



Main Manuscript for
AMERICANS HARBOR MUCH MORE NEGATIVE SENTIMENTS
TOWARD YOUNGER THAN OLDER ADULTS

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Author Contributions: S.P.F designed research. S.P.F performed research, with A.S.'s support. S.P.F. analyzed data and wrote the paper. A.S. and M.S.N. provided critical feedback.

Competing Interest Statement: No competing interests to disclose.

Classification: Social Sciences; Psychological and Cognitive Sciences.

Keywords: Ageism, Age prejudice, Age stereotypes, Forecasting, Youngism

Code and de-identified data. De-identified datasets of Study 1-3, along with their codebooks and data analyses scripts, are available [here](#).

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Abstract

Public and academic debates on ageism focus primarily on prejudice targeting older adults, implicitly assuming that the latter experience the most age bias. We put this assumption to the test in a large, pre-registered study surveying Americans' sentiments toward younger, middle-aged, and older adults. Challenging common expectations, two samples representative of the U.S. adult population ($n = 1,820$ participants, $N = 14,560$ observations) harbored the most favorable sentiments toward older adults, and least favorable ones toward the young. This pattern held across a wide range of participant demographics, in both samples, for all outcome variables included. Indicative of a prejudice against younger adults more than a benign preference for older adults, participants high on SDO (i.e., a key antecedent of prejudices, including racism, sexism, ableism, and homophobia) expressed even more negative attitudes toward younger adults—and more positive ones toward older adults. In two follow-up, pre-registered, forecasting surveys, lay participants ($n = 500$) were generally quite accurate at predicting these results; in contrast, social scientists ($n = 241$) underestimated how negatively our nationally representative sample viewed younger adults and how positively they viewed older adults. The more expertise in ageism scientists had, the *more* biased their forecasts. In a rapidly aging world where younger adults face economic, social, political, and ecological hardship, these findings highlight the need for public authorities and social scientists to reconsider what age prejudice looks like and develop theory and policies that ponder discriminations targeting all age groups.

Significance Statement

Older adults are often assumed to bear the brunt of age-based prejudice. Challenging this idea, two large samples representative of the U.S. adult population consistently report the most negative sentiments toward younger adults and most positive ones toward older adults. Two follow up studies reveal that, while lay people are quite accurate at forecasting these results, social scientists are not, especially ageism experts. Given the grim economic and environmental prospects of today's young, our results underscore the importance for authorities and social scientists to build a more comprehensive view of age-based prejudice and adapt their theory and policies to attend to the needs of all age groups.

Main Text

Introduction

Although young people represent the future of society, the future of today's young looks surprisingly bleak, in rapidly aging America. Saddled by two of the worst economic crises of the century, rising costs of housing, unparalleled student debts, lower income, and the projected insolvency of social security, they face the largest intergenerational wealth gap in history (1). Homeownership, once a pillar of the American dream, seems more and more distant to them (1). Rubbing salt in the wound, they will be the first to bear the steep ecological costs of decades of unrestrained consumption and economic growths that largely benefited their predecessors (2).

This grim outlook has led some to plea for a renegotiation of the social contract that binds younger and older generations (e.g., 1, 3). However, this decision is contingent upon the goodwill of older adults, who hold a disproportionate share of the economic and political equity needed to steer change (4). Hence, in a context where young adults' collective life prospects lie in part out of their own hands, society's sentiments toward them could play a key role in shaping their future. Positive views of younger generations could spawn the empathy required to support actions needed to address the plight faced by today's young. Negative views could lead people to dismiss their struggle.

So, how do Americans see and feel toward the young? Surprisingly, little is known about people's sentiments toward younger adults (5). As societies worldwide grapple with an unprecedented aging of the population, social scientists have taken a keen interest in age-based perceptions and ageism (i.e., the stereotyping, prejudice, and discrimination of people based on their age). Research on the topic has shown that negative views of older adults can have detrimental effects on their social lives, economic prospects, subjective wellbeing, health, and quality of care (6–16). This academic work, in turn, has shaped discrimination laws, public policies, organizational practices, educational programs, and patient engagement to reduce biases against older adults.

Despite a boom in ageism research however, academics have focused almost exclusively on the plight targeting older adults, the proportionally growing segment of the population. However, when coining the term ageism in 1969, gerontologist Robert Butler discussed how age bias could also apply to younger age groups (17). Yet, much less work has examined perceptions of younger people and how said perceptions might shape young's lives (5, 18–20). Implicit in this balance of old-young ageism research is the assumption that, by and large, society is primarily biased against older adults. Common depictions of old age tend to back up this claim. Aging is frequently associated with death, decay, and poor health (21, 22); the caricature of older adults as slow, grumpy, and forgetful is familiar to all (23), even children (24); and older generations are sometimes portrayed as a burden to society (14, 15). In contrast, youthfulness is often synonymous with beauty, athleticism, and mental acuity; young adulthood is commonly labelled best period of one's life (5); and people across the globe try to look—and see themselves as—younger than they are (25–31).

While research on implicit age attitudes strongly support the idea that younger adults are seen more favorably than older ones (32, 33), our understanding of societies' explicit age sentiments is murkier. Ageism research in the lab has traditionally yielded results that corroborate those found with implicit measures. After reviewing 40 years of (explicit) ageism research and compiling more than 230 effects sizes pitting younger against older targets, the most comprehensive meta-analysis on the topic revealed that older adults were perceived less favorably across all outcome measures included (34). However, methodological limitations common to empirical investigations on the topic might constrain the generalization of these findings. First, research on ageism has

disproportionately relied on young subjects such as undergrads, young professionals, and medical personnel in training—more than 60% of the samples in the above cited meta-analysis fall in that category (34). Given a median age of the U.S. adult population between 42 in the 1960s and 46 in the 2010s, the generalization one can reach from undergrad samples is likely circumscribed (35). Second, a large stream of ageism research has examined people's sentiments toward older adults without comparing them against sentiments toward other age groups (e.g., 6, 11–13, 16, 23, 35). Although this work is helpful in demonstrating the wide variance in sentiments toward older adults, the mechanisms underlying said variance, and its impact on outcomes relevant to older people's lives, it provides limited insights as to how these sentiments compare with those of other age groups. Third, studies that do include younger targets often use them as a baseline against which to contrast sentiments toward older adults in domains stereotypically unfavorable to the latter (e.g., 6, 8, 21, 36). Unfortunately, these discriminating choices of study domains limit the scope of conclusions one can reach about society's broader sentiments toward various age groups. Finally, challenging the conclusion that older adults are the primary target of unfavorable sentiments, a growing body of work suggests that aging societies might entertain particularly negative views of the young (5, 18, 19, 38). Recent studies have shown that young adults report being the target of condescension, stereotyping, prejudice, and discrimination (18–20, 39). In fact, some studies indicate that young ageism might be even more pronounced than old ageism (18, 19). However, this work has primarily relied on self-reported experiences of ageism. As a result, it is unclear what society's explicit sentiments toward the young looks like, and how they compare with those toward other age groups.

The purpose of the present research is twofold. First, we advance our understanding of this issue by assessing Americans' explicit sentiments toward all age groups in the adult spectrum in a single study-design, using two samples representative of the U.S. adult population, evaluating the age groups in a target-neutral setting (general impressions). In addition, we examine how social dominance orientation (SDO) shapes participants' attitudes toward these different age groups. SDO captures people's disposition to tolerate, justify, and sometimes promote social hierarchies and inequalities (40, 41). A large body of work has shown that SDO is a powerful predictor of prejudices, including racism, sexism, homophobia, classism, Islamophobia, and ableism (e.g., 29–35). Building on this work, we examine how the age attitudes of people with a higher proclivity for prejudices (high SDO) compare with the age attitudes of people with a low proclivity for prejudices (low SDO) to better understand the prejudicial nature of attitudes toward younger, middle-aged, and older adults.

Second, we explore why ageism targeting younger adults has been largely absent from public and academic debates, particularly in a context where ageism targeting older adults has received growing attention. One possibility is that society harbors rather positive views of the young. It would then stand to reason that collective attention focuses on other, more stigmatized age groups. An alternative explanation is that society entertains rather negative views of the young, but people don't know it or underestimate their extent. To test for this possibility, we asked lay people and social scientists with various degrees of expertise in age-based prejudice to forecast the responses of our nationally representative sample. Forecasting surveys have grown in popularity in recent years (49–60). They constitute a useful tool to assess whether and how people's intuitions about a social phenomenon deviate from reality (53, 57–59). More recently, they have also proven particularly valuable to test the fundamental assumptions and potential biases that experts hold about their field of study (49–56, 58, 60, 61). If our forecasters have a good sense of Americans' attitudes toward younger, middle-aged, and older adults, their forecasts should more or less match the results obtained with our representative sample. Conversely, deviations might indicate that forecasters misjudge how Americans feel toward certain age groups.

