the ideal leader ($b = -0.98, SE = 0.16, p < .001$) compared with a smaller effect among younger raters ($b = -0.44, SE = 0.10, p < .001$).

Robustness check: role incongruity for young adults with leader roles

To check the robustness of our regression findings, we conducted additional analyses using Intraclass Correlation Coefficients (ICCs). ICCs are a widely employed reliability index for test–retest, intra-rater, and inter-rater assessments (LeBreton & Senter, 2008) and have been used previously in research on incongruity between gender or racial stereotypes and leader roles (e.g., see Koenig et al., 2011, for a description of the use of these statistics). Here, ICCs were used as an indicator of the role incongruity of the ratings of the various groups (e.g., manager, women/men, Black/White) with a high ICC reflecting congruity and a low ICC reflecting incongruity (e.g., Paluch & Shum, 2024; Ryan et al., 2011).

We adopted this approach and calculated ICCs for each leader and age-group comparison using the 49 leadership attributes examined in our regression analyses. In this approach, each attribute (rather than each participant) is treated as the unit of analysis. Specifically, we merged and restructured data from Sample 1 and Sample 2 so that each of the 49 attributes became a single case (row), and the mean ratings for each target group (e.g., typical leaders, young adults) were treated as separate variables (columns). Consequently, the sample size in our ICC analyses was the number of attributes ($n = 49$). For our robustness check, we performed this attribute-level approach rather than aggregating attributes into ten leader attribute dimensions as in our regression-based approach to ensure sufficient statistical power for detecting differences in ICCs. The restructured dataset, including mean ratings for each age group, both overall and by rater age groups, is available on OSF (<https://osf.io/bc59v/>).

We employed a two-way, single-rater, mixed-effects model (absolute agreement; see Koenig et al., 2011) to assess the extent to which each age group's ratings aligned with the typical or ideal leader reference category (see Table 6). ICCs range from −1 to 1, with values closer to 1 indicating higher congruity and lower values indicating higher incongruity. The ICCs of leader roles and group stereotypes can be tested against each other using Fisher's z -transformation (e.g., Ryan et al., 2011).

Role incongruity for young adults with typical/ideal leaders

In support of Hypothesis 1a, the ICC for young adults and the typical leader (ICC = .17) was significantly lower than that for middle-aged adults (ICC = .58; $z = -2.32, p = .02$), but did not differ significantly from that for older adults (ICC = .42; $z = -1.32, p = .19$), indicating that young adults are perceived as more incongruent with the typical leader compared to middle-aged adults. In support of Hypothesis 1b, the ICC for young adults and the ideal leader (ICC = .36) was significantly lower than that for both middle-aged adults (ICC = .72; $z = -2.56, p = .01$) and older adults (ICC = .72; $z = -2.52, p = .01$), supporting the conclusion that young adults are perceived as more incongruent with the ideal leader.

Table 5
Regression Analyses Comparing Age Group Ratings to Ideal Leader Ratings as Indicators of Role Incongruity.

Variable	Perceived Competence		Perceived Dominance		
	Intelligence	Dedication	Tyranny	Strength	Masculinity
Constant (Ideal Leader Rating)	4.35** (.08)	4.52** (.07)	2.75** (.08)	3.84** (.07)	3.11** (.06)
Rater Age (centered)	0.00 (.00)	-0.002 (.00)	-0.01** (.00)	-0.002 (0.00)	-0.002 (0.00)
Group Identification (centered)	0.15** (.02)	0.17** (.02)	0.06* (.03)	0.14** (.02)	0.10** (.02)
Rater Gender (women = 1)	0.18** (.05)	0.10* (.05)	-0.006 (.06)	0.10* (0.05)	-0.07 (0.04)
Young-Ideal Leader (H1b)	-0.85** (.09)	-1.32** (.08)	0.36** (.09)	-0.77** (0.08)	0.12 (0.07)
Middle-aged-Ideal Leader	-0.52** (.09)	-0.67** (.08)	0.16 (.09)	-0.30** (0.08)	0.08 (0.07)
Older-Ideal Leader	-0.64** (.09)	-0.85** (.08)	0.02 (.09)	-0.39** (0.08)	-0.09 (0.07)
R ²	.168**	.319**	.051**	.179**	.048**
Young-Ideal Leader × Rater Age (H2b)	0.001 (.01)	-0.014 (.01)	0.022** (.01)	0.006 (0.01)	0.01 (0.01)
Middle-aged-Ideal Leader × Rater Age	0.007 (.01)	0.003 (.01)	0.001 (.01)	0.001 (0.01)	0.01 (0.01)
Older-Ideal Leader × Rater Age	0.010 (.01)	0.004 (.01)	-0.002 (.01)	0.003 (0.01)	0.01 (0.01)
R ²	.171**	.334**	.077**	.180**	.053

Variable	Perceived Communion		Other Dimensions		
	Sensitivity	Integrity	Well-groomed	Creativity	Charisma
Constant (Ideal Leader Rating)	4.07** (.07)	4.43** (.08)	3.62** (.08)	4.37** (.07)	4.22** (.06)
Rater Age (centered)	0.001 (.00)	0.002 (.00)	-0.003 (.00)	0.002 (.00)	-0.002 (.00)
Group Identification (centered)	0.16** (.02)	0.16** (.03)	0.14** (.03)	0.21** (.02)	0.18** (.02)
Rater Gender (women = 1)	0.06 (.05)	0.06 (.05)	0.11 (.06)	0.07 (.05)	0.03 (.04)
Young-Ideal Leader (H1b)	-0.69** (.08)	-1.14** (.09)	-0.18 (.09)	-0.88** (.08)	-0.60** (.07)
Middle-aged-Ideal Leader (H1b)	-0.48** (.08)	-0.74** (.09)	0.07 (.09)	-0.97** (.08)	-0.77** (.07)
Older-Ideal Leader (H1b)	-0.36** (.08)	-0.56** (.09)	-0.09 (.09)	-1.10** (.08)	-0.86** (.07)
R ²	.138**	.228**	.054**	.250**	.219**
Young-Ideal Leader × Rater Age (H2b)	-0.023** (.01)	-0.01 (.01)	-0.01 (.01)	-0.01 (.01)	-0.01 (.01)
Middle-aged-Ideal Leader × Rater Age	-0.001 (.01)	0.004 (.01)	-0.01 (.01)	0.01 (.01)	0.01 (.01)
Older-Ideal Leader × Rater Age	0.001 (.01)	0.005 (.01)	-0.01 (.01)	0.01 (.01)	0.00 (.01)
R ²	.168**	.239**	.057**	.272**	.231**

Notes. N = 808. Unstandardized coefficients are displayed with standard errors in parentheses. Coefficients for the constant, rater age, group identification, rater gender, and leader-age group dummies are reported from the step in which these variables were included for the first time (main effect-model; see Aiken & West, 1991). Interaction terms are reported from the final step of the regression analysis, where interaction terms were added. Extended stepwise regression models are available in the Online Supplements (see section 2.1, Tables S11–S20). *p < .05, **p < .01.

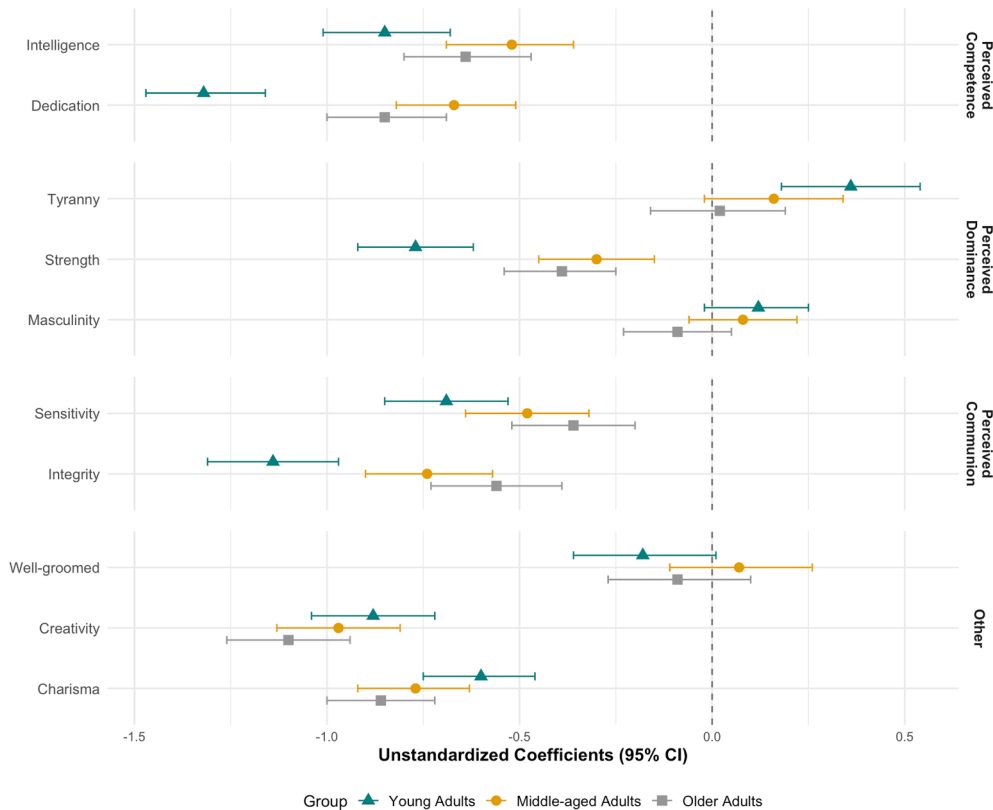


Fig. 3. Forest Plot of Mean Differences from the Ideal Leader Rating across Leadership Dimensions.

