

Breaking the retirement rules:

How age norm violations shape perceptions of older adults pre- and post-retirement age

M. Clara P. de Paula Couto¹, Maria Wirth¹, Elisabeth Hefner¹, Michelle Thomas¹, Tim Kuball²,
& Klaus Rothermund¹

1. Department of Psychology, Friedrich Schiller University Jena, Jena, Germany

2. Department of Psychology, Chemnitz University of Technology, Chemnitz, Germany

Psychology & Aging, in press

Author Note

This work was supported by the Deutsche Forschungsgemeinschaft, German Research Foundation (DFG) to Rothermund (grant numbers: RO 1272/15-1)

We have no known conflict of interest to disclose.

Correspondence concerning this article should be addressed to Clara de Paula Couto, Department of Psychology, Friedrich Schiller University Jena, Am Steiger 3/1, 07743 Jena, Germany. E-mail: clara.depaulacouto@uni-jena.de

De-identified data and analyses codes are available at
https://osf.io/gah2z/?view_only=b69645e4a5f6424590ed85c8000bdd32

Pre-registration study 1 and study 2: <https://aspredicted.org/tm7g5b.pdf> (de-identified pre-registration is attached to the submission as the one available via the link contains the name of the authors).

Abstract

Societal expectations shape how we perceive aging workers, prescribing active engagement before retirement and disengagement afterward. In two pre-registered studies, we examined evaluations of fictitious older worker targets who either adhered to or violated two age-related norms in the work domain: active aging (e.g., continuing to contribute actively to working life) and altruistic disengagement (e.g., refraining from further professional engagement). Targets were either pre-retirement age (Study 1, $N = 288$) or post-retirement age (Study 2, $N = 206$) and were evaluated on warmth and social status by raters from the same or a different age group. Study 1 showed that *pre-retirement* targets were evaluated more positively when adhering to (vs. violating) the active aging norm, with evaluative differences primarily affecting perceptions of social status rather than warmth, regardless of rater age. Study 2 found that *post-retirement* targets were evaluated more positively when adhering to (vs. violating) the altruistic disengagement norm, with evaluative differences mostly affecting perceptions of warmth rather than social status. This effect was stronger among raters aged 50–65 years and currently working than among raters aged 66 and older who were retired. Together, these findings demonstrate that retirement age significantly influences which of the two prescriptive views of aging, active aging or altruistic disengagement, is applied when evaluating older adults in the work domain. The differential impact on perceptions of social status versus warmth highlights the importance of considering distinct social perception dimensions in age-related evaluations, as their relevance appears to shift depending on retirement status.

Public Significance Statement

What happens when older adults pre- and post-retirement age break the “rules” of retirement? This research reveals how societal expectations shape how we perceive aging

workers, valuing activity before retirement and withdrawal afterward. Those who follow these age norms are judged more favorably, influencing whether they are seen as high-status or warm, respectively. Recognizing these shifting perceptions is key to tackling ageism and promoting fairer, more inclusive treatment of older adults in the workplace and beyond.

Keywords: prescriptive views of aging, social perception, active aging, altruistic disengagement, retirement

Number of words: 6,904

Breaking the retirement rules:

How age norm violations shape perceptions of older adults pre- and post-retirement age

Age-related life transitions serve as important markers that shape societal expectations about age-appropriate behavior (de Paula Couto & Rothermund, 2022). In the context of work, key transitions, such as entering the workforce, advancing in one's career, and retiring, are strongly linked to specific age norms. For instance, younger adults are generally expected to begin working after graduation and focus on learning and growth; middle-aged adults are expected to advance and establish well-consolidated careers; and older workers are typically expected to prepare for retirement (e.g., de Paula Couto et al., 2022a). Deviating from these age-based expectations can lead to social backlash, including perceptions of reduced warmth, competence, or lower social status (e.g., North & Fiske, 2013a).

Statutory retirement age defines when individuals are expected to retire. In Germany, mandatory retirement age is set at 67 for those born in 1964 or later and gradually rises from age 65 to the age of 67 for earlier cohorts (Bundesministerium für Arbeit und Soziales, n.d.). While there is no legal prohibition on working beyond this age, many employment contracts and collective agreements include clauses that automatically terminate at the statutory retirement threshold (Börsch-Supan et al., 2019; Dudel et al., 2023), making the statutory retirement age a salient social and institutional norm. Yet, retirement timing in Germany is far from uniform: while some opt for early retirement due to financial, health, or labor market factors (Bundesbank, 2025), a growing share of individuals continues working beyond the statutory retirement age (Trahms & Vicari, 2025).

With rising life expectancy and the retirement of the baby boomer generation, pension systems face increasing strain, while labor markets experience growing shortages. In response, many European countries have raised the retirement age and adopted active aging policies to

extend working lives (Hofäcker & Naumann, 2015; Zacher et al., 2018). While reaching statutory retirement age makes individuals eligible to receive a pension, it often does not prohibit continued participation in the workforce. In fact, many are encouraged through various incentives to remain in the workforce (e.g., “Aktivrente”, Deutsche Rentenversicherung, 2026).

In Germany, retirement patterns have changed significantly. A recent report (Trahms & Vicari, 2025; see also Hofäcker & Naumann, 2015) shows that about 38% of individuals past retirement age continue working. This trend is influenced by gender (men are more likely to continue working), education (higher education correlates with extended employment), and health (good health supports it). Beyond financial need, older adults often cite enjoyment, purpose, social connection, and a desire to maintain status and identity as reasons for staying employed (Silke et al., 2018).

This scenario raises important questions about whether retirement represents not only a significant personal transition but also a shift in how society perceives older adults. Adults under 65 are generally expected to remain in the workforce, consistent with active aging ideals. However, once they reach statutory retirement age, social expectations can diverge. While active aging promotes continued work, ideals of altruistic disengagement suggest older adults should make way for younger generations (de Paula Couto & Rothermund, 2022; North & Fiske, 2013b). As a result, decisions to retire early or to continue working beyond the statutory age can carry different social implications, influenced by the age-based expectations held by others as well as oneself.

Prescriptive Views of Aging in the Work Domain

Prescriptive views of aging (PVoA) refer to normative, age-based expectations about how older adults *should* behave, in contrast to descriptive views, which concern how older individuals supposedly *are* (de Paula Couto & Rothermund, 2022). These prescriptive norms are

directed not only at older adults as a social group but also at individuals as they age, shaping how they are evaluated based on their conformity to age-related roles and socially sanctioned behaviors. When older adults act in accordance with these expectations, they are generally evaluated more positively, whereas violations tend to elicit negative social and interpersonal responses (North & Fiske, 2013a). Importantly, PVoA do not obligate individuals to conform; people are free to make their own choices. What is theoretically relevant is not whether any given personal choice is legitimate, but rather how such behavior is evaluated by others and what social consequences follow.

Two dominant PVoA are frequently discussed in the literature: active aging and altruistic disengagement (e.g., de Paula Couto & Rothermund, 2022). *Active aging* emphasizes the expectation that older adults should remain physically, mentally, and socially engaged, preserving their health, autonomy, and productivity for as long as possible (e.g., Katz, 2000; Pavlova & Silbereisen, 2012). This view aligns with contemporary discourses and policy initiatives that promote aging as an extended period of activity, independence, and self-reliance (World Health Organization [WHO], 2002). In contrast, *altruistic disengagement* prescribes that older adults should gradually withdraw from positions of influence, responsibility, and resource consumption (e.g., North & Fiske, 2013b). This perspective reflects an intergenerational contract, wherein older individuals are expected to act in ways that serve the broader social system by withdrawing from roles and opportunities to younger generations. Although altruistic disengagement can be conceptualized in terms of three subcomponents, i.e., ceding roles to younger generations (succession), reduced consumption of social resources (consumption), and adopting an age-appropriate identity (identity) as described in the Succession–Identity–Consumption (SIC) model proposed by North and Fiske (2013b), the present studies focused specifically on the *succession* component. Within the work domain, this translates into the

expectation that older adults should disengage from professional roles to create opportunities for younger generations, which is particularly relevant in the context of retirement norms and intergenerational workplace dynamics.

Recent research suggests that individuals do not uniformly endorse these age-related norms. Rather, the cognitive representation of PVoA appears to be both norm- and domain-specific (Pavlova et al., 2023; Wirth et al., 2023). Accordingly, Wirth et al. (2023) examined the interplay between the two dominant prescriptive views, active aging and altruistic disengagement, across two life domains: health and social engagement. This approach revealed four distinct norm-domain combinations, highlighting that expectations about aging can vary considerably depending on the context. For instance, active aging in the health domain emphasizes that older adults should take responsibility for maintaining their mental and physical well-being. In contrast, altruistic disengagement in this domain reflects the expectation that they should limit their use of socially shared healthcare resources and avoid behaviors that might compromise their health. Within the social domain, active aging involves continued participation in civic and social life, while altruistic disengagement corresponds to expectations that older adults should step back from influential social roles and focus on their private lives.