Results

We present our results in two separate sections. In the first section, we report how our nationally representative sample felt toward various age groups. In the second, we compare these results against the estimations of our forecasters.

Sentiments toward younger, middle-aged, and older adults. To gauge American sentiments toward younger, middle-aged, and older adults, we conducted two large, quasi-identical studies with samples representative of the U.S. adult population. The two samples were collected seven months apart. The recruiting process, demographic composition, procedures, and results for the two samples were highly consistent. The two, equally sized samples are here combined into a single dataset ($N_{\text{sample A + B}} = 1,820$ participants; details about each sample and separate analyses per sample available in *SI Appendix: Samples and Recruiting*).

To capture sentiments reflective of the population as a whole and to maximize the ecological validity of our findings, participants from both samples were recruited using a stratified sampling approach with proportionate allocation. Our stratification criteria included age, gender, and race, but also political ideology, a factor known to correlate with age attitudes (62) and a source of bias among crowdsourcing pools, generally liberal leaning (63, 64).

To compare sentiments toward all age cohorts and present a more comprehensive picture of ageism throughout the entire adult lifespan, participants reported how they felt toward people in their 20s, 30s, 40s, and so on, up to people in their 90s. We used explicit attitudes as our primary outcome variable. Explicit attitudes are widely used across social sciences (e.g., 55–62) and constitute a proven predictor of prejudicial beliefs and discriminatory behaviors (73, 74). To capture explicit attitudes, we used feeling thermometers, a decontextualized, single-item measure that facilitates comparisons across target groups (55, see also American National Election Studies). Of noteworthy mention however, what feeling thermometers provide in convenience, they lose in depth and nuance. To address this limitation, we also asked participants in our second sample (Sample B) to share their sentiments toward younger and older adults in two short essays. We used these essays to develop a complementary measure of attitudes and examine the stereotype content of younger and older adults. Finally, participants in both samples completed a measure of social dominance orientation (SDO, 31) to compare how the age sentiments of participants with higher prejudicial dispositions (i.e., high SDO) fared relative to those of people with lower dispositions (i.e., low SDO; details in *SI Appendix: Procedures*).

To guarantee both the transparency and impartiality of our approach, we preregistered the sample size, study design, variables, and analytical plan of both studies but did not preregister—nor formulate—any hypothesis. This approach allowed us to set clear methodological and analytical criteria but remain agnostic as to the direction of our potential findings.

Feeling thermometers. How did our nationally representative samples feel toward younger, middle-aged, and older adults, overall? Focusing first on feeling thermometers, we observe an upward trend with a plateau between 40 and 60 (Fig. 1; see also Table S1 and Fig. S1). Respondents harbored the least favorable attitudes toward people in their 20s ($M = 6.07$, $SD = 2.34$), below those toward people in their 30s ($M = 6.68$, $SD = 1.96$), $p < .0001$. Attitudes toward people in their 30s were lower than those toward people in their 40s ($M = 6.88$, $SD = 1.81$), $p < .0001$. Attitudes toward people in their 40s were not significantly different from those toward people in their 50s ($M = 6.95$, $SD = 1.97$), $p = .183$, and those toward people in their 50s, not significantly different from those toward people in their 60s ($M = 7.03$, $SD = 2.15$), $p = .112$. Attitudes toward people in their 60s were lower than those toward people in their 70s ($M = 7.29$, $SD = 2.17$), $p < .0001$, attitudes toward people in their 70s, lower than those toward people in their 80s ($M = 7.46$,

$SD = 2.14$), $p = .0001$, and attitudes toward people in their 80s, lower than those toward people in their 90s ($M = 7.59$, $SD = 2.21$), $p = .0006$. In terms of effect size, the highest rated group (i.e., people in their 90s) enjoyed $(7.59 - 6.06) / 6.06 = 25.2\%$ more favorable attitudes than the lowest rated group (i.e., people in their 20s).

We also find a great deal of agreement across participants. A third of them (32.7%) rated people in their 20s lower than any other target age group, about four times higher than what would be expected by chance (i.e., chance = 8.7%), $t(1,819) = 21.81$, $p < .0001$. In contrast, 3.0% or less rated people in their 60s, 70s, 80s, or 90s the lowest—three to fourteen times lower than what would be expected by chance, $ps < .0001$ (Fig. 2). The above-reported results were highly consistent across samples, further attesting to the robustness of our findings (details in *SI Appendix: Additional Results*, Fig. S2 and Table S2).

Taken together, our two large, nationally representative samples overwhelmingly harbored the least favorable explicit attitudes toward younger adults and most favorable ones toward older adults.

Moderation by participant demographics. We ran a series of models to examine whether participant demographics moderated the general attitudinal pattern reported above (detailed results in *SI Appendix: Additional Results*). Participant gender, level of education, and income did not moderate this attitudinal preference (Fig. 3a-c). White participants showed a stronger preference for older adults than did their non-White counterparts, but the latter still evaluated people in their 20s less favorably than those in their 60s and 90s (Fig. 3d; detailed analyses by racial group in *SI Appendix: Additional Results*). Similarly, conservative-leaning participants showed a stronger preference for older adults than did their liberal counterparts, but the latter still evaluated people in their 20s less favorably than people in their 90s (Fig. 3e).

Predictably, participant age moderated attitudes toward different age groups, albeit not quite the way classic intergroup conflict theories would predict. Older participants did show a marked ingroup-outgroup bias (Fig. 3f). For instance, estimates of main effects for a 60-year-old participant (1 SD above mean participant age) showed that the latter tended to rate people in their 20s ($M = 5.99$, $SE = 0.06$) significantly lower than those in their 60s ($M = 7.90$, $SE = 0.06$), $p < .0001$, and 90s ($M = 8.25$, $SE = 0.06$), $p < .0001$. However, young adults did not seem to exhibit a strong ingroup-outgroup bias. For instance, estimates of main effects for a 30-year-old participant (1 SD below mean participant age) suggests that the latter tended to rate people in their 20s ($M = 6.14$, $SE = 0.06$) similarly to those in their 60s ($M = 6.17$, $SE = 0.06$), $p = .699$, but lower than those in their 90s ($M = 6.94$, $SE = 0.06$), $p < .0001$.

To summarize: Men, women, white people, racial minorities, people of higher social class, people of lower social class, conservatives, liberals, older adults, and, to some extent, even younger ones, all expressed an explicit preference for older adults—particularly for people in their 80s and 90s—over younger adults.

Moderation by Social dominance orientation. Does this attitudinal pattern reflect a benign liking of older adults or a form of prejudice toward younger ones? To answer this question, we conducted another moderation analysis comparing participants with a higher proclivity for prejudice (people high on SDO) with people with a lower proclivity for prejudice (people low on SDO). SDO moderated attitudes toward the different age groups, $\chi^2(7) = 423.55$, $p < .0001$. Consistent with the notion that higher attitudes toward older—relative to younger—adults do not reflect a benign preference but rather, a prejudice toward the young, participants with a strong proclivity for prejudice (high SDO) expressed stronger anti-young and pro-old sentiments than the rest of the sample (Fig. 4g).

To get a sense of the magnitude of the prejudice targeting younger adults, we also compared correlations between SDO and attitudes toward these various age groups with correlations between SDO and attitudes toward various racial groups in the United States (Table 1; details in *SI*

Appendix: Additional Results and Table S4). The correlation between SDO and attitudes toward people in their 20s, $r = -.25$, most closely matched that between SDO and attitudes toward Black people (a disadvantaged, racial minority group), $r = -.25$, $z = 0.01$, $p = .9944$. Conversely, the correlation between SDO and attitudes toward people in their 60s, $r = .24$, most closely matched that between SDO and attitudes toward White people (the advantaged, dominant racial group), $r = .22$, $z = 0.20$, $p = .8383$.

Open-ended responses. While feeling thermometers offer a convenient way to compare explicit attitudes, it masks the potential nuances of people's sentiments toward a target group. So, how do the sentiments of our nationally representative sample look like in an unconstrained, open-ended response format? Participants in Sample B ($N = 967$ participants) were asked to write a short essay about their perceptions of people in their 20s and 30s ($n = 966$ complete essays), and another about their perceptions of people in their 80s and 90s ($n = 965$ complete essays; full essays available in Open Access Material; sample in Table S5).

