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Facing Fate: Estimates of Longevity From Facial Appearance and Their Underlying Cues

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ABSTRACT

Life span is associated with a number of physical and social factors, including health, personality, and socioeconomic status. Here, we examined whether life longevity could be predicted from facial appearance. We asked participants to view headshots from a 1923 university yearbook and to estimate how long they thought each person lived, finding that participants' judgments predicted targets' actual age of death. Additional participants rated the photos along a variety of characteristics previously found to predict longevity. Judgments of wealth were most closely related to perceived longevity, providing stronger predictive power than perceptions of health, attractiveness, or personality. These results demonstrate that longevity can be accurately judged from faces alone, and that assessments of traits related to actual longevity underlie the accurate perception of life span.

SCIENTIFIC ABSTRACT

Studies on social demographics have demonstrated that life span is influenced by a number of parameters related to one's physical health and to the external environment. The current study examined whether longevity could be predicted from the face alone and, if so, the characteristics that relate to accurate judgments of longevity. Participants ($N = 212$) viewed 100 portraits from a 1923 university yearbook and were asked to estimate how long each person lived. A structural equation model revealed that estimates of longevity significantly predicted targets' actual age of death ($\beta = .30$, $t = 2.27$, $p = 0.02$). To explore the mechanisms underlying these judgments, we examined perceptions of the faces along a set of variables related to actual life span. Perceptions of health and attractiveness ($\beta = .21$, $t = 2.77$, $p = .01$), power ($\beta = .25$, $t = 3.32$, $p < .01$) and wealth ($\beta = .52$, $t = 6.48$, $p < .01$) predicted participants' judgments of longevity, with perceived wealth showing the strongest relationship to estimated age of death. Overall, these results demonstrate that demographic factors that affect life span may also affect facial appearance, affording accurate judgments of longevity based on the face alone.

Keywords: person perception, facial cues, life span, health, nonverbal behavior

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power ($\beta = .25$, $t = 3.32$, $p < .01$) and wealth ($\beta = .52$, $t = 6.48$, $p < .01$) predicted participants' judgments of longevity, with perceived wealth showing the strongest relationship to estimated age of death. Overall, these results demonstrate that demographic factors that affect life span may also affect facial appearance, affording accurate judgments of longevity based on the face alone.

Long life is a fundamental desire common to most people. When asked, people typically report a desired life span reaching into the mid-to-upper 80s (Lang, Baltes, & Wagner, 2007)—higher than the life expectancy of even the healthiest nations (World Health Organization, 2012). Indeed, longevity is one of the major elements that the United Nations uses to index quality of life around the world (United Nations Development Programme, 1998). Many studies have established a number of physical and social factors directly related to longevity. It is unsurprising that longevity is linked to health, with a number of health problems (based both on genetics, such as Alzheimer's disease, and behaviors, such as smoking) constituting the primary causes of death in the United States (Mokdad, Marks, Stroup, & Gerberding, 2004). Other influences on longevity are less obvious, however. Several studies have revealed that personality and emotional traits, such as high optimism, agreeableness, and conscientiousness portend a longer life span (reviewed in Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007). Socioeconomic status (SES) is also associated with longevity (individuals of higher SES live longer; Backlund, Sorlie, & Johnson, 1999), possibly due to positive relationships between economic status and living conditions (Bosma, van de Mheen, Borsboom, & Mackenbach, 2001). Here, we sought to test whether longevity might be predicted from a very different source of information—facial appearance.

Ancient and contemporary folk theories about physiognomy include the suggestion that one's face holds clues to various traits and fortunes, including longevity (e.g., Bridges, 2012). Although no research has yet investigated whether one can directly perceive another person's life span from looking at his or her face, scientific studies have demonstrated that many important long-term life outcomes can be indirectly predicted from impressions of a single facial photograph. For example, facial appearance at a young age can predict later physical qualities, such as individuals' weight and health in adulthood (Reither, Hauser, & Swallen, 2009). More striking, one's facial appearance can also foreshadow major life events: judgments of dominance from the faces of entry-level cadets at the U.S. Military Academy predicted their ranks more than 20 years later (Mueller & Mazur, 1996), how people smile in childhood photos can predict whether their marriages will end in divorce (Hertenstein, Hansel, Butts, & Hile, 2009), and judgments of power from the college yearbook photos of law firm managing partners predicted their firms' current profits (Rule & Ambady, 2011).