However, one important life domain that has received limited attention in research on age norms is the *work domain*. While altruistic disengagement in the social domain includes expectations for older adults to step back from roles of responsibility, it does not fully capture the specific normative expectations associated with employment and retirement (e.g., older workers are expected to refrain from further professional development, due to the perception that investing resources in their career growth may reduce opportunities available to younger workers). Similarly, the norm of active aging in the social domain overlooks prescriptions that directly pertain to older adults' participation in the workforce (e.g., older workers are expected to

continually update their technological skills). To address this gap, the present research examines PVoA in the work domain across two studies, focusing on both pre- and post-retirement age. Specifically, it investigates the consequences of adhering to versus violating work-related age norms, thereby extending the understanding of PVoA into a domain with significant personal and societal implications.

Social Consequences of Violating Prescriptive Views of Aging

PVoA carry a strong normative component: They delineate which behaviors are deemed appropriate for certain groups and punish deviations through social sanctions or backlash. In this way, they serve a social control function, regulating behavior and maintaining intergroup boundaries (de Paula Couto & Rothermund, 2022; North & Fiske, 2013a). Previous studies have examined the consequences of age norm adherence and violation regarding the altruistic disengagement age norm. For example, North and Fiske (2013a), in a series of studies, demonstrated that backlash arises when individuals fail to “act their age”. In other words, older adults are sanctioned for violating socially prescribed expectations based on age. Using both vignettes and simulated behavioral interactions, they found that adherence to age norms is socially rewarded, while violations result in negative evaluations. Specifically, norm-adhering targets were perceived as warmer, more competent, and more socially approachable than those who deviated from age-based expectations. Notably, the evaluative gap between targets who violated versus adhered to age norms was descriptively larger for warmth than for competence ratings, especially for succession and consumption norms and for older adult targets, suggesting that older adults who violate age norms carry a stronger social penalty in terms of warmth, a penalty that was primarily driven by younger raters, consistent with an intergenerational tension perspective (North & Fiske, 2013a).

Social perceptions related to adherence to and violation of PVoA in the workplace have been examined by Hanrahan et al. (2023) using vignettes. Their study focused on violations of identity age norms, which prescribe that older adults should behave their age rather than attempting to appear younger. The work context is particularly relevant for examining identity-based age norms, as these may help younger workers maintain a sense of being current and distinct from older colleagues. In line with previous findings, results showed that targets who violated the identity norm in the workplace were perceived more negatively in terms of warmth, competence, and desirability for interaction. Again, the evaluative gap between norm-violating and norm-adhering targets was descriptively larger for warmth than for competence ratings, that being especially the case for older worker targets. Notably, however, no moderation by rater age was found, failing to replicate the intergenerational tension effect reported by North and Fiske (2013a) for identity norm violations. The reasons for this discrepancy remain unclear, and further research is needed to determine under what conditions rater age moderates evaluative responses to age-norm violations. Taken together, North and Fiske's (2013a) as well as Hanrahan et al.'s (2023) findings highlight the normative force of PVoA and their role in regulating behavior through social approval and punishment. Both studies share some common features. For example, adherence to (vs. violation of) PVoA was manipulated between participants, which limits conclusions about how individuals evaluate both adherence and violation within the same evaluative context. Social perception in relation to adherence and violation of prescriptive age stereotypes were assessed via ratings of warmth and competence (Fiske et al., 2002). Additionally, in both studies, the vignettes were held constant across target age groups, with norm adherence versus violation as the only manipulation. While this ensures experimental control, it may limit the ecological validity of the scenarios for different target ages.

In the current studies, we investigate how norm adherence and violation in the work domain affect social perception, focusing on the dimensions of warmth and social status. While competence is often assessed alongside warmth (e.g., North & Fiske, 2013a), we used perceived social status instead for several reasons. Although status and competence are highly correlated ($r = .77-.94$; Fiske et al., 2007), we theorize that status is more salient in workplace contexts, as it is closely tied to occupational role and position (Hughes et al., 2024). In addition, perceived social status is an inherently relational construct: the status ladder locates the target relative to others within a social hierarchy. This differentiates it from competence ratings, which capture attributed ability-related characteristics. In the workplace context, this relational aspect seems especially relevant because judgments about age groups are embedded in occupational hierarchies, role expectations, recognition, and perceived social or instrumental value.

Moreover, competence is an internal trait that is difficult to assess without direct observation of actual performance in the context of brief vignettes, where observers lack access to information about the target's job performance. Perceived social status offers a more ecologically valid alternative, as it is socially constructed and directly inferable from observable cues such as occupational role and norm-relevant behavior.

While status is theoretically framed as a core dimension of social perception (Fiske et al., 2002), it also has a strong age-related component: Social status tends to systematically shift across the lifespan in response to age-based norms and societal expectations. Midlife is often associated with peak social standing and stability, whereas later adulthood is more commonly marked by efforts to maintain status and prevent its decline (Ebner et al., 2006; Weiss & Kuball, 2025). Beyond professional position, social status signals an individual's instrumental social value and capacity to mobilize resources in pursuit of collective or personal goals (Anderson, 2015; Heinrich & Gil-White, 2001). For older employees, who may be stereotyped as less

competent, perceived status offers a more structurally embedded, ecologically valid, and age-sensitive indicator of how norm adherence and violation are interpreted in work-related settings.

Overview of the Current Research

The present research comprises two studies that examine how adherence to and violation of PVoA influence social perception of older adults in the work domain. Both studies use a fully within-person design, allowing each participant to evaluate targets who either conform to or violate age-based expectations. This design enables direct comparisons of norm adherence vs. violation within individuals, providing more nuanced insights into relative social evaluations, an advancement over previous studies, which relied on between-subjects manipulations (e.g., North & Fiske, 2013a; Hanrahan et al., 2023). Furthermore, the vignettes developed for the current study were designed to reflect realistic work-domain scenarios for both pre- and post-retirement targets, aiming for greater ecological validity than the more standardized vignettes used in prior work.

Study 1 focuses on targets of *pre-retirement age* (50-65 years old), who are expected to remain active in the labor market. In this context, early retirement or intentions to step back from demanding roles may be viewed as a violation of the active aging norm. Study 2, in contrast, examines perceptions of targets *beyond the statutory retirement age* (66 years and older), a life phase in which altruistic disengagement gains salience and is increasingly endorsed, also by older people themselves (de Paula Couto et al., 2022b; Ludwig et al., 2024). The focus on active aging norms in Study 1 and altruistic disengagement norms in Study 2 was informed by two pilot studies (see Supplemental Materials), which identified these as the most salient norms for each respective age range. These pilot studies also provided preliminary empirical evidence that norm violations by pre-retirement targets are more negatively evaluated in terms of social status than warmth, whereas the opposite pattern emerges for post-retirement targets.

Our samples include raters who are either within the same age range as the targets (same-age raters) or in a different age range (cross-age raters), which allows us to examine both intergenerational tensions and self-relevance effects. Intergenerational tensions are expected to emerge mainly for pre-retirement raters when evaluating post-retirement targets, who may penalize post-retirement targets for violating altruistic disengagement norms by remaining in the workforce (North & Fiske, 2013a). In relation to self-relevance effects, in addition to their social control function, PVoA may also serve as guiding principles shaping aging individuals' own experiences (de Paula Couto & Rothermund, 2022). When evaluating same-age peers, people may project their personal work-related trajectories as normative: Older workers still in the workforce may view early retirement as inconsistent with their own paths, while those who have already retired may endorse PVoA for others based on what they themselves have done or consider appropriate. Taken together, the two studies aim to deepen our understanding of how adherence to versus violation of PVoA influences different dimensions of social evaluations in the work domain, either before or after retirement.

In the two presented studies, we test the following hypotheses:

H1: Older worker targets whose behavior violates PVoA within the work domain will be perceived more negatively compared to those whose behavior conforms with these norms, as indicated by a main effect of target behavior.

H2: The effect of target behavior (i.e., adherence vs. violation) is expected to vary depending on the evaluative dimension (warmth vs. social status). In Study 1, compared to pre-retirement adult targets who adhere to active aging norms, those who violate these norms are expected to be perceived more negatively in terms of social status but less so on warmth. In Study 2, compared to post-retirement adult targets who adhere to altruistic disengagement norms, those who violate these norms are expected to be perceived more negatively in terms

of warmth but less so on social status. Thus, H2 predicts an interaction between target behavior and the evaluative dimension.

H3: The effects predicted in H1 and H2 may further vary depending on whether the rater belongs to the same or a different age group as the target. We test whether these effects are stronger when rater and target age match, reflecting a self-relevance effect. We do not propose a directional hypothesis for H3; however, self-relevance may lead to either harsher or more forgiving judgments of norm violators.

We additionally explore whether cross-age raters show distinct patterns consistent with intergenerational tensions. However, in Study 1, where targets are older workers of pre-retirement age, intergenerational tensions among retired cross-age raters are less plausible given the absence of resource competition. Unlike Study 1, however, in Study 2, we expect cross-age effects to be directionally meaningful: Middle-aged raters (50–65 years old) may perceive older worker targets who violate altruistic disengagement norms by remaining in the workforce as blocking their own career opportunities and may therefore show stronger norm-violation effects than same-age raters.