Attitudinal measure. Each essay was coded to assess the overall valence of participant's sentiments toward younger and older adults (detailed reliability tests in *SI Appendix: Additional Results*). Consistent with the findings reported with feeling thermometers, the content of essays about younger adults was significantly less positively valenced than that of essays about older adults, $t(964) = 14.89$, $p < .0001$ (Fig. 4 and Fig. S3). In fact, the valence of essays about the young scored below the midpoint (neutral valence), $t(965) = 3.27$, $p = .0011$, and those about older adults, significantly above, $t(964) = 21.34$, $p < .0001$. Finally, also corroborating the thermometer findings, SDO correlated negatively with the valence of essays about the young, $r = -.32$, $p < .0001$, and positively with the valence of essays about older adults, $r = .09$, $p = .0081$. Overall, using open-ended essays—a format that offered participants an opportunity to provide a more nuanced view of younger and older adults—we found results highly consistent with those obtained using single-item, feeling thermometers.

Stereotype contents. One way to examine how a social group is perceived is to look at the stereotype content associated with this group. To this end, attributes associated with younger and older adults were extracted from participant essays and coded for valence as well as warmth / communality and competence / agency, the two fundamental dimensions of social cognition (65, 66; full list in Open Access Material; detailed methodology in *SI Appendix: Additional Results*). Warmth / communality refers to group members' perceived concern for others, sociability, and emotional sensitivity. Competence / agency refers to their ability to influence the environment to reach their goal and relates to group members' perceived independence, instrumental competence, leadership skills, and assertiveness.

Close to two-thirds of the—non-unique—attributes associated with older adults were positive (66.1%) and only one quarter were negative (26.1%). In contrast, only one third of the attributes associated with younger adults were positive (35.2%) and more than half were negative (57.5%; summary in Table S6 and Fig. S4; list of the most frequently cited items for each cohort in Table S7; full list with frequencies available in Open Access Material).

The stereotype content of younger adults was particularly negative for the warmth / communality dimension (73% of negative attributes) and negatively trending for the competence / agency dimension (55% of negative attributes; Fig. 5). An examination of the most frequently mentioned attributes suggests that, from a competence / agency standpoint, young adults were seen by some as energetic, smart, and hard-working, and by others as lazy, immature, and stupid (Table 2). From a warmth / communality standpoint, although young adults were sometimes described as fun and positive, they were largely depicted negatively (e.g., entitled, disrespectful, spoiled, arrogant, self-centered). Overall, these sets of adjectives corroborate recent efforts to unearth the stereotype content associated with young adults (5).

In sharp contrast, the stereotype content of older cohorts was highly positive, both on the

warmth / communality dimension (65% of positive attributes) and the competence / agency dimension (84% of positive attributes; Fig. 5). Per the frequency of attributes used in participant essays (Table 2), from a competence / agency standpoint, older adults were overwhelmingly described as wise, experienced, and hard-working. From a warmth / communality standpoint, although they were seen by some as mean, grumpy, negative, or racist, older adults were more often described favorably, with attributes such as sweet, kind, positive, happy, and respectful.*

Forecasting surveys. Americans in our nationally representative samples expressed the least favorable sentiments toward younger adults and most favorable ones toward older adults. This pattern emerged consistently across a wide range of measures and participant demographics. Furthermore, participants with a higher proclivity for prejudice and discrimination were more likely to express negative sentiments toward younger cohorts and positive ones toward older cohorts, suggesting that the overall pattern captured with our representative samples reflects a derogation of the young more than a benign preference for older adults.

Surprisingly though, age bias targeting younger adults has been largely absent from both public and academic debates. One potential explanation is that the public and scientific community are unaware that people harbor such negative feelings toward the young. To test this proposition, we asked a new sample representative of the U.S. adult population ($N = 500$) and a sample of social scientists ($N = 241$) to forecast the results of the study presented above (details about the recruiting process and the samples in *SI Appendix: Samples and Recruiting* and Table S8). We were particularly interested to see whether forecasters would accurately predict that younger adults were seen more negatively than middle-aged and older adults, and whether social scientists' familiarity with the academic literature on ageism would influence their response.

The social scientists recruited for our forecasting survey came from a wide range of disciplines and career stages, and included ageism experts; diversity, equity, and inclusion experts (DEI); and researchers with expertise in neither domain. We recruited DEI experts specifically to isolate effects of ageism expertise on forecasting accuracy from a broader familiarity with the literature on prejudice and intergroup conflict at large (e.g., racism, sexism, homophobia). Importantly, since our sample of social scientists was relatively small, we favored a continuous measure of DEI and ageism expertise in our analyses to maximize statistical power.

Lay people and social scientists were asked to forecast the responses of the study described above. A detailed presentation of the methodology of our study was provided to participants (see *SI Appendix: Procedures*). Forecasters then predicted the results of the feeling thermometers in our original study, as well as the percentages of positive attributes associated with younger and older adults in the representative sample's essays. Social scientists also forecasted the correlation between SDO and attitudes toward each age group. Detailed reporting of our results in *SI Appendix: Additional Results*.

Feeling thermometers. We ran a model to assess participant accuracy at forecasting the feeling thermometer responses of our original sample. We also ran additional models with social scientists only, to examine whether their familiarity with DEI and ageism research influenced the accuracy of their forecast.

Lay participants overestimated how negatively our representative sample felt toward people in their 20s, $\Delta_{\text{actual}} = -0.37$, $p = .0007$, and how positively they felt toward middle-aged adults (e.g.,

* Of note, these later results contrast sharply with the stereotyping literature suggesting that older adults are perceived as warm but incompetent (i.e., "dodderly but dear"; 65). This discrepancy may stem from methodological differences: Stereotype contents are commonly measured using a short list of predefined attributes while we coded participants' unconstrained responses in open-ended essays. Furthermore, the attributes that our participants ascribed to older adults seem to reflect at least in part the values epitomized by the target age groups (e.g., hard-working) more than the actual skills they currently display.

people in their 40s: $\Delta_{\text{actual}} = 0.28, p = .0099$). However, their forecast of attitudes toward older age groups did not differ significantly from the actual responses of our representative sample (Fig. 6a; see also Table S9). In comparison, social scientists were less accurate. Although their estimations of attitudes toward people in their 20s did not differ significantly from actual responses, they were typically more likely to overestimate attitudes toward younger age groups (e.g., people in their 30s: $\Delta_{\text{actual}} = 0.54, p = .0003$; $\Delta_{\text{lay est.}} = 0.33, p = .0093$) and underestimate attitudes toward older age groups (e.g., people in their 70s: $\Delta_{\text{actual}} = 0.55, p = .0002$; $\Delta_{\text{lay est.}} = 0.38, p = .0032$; Fig. 6b; see also Table S9).

Familiarity with DEI research did not influence social scientists' forecasts, $\chi^2(7) = 4.08, p = .7710$ (Fig. 7a), but familiarity with ageism research did, $\chi^2(7) = 63.14, p < .0001$. Specifically, the higher their familiarity with ageism research, the more social scientists tended to overestimate positive attitudes toward younger age groups and underestimate those toward older age groups (Fig. 7b). For instance, simple slope analyses suggest that social scientists at +1 *SD* in ageism expertise expected people in their 40s to be viewed the most favorably and people in their 20s to be perceived as favorably as people in their 60s, 70s, and 80s. In comparison, social scientists at -1 *SD* in ageism expertise overestimated favorable attitudes toward older adults but still anticipated younger adults to receive the least favorable attitudes and older adults, the most favorable ones.

Attitudes in open-ended responses. We ran similar models to examine how accurately participants forecasted attitudes toward younger and older adults captured in our representative sample's essays. Lay forecasts of attitudes toward younger and older adults did not differ significantly from the actual attitudes coded in these essays. In contrast, while social scientists accurately forecasted attitudes toward younger adults, they significantly underestimated attitudes toward older adults, $\Delta_{\text{actual}} = -0.42, p < .0001$ (Fig. 4). Once again, DEI expertise did not moderate social scientists' forecast, $\chi^2(1) = 0.07, p = .7918$, but ageism expertise did, $\chi^2(1) = 8.65, p = .0033$. More ageism expertise led to greater underestimations of attitudes toward older adults, $B = -0.17, SE = .06, p = .0033$.