Notes. Unstandardized regression coefficients, as direct indicators of role incongruity, and 95% confidence intervals are presented for each age group, indicating deviations from the ideal leader (represented by the zero line).

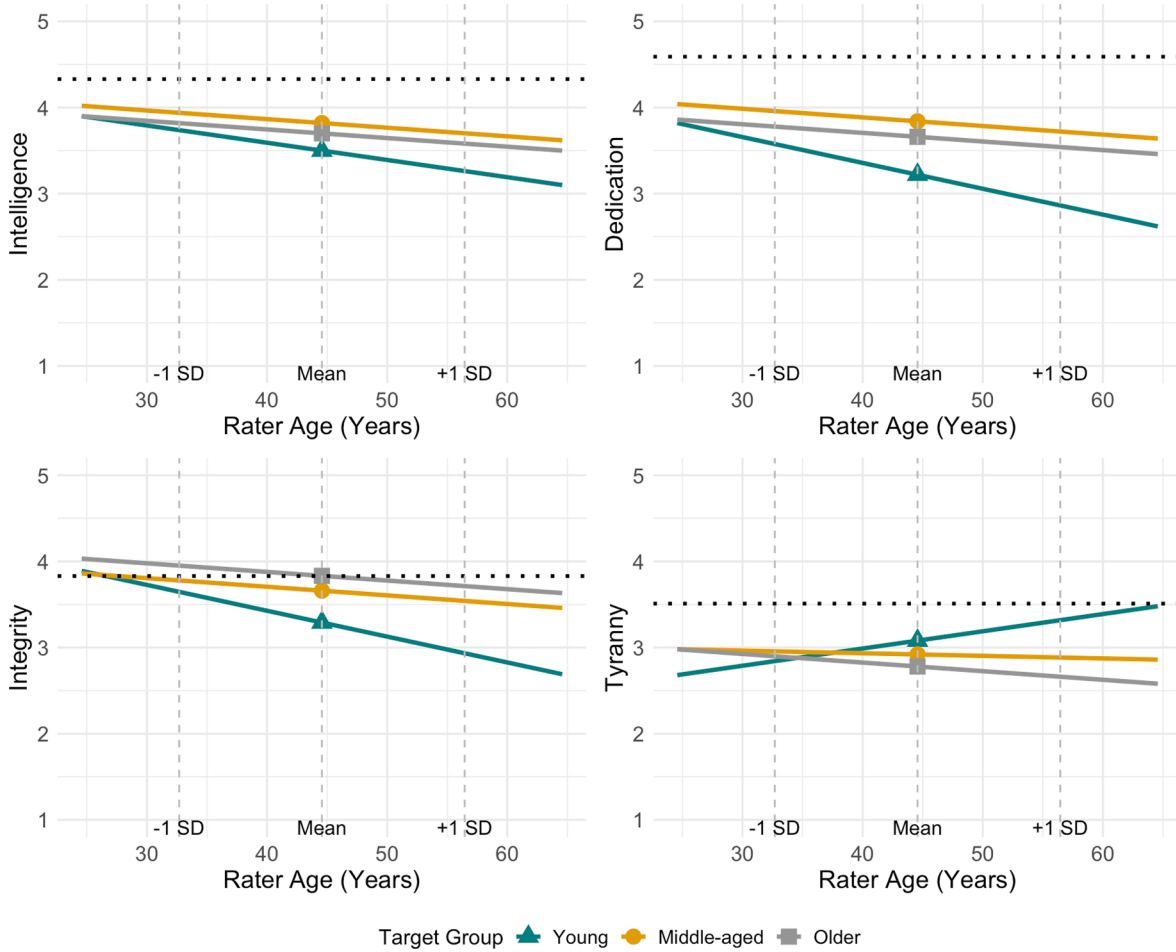


Fig. 4. Simple Slopes of Age Group Comparisons to Typical Leaders as a Function of Rater Age. Notes. Coefficients, as direct indicators of role incongruity, are reported as a function of rater age. Dotted lines represent the typical leader rating.

The role of the observer in incongruity of young adults with leader roles

Lastly, to evaluate H2a and H2b—whether young adults’ leader-role incongruity is amplified among older observers—we employed Fisher’s *z*-transformations to compare ICCs across rater-age groups. For this analysis, rater age was classified into four groups: 20/30s (ages 25–39), 40s (ages 40–49), 50s (ages 50–59), and 60s (ages 60–69).

For the young adults–typical leader comparison (H2a), ICCs did not differ across rater-age comparisons (e.g., 20/30s vs. 40s: $z = 0.86, p = .39$; 20/30s vs. 50s: $z = 0.71, p = .48$; 20/30s vs. 60s: $z = 0.71, p = .48$). In contrast, for the young adults–ideal leader comparison (H2b), the ICC among raters in their 20/30s ($ICC = .56$) was higher than that among raters in their 60s ($ICC = -.12; z = 3.58, p < .001$). ICCs did not differ for raters in their 20/30s and those in their 40s or 50s (20/30s vs. 40s: $z = 1.15, p = .25$; 20/30s vs. 50s: $z = 1.30, p = .19$). These results provide support for H2b, but only regarding older observers’ more pronounced perceptions of young adults’ incongruity with ideal leader roles.

Overall, the ICC-based analyses largely replicated our regression findings. In support of Hypothesis 1a, the ICC for young adults and the typical leader was significantly lower than for middle-aged adults, indicating stronger role incongruity for young adults, whereas the difference between typical leader ICCs for young and older adults remained nonsignificant, mirroring the mixed results observed in the regression analyses for that comparison. Consistent with our regression-based approach, the ICC for young adults and the ideal leader was significantly lower than that for both middle-aged and older adults, supporting Hypothesis 1b. Regarding the moderation by rater age in Hypothesis H2a/b, the ICCs for the typical leader comparison (H2a) did not show significant differences across rater-age groups—diverging from the

regression results, which showed a clear moderation effect. In contrast, for the ideal leader (H2b), older raters perceived young adults as more incongruent than did younger raters, aligning partially with the regression-based findings for H2b. Specifically, in H2b, rater age moderated perceptions of tyranny and sensitivity, with older raters viewing young adults as more tyrannical and less sensitive than the ideal leader.

Discussion

While age bias against young leaders has been recognized in prior research (e.g., Buengeler et al., 2016; Kunze & Menges, 2016), our study extends the literature by identifying *role incongruity* with leader role expectations as an underlying mechanism and highlighting the *observer’s age* as an important moderating factor. First, consistent with Hypothesis 1a and 1b, our findings demonstrate that young adults are perceived as more incongruent with both *typical* and *ideal* leader roles than middle-aged adults, and (in most comparisons) also more incongruent than older adults. This incongruity is especially pronounced for competence-related attributes (e.g., intelligence, dedication) and communion-related attributes (e.g., sensitivity, integrity), suggesting that perceptions of young adults’ “lack” in these critical dimensions may, at least in part, underlie age-based leadership biases.

Second, our regression-based findings indicate that relatively older observers tend to view young adults as more incongruent with leader roles than younger observers, particularly for typical leader roles (H2a). This greater incongruity was most evident in competence-related attributes (e.g., intelligence, dedication) and communion-related attributes

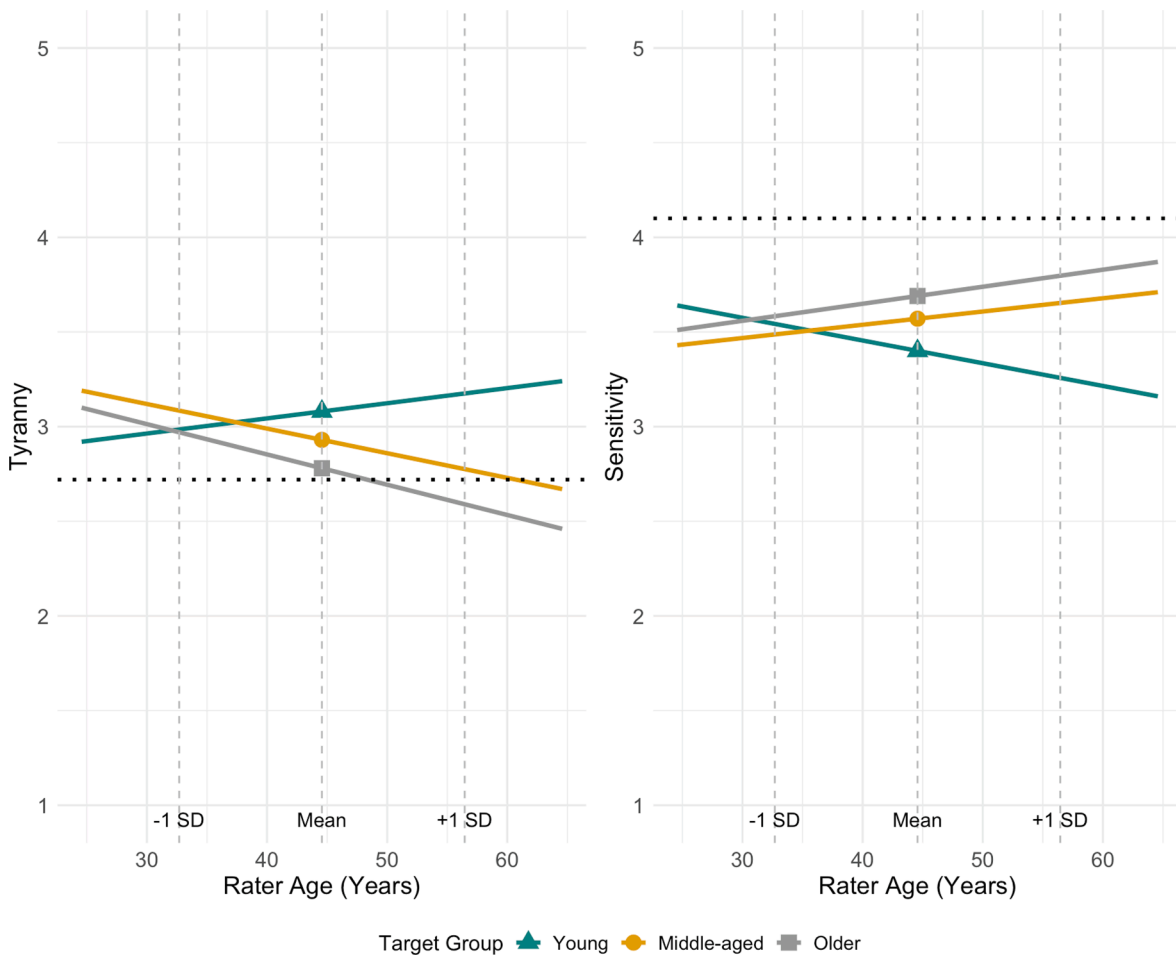


Fig. 5. Simple Slopes of Age Group Comparisons to Ideal Leaders as a Function of Rater Age.
Notes. Coefficients, as direct indicators of role incongruity, are reported as a function of rater age. Dotted lines represent the ideal leader rating.