Study 1

The aim of Study 1 was to examine attitudes toward behaviors that either conform to or deviate from prescriptive views of aging (PVoA) in the workplace. The study specifically focused on age-related norms relevant to older employees, defined here as individuals aged 50 to 65 who are currently employed. We investigated active aging as it is a prominent type of PVoA in the work context, emphasizing continued engagement, productivity, and motivation at work.

Method

Transparency and Openness

We report how we determined our sample size and describe all data exclusions, manipulations, and measures that were collected, as described in the pre-registration for Study 1 and 2. Deidentified data and analysis code are available for both studies (https://osf.io/gah2z/?view_only=b69645e4a5f6424590ed85c8000bdd32, blinded for Review, 2025). Ethical approval was granted by (blinded for Review). Before data collection, study design, hypotheses, and analytic plan were pre-registered (blinded for review).

Participants

An a priori power analysis indicated that a minimum of 180 participants was required to detect a small effect ($f = .10$) with sufficient power ($1 - \beta = .90$). We assumed a small effect size, informed by a previous pilot study and the limited availability of prior research testing our hypotheses. The initial sample consisted of 304 native German-speaking adults. After applying exclusion criteria, 16 participants were excluded due to (1) careless responding, indicated by homogeneous answers on the dependent variables ($n = 12$), (2) extreme outlier values on the dependent variables ($n = 2$), and (3) retired participants who also reported being currently employed ($n = 2$), resulting in a final sample of 288 participants. Participants were divided into two rater age groups: currently employed, middle-aged adults ($n = 144$, aged 50–65 years; $M_{age} = 56.70$ years, 49.30% women) and retired older adults ($n = 144$, aged 66–88 years; $M_{age} = 70.80$ years, 48.60% women). Background characteristics of both included and excluded participants are presented in Table 1. Participants were recruited via Horizoom (<https://lp.horizoom-panel.de/>) and received monetary compensation. Data collection took place in January 2026.

Design

Study 1 employed a 2 (Target Behavior: adherence vs. violation, within) x 2 (Evaluative Dimension: warmth vs. social status, within) x 2 (Rater Age: same vs. different age group as target, between) design.

Measures and Materials

Target Profiles

The targets were male older employee protagonists who described themselves as displaying behavior that either adhered to or violated the norms of active aging in the work domain. We constructed target profiles that varied along the following dimensions: age (ranging from 59 to 60 years), name (reflecting common German names from mid 1960s), and job type (HR manager and business consultant¹). There was one profile for each behavior type (i.e., adherence and violation), resulting in a total of two distinct target profiles evaluated by participants. To ensure that target evaluations were not confounded by the job type, the two jobs described in the target profiles were counterbalanced with respect to target behavior, such that half of the participants saw an HR manager paired with adherence and a business consultant paired with violation, while the other half saw the reverse (see Appendix A for the detailed description of Pre-Retirement Target Profiles). Presentation order was counterbalanced.

Target Profile Evaluation

Participants' evaluations of the target profiles were measured using two separate attitude scales, reflecting distinct components of attitude that serve as reliable dimensions of social judgment: warmth and perceived social status (Fiske et al., 2007).

Feeling Thermometer. Given its ease of use and demonstrated reliability and validity (Alwin, 1997), warmth ratings were collected using a feeling thermometer. Participants were

asked to indicate how they felt toward the presented target by adjusting a slider resembling a colorful thermometer, ranging from 1 (cold) to 11 (warm).

Social Status Ladder. Perceived social status was assessed using an adapted version of the MacArthur Scale of Subjective Social Status (Adler et al., 2000; Robertson & Weiss, 2017). Participants were shown an image of a ladder and were told the following: *“Think of this ladder as representing where people stand in society. At the top of the ladder are the people who are best off, who are most respected in society and looked up to in society. At the bottom of the ladder are the people who are the worst off, who are least respected and looked down on in society. Where would you place (target’s name) on this ladder?”* Participants were asked to indicate the target’s perceived social status by selecting a position on the ladder ranging from 1 (low status) to 11 (high status).

Procedure

Participants completed the study online using a personal computer via the SoSci Survey platform (<https://www.soscisurvey.de/>). At the beginning of the study, they received a brief introduction outlining the study goals and were then asked to provide written informed consent.

Following this, participants completed a short sociodemographic questionnaire. Before proceeding to the target profile evaluations, participants read the following instruction: *“You will now be presented with some brief profiles. Please read each one carefully. After each profile, we ask you to provide a brief assessment based on the information given. There are no right or wrong answers — we appreciate your honest personal opinion.”* Each target profile appeared at the top of a page, with the evaluation measures (i.e., the feeling thermometer and the social status ladder) presented directly below it on the same page. On average, participants took approximately 3 minutes to complete the study.

Analytic Strategy

A 2 x 2 x 2 mixed-design ANOVA using the three factors of the design (Target Behavior and Evaluative Dimension, within; Rater Age, between) was carried out. Partial eta-squared (η^2_p) was reported as a measure of effect size, using the effectsize package (Ben-Schachar et al., 2020). For statistically significant main effects and interactions, estimated marginal means were obtained using the emmeans package (Lenth, 2025), and pairwise comparisons were conducted to examine the significant main effects and interactions. The Tukey method was applied to adjust for multiple comparisons. Analyses were conducted using R version 4.5.2 (R Core Team, 2025).

Results

Confirming H2, a significant Target Behavior by Evaluative Dimension interaction emerged, $F(1, 286) = 12.41, p < .001, \eta^2_p = .042$. This two-way interaction indicates that the effect of Target Behavior on evaluations differed depending on whether participants rated social status or warmth. To explore the significant interaction between Target Behavior and Evaluative Dimension, pairwise comparisons of estimated marginal means were conducted. This analysis indicated that the interaction between Target Behavior and Evaluative Dimension was driven by social status ratings (see Figure 1). Specifically, adherence behaviors were rated significantly higher in status ($M = 8.53, SE = 0.09$) than violation behaviors ($M = 7.90, SE = 0.10$), $t(286) = 6.22, p < .001$. In contrast, for warmth ratings, adherence ($M = 7.73, SE = 0.13$) and violation behaviors ($M = 7.66, SE = 0.13$) were rated similarly, $t(286) = 0.42, p = .673$. These results indicate that the effect of Target Behavior on evaluations depends on the Evaluative Dimension, emerging strongly in judgments of social status, but not in judgments of warmth.

Main effects of Target Behavior, $F(1, 286) = 10.25, p = .002, \eta^2_p = .035$, and Evaluation Dimension, $F(1, 286) = 33.23, p < .001, \eta^2_p = .104$ were observed (see Table 2). As hypothesized (H1), targets who violated active aging norms were evaluated less positively ($M = 7.78, SE =$

0.10) than targets who adhered to them ($M = 8.13$, $SE = 0.10$). Overall, social status ratings ($M = 8.22$, $SE = 0.08$) were higher than warmth ratings ($M = 7.69$, $SE = 0.10$).

Concerning Rater Age (H3), neither its main effect nor any of its interactions with Target Behavior and Evaluative Dimension were significant (see Table 2).

To rule out occupational confounds and comparison artifacts, we conducted additional position analyses; results were consistent with the main findings (see Footnote 3).

Discussion

Replicating previous findings that violation of age-based expectations is punished (e.g., North & Fiske, 2013a), our findings showed that older workers who violate PVoA in the work domain are perceived less positively than those who adhered to those age norms. Hence, intentions to step back from demanding roles or retire before the mandatory age are met with social disapproval.

Extending previous findings, Study 1 suggests that social sanctions for norm violation are not limited to succession norms in the workplace (e.g., Hanrahan et al., 2023) but extend to active aging norms, indicating that professional engagement remains a key social expectation for older workers in pre-retirement age.

In terms of social evaluation, perceived social status emerged as the more relevant evaluative dimension for older workers at pre-retirement age. Warmth judgments, in contrast, did not play a role in defining social perceptions of older workers. This reflects broader age-related shifts in the basis of social value and identity. As individuals approach later adulthood, ascribed social status may decline, and traditional status markers of midlife, such as occupational position, tend to lose salience (Weiss & Kuball, 2025). However, as our findings showed, older adults before retirement are positively evaluated when they actively maintain their standing and productivity status, thereby countering the stereotype of inevitable decline.

In Study 2, we examined the role of the altruistic disengagement norm among older workers at the *post-retirement age*. Previous research has shown that despite its restrictive function, endorsement of altruistic disengagement increases and gains salience around retirement age, whereas endorsement of active aging tends to plateau around the age of 60 (de Paula Couto et al., 2022b; Ludwig et al., 2024). Importantly, Ludwig et al. (2024) found that while being retired predicts stronger endorsement of altruistic disengagement, it is not associated with increased support for active aging. Building on these findings and guided by a pilot study indicating the salience of altruistic disengagement norms in post-retirement age (see Supplemental Materials), Study 2 examined social perceptions of targets who adhere to or violate these norms past the statutory retirement age.