An analysis outside the scope of our preregistered analytical plan offers perhaps a better sense of the magnitude of the impact of ageism expertise on forecasting accuracy. Social scientists who self-identified as ageism experts were 42.2% less likely than non-ageism experts to accurately forecast that attitudes in our representative sample's essays would be more favorable to older than younger adults, $B = -0.55, p = .011, OR = .578$ (95% CI: .380, .881).

Valence of the stereotype contents. Forecasts of the stereotype contents of younger and older adults yielded similar results. Social scientists expected younger adults to receive 4.2 percentage points fewer positive attributes than older adults, four times less than lay forecasts (i.e., 19.2 percentage points) and seven times less than the actual gap (i.e., 30.9 percentage points; Fig. S4). Consistent with our other findings, ageism—but not DEI—expertise increased the likelihood that social scientists overestimate the percentage of positive attributes associated with young adults, and underestimate that associated with older adults, $B = -6.58, SE = 1.68, p = .0001$.

Relationship between SDO and age attitudes. We also tested whether social scientists anticipated that people high in SDO would harbor more negative attitudes toward younger age groups and more positive attitudes toward older age groups. To do so, we asked them to estimate the correlations between SDO and the feeling thermometer of each age group obtained in our original study. To guide them, we provided a definition of SDO and included the correlations between SDO and attitudes toward racial groups (Table 1). The latter piece of information was meant to provide forecasters with a sense of the direction and magnitude of correlations between SDO and attitudes toward advantaged and disadvantaged groups in a domain other than age.

Overall, social scientists greatly underestimated the magnitude of the correlation between SDO and age attitudes. The range of forecasted correlations [-.08, .07] was more than three times

narrower than the actual one [-.29, .25] (Table 3). Since the correlations between SDO and race were provided in the instructions (i.e., range: [-.25, .22]), these forecasts suggest that social scientists erroneously expected SDO to be a much weaker predictor of age attitudes than of race attitudes, and that people with a high proclivity for prejudice would not feel very differently about younger and older adults than would people with a low proclivity for prejudice. Social scientists greatly underestimated how negative the correlations between SDO and attitudes toward younger target groups were (e.g., people in their 20s, $\Delta_r = -.21$, $t(240) = -10.73$, $p < .0001$), and how positive correlations between SDO and attitudes toward older target groups were (e.g., people in their 60s, $\Delta_r = .20$, $t(240) = 12.17$, $p < .0001$; Table 3). Again, this forecasting bias was exacerbated by ageism expertise, $\chi^2(7) = 105.32$, $p < .0001$, but not DEI expertise, $p = .0944$ (Fig. 7c and 7d).

Discussion

Public and academic debates on ageism focus predominantly on prejudices targeting older adults, implicitly assuming that the latter experience the most age bias. Our findings challenge this assumption and highlight the need for public authorities and social scientists to reconsider what age prejudice looks like and develop theory and policies that ponder discriminations targeting all age groups.

In two large, preregistered surveys with samples representative of the U.S. adult population, participants overwhelmingly harbored the least favorable sentiments toward younger adults and most favorable ones toward older adults. This dislike for younger relative to older adults held across a wide range of measures and participant demographics. Furthermore, consistent with the notion that this pattern reflects a derogation of the young rather than a benign preference for older adults, bias against the young was exacerbated by social dominance orientation. That is, people with a proclivity for prejudice (high SDO) tended to see younger adults more negatively and older adults more positively than the rest of the population. Indicative of the extent of this bias, the correlation between SDO and anti-young / pro-old sentiments was similar in direction and magnitude to that between SDO and anti-black / pro-white sentiments.

While these findings are at odds with common ageism research, they resonate with more recent work examining attitudes toward younger adults (5, 18–20, 38, 62). The robust pattern observed in our surveys further challenges the notion that older adults face the highest level of age prejudice and help quantify the magnitude of *youngism* (i.e., age-bias targeting younger adults).

Given the extent of anti-young sentiments captured in our surveys, it is worth pondering why youngism has been largely absent from public and academic debates so far. One possibility, explored in our two forecasting surveys, is that lay people and social scientists hold an inaccurate map of Americans' age sentiments, thus being unaware of the negative views young adults are subjected to. Contradicting this prediction, lay participants were quite accurate in forecasting the sentiments expressed by our representative sample. Lack of awareness, therefore, is unlikely to explain the absence of *public* debates around youngism. Future research should thus explore alternative explanations. In this regard, researchers have suggested that ageism tends to be more condoned than other forms of prejudice such as racism, sexism, and homophobia. People might therefore be aware of the extent of anti-young sentiments but do not consider it morally problematic and, hence, not worthy of substantial debate. This impunity of anti-young sentiments might be compounded by the fact that everyone has once been young: Just as having a "black friend" is sometimes used to deflect suspicions of racism, the experience of having once been young might make everyone feel entitled to hold prejudices against younger people without experiencing any guilt or need for self-reflection.

Contrasting with lay respondents' relatively accurate map of Americans' age sentiments, social scientists in our forecasting survey were more prone to forecasting biases. Across all measures, they tended to underestimate the extent of Americans' unfavorable sentiments toward younger relative to older adults. Importantly, this bias was even more pronounced for ageism experts. This latter finding contributes to a growing body of work examining how academic expertise influences social scientists' understanding of the social phenomena they study (49–56, 60, 61). In this regard, our findings document a rare case where expertise *reduces* forecasting accuracy. This forecasting bias might also help explain why youngism has been largely absent from academic debates. The tendency of ageism experts to discount negative sentiments toward younger adults and inflate those toward older adults might narrow their understanding of who is victim of age prejudice, and, in turn, whose conditions and experiences are worthy of further academic investigation. We present below promising research avenues on youngism which, combined with more traditional work on older-age stigma, should contribute to building a more comprehensive, accurate, and fair picture of ageism in rapidly aging societies.

Future Research. First, more research is needed to understand the causes of anti-young sentiments. Recent work offers encouraging leads. Contrary to ageism targeting older adults, which tends to focus on the fear and discomfort with the process of aging, evidence suggests that ageism targeting the young manifests itself as a form of generational scolding (5, 38, 62). That is, people claim to like the young *in general*, but to dislike *today's* young in particular (5), what some have labelled the “kids these days” effect (38). This dislike for younger generations seems rooted in symbolic fears, an impression that younger generations hold values, habits, and worldviews both different from those of previous generations and dangerous for the future of society (62). Importantly, however, these anti-young sentiments are likely not new. Plethora of anecdotes and quotes throughout history display members of older generations scolding younger ones and judging them as more disrespectful, shallow, and entitled than previous generations at the same age (5). In this regard, systematic archival studies would be invaluable to understand how the degree and content of anti-young sentiments have evolved over time and what macro-level factors exacerbate or alleviate them.

A second area of research, mostly unexplored, concerns the consequences of youngism. A large body of work has documented how “old” ageism shapes the lives of older adults, including their experience of the workplace, the healthcare system, and common social interactions (7, 9, 10, 12, 14–16). In sharp contrast, very little is known about the consequences of ageism targeting younger adults. The recent, global “OK Boomers” movement has brought to light the growing resentment that today's young feel toward older generations and the perceived lack of concern for young's economic, social, political, and ecological predicaments (77). With close to half of American adults now aged 50 and over, older adults have become a powerful voting bloc. They also dominate the political scene: 44% of the House of Representatives, 54% of governorships, and 67% of the Senate is composed of politicians aged 60 and over. Hence, while today's young face more economic, political, and environmental hardship than ever before, they also see their collective destiny fall largely in the hands of older generations, who hold disproportionately high share of economic and political power. In this context, the high level of anti-young sentiments expressed by older participants in our study (Fig. 3f) raises concerns as to the latter's willingness to attend to the plight faced by younger generations. Future work should investigate how youngism shapes society's willingness to address the major—and in the case of the ecological crisis, civilizational—challenges faced by today's young.

A third area of research is cross-cultural comparisons. Our work has focused exclusively on Americans' sentiments toward younger adults. However, younger generations across the globe might face similar derogations. Prior work has documented variances in age attitudes across cultures (78, 79). Recent evidence has also shown that young people's experience of ageism varies

across countries (18, 19). Future work could use methods similar to ours to disentangle how explicit sentiments toward all age groups vary across cultures and what factors drive said variance.