(e.g., sensitivity, integrity), underscoring the role of rater age as a key contextual factor in age stereotypes. Although the effect was less pronounced for ideal leader roles, older raters still perceived young adults as lacking more in sensitivity and exhibiting higher levels of tyranny.

Finally, our Intraclass Correlation Coefficients (ICC) results largely converged with the regression findings, showing that young adults are perceived as more incongruent with leader roles than middle-aged adults and, for ideal leaders, also more incongruent than older adults (H1a/b). However, the ICC approach yielded a less clear effect of rater age moderation, detecting a rater-age difference only when comparing the youngest (20/30s) to the oldest (60s) raters in the ideal leader condition. These discrepancies likely stem from methodological

differences in how each approach aggregates and weights leadership attributes. Specifically, the ICC analyses rely on a full set of 49 individual items, allowing dimensions with more items (e.g., sensitivity, tyranny; see Table 3) to carry greater weight than in the regression approach, which treats each attribute dimension as equally important. Consequently, the observed effect of rater age on the ideal leader comparison in the ICCs may be particularly driven by these two dimensions (see Table 5). Further, categorizing rater age into groups (i.e., 20/30s, 40s, 50s, 60s) rather than a continuous measure of rater age can obscure subtler variations captured by continuous measures. Despite these differences, both methods converge on the central conclusion that young adults are generally perceived as less “leader-like” than middle-aged and older adults, reinforcing the overarching patterns of age-based role incongruity identified in this study. In the following, we discuss the theoretical and practical implications of our findings for leadership evaluations and organizational practices.

Table 6
 Intraclass Correlation Coefficients between Ratings of Typical or Ideal Leaders (Sample 1) with Ratings of Target Age Groups (Sample 2).

Comparison	Overall (H1a/b)	Rater Age Group (H2a/b)			
		20/30s	40s	50s	60s
Young Adults vs. Typical Leader	.17	.28	.10	.13	.13
Middle-aged Adults vs. Typical Leader	.58	.53	.53	.55	.63
Older Adults vs. Typical Leader	.42	.46	.35	.40	.42
Young Adults vs. Ideal Leader	.36	.56	.36	.32	-.12
Middle-aged Adults vs. Ideal Leader	.72	.43	.80	.83	.77
Older Adults vs. Ideal Leader	.72	.61	.75	.75	.82

Note. $N = 49$ (attributes). Rater age groups were categorized as follows: 20/30s (ages 25–39), 40s (ages 40–49), 50s (ages 50–59), and 60s (ages 60–69).

Theoretical implications

The first main contribution of our work is its extension of the literature on leader roles (i.e., implicit leadership theories; Lord et al., 2020; Lord et al., 1984) and role congruity theory (del Carmen Triana et al., 2023; Eagly & Karau, 2002). Building upon classic work on leader roles and gender stereotypes (Eagly & Karau, 2002; Koenig et al., 2011), we expand on role congruity theory to age groups. With our role incongruity hypothesis, we identify *why* people perceive young adults as less typical and less ideal leaders. Typical and ideal leaders are expected to be highly competent. In addition, typical leaders are often expected to be

relatively dominant, whereas ideal leaders are expected to be communal. We find that young adults are perceived as neither competent (e.g., educated, informed) nor communal (e.g., caring, trustworthy), which creates incongruity with the ideal leader role. Although young adults are seen, at least partly, as dominant (e.g., demanding, pushy) and creative (e.g., innovative, creative), their perceived lack of competence diminishes their congruity with both typical and ideal leader roles.

Second, our study advances research on stereotype content and structure by addressing complexities within stereotype dimensions (e.g., Abele, 2022; Ma et al., 2022; Rosette et al., 2016). Specifically, contributing to the ongoing discourse on agency, our findings support a multidimensional perspective on agency rather than treating it as a unidimensional construct. While the two-dimensional model of stereotype content (agency and communion) provides a useful framework, it oversimplifies the nuanced stereotypes attributed to different age groups in the workplace. We propose and demonstrate that decomposing agency into competence and dominance is crucial to understanding how different age groups face leader role incongruity. Our findings reveal a distinct divide in competence stereotypes. Young adults receive lower ratings on intelligence and dedication, whereas both middle-aged and older adults are rated higher on these attributes. This suggests that competence is not attributed to individuals until they reach a certain career stage. Interestingly, dominance stereotypes are less clear-cut across age groups, with young adults being rated slightly higher in tyranny yet lower in strength than middle-aged and older adults. These results contrast with gender stereotypes, where dominance plays a more pronounced role (with men perceived as more dominant than women) than competence (where women hold a slight advantage nowadays; Eagly et al., 2020). Our findings on age stereotypes highlight the equivalence of age and gender stereotypes and the need to account for them in research on leadership perception.

Our third main contribution is to extend theorizing on age stereotype content. With our theoretical rationale linking different employment stages to age stereotypes, we offer a new perspective on social role theory (Eagly, 1987; Eagly & Wood, 2012) from an age lens. Specifically, we challenge existing theoretical insights by demonstrating how age stereotypes are derived from the typical occupational roles of young, middle-aged, and older adults. For example, the emphasis of past research on a social role distinction of age groups (i.e., employee vs. non-employee roles; Kite et al., 2005) tends to oversimplify stereotypes about age groups found in the workforce. Our approach focuses on the typical occupational roles of age groups at different employment stages. As we illustrate, early-career (i.e., young adults), mid-career (i.e., middle-aged adults), and late-career (i.e., older adults) occupational roles are associated with attributes that shape stereotypes about different age groups.

The present work further contributes to theoretical perspectives suggesting that age stereotypes rely on contextual factors (e.g., Kite et al., 2005; Kornadt & Rothermund, 2011). Incorporating the observer's age as a contextual factor, we argued that observers' age stereotypes intensify due to their exposure to and experience with age groups and their typical occupational roles at different employment stages. In line with this lifespan perspective, we found that older observers exhibit stronger biases against young adults in leader attributes. By applying a stronger "age lens," older observers may be especially attuned to resource threats posed by young adults (i.e., higher tyranny and lower sensitivity perception), thus reinforcing their sense of leader-age incongruity for the younger age group. Interestingly, younger observers seem not to display a strong age bias against young adults (or exhibit similar biases toward both young and older adults). Age stereotypes may be less crucial for younger observers; they might prioritize gender or other salient characteristics, whereas middle-aged and older adults may rely more on age as a distinguishing factor. Our findings suggest that the observer's age is a crucial contingency factor in age stereotyping, playing a key role in uncovering role incongruity and the bias against young leaders.

Our research also offers insights into the (in)congruity of middle-aged and older adults with leader roles. Middle-aged adults, who were perceived as the least incongruent with both typical and ideal leader roles, appear to set the age-related standard for leadership expectations. Notably, older adults were perceived as overly communal in the context of typical leader roles, particularly in attributes like sensitivity (see Fig. 2), whereas this pattern did not emerge for ideal leader roles. This finding contributes to ongoing debates about age bias toward older leaders, where previous research has yielded mixed results. Some studies suggest that older leaders are perceived as having lower leadership potential (e.g., Guillén & Kunze, 2019; Hirschfeld & Thomas, 2011), whereas others indicate they are viewed as more effective in relationship-oriented leadership behaviors (e.g., Thrasher et al., 2020). Our framework and empirical findings, particularly the perception of older adults as excessively communal for typical leader roles yet appropriately communal for ideal leader roles, may help reconcile these divergent perspectives. These insights underscore the need to differentiate between leader prototypes (e.g., typical vs. ideal) and highlight the broader impact of age-related biases. They reinforce the importance of organizations critically assessing how leadership expectations are framed to prevent age-based stereotypes from influencing leader selection and evaluation.

Limitations and future research directions

While our research on age bias toward young leaders has broad theoretical implications, it is important to acknowledge certain limitations that constrain the generality of our findings (Simons et al., 2017). These constraints include contextual factors at different levels, including societal (e.g., cultural influences), organizational (e.g., industry and organizational specifics), and individual (e.g., leader gender) factors. Further, our study does not address the potential influence of generational differences in shaping leader role incongruity. Additionally, there is a need for a more nuanced understanding of the dominance dimensions and a deeper investigation into the discrepancy between perceived and actual leader effectiveness across age groups. We discuss these constraints in detail below.