Study 2

As in Study 1, the aim of Study 2 was to investigate attitudes toward behaviors that either align with or diverge from PVoA. However, Study 2 introduced some key changes. Whereas Study 1 focused broadly on age norms relevant to older employees, that is, active aging norms, this second study examined perceptions of older employees beyond the mandatory retirement age (i.e., 65 years), focusing on altruistic disengagement norms, conceptualized in line with succession-related norms (North & Fiske, 2013b).

Method

Participants

The initial sample consisted of 220 native German-speaking adults. After applying exclusion criteria, 14 participants were excluded due to (1) careless responding, indicated by homogeneous answers on the dependent variables ($n = 8$), (2) extreme outlier values on the dependent variables ($n = 4$), and (3) retired participants who also reported being currently employed ($n = 2$), resulting in a final sample of 206 participants. Participants were divided into

two rater age groups: currently employed, middle-aged adults ($n = 102$, aged 50–65 years; $M_{age} = 57.00$ years, 49.00% women) and retired older adults ($n = 104$, aged 66–88 years; $M_{age} = 70.90$ years, 52.90% women). Background characteristics of both included and excluded participants are presented in Table 3. The a priori power analysis stated in Study 1 also applied to Study 2. As in Study 1, participants were recruited via Horizoom (<https://lp.horizoom-panel.de/>) and received monetary compensation. Data collection took place in January 2026.

Design

Study 2 employed the same design as in Study 1, that is, a 2 (Target Behavior: adherence vs. violation, within) x 2 (Evaluative Dimension: warmth vs. social status, within) x 2 (Rater Age: same vs. different age group as target, between) design.

Measures and Materials

Target Profiles

The targets were male older protagonists beyond retirement age (i.e., 65 years) who described themselves as displaying behavior that either adhered to or violated the norms of altruistic disengagement in the work domain. As in Study 1, we constructed target profiles that varied along the following dimensions: age (ranging from 66 to 68 years), name (reflecting common German names from the 1950s and 1960s), and job type (editor and bank clerk²). There was one profile for each behavior type (i.e., adherence and violation), resulting in a total of two distinct target profiles evaluated by participants. As in Study 1, to ensure that target evaluations were not confounded by the job type, the two jobs described in the target profiles were counterbalanced with respect to target behavior, such that half of the participants saw editor paired with adherence and bank clerk paired with violation, while the other half saw the reverse (see Appendix B for the detailed description of Post-Retirement Target Profiles). Presentation order was counterbalanced.

Target Profile Evaluation

Participants' evaluations of the target profiles were measured using the same scales as in Study 1: A feeling thermometer for warmth and a social status ladder for social status.

Procedure

Participants completed the study online using a personal computer via the SoSci Survey platform (<https://www.soscisurvey.de/>) following the exact procedure as in Study 1. On average, participants took approximately 3 minutes to complete the study.

Analytic Strategy

Study 2 employed the same data-analytic strategy as Study 1, including the mixed-design ANOVA and follow-up analyses.

Results

Confirming H2, a significant Target Behavior by Evaluative Dimension interaction emerged, $F(1, 204) = 46.24, p < .001, \eta^2_p = .185$. This two-way interaction indicates that the effect of Target Behavior on evaluations differed depending on whether participants rated social status or warmth. To explore the significant interaction between Target Behavior and Evaluative Dimension, pairwise comparisons of estimated marginal means were conducted. This analysis indicated that the interaction between Target Behavior and Evaluative Dimension was driven by warmth ratings (see Figure 2). Specifically, adherence behaviors were rated significantly higher in warmth ($M = 8.47, SE = 0.13$) than violation behaviors ($M = 7.04, SE = 0.15$), $t(204) = 7.62, p < .001$. In contrast, for social status ratings, adherence ($M = 8.32, SE = 0.10$) and violation ($M = 8.11, SE = 0.10$) were rated similarly, $t(204) = 1.70, p = .090$. These results indicate that the effect of Target Behavior on evaluations depends on the Evaluative Dimension, emerging strongly in judgments of warmth, but not in judgments of social status.

Main effects of Target Behavior, $F(1, 204) = 39.17, p < .001, \eta^2_p = .161$, and Evaluative Dimension, $F(1, 204) = 19.45, p < .001, \eta^2_p = .087$ were observed (see Table 4). As hypothesized (H1), targets who violated altruistic disengagement norms were evaluated less positively ($M = 7.58, SE = 0.11$) than targets who adhered to them ($M = 8.39, SE = 0.09$). Overall, social status ratings ($M = 8.21, SE = 0.08$) were higher than warmth ratings ($M = 7.76, SE = 0.11$).

As for Rater Age, its main effect was not significant, nor was its interaction with Evaluative Dimension (see Table 4). In line with H3, two interactions were, however, significant: the Rater Age by Target Behavior interaction, $F(1, 204) = 4.22, p = .041, \eta^2_p = .020$, and the three-way interaction of Rater Age by Target Behavior by Evaluative Dimension, $F(1, 204) = 7.32, p = .007, \eta^2_p = .035$. The Rater Age by Target Behavior interaction indicated that the effect of Target Behavior (i.e., less positive ratings for norm-violating than for norm-adhering targets) was significant for both same-age raters (66 years and older), $t(204) = 2.99, p = .003$, and different-age raters (50–65 years old), $t(204) = 5.85, p < .001$, but was stronger among raters whose age did not match that of the target.

The three-way interaction of Rater Age by Target Behavior by Evaluative Dimension revealed that the Target Behavior by Evaluative Dimension interaction was significant for warmth but not for social status, among both same-age raters (warmth: $t(204) = 3.48, p < .001$; social status: $t(204) = 1.06, p = .291$) and different-age raters (warmth: $t(204) = 7.28, p < .001$; social status: $t(204) = 1.35, p = .178$), with the pattern again being stronger for raters whose age did not match that of the target (see Figure 2).

As in Study 1, to rule out occupational confounds and comparison artifacts, we conducted additional position analyses; results were consistent with the main findings (see Footnote 3).

Discussion

Extending the findings from Study 1, Study 2 showed that older workers past retirement age who violated the norm of altruistic disengagement were evaluated less positively than those who adhered to it. This suggests that working beyond retirement age is perceived as a socially undesirable behavior. Unlike Study 1, where social status emerged as the central evaluative dimension for older individuals still in the workforce, Study 2 revealed that the focus of social evaluations changes across the life course. Specifically, for older individuals beyond retirement age, evaluative differences emerged for perceptions of warmth rather than status, whereas for targets before retirement age, norm-related differences emerged for status rather than for warmth. In addition, Study 2 findings indicated that cross-age raters (i.e., employed middle-aged adults) showed stronger effects than same-age raters (retired older adults), a pattern consistent with an intergenerational tension perspective. This suggested that older workers who remain in the work force beyond retirement age, thereby violating altruistic disengagement norms, may be perceived as blocking career opportunities for those still actively employed (North & Fiske, 2013a).

Social role theory (e.g., Eagly & Wood, 2012) provides a useful framework for interpreting these findings, as it posits that the roles people occupy shape how they are perceived and evaluated. As individuals age and exit the workforce, they transition from the role of worker to that of retiree, a shift that often entails a loss of social status. At the same time, warmth becomes a more central component of both identity and social value. This aligns with the Stereotype Content Model (Fiske et al., 2002), which suggests that older adults are commonly stereotyped as high in warmth but low in competence or status (Cuddy & Fiske, 2002). While this shift may reflect ageist assumptions, it also points to a transformation in the sources of social value available to older adults. In non-work domains, such as family and community, attributes like warmth, wisdom, and prosocial behavior become essential for maintaining influence and

earning respect. As formal status declines, being perceived as warm can facilitate continued social integration, particularly in roles that emphasize generosity, mentorship, and emotional support. This pattern is also consistent with previous research showing that older adults who violate succession norms are more strongly penalized in terms of warmth than competence (North & Fiske, 2013a).

General Discussion

In two studies, we replicated previous findings demonstrating that violations of prescriptive views of aging (PVoA) are associated with negative social perceptions. Hence, our findings further support the notion that PVoA serve a social function, incentivizing adherence to and sanctioning deviations from age norms, thus shaping the behavior of older adults (e.g., Wirth et al., 2025, in press). Moreover, we extend prior research by showing that the adverse effects of age norm violations are contingent on both life stage and the specific type of PVoA involved. The salience of active aging norms was evident in pre-retirement age, while norms of altruistic disengagement became prominent after passing statutory retirement age. Accordingly, individuals approaching retirement are still expected to remain active and productive, whereas those who have passed statutory retirement age are expected to altruistically disengage from work-related roles. Failure to conform to these norms, that is, opting for early retirement or deciding to continue working after passing statutory retirement age, leads to negative perceptions, underscoring the role of PVoA in structuring the aging experience.

These findings align with the idea that societies organize time in ways that create age-related expectations for behavior. As already described by Neugarten et al. (1965), society's timelines, or social clocks, prescribe when individuals are expected to achieve key life milestones, such as starting a career or retiring (see Heckhausen, 1990; Mayer, 2004). The assumption is that there is an ideal pace or at least a socially acceptable time for these transitions.