Finally, researchers should strive to reconcile research on ageism targeting younger and older adults. Sixty years of academic work on ageism has underscored the strength of ageism targeting older adults (13, 14, 34, 80). In contrast, corroborating more recent work, our large, representative samples exhibited strong explicit anti-young sentiments and positive views of older adults. What accounts for these discrepancies? Methodological differences probably partly explain these antagonistic results. For instance, contrasting with our decontextualized approach, studies on explicit ageism have traditionally focused on domains or settings commonly unfavorable to older adults (e.g., memory, health, attractiveness, adaptability at work). It is also worth noting that, while the present study has focused on explicit sentiments, large datasets of implicit attitudes have consistently found a preference for younger over older targets, among participants of all age groups (32, 33). Future research on age-based prejudice should therefore build new theory and empirical tests to disentangle when, where, how, and why people might be most likely to be biased against younger adults, older adults, or both.

Finally, methodological limitations of prior work may also account for discrepancies between our findings and traditional ageism research. For instance, a large share of ageism research has been conducted with undergraduate participants. Per our findings, undergrads, younger and more liberal leaning than the rest of the population, are the most likely to express favorable sentiments toward younger relative to older targets (Fig. 3h). Similarly, participant pools of crowdsourcing platforms tend to be young and progressive (63, 64). Relying on these samples greatly limits the ecological validity of ageism research. Researchers should strive to build representative samples to account for the full spectrum of attitudes toward younger and older adults. They should also explore the effect of ageism in a broader range of settings and topics, including those potentially unfavorable to younger adults (e.g., perceptions of younger versus older political activists; endorsement of economic policies to address issues of rising student debts, insolvency of social security, or growing intergenerational wealth gap; endorsement of political efforts to tighten abortion laws, limit gun controls, or contain LGBTQ+ rights, which disproportionately affect younger adults).

In a rapidly aging world where valued resources must be shared across a widening range of generations, building a comprehensive picture of age prejudice is indispensable to not only put in place policies that balance the needs and well-being of all age groups, but also protect the intergenerational solidarity at the center of all human societies.

Materials and Methods

Participants. Participants in Sample A and B were recruited from the U.S. pool of the crowdsourcing platform Prolific and were paid, respectively, \$0.54 and \$0.67. Participants in our lay estimation study were recruited from the U.S. pool of the crowdsourcing platform Amazon Mechanical Turk using demographic screenings from cloudresearch.com and were paid \$0.40. Finally, the sample of social scientists who joined our estimation study were recruited via email, snowball sampling, and a post on the open forum of the *Society of Personality and Social Psychology*. They were incentivized with an opportunity to join a raffle to win one of eight \$100 Amazon Gift Cards. Details about the samples and recruiting in *SI Appendix, Samples and Recruiting*.

Procedure. All studies were approved by the authors' Institutional Review Board. Participants read the consent form at the beginning of the study and were able to withdraw at any time. By continuing with the survey, they implied their consent to participate. The material for each survey,

including items and scales, is available at LINK. Detailed procedures in *SI Appendix, Procedures*. Of note, because the instructions and scales for Sample A and B differed slightly, and because the survey of Sample B included essay questions absent for Sample A, participants in our forecasting surveys were only instructed to estimate the results of Sample B. To keep things clear and simple, Sample A was not mentioned. For the sake of consistency, forecasts were compared with the responses of Sample B exclusively.

Analyses. Sentiments toward younger, middle-aged, and older adults. *Feeling thermometers*. To examine participant attitudes toward the target age groups, we ran a repeated measure ANOVA with feeling thermometers as the outcome variable and target group's age as the repeated independent measure. We followed up with a series of pairwise comparisons. We used a series of one-sample t-tests to compare the frequency at which each target age group was rated the least favorably versus the likelihood that it occurs by chance. To examine how participant demographics and SDO moderated attitudes toward the target age groups, we ran a series of multi-level models. Feeling thermometers served as our outcome measure. Target groups' age was entered as an ordinal predictor. Participant demographics were interacted with target cohorts' age. Each demographic variable was examined in a separate model. We entered categorical demographic variables as dummy predictors, and standardized those that were non-categorical before entering them as continuous predictors. Observations were nested within participant. To examine the relationship between SDO and attitudes toward each target age group, we used partial Spearman correlations, net of participant attitudes toward age groups *in general* (aggregate of the eight feeling thermometers).

***Open-ended responses*.** Three research assistants independently coded each essay to assess the overall valence of participant's sentiments toward younger and older adults using a 5-point scale with endpoints -2 = *Extremely negative feelings*, and +2 = *Extremely positive feelings*, ICC = .92, CI_{95%} [.911, .924]. Four other research assistants extracted all the attributes that respondents associated with younger and older adults in their essays ($N = 3,761$ non-unique attributes; 1,256 unique attributes; full list in Open Access Material). Three assistants then independently coded each attribute as positive, neutral, or negative (Fleiss's $k = .77$, $p < .0001$; detailed methodology in *SI Appendix: Additional Results*). The first two authors coded all the attributes mentioned at least twice in participant essays along the two fundamental dimensions of social cognition warmth/communality and competence/agency ($n = 351$ unique attributes; $N = 2,791$ non-unique attributes; 74.2% of the entire sample of attributes; $k = .83$, $p < .0001$; detailed methods in *SI Appendix: Additional Results*). We used a paired t-test to compare attitudes toward the two target age groups (i.e., people in their 20s/30s and people in their 80s/90s). We used one-sample t-tests to compare attitudes toward these groups against the midpoint (neutral valence). We used Pearson correlations to examine the relationships between SDO and attitudes toward each group.

Forecasting surveys. *Feeling thermometers*. We ran a multi-level model to assess participant accuracy at forecasting the feeling thermometer responses of our original sample. Consistent with our preregistered analytical plan, feeling thermometers were centered to eliminate baseline differences and allow for appropriate pairwise comparisons between actual and forecasted data. To assess accuracy at estimating the *collective* sentiment of our original sample, *actual* attitudes were centered at their Grand Mean (i.e., mean of all actual feeling thermometers). To assess *individual* rather than collective accuracy of participants in our estimation studies, *estimated* attitudes were centered at the Individual Mean (i.e., mean of all the estimated attitudes of a given participant; 75). Alternative DV transformations were also preregistered; none significantly altered the conclusions presented in this article. Observations were nested in participant. Target age group was entered as an ordinal predictor. The three subject groups were identified by a categorical variable (0 = *actual attitudes*, 1 = *lay forecasts*, and 2 = *social scientists' forecasts*). The interaction

of the two variables was added to compare actual and estimated responses. We followed up with a Wald test and pairwise comparisons. To examine whether familiarity with DEI or ageism research influenced social scientists' estimations, we also conducted two additional analyses (one for each area of expertise) focusing exclusively on social scientists. Specifically, we ran multi-level models with feeling thermometers as outcome variable, target age group (ordinal) as predictor, and DEI or ageism expertise (continuous, standardized) as moderator. Observations were nested in participant and the outcome variable was transformed into a measure of accuracy by subtracting actual from estimated attitudes.

Open-ended responses. To determine how accurately participants forecasted attitudes toward younger and older adults as measured in our representative sample's essays, we ran a multi-level model with positivity of the essays as dependent variable. For our predictors, we included a dummy variable to distinguish the younger from the older target group, a categorical variable to identify the three subject groups (actual responses, lay forecasts, and social scientists' forecasts), and the interaction term of the two to compare actual versus estimated responses. Observations were nested within participants. We followed up with a Wald test and pairwise comparisons. Much like for our feeling thermometer analyses, we also adapted this model to examine moderation by ageism and DEI expertise among social scientists. Specifically, we ran multi-level models with attitudes as outcome variable, target age group as predictor, and DEI or ageism expertise (continuous, standardized) as moderator. Observations were nested in participant and the outcome variable was transformed into a measure of accuracy by subtracting actual from estimated attitudes. To compare the likelihood that social scientists with expertise in ageism, DEI, or neither, accurately predict that essays about older adults were more positively valenced than those about younger adults, we ran a logistic regression with a binary outcome measure coded as: 1 = correct prediction and 0 = incorrect prediction. This latter analysis was not pre-registered. To determine how accurate participants were at forecasting the percentage of positive attributes associated with younger and older adults, we ran a multi-level model. Estimations were transformed into a measure of accuracy by subtracting actual from estimated percentage of positive attributes associated with the target group. Target group (younger / older adults), subject group (lay forecast / social scientists' forecast), and their interaction were entered as predictors. Observations were nested in participant. To test whether expertise moderated social scientists' forecast, we ran two additional models in which we focused on social scientists and replaced the subject group variable with a continuous, standardized expertise variable (either ageism or DEI). To assess how accurate social scientists were at forecasting partial Spearman correlations between SDO and attitudes toward each age groups, we ran a series of one-sample t-tests comparing their forecast against the actual partial Spearman correlation obtained in our original study. Finally, to examine whether DEI and ageism expertise moderated participants' accuracy at estimating the relationships between SDO and attitudes toward each target age group, we ran two multi-level models with correlation coefficients as outcome measures, target age group as a categorical predictor and expertise as a standardized, continuous moderator. The outcome variable was transformed into a measure of accuracy by subtracting actual from forecasted partial correlations. Observations were nested in participant.