First, given that our findings are based on data from U.S. participants, they reflect the sociocultural and political context of the United States. As such, the generalizability of our results regarding age stereotypes and leadership perceptions may be limited to similar Western contexts. Although our U.S.-based data may not cover all global perspectives, it still provides insights relevant to various cultural contexts. Moreover, we argue, the incongruity in perceptions of young leaders is likely a universal phenomenon. While age stereotypes toward older adults vary across cultures, with Eastern cultural contexts often exhibiting stronger biases, no differences in stereotypes toward young adults were observed between Western and Eastern cultures (North & Fiske, 2015). Further, we suggest that young adults' frequent association with non-managerial roles that lack responsibilities, as evident in Western countries, reflects a pattern consistent across various cultures. For instance, in Asian countries, young adults are often overrepresented in service and lower-level positions, despite their interest and engagement in leader roles, as highlighted in the *ASEM Youth Report (2021)*. Consequently, the role incongruity experienced by young leaders might not vary significantly across cultures. In fact, the bias against young leaders could be more pronounced in many Asian cultures due to their higher power distance and greater cultural "tightness." For instance, the greater tightness of Eastern cultures as compared to Western cultures (e.g., stricter social norms, a lower tolerance for deviant behavior; Gelfand, 2012) has been linked to a preference for older leaders (e.g., Vaughan-Johnston et al., 2021). We encourage future research in diverse cultural settings to validate and expand upon our conclusions in a global context.

Second, role incongruity implies a mismatch between stereotypes based on social categories such as age and the expectations of a functional role like a leader (Eagly & Karau, 2002). Whereas we recognized

the crucial role of observer age in forming age stereotypes, our examination of leader roles was intentionally broad, not confined to any specific industry or organizational context. Certain industries, such as the military (Hirschfeld & Thomas, 2011) or startup and technology sectors (Hubner et al., 2021; Reeves et al., 2021), might be more conducive to positive reactions to young leaders. Our findings on age stereotypes specific to young adults—such as being creative, innovative, bold, and dynamic—may explain associations of young leaders with organizational change (e.g., Daldrop, 2020; Spisak et al., 2014). In addition to role incongruity regarding leader roles, young individuals may face age bias in other functional roles perceived to require high competence and expertise, such as those of surgeons, lawyers, and researchers (e.g., Reeves et al., 2021; Strinić et al., 2021), or in roles associated with high levels of communion, like teachers or nurses (e.g., Koenig & Eagly, 2014), given lower perceived matches with these qualities. Future research could expand on our findings by exploring how different industry norms, organizational contexts, and functional roles might influence age bias toward young adults.

Third, while offering valuable insights into age bias against young leaders, our research also paves the way for intersectional research (Cole, 2009; Crenshaw, 1990). While our research has primarily focused on biases toward young leaders (i.e., an “age lens”), we recognize the critical need to examine further how age and gender intersect to shape leadership perceptions (i.e., an intersectional lens). In other words, do perceptions change when the leader is a young woman or a young man? Initial empirical results reveal that both young women and young men may face negative age bias in leader status ascriptions (Daldrop et al., 2023). This emphasizes the need to consider (young) age as a powerful demographic characteristic in leadership perceptions, one that can even overshadow the role of gender. Further, examining how age intersects with racial or ethnic identities, sexual orientation, or social class could yield more nuanced and layered insights. An intersectional approach (e.g., Hall et al., 2019; Petsko et al., 2022) to age bias in leadership may help further elucidate challenges facing young leaders.

Fourth, we considered chronological age as an antecedent as we aimed to uncover the effects of age stereotypes on role incongruity for young adults in leader roles. Our approach also accounted for in-group dynamics, asking participants to self-identify their age group to capture nuanced perceptions and stereotypes across different age groups. Nevertheless, we acknowledge that the conception of age in the workplace is multifaceted, encompassing generation, age, tenure, and experience (North, 2019). However, we did not explicitly examine the potential role of generational stereotypes on leader role incongruity for young adults. Given that attitudes toward specific young generations (e.g., “Millennials” in the U.S.; “post-1980 s/1990 s generation” in China) are generally more negative than attitudes toward young adults as an age group (Weiss & Zhang, 2020), biases against young leaders might be even more pronounced when employing generational labels. The various conceptualizations of age, such as chronological age, life stages, experience, and generations present a rich avenue for research to enhance our understanding of age stereotypes and their consequences.

Fifth, there is a need for a more nuanced examination of the dominance dimension in the relationship between leader age and leader perception. This is primarily because the subdimensions of *strength* (i.e., assertive, commanding) and *tyranny* (i.e., power-hungry or pushy; e.g., Offermann & Coats, 2018) yield mixed findings regarding what is considered typical versus ideal for leaders, as well as in comparisons between young versus middle-aged/older adults. Specifically, our results align with findings by Offermann et al. (1994), showing that attributes related to “strength” and “tyranny” are typical for leaders. However, while “strength” is considered ideal, “tyranny” is counter-ideal, which suggests that ideal leaders are *not* tyrannical. Additionally, our findings indicate that tyranny is associated more with young adults, whereas strength is associated more with middle-aged and older adults. These patterns in the subdimensions of dominance may explain mixed findings regarding leader age and perceptions of dominance. For

example, anthropological studies suggest that older leaders are seen as more dominant because age tends to correlate with access to social networks (Spisak, 2012). In contrast, testosterone—a marker of dominance—has been found to correlate positively with dominant behaviors among young leaders (van der Meij et al., 2016). We argue that perceptions of dominance in individuals of certain age groups might be contingent upon the operationalization of dominance as either more “tyrannical” and “autocratic” or as “strength.” Therefore, we call for further research to examine the age-contingent perceptions of dominance in leadership.

A final limitation is our focus on biased perceptions toward young leaders without directly addressing whether these perceptions and stereotypes hold any truth. A literature review on the role of leader age and actual leader effectiveness “paints a rather inconsistent picture” (Walter & Scheibe, 2013, p. 887), suggesting that the perception of young and older adults as less effective leaders leans more toward myth than reality. If anything, the age bias toward older leaders may have at least some basis in fact (Walter & Scheibe, 2013). Suggestive evidence indicates that younger leaders may exhibit less ineffective leadership behaviors, such as passive-avoidant leadership, than older leaders (Zacher, Rosing, & Frese, 2011). Further, younger age was related to higher mastery of teamwork and strategic knowledge, which partly explains the negative association between an individual’s older age and lower perceived leadership potential (Hirschfeld & Thomas, 2011). The discrepancy between young adults’ actual effectiveness and their biased perceptions as leaders highlights the need for more research on the leader age and (perceived) effectiveness relationship, a topic less explored than, for instance, leader gender and (perceived) effectiveness (Eagly et al., 2003; Paustian-Underdahl et al., 2014).

Practical and societal implications

Our results offer valuable practical implications for recognizing and combating age bias toward young adults at individual, organizational, and societal levels. First, role incongruity with leader roles can have personal consequences for young adults, especially as it is more pronounced among middle-aged and older observers. As middle-aged and older observers often represent the majority of decision-makers in promotion decisions, performance evaluations, and terminations, leadership positions may be less accessible and more precarious for young individuals than for middle-aged and older adults. In particular, role incongruity may prevent young individuals from being considered competent enough to occupy leadership positions. This can create a self-perpetuating cycle in which middle-aged and older individuals are selected as leaders over young individuals, leading to people having more experience with middle-aged and older leaders than young leaders. Furthermore, role incongruity could result in negative evaluations and a higher likelihood of dismissal for young individuals in leadership positions, thereby reinforcing bias against young leaders. Notably, young individuals may be unable to compensate for age bias by displaying greater competence (or cues of competence, such as confidence and self-promotion) and communion (e.g., sensitivity and integrity). While these competent and communal young leaders match leader role expectations, they may violate age role expectations and receive backlash and negative reactions (Eagly & Karau, 2002; Rudman & Phelan, 2008). This idea aligns with research showing that participative leadership behavior (i.e., being communal) is less beneficial for young than for older leaders (Buengeler et al., 2016).

Second, our research suggests that organizations should address age bias against young adults in leader roles from ethical and business perspectives. Ethically, organizations should incorporate young age into their compliance practices and anti-bias and anti-discrimination policies. This approach can assist organizations in managing the full spectrum of age bias and discrimination in the workplace (Hebl et al., 2020). From a business perspective, organizations could benefit from increased age diversity among their leaders. Previous work has indicated that age

diversity can positively influence organizational performance by enhancing human and social capital (Li et al., 2021); for instance, leadership teams with a diverse age range are more effective at monitoring managerial decision-making than homogeneous teams with less age variation, as diverse teams bring a broader range of perspectives and experiences to oversight processes (Janahi et al., 2023). Organizations aiming for greater age diversity in their leadership teams could implement age-diversity-friendly HR policies (e.g., Boehm et al., 2013; Kunze et al., 2013) and diversity training (e.g., Homan et al., 2015). Furthermore, organizations with multiple leadership teams can optimize their performance by ensuring each team includes a diverse range of ages (Sztamari, 2022).

Third, age bias has implications not just for young individuals and organizations but also for society. Negative bias against young leaders coincides with a positive age bias, or *privilege*, favoring middle-aged and older leaders, especially among older observers. Since privilege is frequently overlooked because it is perceived as well-intentioned (Phillips & Jun, 2022), such biased favoritism can lead to inequalities for young adults. This is consequential, as young people are seriously underrepresented in political and legislative spheres. Whereas the minimum age for serving in the U.S. Congress is 25 years (Congressional Research Service, 2023), most of the 118th U.S. Congress is older than 58. To achieve proportional representation, about 100 U.S. Congress members should be under 40 (Blazina & DeSilver, 2021). However, the Congress included only 38 members under age 40, fewer than those over age 75 (Congressional Research Service, 2023). In other words, individuals over 75 are more represented in politics than the younger half of the U.S. population. Reevaluating certain restrictions, such as the minimum age for candidacy, or introducing term limits could foster more opportunities for young political leaders and help counteract the underrepresentation of young adults in political leadership roles.