Deviating from these normative timelines can result in social sanctions, including disapproval or diminished status. For instance, retiring “on time” is typically viewed as appropriate and responsible. In contrast, early retirement may prompt questions relating to health (“Why so early? Are there underlying health issues?”) or personality and motivation (“Why aren’t you willing to contribute? Doesn’t that attitude reveal a lack of solidarity or even laziness?”). Conversely, late retirement may drive criticism, often framed as impeding opportunities for younger generations (e.g., “Why are they still working? They should make room for others.”). These mostly negative evaluations reflect the enduring influence of socially constructed age norms in guiding behavior and influencing perceptions across the adult life course. Furthermore, broader cultural narratives often frame late retirement as burdensome, with messages such as “Don’t be a burden on the system,” reinforcing normative timelines for disengagement from the workforce.

In terms of social evaluation, perceived social status emerged as the more salient evaluative dimension for older workers before retirement age, whereas warmth was central in the evaluation of individuals beyond retirement age. These findings suggest that social perceptions are closely aligned with normative life-course timelines, with the criteria for social value shifting depending on where individuals are situated in the life course. Perceived status holds particular relevance for middle-aged and older adults who are still active in the workforce, as it reflects career advancement and professional competence. In midlife, especially, occupational position serves as a central status cue, and subjective social status becomes an increasingly important basis of social value. By contrast, status is less central in early adulthood, when careers are only beginning, and in later life, after retirement, when occupational markers lose their significance (Weiss & Kuball, 2025). In contrast, older adults are often stereotyped as high in warmth but low in competence or status (Cuddy & Fiske, 2002; Fiske et al., 2002), and being perceived as warm and friendly may become increasingly important for maintaining social value, integration, and

respect outside of work-related contexts. These findings replicate the results of two pilot studies that were previously carried out focusing on PVoA adherence and violation in older worker targets in pre- and post-retirement (see Supplemental Materials).

It is also important to note that we examined social perceptions as evaluated by same-age and cross-age raters. For pre-retirement targets, rater age did not moderate these perceptions, suggesting that neither personal relevance nor intergenerational tensions amplified normative judgments in this context. While we acknowledge that this null finding should be interpreted with caution (e.g., three-way interactions may be underpowered, and retired older adults may no longer experience the workplace resource competition that typically drives intergenerational tensions), the consistency of normative judgments across rater age groups is at least compatible with the interpretation that these norms reflect a broadly internalized standard rather than one that varies across generations. Future research with larger samples and age groups more directly engaged in resource competition would be needed to more definitively address this question.

In contrast, for post-retirement targets who violated altruistic disengagement norms, rater age did moderate social perceptions, with effects being stronger among cross-age raters (working middle-aged adults). This pattern is consistent with an intergenerational tension perspective, suggesting that violations of altruistic disengagement norms among older workers beyond the retirement age, such as failing to disengage and make way for younger generations, are judged more harshly by those in the age group most directly affected, namely, employed adults who have not yet retired. This aligns with previous research showing that norm violations carry heightened social costs when they are perceived to impinge on the opportunities or standing of a different generational cohort (e.g., North & Fiske, 2013a, 2013b). The effect was also significant among same-age raters (66 and older, retired), though weaker. Retired older adults might be expected to endorse altruistic disengagement more strongly because they have acted on it themselves (i.e.,

retired on time), a self-relevance effect that has been shown empirically (e.g., de Paula Couto et al., 2022a; de Paula Couto et al., 2022b; Ludwig et al., 2024), which would predict larger rather than smaller effects in this rater group. Our findings of an opposite pattern suggest that a self-relevance effect might not be the primary driver of normative judgments in the work context. Instead, the asymmetry between rater age groups may reflect differences in experienced intergenerational resource competition: for working middle-aged adults, norm violations by older employees may be perceived as a direct threat to workplace resources and opportunities, motivating stronger sanctioning. Retired older adults, no longer embedded in contexts of active resource competition, may strongly endorse the norm of altruistic disengagement while applying it less severely.

Limitations

The reported findings are based on the German context, where mandatory retirement may shape age-related expectations differently than in other countries. In countries where no mandatory retirement age exists and continued employment beyond the normative retirement age carries fewer institutional constraints, like in the US, for example, the onset of normative expectations around altruistic disengagement may occur at a later or more variable age than observed in the current studies. Hence, cultural context may influence what is considered “on-time” retirement, so cross-cultural replication is warranted.

In addition, target profiles focused on white-collar professions. However, people may be more lenient toward early retirement in physically demanding blue-collar jobs due to harsher working conditions. Similarly, expectations around altruistic disengagement may differ for highly specialized professionals or leadership positions compared to more easily transferable roles. Future research should include a wider range of occupations to explore how job type affects expectations about work engagement and retirement.

The employed within-subjects design, that is, presenting both adherence and violation target profiles, may have made the normative manipulation transparent to participants. However, we opted for a within-subjects manipulation because a between-subjects design would not allow us to examine intraindividual evaluative differences. Still, since participants were presented with only two target profiles, we believe that any potential demand effects may have been attenuated.

Conclusion

Social perceptions of older adults can restrict their retirement-related behaviors. Our findings show that before reaching retirement age, older workers are positively viewed when they follow active aging norms by staying employed. However, after reaching statutory retirement age, continued work is perceived less favorably, as it clashes with expectations of altruistic disengagement. This suggests that societal norms exert a relevant influence on how older adults are perceived, depending on the social clock that prescribes retirement at a specific age.

In terms of specific behaviors, evaluations regarding warmth and social status may shape how older workers are treated. For example, lower perceived warmth toward norm-violating older workers may translate into social exclusion and diminished social support from colleagues, which are forms of workplace marginalization. Lower perceived social status may have more structural consequences, potentially influencing decisions about task allocation, access to training and development opportunities, and inclusion in leadership roles (for a review, see de Paula Couto & Rothermund, 2019).

For employers, these findings have important implications. Among pre-retirement older workers, those who seek to reduce their work pace or engagement may be targets of negative social judgments, suggesting that organizations should foster cultures that respect individual choices around work and transitions toward retirement. Among post-retirement workers, awareness training could help colleagues and managers recognize when their evaluations are

driven by normative expectations around retirement timing rather than actual performance.

However, such training is unlikely to be sufficient on its own. Research on diversity interventions suggests that programs targeting individual bias through education and feedback tend to show limited effects unless embedded within broader organizational structures that assign clear responsibility and accountability for equitable outcomes (Kalev et al., 2006). Accordingly, combating ageism requires not only individual-level awareness but also company-wide accountability mechanisms that embed non-ageist decision-making into organizational strategy. More broadly, encouraging intergenerational contact and collaboration and reframing extended working life as expertise retention rather than norm violation may help build more inclusive workplace environments for older workers across both age groups (see Naegele et al., 2018).

References

- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy white women. *Health Psychology, 19*(6), 586–592. <https://doi.org/10.1037//0278-6133.19.6.586>
- Alwin, D. F. (1997). Feeling thermometers vs. 7-point scales. Which are better? *Sociological Methods & Research, 25*(3), 318–340. <https://doi.org/10.1177/0049124197025003003>
- Anger, S., Trahms, A., & Westermeier, C. (2018). *Erwerbstätigkeit nach dem Übergang in Altersrente: Soziale Motive überwiegen, aber auch Geld ist wichtig* [Employment after transitioning into retirement: Social motives prevail, but money also matters] (IAB-Kurzbericht Nr. 24). Institute for Employment Research (IAB).
- Ben-Shachar M, Lüdtke D, Makowski D (2020). effectsize: Estimation of effect size indices and standardized parameters. *Journal of Open Source Software, 5*(56), 2815. <https://doi.org/10.21105/joss.02815>
- Börsch-Supan, A. H., Rausch, J., & Goll, N. (2019). *Social security reforms and the changing retirement behavior in Germany* (MEA Discussion Paper No. 09-2019). SSRN. <https://doi.org/10.2139/ssrn.3642482>
- Bundesministerium für Arbeit und Soziales (n.d.). *Altersgrenze* [Age limits]. Retrieved September 8, 2025, from <https://www.bmas.de/DE/Soziales/Rente-und-Altersvorsorge/Rentenlexikon/A/altersgrenze.html>
- Cuddy, A. J. C., & Fiske, S. T. (2002). Doddering but dear: Process, content, and function in stereotyping of older persons. In T. D. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 3–26). The MIT Press.

de Paula Couto, M. C. P., & Rothermund, K. (2019). Ageism and age discrimination at the workplace – a psychological perspective. In M. E. Domsch, D. H. Ladwig, & F. C. Weber (Eds.), *Vorurteile im Arbeitsleben - Unconscious bias erkennen, vermeiden und abbauen* (pp. 57-80). Berlin: Springer.