Academic Transparency. Our data, material, syntax, and preregistration forms are publicly accessible online on a database of the Open Science Foundation: [LINK](#). Due to minor variations in preregistered analytical plans between Sample A and Sample B, the analyses of the combined dataset presented in this paper follow the plan preregistered for Sample B.

Acknowledgments. We thank Eric Luis Uhlmann for his valuable comments during the design of this research.

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Figures and Tables

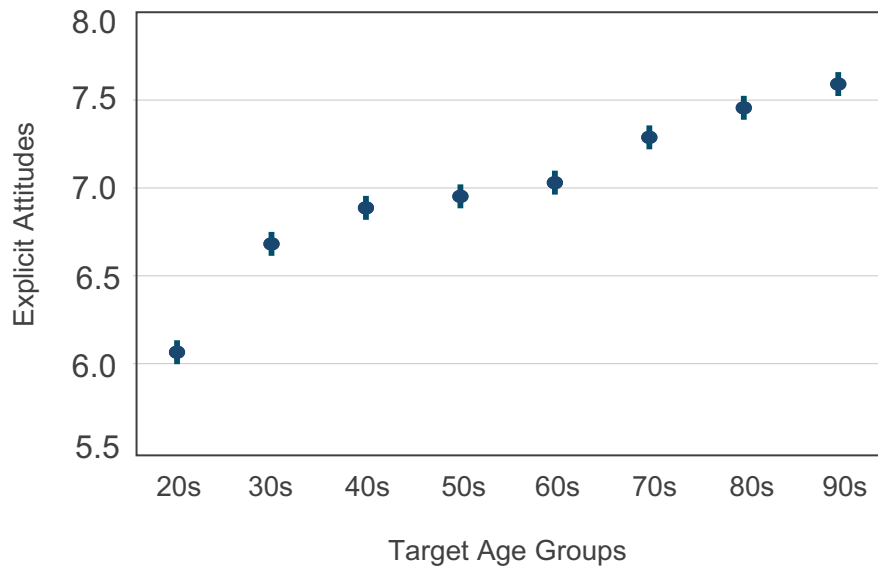


Figure 1. Mean plot of explicit attitudes toward different age groups for a sample representative of the U.S. adult population. Results for Sample A + Sample B. Full scale of the outcome measure: Sample A: 0 = *Extremely Cold*, to 10 = *Extremely Warm*; Sample B: 0 = *Extremely Negative*, to 10 = *Extremely Positive*. Error bars represent 95% confidence intervals. Explicit attitudes toward age groups follow an upward trend with a plateau between 40 and 60. People in their 20s tend to experience the least favorable attitudes, people in their 90s, the most favorable ones.

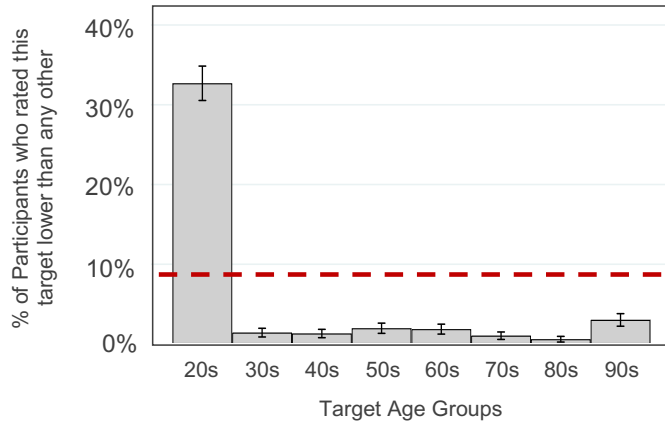


Figure 2. Percentage of participants who rated a given target age group lower than any other. Error bars represent 95% confidence intervals. The red dotted line indicates the likelihood that the event occurs by chance (8.7%). About a third (32.7%) of participants rated people in their 20s lower than any other target age group, close to four times the probability that such an event occurs by chance. In contrast, 3.0% or less rated any other group the lowest, way below chance.

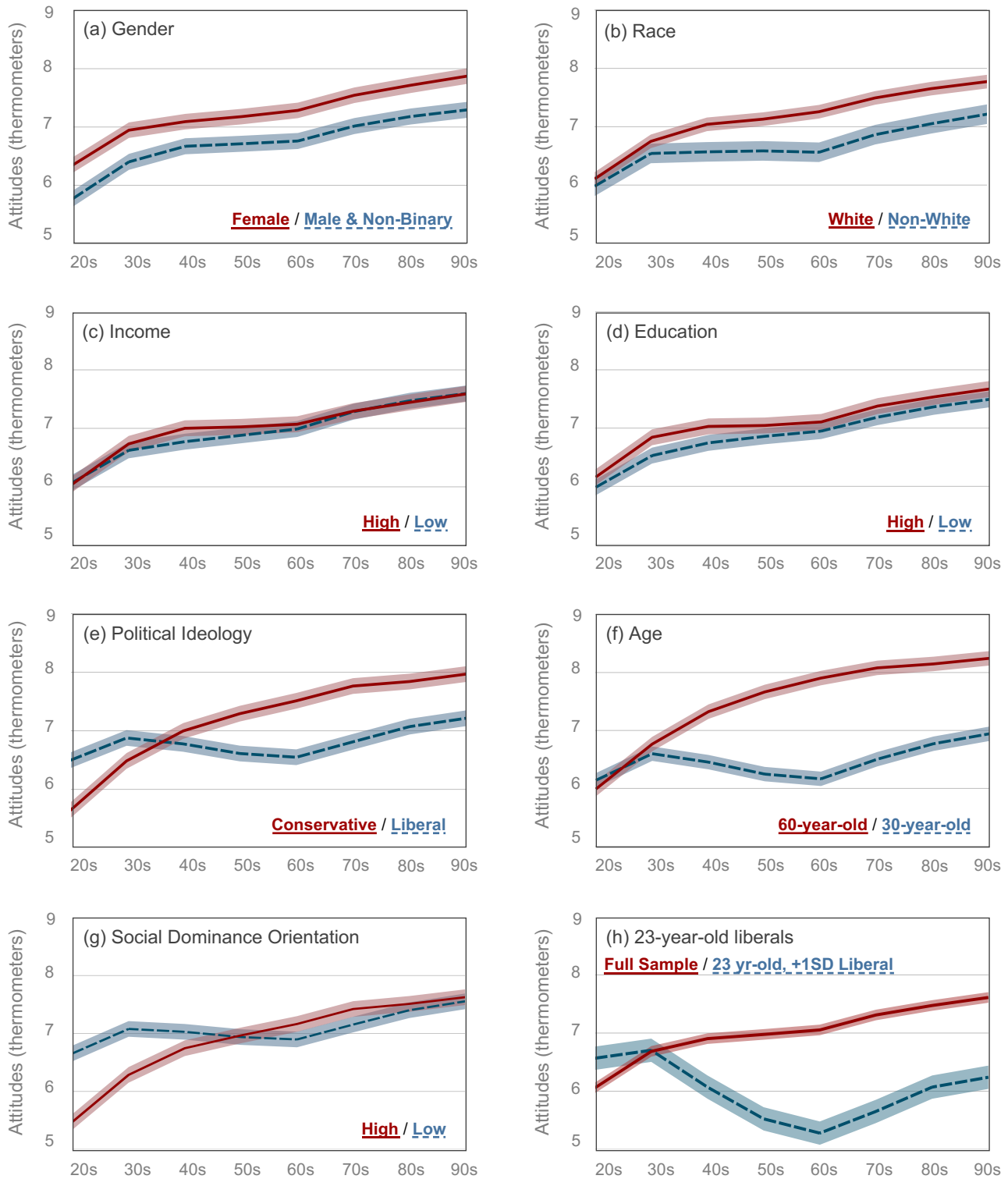


Figure 3. Mean plots of explicit attitudes toward different age groups for a sample representative of the U.S. adult population, as a function of participant demographic characteristics. Results of Sample A and B combined. Full scale of the outcome measure: Sample A: 0 = *Extremely Cold*, to 10 = *Extremely Warm*; Sample B: 0 = *Extremely Negative*, to 10 = *Extremely Positive*. Mean plots for categorical moderators based on actual means. Mean plots for continuous moderators based