Conclusion: Think Leader, Think “Not Younger”

This paper aimed to reveal an antecedent of the negative age bias against young leaders. Our research shows that young adults, relative to middle-aged and older adults, face a perceived incongruity with leader roles. This incongruity stems predominately from observers perceiving young adults as less competent and communal, especially when observers are relatively older themselves. As a result, leadership positions are likely to be less accessible to and more precarious for young individuals than for middle-aged or older individuals. Our role-incongruity hypothesis offers important theoretical and practical insights into age bias against young adults at work.

Funding source declaration

This research was partly supported by the German Federal Ministry of Education and Research under grant number 01PL17068. The content of this article lies entirely with the authors.

CRedit authorship contribution statement

Christoph Daldrop: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Astrid C. Homan:** Writing – review & editing, Methodology, Conceptualization. **Claudia Buengeler:** Writing – review & editing, Methodology, Conceptualization.

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

We have shared the link to our data/code in the manuscript.

References

- Abele, A. E. (2022). Evaluation of the self on the big two and their facets. *International Review of Social Psychology*, 35(1), 1–15. <https://doi.org/10.5334/irsp.688>
- Abele, A. E., Ellemers, N., Fiske, S. T., Koch, A., & Zyerby, V. (2021). Navigating the social world: Toward an integrated framework for evaluating self, individuals, and groups. *Psychological Review*, 128(2), 290–314. <https://doi.org/10.1037/rev0000262>
- Aguinis, H., Villamor, I., & Ramani, R. S. (2021). MTurk research: Review and recommendations. *Journal of Management*, 47(4), 823–837. <https://doi.org/10.1177/0149206320969787>
- Aichholzer, J., & Zeglövits, E. (2015). Balancierte Kurzsкала autoritärer Einstellungen (B-RWA-6) [Balanced Short Scale of Authoritarian Attitudes]. *Zusammenstellung sozialwissenschaftlicher Items und Skalen*. <https://doi.org/10.6102/zis239>
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Akinola, M., Martin, A. E., & Phillips, K. W. (2018). To delegate or not to delegate: Gender differences in affective associations and behavioral responses to delegation. *Academy of Management Journal*, 61(4), 1467–1491. <https://doi.org/10.5465/amj.2016.0662>
- Arnett, J. J. (2000). Emerging adulthood. *American Psychologist*, 55(5), 469–480. <https://doi.org/10.1037/0003-066x.55.5.469>
- Arthur, W., Hagen, E., & George, F. (2021). The lazy or dishonest respondent: Detection and prevention. *Annual Review of Organizational Psychology and Organizational Behavior*, 8(1), 105–137. <https://doi.org/10.1146/annurev-orgpsych-012420-055324>
- Asbrock, F., Sibley, C. G., & Duckitt, J. (2010). Right-wing authoritarianism and social dominance orientation and the dimensions of generalized prejudice: A longitudinal test. *European Journal of Personality*, 24(4), 324–340. <https://doi.org/10.1002/per.746>
- ASEM Youth Report. (2021). <https://asef.org/wp-content/uploads/2021/11/ASEM-Youth-report.pdf>
- Badura, K. L., Grijalva, E., Newman, D. A., Yan, T. T., & Jeon, G. (2018). Gender and leadership emergence: A meta-analysis and explanatory model. *Personnel Psychology*, 71(3), 335–367. <https://doi.org/10.1111/peps.12266>
- Bakan, D. (1966). *The duality of human existence: An essay on psychology and religion*. Rand McNally.
- Barsalou, L. W. (1985). Ideals, central tendency, and frequency of instantiation as determinants of graded structure in categories. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 11(4), 629–654. <https://doi.org/10.1037/0278-7393.11.4.629>
- Bedeian, A. G., Pizzolatto, A. B., Long, R. G., & Griffeth, R. W. (1991). The measurement and conceptualization of career stages. *Journal of Career Development*, 17(3), 153–166. <https://doi.org/10.1007/bf01322023>
- Blazina, C., & DeSilver, D. (2021). Boomers, Silents still have most seats in Congress, though number of Millennials. *Gen Xers is up slightly*. <https://pewrsr.ch/3af4zSr>
- Boehm, S. A., Kunze, F., & Bruch, H. (2013). Spotlight on age-diversity climate: The impact of age-inclusive HR practices on firm-level outcomes. *Personnel Psychology*, 67(3), 667–704. <https://doi.org/10.1111/peps.12047>
- Boehm, S. A., Schröder, H., & Bal, M. (2021). Age-Related Human Resource Management Policies and Practices: Antecedents, Outcomes, and Conceptualizations. *Work Aging and Retirement*, 7(4), 257–272. <https://doi.org/10.1093/workar/waab024>
- Bordalo, P., Coffman, K., Gennaioli, N., & Shleifer, A. (2016). Stereotypes. *Quarterly Journal of Economics*, 131(4), 1753–1794. <https://doi.org/10.1093/qje/qjw029>
- Brown, M. E., & Treviño, L. K. (2006). Ethical leadership: A review and future directions. *The Leadership Quarterly*, 17(6), 595–616. <https://doi.org/10.1016/j.leaqua.2006.10.004>
- Buengeler, C., Homan, A. C., & Voelpel, S. C. (2016). The challenge of being a young manager: The effects of contingent reward and participative leadership on team-level turnover depend on leader age. *Journal of Organizational Behavior*, 37(8), 1224–1245. <https://doi.org/10.1002/job.2101>
- Burmeister, A., Fasbender, U., & Deller, J. (2018). Being perceived as a knowledge sender or knowledge receiver: A multistudy investigation of the effect of age on knowledge transfer. *Journal of Occupational and Organizational Psychology*, 91(3), 518–545. <https://doi.org/10.1111/joop.12208>
- Carton, A. M., & Rosette, A. S. (2011). Explaining bias against black leaders: Integrating theory on information processing and goal-based stereotyping. *Academy of Management Journal*, 54(6), 1141–1158. <https://doi.org/10.5465/amj.2009.0745>
- Chasteen, A. L., Schwarz, N., & Park, D. C. (2002). The activation of aging stereotypes in younger and older adults. *The Journals of Gerontology: Series B*, 57(6), P540–P547. <https://doi.org/10.1093/geronb/57.6.p540>
- Clifford, S., Jewell, R. M., & Waggoner, P. D. (2015). Are samples drawn from Mechanical Turk valid for research on political ideology? *Research & Politics*, 2(4). <https://doi.org/10.1177/2053168015622072>
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*. Routledge.
- Cole, E. R. (2009). Intersectionality and research in psychology. *American Psychologist*, 64(3), 170–180. <https://doi.org/10.1037/a0014564>
- Congressional Research Service. (2023). *Membership of the 117th Congress: A Profile*. <https://crsreports.congress.gov/product/pdf/R/R46705>