de Paula Couto, M. C., & Rothermund, K. (2022). Prescriptive views of aging: Disengagement, activation, wisdom, and dignity as normative expectations for older people. In Y. Palgi, A. Shrira, & M. Diehl (Hrsg.), *Subjective Views of Aging* (Bd. 33, S. 59–75). Springer.
https://doi.org/10.1007/978-3-031-11073-3_4

de Paula Couto, M. C. P., Huang, T., & Rothermund, K. (2022a). Age specificity in explicit and implicit endorsement of prescriptive age stereotypes. *Frontiers in Psychology*, 13:820739.
doi.org/10.3389/fpsyg.2022.820739

de Paula Couto, M. C., Fung, H. H., Graf, S., Hess, T. M., Liou, S., Nikitin, J., & Rothermund, K. (2022b). Antecedents and consequences of endorsing prescriptive views of active aging and altruistic disengagement. *Frontiers in Psychology*, 13, 807726.
<https://doi.org/10.3389/fpsyg.2022.807726>

de Paula Couto, M. C. P., et al. (2025). Breaking the retirement rules: How age norm violations shape perceptions of older adults pre- and past-retirement age [Data set and Analytical Code]. Open Science Framework (OSF). Retrieved from
https://osf.io/gah2z/?view_only=b69645e4a5f6424590ed85c8000bdd32

Deutsche Rentenversicherung (2026, January). *Aktivrente: Keine Leistung der Rentenversicherung, sondern Steuerbonus* [Active pension: Not a benefit of the pension insurance system, but a tax bonus]. https://www.deutsche-rentenversicherung.de/SharedDocs/FAQ/aktivrente/aktivrente_liste.html

Deutsche Bundesbank (2025). *Early, standard, late: When insurees retire and how pension benefit reductions and increases could be determined* (Monthly Report, Vol. 77 No. 6).

Deutsche Bundesbank.

Dudel, C., Loichinger, E., Klüsener, S., Sulak, H., & Myrskylä, M. (2023). The Extension of late working life in Germany: Trends, inequalities, and the East-West divide. *Demography*, 60(4), 1115–1137. <https://doi.org/10.1215/00703370-10850040>

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* (pp. 458–476). Sage Publications Ltd. <https://doi.org/10.4135/9781446249222.n49>

Ebner, N. C., Freund, A. M., & Baltes, P. B. (2006). Developmental changes in personal goal orientation from young to late adulthood: From striving for gains to maintenance and prevention of losses. *Psychology and Aging*, 21(4), 664–678. <https://doi.org/10.1037/0882-7974.21.4.664>

Ebner, N. C., Riediger, M., & Lindenberger, U. (2010). FACES--a database of facial expressions in young, middle-aged, and older women and men: development and validation. *Behavior Research Methods*, 42(1), 351–362. <https://doi.org/10.3758/BRM.42.1.351> Silke et al 2018

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>

Fiske, S. T., Cuddy, A. J., & Glick, P. (2007). Universal dimensions of social cognition: warmth and competence. *Trends in Cognitive Sciences*, 11(2), 77–83. <https://doi.org/10.1016/j.tics.2006.11.005>

Hanrahan, E. A., Thomas, C. L., & Finkelstein, L. M. (2023). You're too old for that! Ageism and prescriptive stereotypes in the workplace. *Work, Aging and Retirement*, 9(2), 204–220.

<https://doi.org/10.1093/workar/waab037>

Heckhausen, J. (1990). Erwerb und Funktion normativer Vorstellungen über den Lebenslauf [Normative conceptions on the life course. Age-related timing and sequencing rules as elements of the social construction of reality]. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 31, 351-373.

Hofäcker, D., & Naumann, E. (2015). The emerging trend of work beyond retirement age in Germany. Increasing social inequality? *Zeitschrift für Gerontologie und Geriatrie*, 48(5), 473–479. <https://doi.org/10.1007/s00391-014-0669-y>

Hughes, B. T., Srivastava, S., Leszko, M., & Condon, D. M. (2024). Occupational prestige: The status component of socioeconomic status. *Collabra: Psychology*, 10(1).

<https://doi.org/10.1525/collabra.92882>

Katz, S. (2000). Busy bodies: Activity, aging, and the management of everyday life. *Journal of Aging Studies*, 14(2), 135-152. [https://doi.org/10.1016/S0890-4065\(00\)80008-0](https://doi.org/10.1016/S0890-4065(00)80008-0)

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: Psychological Sciences and Social Sciences*, 72(4), 582–592.

<https://doi.org/10.1093/geronb/gbv099>

Lenth, R. (2025). *emmeans: Estimated Marginal Means, aka Least-Squares Means*. R package version 1.11.2-80003, <https://rvlenth.github.io/emmeans/>.

Ludwig, V., Kessler, E. M., Warner, L. M., Pedroso-Chaparro, M. D. S., Rothermund, K., & de Paula Couto, M. C. P. (2024). 'Who tells me when to stay active or to leave?' Age differences

- in and predictors of endorsement of prescriptive views of aging. *Aging & Mental Health*, 28(11), 1511–1521. <https://doi.org/10.1080/13607863.2024.2354333>
- Martin, A. E., North, M. S., & Phillips, K. W. (2019). Intersectional escape: Older women elude agentic prescriptions more than older men. *Personality and Social Psychology Bulletin*, 45(3), 342–359. <https://doi.org/10.1177/0146167218784895>
- Mayer, K. U. (2004). Whose lives? How history, societies, and institutions define and shape life courses. *Research in Human Development*, 1(3), 161–187. https://doi.org/10.1207/s15427617rhd0103_3
- Naegele, L., De Tavernier, W., & Moritz, H. (2018). Work environment and the origin of ageism. In L. Ayalon & C. Tesch-Römer (Eds.), *Contemporary perspectives on ageism* (pp. 73–90). Switzerland: Springer Open. <https://doi.org/10.1007/978-3-319-73820-8>
- Neugarten, B. L., Moore, J. W., & Lowe, J. C. (1965). Age norms, age constraints, and adult socialization. *American Journal of Sociology*, 70(6), 710–717. <https://doi.org/10.1086/223965>
- North, M. S., & Fiske, S. T. (2013a). Act your (old) age: Prescriptive, ageist biases over succession, consumption, and identity. *Personality and Social Psychology Bulletin*, 39(6), 720–734. <https://doi.org/10.1177/0146167213480043>
- North, M. S., & Fiske, S. T. (2013b). A prescriptive intergenerational-tension ageism scale: succession, identity, and consumption (SIC). *Psychological Assessment*, 25(3), 706–713. <https://doi.org/10.1037/a0032367>
- Pavlova, M. K., & Silbereisen, R. K. (2012). Perceived level and appraisal of the growing expectations for active ageing among the young-old in Germany. *Research on Aging*, 34(1), 80–99. <https://doi.org/10.1177/0164027511416371>

- Pavlova, M. K., Radoš, S., Rothermund, K., & Silbereisen, R. K. (2023). Age, Individual Resources, and Perceived Expectations for Active Aging: General and Domain- Specific Effects. *International Journal of Aging & Human Development*, 97(3), 267–288. <https://doi.org/10.1177/00914150221112294>
- Ralek, A., & Dobbin, F. (2006). Best practices or best guesses? Assessing the efficacy of corporate affirmative action and diversity policies. *American Sociological Review*, 71, 589-617. <https://doi.org/10.1177/000312240607100404>
- 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>
- R Core Team. (2025). *R: A language and environment for statistical computing*. (Version 4.5.1) [Computer software]. R Foundation for Statistical Computing. <https://www.r-project.org/>
- Robertson, D. A., & Weiss, D. (2017). In the eye of the beholder: Can counter-stereotypes change perceptions of older adults’ social status? *Psychology and Aging*, 32(6), 531-542. <https://doi.org/10.1037/pag0000186>
- Rothermund, K. & Brandtstädter, J. (2003). Age stereotypes, self-views, and well-being in later life: Evaluating rival assumptions. *International Journal of Behavioral Development*, 27, 549-554. <https://doi.org/10.1080/01650250344000208>
- Shakeri, A., & North, M. S. (2025). The gender convergence effect in older age: A meta-analytic review comparing modern attitudes toward younger, middle-aged, and older women and men. *Psychological Bulletin*, 151(3), 261–284. <https://doi.org/10.1037/bul0000467>
- Singmann H, Bolker B, Westfall J, Aust F, Ben-Shachar M (2025). *afex: Analysis of Factorial Experiments*. R package version 1.5-0, <https://github.com/singmann/afex>

- Trahms, A., & Vicari, B. (2025). Employment of older people: Those who work alongside retirement rarely change professions [*Erwerbstätigkeit von Älteren: Wer neben der Altersrente arbeitet, wechselt nur selten den Beruf*] (IAB-Kurzbericht 1/2025). Institute for Employment Research (IAB). <https://doi.org/10.48720/IAB.KB.2501>
- Weiss, D., Kuball, T. (2025). Stepping up and stepping down: The dynamic nature of social status across the lifespan. *Journal of Adult Development*. <https://doi.org/10.1007/s10804-025-09532-y>
- Wirth, M., de Paula Couto, M. C. P., Ayalon, L., & Rothermund, K. (in press). Older adults are or older adults should be? Descriptive and prescriptive views of aging and their relation to self-reported behaviors in late adulthood. *Psychology & Aging*. <https://doi.org/10.1037/pag0001005>
- Wirth, M., de Paula Couto, M. C. P., Fung, H. H., Pavlova, M. K., & Rothermund, K. (2025). Normative beliefs for older adults and volunteering intentions. *Gerontology*, 71(4), 321-335. <https://doi.org/10.1159/000543917>
- Wirth, M., de Paula Couto, M. C., Pavlova, M. K., & Rothermund, K. (2023). Manipulating prescriptive views of active aging and altruistic disengagement. *Psychology and Aging*, 38(8), 854–881. <https://doi.org/10.1037/pag0000763>
- World Health Organization (2002). *Active ageing: A policy framework*. World Health Organization. <https://apps.who.int/iris/handle/10665/67215>
- Zacher, H., Kooij, D. T. A. M., & Beier, M. E. (2018). Active aging at work: Contributing factors and implications for organizations. *Organizational Dynamics*, 47(1), 37–45. <https://doi.org/10.1016/j.orgdyn.2017.08.001>