on mean estimates derived from simple slopes. High/low = ± 1 *SD* away from the mean. Political Ideology: Conservatives (/Liberals) = ± 1 *SD* away from the mean on a continuous measure of political view. Age: 60-year-old = 0.93 *SD* above the mean age, and 30-year-old = 0.92 *SD* below the mean age. Shaded areas represent 95% CI. Panel A, B, C: Gender, level of income, and level of education do not greatly moderate the general pattern of age attitudes. Panel D, E, F: White, conservatives and older participants show an even stronger attitudinal preference for older—over younger—adults. Conversely, racial and ethnic minorities, liberals, and younger participants tend to express more even attitudinal responses across target age groups, but still show more favorable attitudes toward the “old older adults” than toward the youngest target age group. Panel G: Consistent with the notion that higher attitudes toward older—relative to younger—adults do not reflect a benign social preference, but rather, a real prejudice toward the young, people with a strong proclivity for prejudice (i.e., people high on SDO) tend to view younger adults less positively than those with no such proclivity (i.e., people low on SDO). Panel H: Young liberal participants were among the few demographic groups to express a strong preference for younger over older target age groups, which further cautions against the generalizations of ageism findings relying on undergraduate samples.

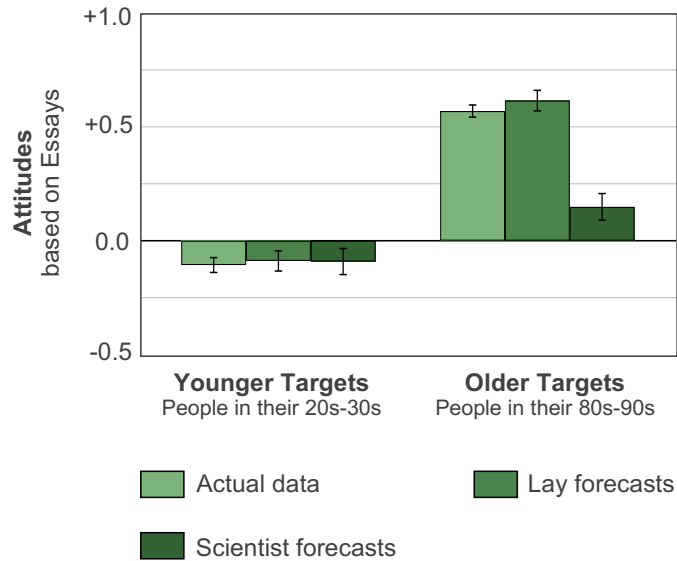


Figure 4. Actual versus lay and social scientists' forecasts of attitudes toward younger and older adults, based on open-ended responses of our sample representative of the U.S. adult population. Full scale of the outcome measure: -2 = *Extremely Negative* to +2 = *Extremely Positive*. 0 = *Neither Positive nor Negative*. Error bars represent +/-1 SE away from the mean. Based on the essays of participants in Sample B, Attitudes toward younger adults (i.e., people in their 20s and 30s) were trending negatively. In contrast, attitudes toward older adults (i.e., people in their 80s and 90s) were positive. Lay estimators and social scientists both accurately predicted essay-based attitudinal ratings for younger adult targets. However, social scientists greatly underestimated attitudinal ratings for older adults, estimating an attitudinal gap between the younger and older target group of $\Delta = 0.24$, much smaller than the actual gap ($\Delta = 0.68$). In contrast, lay forecasters were highly accurate (forecasted gap of $\Delta = 0.70$).



Figure 5. Stereotype content of younger and older adults, based on percentages of positive and negative attributes associated with each target cohort in participant essays. Percentages of positive and negative attributes for warmth / communality and competence / agency, based on attributes extracted from participants' open-ended responses. Attributes rated as neutral in valence are not included in this figure but makeup for the difference between positive and negative attributes. Overall, the stereotype content of younger cohorts was particularly negative for the warmth / communality dimension and negatively trending for the competence / agency dimension. In contrast, the stereotype content of older cohorts was highly positive, both on the warmth / communality dimension and competence / agency dimension.

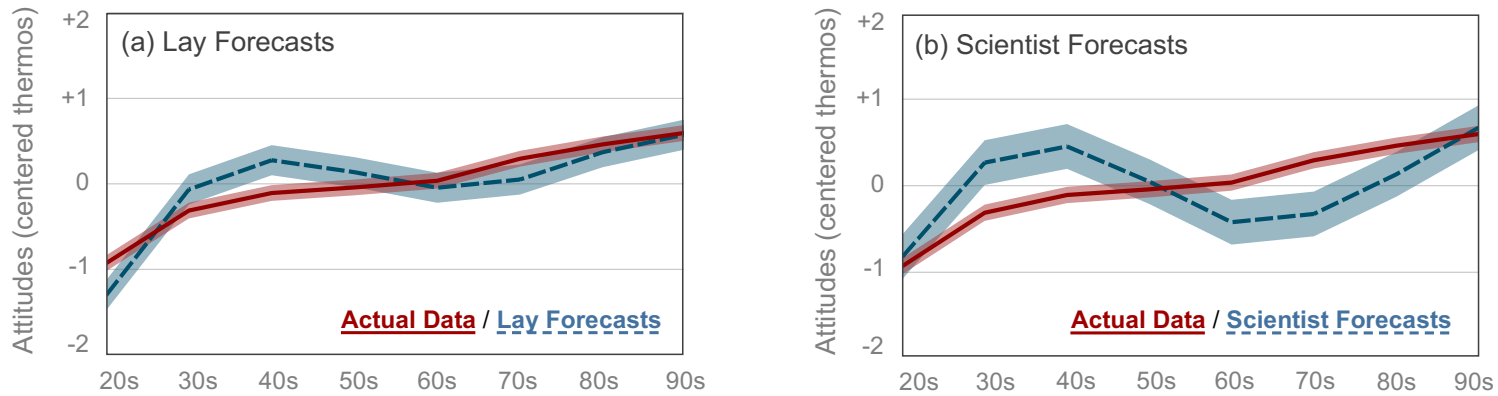
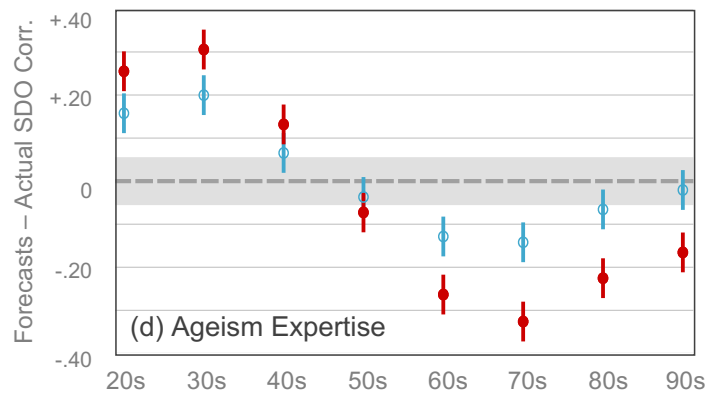
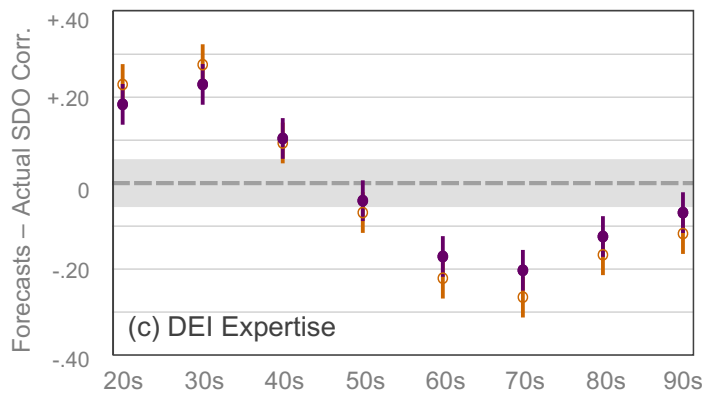
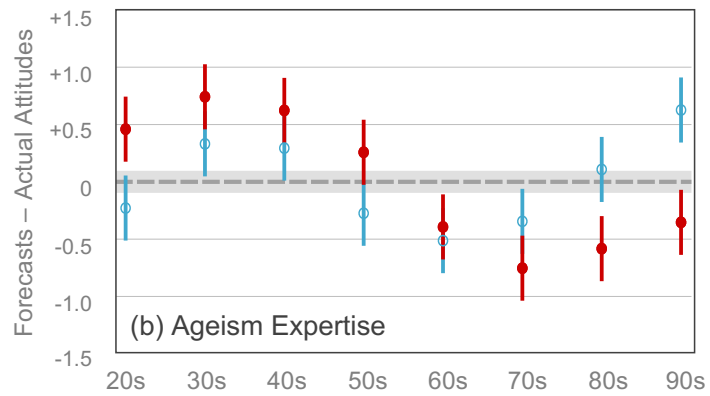
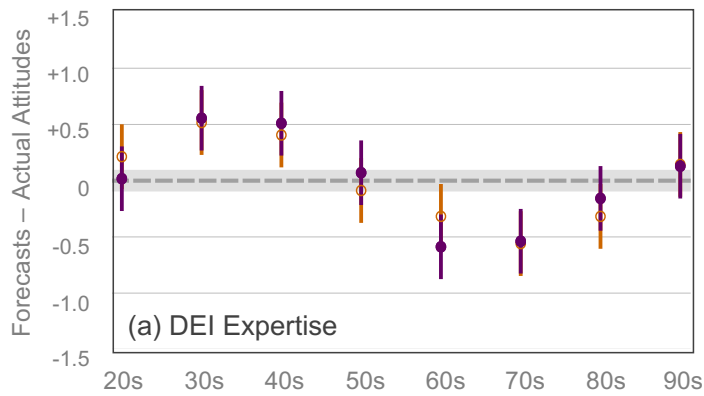