- Crenshaw, K. (1990). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, 43(6), 1241–1299.
- Daldrop, C. (2020). Changing perceptions of younger leaders: The role of the observer and organizational change. *Academy of Management Proceedings*, 2020(1), 16839. <https://doi.org/10.5465/AMBPP.2020.16839abstract>
- Daldrop, C., Buengeler, C., & Homan, A. C. (2023). An intersectional lens on young leaders: Bias toward young women and young men in leadership positions. *Frontiers in Psychology*, 14, Article 1204547. <https://doi.org/10.3389/fpsyg.2023.1204547>
- de la Fuente-Nunez, V., Cohn-Schwartz, E., Roy, S., & Ayalon, L. (2021). Scoping review on ageism against younger populations. *International Journal of Environmental Research and Public Health*, 18(8), 3988. <https://doi.org/10.3390/ijerph18083988>
- DeArmond, S., Tye, M., Chen, P. Y., Krauss, A., Rogers, D. A., & Sintek, E. (2006). Age and gender stereotypes: New challenges in a changing workplace and workforce. *Journal of Applied Social Psychology*, 36(9), 2184–2214. <https://doi.org/10.1111/j.0021-9029.2006.00100.x>
- del Carmen Triana, M., Song, R., Um, C. T., & Huang, L. (2023). Stereotypical perception in management: A review and expansion of role congruity theory. *Journal of Management*, 50(1), 188–215. <https://doi.org/10.1177/01492063231180836>
- Den Hartog, D. N., & De Hoogh, A. H. B. (2024). Cross-cultural leadership: What we know, what we need to know, and where we need to go. *Annual Review of Organizational Psychology and Organizational Behavior*, 11(1), 535–566. <https://doi.org/10.1146/annurev-orgpsych-110721-033711>
- Den Hartog, D. N., House, R. J., Hanges, P. J., Ruiz-Quintanilla, S. A., Dorfman, P. W., Abdalla, I. A., Adetoun, B. S., Aditya, R. N., Agourram, H., Akande, A., Akande, B. E., Akerblom, S., Altschul, C., Alvarez-Backus, E., Andrews, J., Arias, M. E., Arif, M. S., Ashkanasy, N. M., Asllani, A., & Zhou, J. (1999). Culture specific and cross-culturally generalizable implicit leadership theories. *The Leadership Quarterly*, 10(2), 219–256. [https://doi.org/10.1016/s1048-9843\(99\)00018-1](https://doi.org/10.1016/s1048-9843(99)00018-1)
- Duehr, E. E., & Bono, J. E. (2006). Men, women, and managers: Are stereotypes finally changing? *Personnel Psychology*, 59(4), 815–846. <https://doi.org/10.1111/j.1744-6570.2006.00055.x>
- Dwivedi, P., Misangyi, V. F., & Joshi, A. (2021). “Burnt by the spotlight”: How leadership endorsements impact the longevity of female leaders. *Journal of Applied Psychology*, 106(12), 1885–1906. <https://doi.org/10.1037/apl0000871>
- Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Lawrence Erlbaum Associates Inc.
- Eagly, A. H., Johannesen-Schmidt, M. C., & van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, 129(4), 569–591. <https://doi.org/10.1037/0033-2909.129.4.569>
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109(3), 573–598. <https://doi.org/10.1037/0033-295x.109.3.573>
- Eagly, A. H., Nater, C., Miller, D. I., Kaufmann, M., & Sczesny, S. (2020). Gender stereotypes have changed: A cross-temporal meta-analysis of U.S. public opinion polls from 1946 to 2018. *American Psychologist*, 75(3), 301–315. Doi: 10.1037/amp0000494.
- Eagly, A. H., & Steffen, V. J. (1984). Gender Stereotypes Stem from the Distribution of Women and Men into Social Roles. *Journal of Personality and Social Psychology*, 46(4), 735–754. <https://doi.org/10.1037/0022-3514.46.4.735>
- Eagly, A. H., & Wood, W. (2012). *Social role theory*. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (Vol. 2, pp. 458–476). SAGE Publications Ltd.
- Eden, D., & Leviatan, U. (1975). Implicit leadership theory as a determinant of the factor structure underlying supervisory behavior scales. *Journal of Applied Psychology*, 60(6), 736–741. <https://doi.org/10.1037/0021-9010.60.6.736>
- Epitropaki, O., & Martin, R. (2004). Implicit leadership theories in applied settings: Factor structure, generalizability, and stability over time. *Journal of Applied Psychology*, 89(2), 293–310. <https://doi.org/10.1037/0021-9010.89.2.293>
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149–1160. <https://doi.org/10.3758/BRM.41.4.1149>
- Ferris, G. R., Zinko, R., Brouer, R. L., Buckley, M. R., & Harvey, M. G. (2007). Strategic bullying as a supplementary, balanced perspective on destructive leadership. *The Leadership Quarterly*, 18(3), 195–206. <https://doi.org/10.1016/j.leaqua.2007.03.004>
- Finkelstein, L. M., & Burke, M. J. (1998). Age stereotyping at work: The role of rater and contextual factors on evaluations of job applicants. *J Gen Psychol*, 125(4), 317–345. <https://doi.org/10.1080/00221309809595341>
- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, 82(6), 878–902. <https://doi.org/10.1037/0022-3514.82.6.878>
- Francioli, S. P., & North, M. S. (2021). Youngism: The content, causes, and consequences of prejudices toward younger adults. *Journal of Experimental Psychology: General*, 150(12), 2591–2612. <https://doi.org/10.1037/xge0001064>
- Francioli, S. P., Shakeri, A., & North, M. S. (2024). Americans harbor much less favorable explicit sentiments toward young adults than toward older adults. *Proceedings of the National Academy of Sciences*, 121(26), Article e2311009121. <https://doi.org/10.1073/pnas.2311009121>
- Gelfand, M. J. (2012). Culture’s constraints: International differences in the strength of social norms. *Current Directions in Psychological Science*, 21(6), 420–424. <https://doi.org/10.1177/0963721412460048>
- Gloor, J. L., Gazdag, B., & Reinwald, M. (2020). Overlooked or undercooked? Critical review and recommendations for experimental methods in diversity research. In A. J. Risberg (Ed.), *The Routledge Companion to Organizational Diversity Research Methods* (pp. 91–106). Routledge.
- Gorham, B. W. (1999). Stereotypes in the media: So what? *Howard Journal of Communications*, 10(4), 229–247. <https://doi.org/10.1080/106461799246735>
- Guillén, L., & Kunze, F. (2019). When age does not harm innovative behavior and perceptions of competence: Testing interdepartmental collaboration as a social buffer. *Human Resource Management*, 58(3), 301–316. <https://doi.org/10.1002/hrm.21953>
- Gündemir, S., Carton, A. M., & Homan, A. C. (2019). The impact of organizational performance on the emergence of Asian American leaders. *Journal of Applied Psychology*, 104(1), 107–122. <https://doi.org/10.1037/apl0000347>
- Gupta, V. K., Mortal, S. C., Silveri, S., Sun, M. X., & Turban, D. B. (2020). You’re fired! Gender disparities in CEO dismissal. *Journal of Management*, 46(4), 560–582. <https://doi.org/10.1177/0149206318810415>
- Hall, E. V., Hall, A. V., Galinsky, A. D., & Phillips, K. W. (2019). MOSAIC: A model of stereotyping through associated and intersectional categories. *Academy of Management Review*, 44(3), 643–672. <https://doi.org/10.5465/amr.2017.0109>
- Hawkins, S., Yudkin, D., Juan-Torres, M., & Dixon, T. (2019). *Hidden Tribes: A Study of America’s Polarized Landscape*. https://hiddentribes.us/media/qfpezk4g/hidden_tribes_report.pdf.
- Hebl, M., Cheng, S. K., & Ng, L. C. (2020). Modern discrimination in organizations. *Annual Review of Organizational Psychology and Organizational Behavior*, 7(1), 257–282. <https://doi.org/10.1146/annurev-orgpsych-012119-044948>
- Heilman, M. (1983). Sex bias in work settings: The lack of fit model. In B. Staw, & L. Cummings (Eds.), *Research in Organizational Behavior* (Vol. 5, pp. 269–298). JAI Press.
- Hertel, G., & Zacher, H. (2018). Managing the aging workforce. In D. S. Ones, N. Anderson, C. Viswesvaran, & H. K. Sinangal (Eds.), *The SAGE handbook of industrial, work and organization psychology* (Vol. 3, pp. 396–428). Sage.
- Hirschfeld, R. R., & Thomas, C. H. (2011). Age-and gender-based role incongruity: Implications for knowledge mastery and observed leadership potential among personnel in a leadership development program. *Personnel Psychology*, 64(3), 661–692. <https://doi.org/10.1111/j.1744-6570.2011.01222.x>
- Ho, A. K., Sidanius, J., Kteily, N., Sheehy-Skeffington, J., Pratto, F., Henkel, K. E., Foels, R., & Stewart, A. L. (2015). The nature of social dominance orientation: Theorizing and measuring preferences for intergroup inequality using the new SDO (7) scale. *Journal of Personality and Social Psychology*, 109(6), 1003–1028. <https://doi.org/10.1037/pspi0000033>
- Homan, A. C., Buengeler, C., Eckhoff, R. A., van Ginkel, W. P., & Voelpel, S. C. (2015). The interplay of diversity training and diversity beliefs on team creativity in nationality diverse teams. *Journal of Applied Psychology*, 100(5), 1456–1467. <https://doi.org/10.1037/apl0000013>
- Homan, A. C., Wanders, F., van Vianen, A. E. M., & van Kleef, G. A. (2024). Better to bend than to break? Effects of rule behavior on dominance, prestige, and leadership granting. *Journal of Experimental Psychology: Applied*, 30(2), 344–358. <https://doi.org/10.1037/xap0000502>
- House, R. J., Hanges, P., Ruiz-Quintanilla, S. A., Dorfman, P. W., Javidan, M., Dickson, M., Gupta, V., Frese, M., & Hartog, D. N. F. (1999). Cultural influences on leadership and organizations: Project GLOBE. In W. F. Mobley, M. J. Gessner, & V. Arnold (Eds.), *Advances in Global Leadership* (Vol. 1, pp. 171–233). JAI Press.
- Hubner, S., Rudic, B., & Baum, M. (2021). How entrepreneur’s leadership behavior and demographics shape applicant attraction to new ventures: The role of stereotypes. *The International Journal of Human Resource Management*, 34(11), 2137–2172. <https://doi.org/10.1080/09585192.2021.1897875>
- Hummert, M. L. (1990). Multiple stereotypes of elderly and young adults: A comparison of structure and evaluations. *Psychology and Aging*, 5(2), 182–193. <https://doi.org/10.1037/0882-7974.5.2.182>
- Irehill, H., Lundmark, R., & Tafvelin, S. (2023). The well-being of young leaders: Demands and resources from a lifespan perspective. *Frontiers in Psychology*, 14, Article 1187936. <https://doi.org/10.3389/fpsyg.2023.1187936>
- Janahi, M., Millo, Y., & Voulgaris, G. (2023). Age diversity and the monitoring role of corporate boards: Evidence from banks. *Human Relations*, 76(10), 1599–1633. <https://doi.org/10.1177/00187267221108729>
- Johnson, S. K., Murphy, S. E., Zewdie, S., & Reichard, R. J. (2008). The strong, sensitive type: Effects of gender stereotypes and leadership prototypes on the evaluation of male and female leaders. *Organizational Behavior and Human Decision Processes*, 106(1), 39–60. <https://doi.org/10.1016/j.obhdp.2007.12.002>
- Junker, N. M., & van Dick, R. (2014). Implicit theories in organizational settings: A systematic review and research agenda of implicit leadership and followership theories. *The Leadership Quarterly*, 25(6), 1154–1173. <https://doi.org/10.1016/j.leaqua.2014.09.002>
- Kakkar, H., & Sivanathan, N. (2017). When the appeal of a dominant leader is greater than a prestige leader. *Proceedings of the National Academy of Sciences*, 114(26), 6734–6739. <https://doi.org/10.1073/pnas.1617711114>
- Kite, M. E., Stockdale, G. D., Whitley, B. E., & Johnson, B. T. (2005). Attitudes toward younger and older adults: An updated meta-analytic review. *Journal of Social Issues*, 61(2), 241–266. <https://doi.org/10.1111/j.1540-4560.2005.00404.x>
- Koenig, A. M., & Eagly, A. H. (2014). Evidence for the social role theory of stereotype content: Observations of groups’ roles shape stereotypes. *Journal of Personality and Social Psychology*, 107(3), 371–392. <https://doi.org/10.1037/a0037215>
- Koenig, A. M., Eagly, A. H., Mitchell, A. A., & Ristikari, T. (2011). Are leader stereotypes masculine? A meta-analysis of three research paradigms. *Psychological Bulletin*, 137(4), 616–642. <https://doi.org/10.1037/a0023557>
- Kornadt, A. E., Kessler, E. M., Wurm, S., Bowen, C. E., Gabrian, M., & Klusmann, V. (2020). Views on ageing: A lifespan perspective. *European Journal of Ageing*, 17(4), 387–401. <https://doi.org/10.1007/s10433-019-00535-9>