Footnotes

1. Consistent with Reeves et al. (2021), HR Manager and Business Consultants are “older-typed jobs”, i.e., senior level jobs and jobs that require large investments in training or education.
2. Consistent with Reeves et al. (2021), Bank clerk can be classified as an “older-typed job”. Editor is not listed in Reeves et al. (2021) but in line with O*NET (<https://www.onetonline.org/link/summary/27-3041.00>), Editors are classified as Job Zone Four: Considerable Preparation Needed, senior level.
3. To rule out occupational confounds, we included occupation type as a between-subjects factor in all analyses. The Target $\times$ Occupation and Target $\times$ Dimension $\times$ Occupation interactions were not significant in neither study (Study 1: $F(1, 284) = 0.12, p = .724$ and $F(1, 284) = 0.07, p = .791$; Study 2: $F(1, 202) = 0.99, p = .321$ and $F(1, 202) = 0.49, p = .486$), confirming that the observed effects are not attributable to differences in occupational expectations.

To examine whether effects were amplified by within-subjects comparison, we additionally compared ratings on the theoretically critical dimension using only first-position ratings in a between-subjects design. In Study 1, Status ratings showed the hypothesized directional pattern (Adherence: $M = 8.21$, Violation: $M = 7.95$), though the effect was not significant in this between-subjects comparison ($t(284) = 1.28, p = .200, d = 0.17$). A full position analysis including both dimensions (Warmth and Status) confirmed that the Target $\times$ Dimension interaction was borderline significant at Position 1 ($F(1, 280) = 3.86, p = .050$) and significant at Position 2 ($F(1, 280) = 7.51, p = .007$), with a consistent directional pattern across both positions. In Study 2, Warmth ratings were significantly higher for

Adherence than Violation targets at Position 1, before any comparison was possible ($t(201) = 6.00, p < .001, d = 0.89$).

Converging evidence from the two pilot studies reported in the Supplement further supports the findings obtained in the main studies. In both pilot studies, analyses were restricted to first position (Position 1) ratings to test whether the hypothesized patterns already emerge at initial exposure, thereby eliminating the possibility of within-task sequential comparison effects. For both pilot studies, we conducted mixed ANOVAs with Target (Adherence vs. Violation) as a between-subjects factor and Dimension (Warmth vs. Status) as a within-subjects factor. Pilot Study 1 additionally included PVoA Type (Activation vs. Disengagement) as a between-subjects factor, reflecting its fully randomized 2×2 design (PVoA Type $\times$ Target).

In Pilot Study 1, where Status is the theoretically critical dimension, the significant PVoA Type $\times$ Target $\times$ Dimension interaction at Position 1, $F(1, 70) = 9.76, p = .003$, was followed up using estimated marginal means (emmeans). For Warmth, a consistent Target effect emerged across both PVoA Type conditions, with Adherence being rated higher than Violation in both Activation ($M = 9.20$ vs. 8.29) and Disengagement conditions ($M = 8.76$ vs. 7.89). In contrast, Status ratings showed a marked crossover pattern: under Activation, Adherence targets were rated higher in Status than Violation targets ($M = 8.84$ vs. 6.57), whereas under Disengagement, this pattern reversed, with Violation targets receiving higher Status ratings than Adherence targets ($M = 8.50$ vs. 7.29). Thus, the three-way interaction was driven primarily by a reversal of Target effects in Status judgments across PVoA Type conditions, whereas Warmth judgments showed a more uniform Target effect. In Pilot Study 2, where Warmth is the theoretically critical dimension, the analysis of first-exposure order revealed a significant Target $\times$ Dimension interaction, $F(1, 331) = 5.22, p$

= .023. Simple effects based on estimated marginal means (averaged over Block, i.e., own- and other-gender targets) indicated that Adherence was associated with higher Warmth ratings than Violation ($M = 7.18$ vs. 6.58), $p < .001$. For Status, the corresponding difference was not significant ($M = 7.14$ vs. 6.97), $p = .076$. The Target $\times$ Block $\times$ Dimension interaction was not significant, indicating that this pattern was consistent across both own- and other-gender targets. Across both pilot studies, the position effect aligned with the theoretically predicted target behavior and dimension, suggesting that contrast effects driven by comparisons are unlikely to account for the effects observed in the main studies.

Tables

Table 1*Study 1: Background Information of Excluded and Included Participants*

Characteristic	Excluded $N = 16^1$	Included $N = 288^1$	p-value²
Sex			.756
female	9.00 (56.25%)	141.00 (48.96%)	
Age (years)	63.75 (7.57)	63.77 (8.16)	.990
Education (years)			.804
10 years	6.00 (37.50%)	98.00 (34.03%)	
< 10 years	2.00 (12.50%)	55.00 (19.10%)	
> 10 years	8.00 (50.00%)	135.00 (46.88%)	
Occupation			.521
other	0.00 (0.00%)	9.00 (3.13%)	
retired	6.00 (37.50%)	136.00 (47.22%)	
working	10.00 (62.50%)	143.00 (49.65%)	
Perceived Health	3.69 (0.70)	3.49 (0.77)	.300
Life Satisfaction	5.63 (1.26)	4.99 (1.37)	.068
Rater Age			>.999
50–65	8.00 (50.00%)	144.00 (50.00%)	
66+	8.00 (50.00%)	144.00 (50.00%)	

¹n (%); Mean (SD); ²Pearson's Chi-squared test; Welch Two Sample t-test

Table 2*Study 1: Mixed ANOVA Results for Warmth and Status Ratings by Target and Rater Age*

Effect	df	MSE	<i>F</i>	η^2_p	<i>p</i>-value
Rater Age	1, 286	6.52	0.00	0.000	.945
Target	1, 286	3.53	10.25 **	0.035	.002
Rater Age $\times$ Target	1, 286	3.53	3.31	0.011	.070
Dimension	1, 286	2.38	33.23 ***	0.104	<.001
Rater Age $\times$ Dimension	1, 286	2.38	2.69	0.009	.102
Target $\times$ Dimension	1, 286	1.88	12.41 ***	0.042	<.001
Rater Age $\times$ Target $\times$ Dimension	1, 286	1.88	0.89	0.003	.345

Note. df=degrees of freedom; MSE=Mean Square Error; η^2_p = partial eta-squared.

Table 3*Study 2: Background Information of Excluded and Included Participants*

Characteristic	Excluded $N = 14^1$	Included $N = 206^1$	p-value²
Sex			.756
female	6.00 (42.86%)	105.00 (50.97%)	
Age (years)	65.14 (11.94)	64.00 (8.24)	.731
Education (years)			.232
10 years	3.00 (21.43%)	92.00 (44.66%)	
< 10 years	3.00 (21.43%)	34.00 (16.50%)	
> 10 years	8.00 (57.14%)	80.00 (38.83%)	
Occupation			.524
other	0.00 (0.00%)	2.00 (0.97%)	
retired	5.00 (35.71%)	103.00 (50.00%)	
working	9.00 (64.29%)	101.00 (49.03%)	
Perceived Health	3.57 (0.94)	3.41 (0.77)	.533
Life Satisfaction	5.57 (1.45)	5.04 (1.26)	.206
Rater Age			>.999
50–65	7.00 (50.00%)	102.00 (49.51%)	
66+	7.00 (50.00%)	104.00 (50.49%)	