Figure 6. Mean plot of actual versus lay forecasts (Panel A) and scientist forecasts (panel B) of attitudes toward different age groups. Actual explicit attitudes were centered at their Grand Mean. Estimated explicit attitudes were centered at the Individual Mean. Shaded areas represent 95% confidence intervals. Social scientists were much more likely than lay forecasters to overestimate attitudes toward younger target age groups and underestimate attitudes toward young older adults.



○ Forecasts of Social Scientists at -1SD in DEI Expertise
● Forecasts of Social Scientists at +1SD in DEI Expertise

○ Forecasts of Social Scientists at -1SD in Ageism Expert.
● Forecasts of Social Scientists at +1SD in Ageism Expert.

Figure 7. Deviations of social scientists' forecast away from our nationally representative sample's responses, as a function of expertise in DEI (Panel A and C) and ageism (Panel B and D), for attitudes toward different age groups (Panel A and B) and correlations between SDO and attitudes toward different age groups (Panel C and D). Actual responses were subtracted from social scientists' forecasts. Value = 0 means that the forecast matches the actual data; values > 0 reflect overestimations; values < 0 reflect underestimations. X-axis represents the target age groups. Error bars represents 95% confidence intervals. Area shaded in light grey represents the 95% confidence interval for actual responses.

Per Panel B, the more social scientists were familiar with the ageism literature, the more they tended to overestimate attitudes toward younger target groups and underestimate attitudes toward older target groups; in contrast, DEI expertise had no effect on forecasting accuracy. Per Panel D, the more social scientists were familiar with the ageism literature, the more they tended to underestimate how negatively correlated SDO is with attitudes toward younger age groups and how positively correlated it is with attitudes toward older age groups. In contrast DEI expertise had no effect on accuracy of either attitudes or SDO correlations (Panel A and C).

Table 1. Relationship between SDO and attitudes toward age groups, and SDO and attitudes toward racial groups.

Age Groups			Ethnicity & Race		
Target Group	Partial Spearman Correlation	Sig.	Target Group	Partial Spearman Correlation	Sig.
20s	-.25	$p < .0001$	Asian	.06	$p = .4394$
30s	-.22	$p < .0001$	Black	-.25	$p = .0005$
40s	-.05	$p = .0199$	Latino	-.08	$p = .2703$
50s	.12	$p < .0001$	White	.22	$p = .0017$
60s	.24	$p < .0001$			
70s	.23	$p < .0001$			
80s	.14	$p < .0001$			
90s	.11	$p < .0001$			

Note. Matrices of partial Spearman correlations. Attitudes toward each age group are net of participant's attitude toward age groups *in general* (i.e., average attitudes toward people in their 20s-90s). Similarly, attitudes toward each ethnic/racial group are net of participant attitudes toward race *in general* (i.e., average attitudes toward Asian, Black, Latino, and White). Per preregistration plan, SDO scores above or below 2.5 *SD* away from the mean were excluded. Partial correlations with target age groups are based on our original sample ($N = 1,820 - 23$ participants whose SDO scores were ± 2.5 *SD* away from SDO mean). Partial correlations with race are based on a separate study ($N = 198 - 4$ participants whose SDO scores were ± 2.5 *SD* away from SDO mean). The correlation between SDO and attitudes toward the young was akin to that of SDO with attitudes toward Black people (i.e., non-dominant, racial minority group), and that between SDO and attitudes toward the "young older adults" akin to that between SDO and attitudes toward White people (i.e., dominant, majority group).

Table 2. Top 10 warmth / communality and competence / agency attributes associated with younger and older age groups in participants' essays.

WARMTH / COMMUNALITY						COMPETENCE / AGENCY					
Younger Targets People in their 20s-30s			Older Targets People in their 80s-90s			Younger Targets People in their 20s-30s			Older Targets People in their 80s-90s		
<i>Freq.</i>	<i>Attribute</i>	<i>Val.</i>	<i>Freq.</i>	<i>Attribute</i>	<i>Val.</i>	<i>Freq.</i>	<i>Attribute</i>	<i>Val.</i>	<i>Freq.</i>	<i>Attribute</i>	<i>Val.</i>
89	entitled	-	31	positive	+	54	lazy	-	156	wise	+
43	positive	+	24	sweet	+	38	hard-working	+	115	experienced	+
37	disrespectful	-	21	kind	+	36	immature	-	113	respectable	+
32	self-centered	-	16	nice	+	26	inexperienced	-	74	hard-working	+
29	selfish	-	16	racist	-	22	energetic	+	53	knowledgeable	+
27	know-it-all	-	12	respectful	+	12	irresponsible	-	21	set in their ways	-
25	spoiled	-	10	happy	+	12	stupid	-	15	admirable	+
21	annoying	-	8	caring	+	11	mature	+	13	vulnerable	-
20	fun	+	8	friendly	+	11	smart	+	11	hard-workers	+
19	arrogant	-	8	grumpy	-	10	naïve	-	10	slow	-
			8	mean	-						
			8	negative	-						

Note. Freq. = Frequency. Val. = Valence

Table 3. Actual versus scientists' forecasts of partial correlations between SDO and attitudes toward different age groups.

Target Group	Actual Relationships		Forecasted Relationships		One-sample T-tests	
	<i>r</i>	CI _{95%}	<i>r</i>	CI _{95%}	Δ	<i>sig.</i>
20s	-.29	[-0.34, -0.23]	-.08	[-0.12, -0.04]	-.21	$p > .0001$
30s	-.23	[-0.29, -0.17]	.02	[-0.01, 0.05]	-.25	$p > .0001$
40s	-.03	[-0.09, 0.04]	.07	[0.04, 0.10]	-.10	$p > .0001$
50s	.13	[0.06, 0.19]	.07	[0.05, 0.10]	.06	$p = .0001$
60s	.25	[0.19, 0.31]	.05	[0.02, 0.08]	.20	$p > .0001$
70s	.25	[0.19, 0.31]	.02	[-0.02, 0.05]	.23	$p > .0001$
80s	.15	[0.08, 0.21]	.00	[-0.03, 0.04]	.15	$p > .0001$
90s	.11	[0.05, 0.17]	.02	[-0.02, 0.06]	.09	$p > .0001$

Note. Actual data taken from our original study (i.e., Spearman parti-correlations between SDO and attitudes toward *each* age group, controlling for attitudes toward all *age* groups). Forecasted correlations are mean predictions from social scientists. Significance based on two-sided, simple t-tests, testing whether predicted values differed from the actual correlations (e.g., the mean prediction for the correlation between SDO and attitudes toward people in their 20s was significantly lower than -0.29: $t(240) = 10.73$, $p < .0001$). Taken together, academic participants greatly underestimated how negative the correlations were between SDO and attitudes toward younger target groups, and how positive they were between SDO and attitudes toward older target groups.