- Kornadt, A. E., Meissner, F., & Rothermund, K. (2016). Implicit and explicit age stereotypes for specific life domains across the life span: Distinct patterns and age group differences. *Experimental Aging Research*, 42(2), 195–211. <https://doi.org/10.1080/0361073X.2016.1132899>
- Kornadt, A. E., & Rothermund, K. (2011). Contexts of aging: Assessing evaluative age stereotypes in different life domains. *The Journals of Gerontology: Series B*, 66(5), 547–556. <https://doi.org/10.1093/geronb/gbr036>
- Kornadt, A. E., Siebert, J. S., & Wahl, H. W. (2019). The interplay of personality and attitudes toward own aging across two decades of later life. *PLoS One*, 14(10), Article e0223622. <https://doi.org/10.1371/journal.pone.0223622>
- Kornadt, A. E., Voss, P., & Rothermund, K. (2017). Age stereotypes and self-views revisited: Patterns of internalization and projection processes across the life span. *The Journals of Gerontology: Series B*, 72(4), 582–592. <https://doi.org/10.1093/geronb/gbv099>
- Krings, F., Sczesny, S., & Kluge, A. (2011). Stereotypical inferences as mediators of age discrimination: The role of competence and warmth. *British Journal of Management*, 22(2), 187–201. <https://doi.org/10.1111/j.1467-8551.2010.00721.x>
- Kunze, F., Boehm, S., & Bruch, H. (2013). Organizational performance consequences of age diversity: Inspecting the role of diversity-friendly HR policies and top managers' negative age stereotypes. *Journal of Management Studies*, 50(3), 413–442. <https://doi.org/10.1111/joms.12016>
- Kunze, F., & Menges, J. I. (2016). Younger supervisors, older subordinates: An organizational-level study of age differences, emotions, and performance. *Journal of Organizational Behavior*, 38(4), 461–486. <https://doi.org/10.1002/job.2129>
- Lauritsen, M. W. (2023). An alternative procedure for subgroup analyses in the think manager–think male paradigm. *Journal of Personnel Psychology*, 22(2), 76–88. <https://doi.org/10.1027/1866-5888/a000312>
- Laustsen, L., & Petersen, M. B. (2017). Perceived conflict and leader dominance: Individual and contextual factors behind preferences for dominant leaders. *Political Psychology*, 38(6), 1083–1101. <https://doi.org/10.1111/pops.12403>
- Levy, K. E., Freese, J., & Druckman, J. N. (2016). The demographic and political composition of Mechanical Turk samples. *SAGE Open*, 6(1), 1–17. <https://doi.org/10.1177/2158244016636433>
- Li, Y., Gong, Y., Burmeister, A., Wang, M., Alterman, V., Alonso, A., & Robinson, S. (2021). Leveraging age diversity for organizational performance: An intellectual capital perspective. *Journal of Applied Psychology*, 106(1), 71–91. <https://doi.org/10.1037/apl0000497>
- Litman, L., Robinson, J., & Abberbock, T. (2017). TurkPrime.com: A versatile crowdsourcing data acquisition platform for the behavioral sciences. *Behavior Research Methods*, 49(2), 433–442. <https://doi.org/10.3758/s13428-016-0727-z>
- Lonati, S., Quiroga, B. F., Zehnder, C., & Antonakis, J. (2018). On doing relevant and rigorous experiments: Review and recommendations. *Journal of Operations Management*, 64(1), 19–40. <https://doi.org/10.1016/j.jom.2018.10.003>
- Lonati, S., & Van Vugt, M. (2024). Ecology, culture and leadership: Theoretical integration and review. *The Leadership Quarterly*, 35(2), Article 101749. <https://doi.org/10.1016/j.leaqua.2023.101749>
- Lord, R. G., Brown, D. J., Harvey, J. L., & Hall, R. J. (2001). Contextual constraints on prototype generation and their multilevel consequences for leadership perceptions. *The Leadership Quarterly*, 12(3), 311–338. [https://doi.org/10.1016/S1048-9843\(01\)00081-9](https://doi.org/10.1016/S1048-9843(01)00081-9)
- Lord, R. G., de Vader, C. L., & Alliger, G. M. (1986). A meta-analysis of the relation between personality traits and leadership perceptions: An application of validity generalization procedures. *Journal of Applied Psychology*, 71(3), 402–410. <https://doi.org/10.1037/0021-9010.71.3.402>
- Lord, R. G., Epitropaki, O., Foti, R. J., & Hansbrough, T. K. (2020). Implicit leadership theories, implicit followership theories, and dynamic processing of leadership information. *Annual Review of Organizational Psychology and Organizational Behavior*, 7(1), 49–74. <https://doi.org/10.1146/annurev-orgpsych-012119-045434>
- Lord, R. G., Foti, R. J., & Devader, C. L. (1984). A test of leadership categorization theory: Internal structure, information processing, and leadership perceptions. *Organizational Behavior and Human Performance*, 34(3), 343–378. [https://doi.org/10.1016/0030-5073\(84\)90043-6](https://doi.org/10.1016/0030-5073(84)90043-6)
- Ma, A., Rosette, A. S., & Koval, C. Z. (2022). Reconciling female agentic advantage and disadvantage with the CADDIS measure of agency. *Journal of Applied Psychology*, 107(12), 2115–2148. <https://doi.org/10.1037/apl0000550>
- Maner, J. K., & Mead, N. L. (2010). The essential tension between leadership and power: When leaders sacrifice group goals for the sake of self-interest. *Journal of Personality and Social Psychology*, 99(3), 482–497. <https://doi.org/10.1037/a0018559>
- Martin, A. E., & North, M. S. (2022). Equality for (almost) all: Egalitarian advocacy predicts lower endorsement of sexism and racism, but not ageism. *Journal of Personality and Social Psychology*, 123(2), 373–399. <https://doi.org/10.1037/pspi0000262>
- McCauley, C. D. (2004). Successful and unsuccessful leadership. In *The nature of leadership* (pp. 199–221). Sage Publications Inc.
- Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods*, 17(3), 437–455. <https://doi.org/10.1037/a0028085>
- Morgenroth, T., Ryan, M. K., & Sönderlund, A. L. (2020). Think Manager–Think Parent? Investigating the fatherhood advantage and the motherhood penalty using the Think Manager–Think Male paradigm. *Journal of Applied Social Psychology*, 51(3), 237–247. <https://doi.org/10.1111/jasp.12728>
- North, M. S. (2019). A GATE to understanding “older” workers: Generation, age, tenure, experience. *Academy of Management Annals*, 13(2), 414–443. <https://doi.org/10.5465/annals.2017.0125>
- North, M. S. (2025). A symbiotic portal to engaging early-, mid-, and late-career workers: Progression, off-loading, relevance, teachings, advice, legacy. *Academy of Management Review*, 50(2), 392–414. <https://doi.org/10.5465/amr.2021.0324>
- North, M. S., & Fiske, S. T. (2012). An inconvenienced youth? Ageism and its potential intergenerational roots. *Psychological Bulletin*, 138(5), 982–997. <https://doi.org/10.1037/a0027843>
- North, M. S., & Fiske, S. T. (2015). Modern attitudes toward older adults in the aging world: A cross-cultural meta-analysis. *Psychological Bulletin*, 141(5), 993–1021. <https://doi.org/10.1037/a0039469>
- Offermann, L. R., & Coats, M. R. (2018). Implicit theories of leadership: Stability and change over two decades. *The Leadership Quarterly*, 29(4), 513–522. <https://doi.org/10.1016/j.leaqua.2017.12.003>
- Offermann, L. R., Kennedy, J. K., & Wirtz, P. W. (1994). Implicit leadership theories: Content, structure, and generalizability. *The Leadership Quarterly*, 5(1), 43–58. [https://doi.org/10.1016/1048-9843\(94\)90005-1](https://doi.org/10.1016/1048-9843(94)90005-1)
- Oppenheimer, D. M., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of Experimental Social Psychology*, 45(4), 867–872. <https://doi.org/10.1016/j.jesp.2009.03.009>
- Paluch, R. M., & Shum, V. (2024). The non-White standard: Racial bias in perceptions of diversity, equity, and inclusion leaders. *Journal of Applied Psychology*, 109(7), 971–986. <https://doi.org/10.1037/apl0001106>
- Paustian-Underdahl, S. C., Walker, L. S., & Woehr, D. J. (2014). Gender and perceptions of leadership effectiveness: A meta-analysis of contextual moderators. *Journal of Applied Psychology*, 99(6), 1129–1145. <https://doi.org/10.1037/a0036751>
- Petso, C. D., Rosette, A. S., & Bodenhausen, G. V. (2022). Through the looking glass: A lens-based account of intersectional stereotyping. *Journal of Personality and Social Psychology*, 123(4), 763–787. <https://doi.org/10.1037/pspi0000382>
- Phillips, L. T., & Jun, S. (2022). Why benefiting from discrimination is less recognized as discrimination. *Journal of Personality and Social Psychology*, 122(5), 825–852. <https://doi.org/10.1037/pspi0000298>
- Ponce de Leon, R., & Bailey, E. R. (2025). The preeminence of communality in the leadership preferences of followers. *Journal of Personality and Social Psychology*, Advance online publication. <https://doi.org/10.1037/pspa0000437>
- Posthuma, R. A., & Campion, M. A. (2009). Age stereotypes in the workplace: Common stereotypes, moderators, and future research directions. *Journal of Management*, 35(1), 158–188. <https://doi.org/10.1177/0149206308318617>
- Reeves, M. D., Fritzsche, B. A., Marcus, J., Smith, N. A., & Ng, Y. L. (2021). “Beware the young doctor and the old barber”: Development and validation of a job age-type spectrum. *Journal of Vocational Behavior*, 129, Article 103616. <https://doi.org/10.1016/j.jvb.2021.103616>
- Rosette, A. S., de Leon, R. P., Koval, C. Z., & Harrison, D. A. (2018). Intersectionality: Connecting experiences of gender with race at work. *Research in Organizational Behavior*, 38, 1–22. <https://doi.org/10.1016/j.riob.2018.12.002>
- Rosette, A. S., Koval, C. Z., Ma, A. Y., & Livingston, R. (2016). Race matters for women leaders: Intersectional effects on agentic deficiencies and penalties. *The Leadership Quarterly*, 27(3), 429–445. <https://doi.org/10.1016/j.leaqua.2016.01.008>
- Rosette, A. S., Leonardelli, G. J., & Phillips, K. W. (2008). The White standard: Racial bias in leader categorization. *Journal of Applied Psychology*, 93(4), 758–777. <https://doi.org/10.1037/0021-9010.93.4.758>
- Rudic, B., Hubner, S., & Baum, M. (2021). Hustlers, hipsters and hackers: Potential employees' stereotypes of entrepreneurial leaders. *Journal of Business Venturing Insights*, 15, Article e00220. <https://doi.org/10.1016/j.jbvi.2020.e00220>
- Rudman, L. A., & Phelan, J. E. (2008). Backlash effects for disconfirming gender stereotypes in organizations. *Research in Organizational Behavior*, 28, 61–79. <https://doi.org/10.1016/j.riob.2008.04.003>
- Ryan, M. K., Haslam, S. A., Hersby, M. D., & Bongiorno, R. (2011). Think crisis–think female: The glass cliff and contextual variation in the think manager–think male stereotype. *Journal of Applied Psychology*, 96(3), 470–484. <https://doi.org/10.1037/a0022133>
- Schein, V. E. (1973). The relationship between sex role stereotypes and requisite management characteristics. *Journal of Applied Psychology*, 57(2), 95–100. <https://doi.org/10.1037/h0037128>
- Schein, V. E. (1975). Relationships between sex role stereotypes and requisite management characteristics among female managers. *Journal of Applied Psychology*, 60(3), 340–344. <https://doi.org/10.1037/h0076637>
- Schyns, B., & Schilling, J. (2010). Implicit leadership theories: Think leader, think effective? *Journal of Management Inquiry*, 20(2), 141–150. <https://doi.org/10.1177/1056492610375989>
- Sherman, J. W. (1996). Development and mental representation of stereotypes. *Journal of Personality and Social Psychology*, 70(6), 1126–1141. <https://doi.org/10.1037/0022-3514.70.6.1126>
- Simons, D. J., Shoda, Y., & Lindsay, D. S. (2017). Constraints on generality (COG): A proposed addition to all empirical papers. *Perspectives on Psychological Science*, 12(6), 1123–1128. <https://doi.org/10.1177/1745691617708630>
- Sng, O., Williams, K. E. G., & Neuberg, S. L. (2020). Sex-age stereotyping: Social perceivers as lay adaptationists. *Evolution and Human Behavior*, 41(2), 136–149. <https://doi.org/10.1016/j.evolhumbehav.2019.12.001>
- Spisak, B. R. (2012). The general age of leadership: Older-looking presidential candidates win elections during war. *PLoS One*, 7(5), Article e36945. <https://doi.org/10.1371/journal.pone.0036945>
- Spisak, B. R., Grabo, A. E., Arvey, R. D., & van Vugt, M. (2014). The age of exploration and exploitation: Younger-looking leaders endorsed for change and older-looking leaders endorsed for stability. *The Leadership Quarterly*, 25(5), 805–816. <https://doi.org/10.1016/j.leaqua.2014.06.001>
- Sprong, S., Jetten, J., Wang, Z., Peters, K., Mols, F., Verkuyten, M., Bastian, B., Ariyanto, A., Autin, F., Ayub, N., Badea, C., Besta, T., Butera, F., Costa-Lopes, R., Cui, L., Fantini, C., Finchilescu, G., Gaertner, L., Gollwitzer, M., & Wohl, M. J. A. (2019). Our country needs a strong leader right now”: Economic inequality enhances