¹n (%); Mean (SD); ²Pearson's Chi-squared test; Welch Two Sample t-test

Table 4

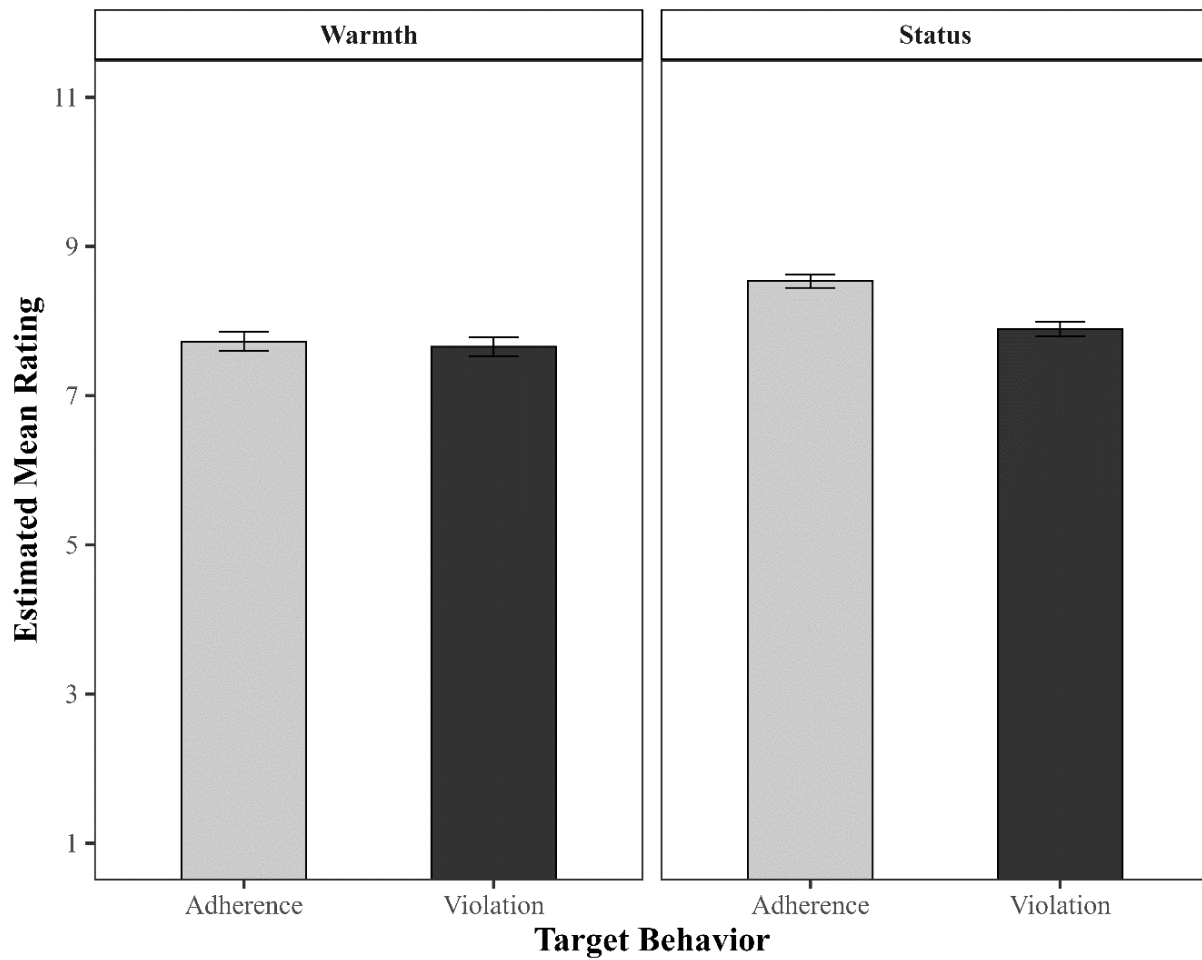
Study 2: Mixed ANOVA Results for Warmth and Status Ratings (Evaluative Dimension) by Target Behavior and Rater Age

Effect	df	MSE	<i>F</i>	η^2_p	<i>p</i>-value
Rater Age	1, 204	5.06	2.65	0.013	.105
Target	1, 204	3.50	39.17 ***	0.161	<.001
Rater Age $\times$ Target	1, 204	3.50	4.22 *	0.020	.041
Dimension	1, 204	2.20	19.45 ***	0.087	<.001
Rater Age $\times$ Dimension	1, 204	2.20	2.04	0.010	.154
Target $\times$ Dimension	1, 204	1.64	46.24 ***	0.185	<.001
Rater Age $\times$ Target $\times$ Dimension	1, 204	1.64	7.32 **	0.035	.007

Note. df=degrees of freedom; MSE=Mean Square Error; η^2_p = partial eta-squared.

Figures**Figure 1**

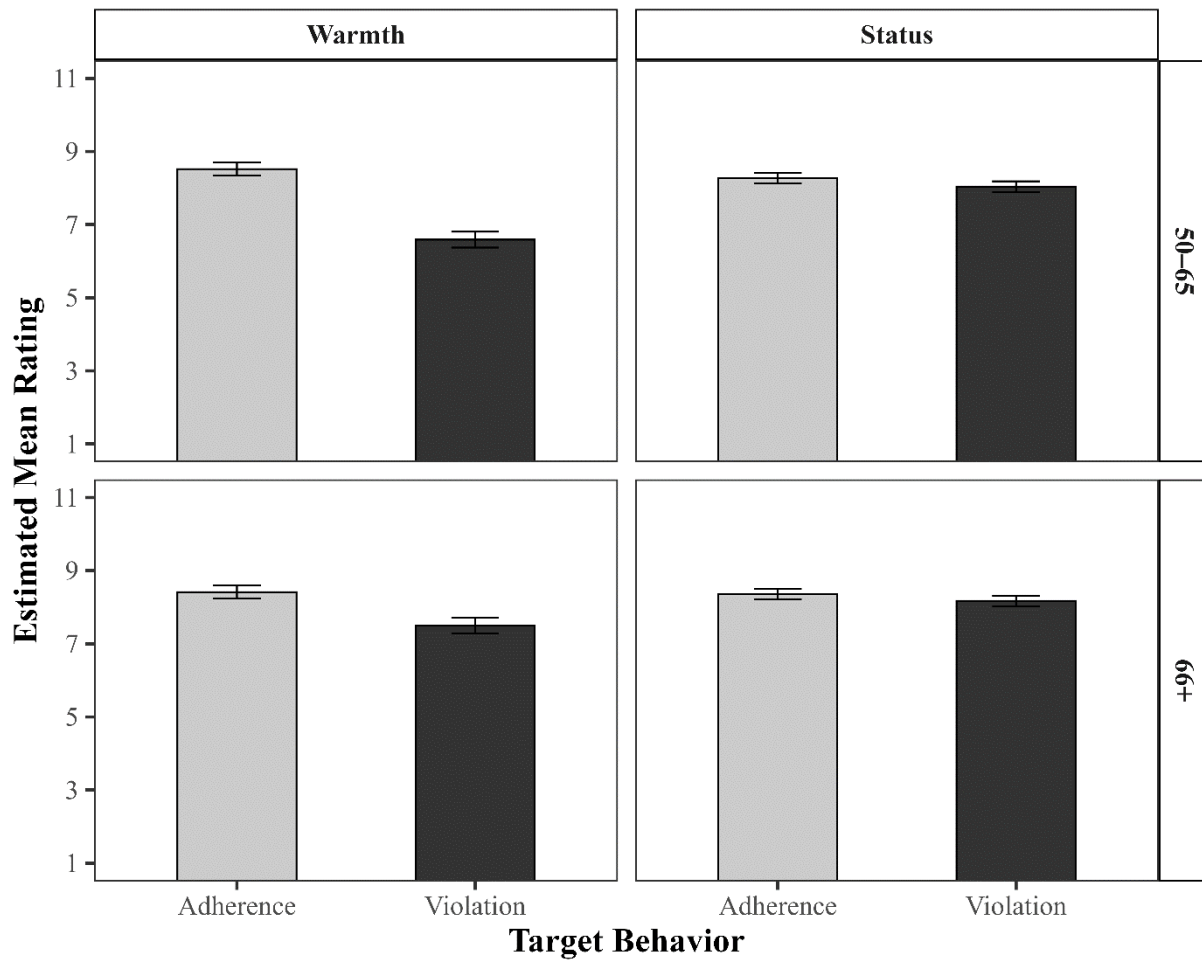
Study 1: Mean ratings of Target Profile Evaluation by Target Behavior and Evaluative Dimension.



Note. Error bars show standard errors.

Figure 2

Study 2: Mean ratings of Target Profile Evaluation by Target Behavior, Evaluative Dimension, and Rater Age.



Note. Error bars show standard errors.

Appendix A

Target Profiles Study 1: Pre-Retirement

Job Types: HR Manager/ Business Consultant

Activation Adherence

My name is Gerd, I am 60 years old and work as a _____ in a medium-sized company. I aim to remain professionally active and keep my skills up to date. I regularly engage with new ideas and concepts to improve work processes and therefore plan to continue working in my profession for a few more years.

Activation Violation

My name is Dirk, I am 59 years old and work as a _____. I'm generally satisfied with my job, but at this stage of my life work is no longer a central priority for me. I would prefer to reduce my responsibilities and work at a slower pace rather than continuing to invest in new tasks or developments.

Appendix B

Target Profiles Study 2: Post-Retirement

Job Types: Editor/Bank Clerk

Disengagement Adherence

My name is Georg, and I am 66 years old. I am retiring this year after a long career as a _____. I was offered the opportunity to continue working part-time, but I have decided to leave the company at the end of the year, as this is a typical point at which people step aside and allow younger colleagues to take over.

Disengagement Violation

My name is Frank, and I am 68 years old. I have held a position as a _____ for many years. Although I am past the statutory retirement age and there have already been discussions about who should take over my job, I have decided not to retire yet and plan to continue working for a few more years.