- the wish for a strong leader. *Psychological Science*, 30(11), 1625–1637. <https://doi.org/10.1177/0956797619875472>
- Steffens, N. K., Haslam, S. A., Jetten, J., & Mols, F. (2018). Our followers are lions, theirs are sheep: How social identity shapes theories about followership and social influence. *Political Psychology*, 39(1), 23–42. <https://doi.org/10.1111/pops.12387>
- Strinić, A., Carlsson, M., & Agerström, J. (2021). Occupational stereotypes: Professionals' warmth and competence perceptions of occupations. *Personnel Review*, 51(2), 603–619. <https://doi.org/10.1108/pr-06-2020-0458>
- Super, D. E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior*, 16(3), 282–298. [https://doi.org/10.1016/0001-8791\(80\)90056-1](https://doi.org/10.1016/0001-8791(80)90056-1)
- Sy, T., Shore, L. M., Strauss, J., Shore, T. H., Tram, S., Whiteley, P., & Ikeda-Muromachi, K. (2010). Leadership perceptions as a function of race-occupation fit: The case of Asian Americans. *Journal of Applied Psychology*, 95(5), 902–919. <https://doi.org/10.1037/a0019501>
- Szatmari, B. (2022). Young stars and red giants: The moderating effect of age diversity on the relationship between the proportion of high performers and team performance. *Journal of Applied Psychology*, 107(10), 1878–1888. <https://doi.org/10.1037/apl0000971>
- Thrasher, G. R., Biermeier-Hanson, B., & Dickson, M. W. (2020). Getting old at the top: The role of agentic and communal orientations in the relationship between age and follower perceptions of leadership behaviors and outcomes. *Work Aging and Retirement*, 6(1), 46–58. <https://doi.org/10.1093/workar/waz012>
- U.S. Bureau of Labor Statistics. (2021). *Occupation: Employed persons by detailed occupation and age, including median age*. <https://www.bls.gov/cps/cpsaat11b.htm>
- U.S. Census Bureau. (2019). *Current Population Survey, Detailed Years of School Completed by People 25 Years and Over by Sex, Age Groups, Race and Hispanic Origin: 2019*. <https://www2.census.gov/programs-surveys/demo/tables/educational-attainment/2019/cps-detailed-tables/table-3.xlsx>
- U.S. Census Bureau. (2021). *Population by Age and Sex: 2021*. https://www2.census.gov/programs-surveys/demo/tables/age-and-sex/2021/age-sex-composition/2021agesex_table1.xlsx
- van der Meij, L., Schaveling, J., & van Vugt, M. (2016). Basal testosterone, leadership and dominance: A field study and meta-analysis. *Psychoneuroendocrinology*, 72, 72–79. <https://doi.org/10.1016/j.psyneuen.2016.06.005>
- Van Kleef, G. A., Wanders, F., van Vianen, A. E. M., Dunham, R. L., Du, X., & Homan, A. C. (2023). Rebels with a cause? How norm violations shape dominance, prestige, and influence granting. *PLoS One*, 18(11), Article e0294019. <https://doi.org/10.1371/journal.pone.0294019>
- Vaughan-Johnston, T., Imtiaz, F., Lee, A., & Ji, L. J. (2021). Age differences in leadership positions across cultures. *Frontiers in Psychology*, 12, Article 703831. <https://doi.org/10.3389/fpsyg.2021.703831>
- Vial, A. C., & Napier, J. L. (2018). Unnecessary frills: Communitarity as a nice (but expendable) trait in leaders. *Frontiers in Psychology*, 9, 1866. <https://doi.org/10.3389/fpsyg.2018.01866>
- Walter, F., & Scheibe, S. (2013). A literature review and emotion-based model of age and leadership: New directions for the trait approach. *The Leadership Quarterly*, 24(6), 882–901. <https://doi.org/10.1016/j.leaqua.2013.10.003>
- Weiss, D., & Zhang, X. (2020). Multiple sources of aging attitudes: Perceptions of age groups and generations from adolescence to old age across China, Germany, and the United States. *Journal of Cross-Cultural Psychology*, 51(6), 407–423. <https://doi.org/10.1177/0022022120925904>
- World Health Organization. (2021). *Global report on ageism: Executive summary*. World Health Organization. <https://apps.who.int/iris/handle/10665/340205>
- Zacher, H., Rosing, K., & Frese, M. (2011). Age and leadership: The moderating role of legacy beliefs. *The Leadership Quarterly*, 22(1), 43–50. <https://doi.org/10.1016/j.leaqua.2010.12.006>
- Zacher, H., Rosing, K., Henning, T., & Frese, M. (2011). Establishing the next generation at work: Leader generativity as a moderator of the relationships between leader age, leader-member exchange, and leadership success. *Psychology and Aging*, 26(1), 241–252. <https://doi.org/10.1037/a0021429>
- Zhang, T., & North, M. S. (2020). What goes down when advice goes up: Younger advisers underestimate their impact. *Personality and Social Psychology Bulletin*, 46(10), 1444–1460. <https://doi.org/10.1177/0146167220905221>