Evidence suggests that longevity may be indirectly gleaned from facial appearance through inferences of health, wealth, and personality. Physical health can be accurately inferred from faces—ranging from body-mass index and immunological strength to the frequency of respiratory and cardiovascular illnesses, including one's susceptibility to common colds (Coetzee, Perrett, & Stephen, 2009; Thornhill & Gangestad, 2006; Tinlin et al., 2013; Whitehead, Re, Xiao, Ozakinci, & Perrett, 2012). If health judgments made from facial photos predict long-term health, as they do for short-term health (Coetzee et al., 2009; Jones et al., 2001; Thornhill & Gangestad, 2006), then it is conceivable that they could predict longevity as well. For example, one study found that judgments of children's body weight from their high school yearbook photos correlated with premature mortality rates (Reither et al., 2009), and another showed that perceptions of facial attrac-

tiveness (a correlate of health; Jones et al., 2001) positively predicted how long people lived (Henderson & Anglin, 2003). Perhaps impressions of overall general health could predict longevity similarly.

Perceivers also use facial appearance to make reliable and accurate judgments of personality (e.g., Ambady, Hallahan, & Rosenthal, 1995; Berry, 1990; Penton-Voak, Pound, Little, & Perrett, 2006). Given that personality traits such as agreeableness, extraversion, and conscientiousness can be inferred from the face (Little & Perrett, 2007; Penton-Voak et al., 2006), and that individuals who exude a generally positive disposition tend to live longer (Roberts et al., 2007), perceptions of personality and emotion from faces may facilitate accurate judgments of longevity. Indeed, Abel and Kruger (2010) found that baseball players who exhibited genuine and intense smiles in their 1952 register photos lived longer than those who did not, and Kleiman and Rule (2013) showed that inferences of impulsive aggression from faces predicted whether young adults had committed suicide. Thus, it is feasible that judgments of personality and emotional traits from faces may correlate with actual longevity, even if only indirectly.

One further way in which appearance may relate to longevity is through perceptions of SES and wealth. Demographic research has revealed a clear association between life span and SES, such that wealthier people live longer (Backlund et al., 1999), and recent studies have demonstrated that SES can be accurately inferred from nonverbal behavior (Kraus & Keltner, 2009) and from photos of faces (Tskhay, Clout, & Rule, 2015). It is therefore conceivable that judgments of SES from faces might contribute to perceptions of longevity. To date, no study has included perceptions of wealth as a variable in predicting how long people live. The current research takes this important step by including wealth as a potential factor in the accurate judgment of individuals' life spans.

Of course, it is possible that perceptions of longevity are not based on one of these possible predictors, but a combination of all three. Health is inextricably tied to socioeconomic status, and there is a robust positive association between wealth and health in the modern world (Adler et al., 1994; Adler & Ostrove, 1999). Socioeconomic status is also strongly linked to happiness and subjective well-being (Gerdtham & Johannesson, 2001; Pinquart & Sörenson, 2000), and higher SES correlates with lower levels of chronic stress (Baum, Garofalo, & Yali, 1999). Given the interrelationships between health, wealth, and emotional disposition, it is possible that perceptions of all three may work together to impact perceived longevity.

Considering that health, wealth, and personality all predict longevity, and that each can be reliably discerned from facial appearance, it therefore seems plausible that perceivers might be able to estimate others' life spans by viewing their faces. Moreover, it is reasonable that perceptions of health, wealth, and personality might integrate to support these judgments. Such a finding would extend beyond previous studies that have examined facial cues to health, wealth, and personality in isolation by demonstrating that these cues can be combined to form impressions of overall longevity. In addition, integrating health, wealth, and personality into a single model would provide an opportunity to estimate the predictive power of each factor individually, and to compare them to each other to assess their relative importance. We therefore asked participants to directly estimate men's longevity from photos of their faces and then related these judgments to perceptions of health, wealth, and personality. This allowed us to test whether longevity can be directly inferred from the face and to better understand how impressions of health, wealth, and personality may integrate to support accurate judgments.

Method

Stimuli

We digitally scanned the portrait photos of 100 graduating students from the University of Toronto class of 1923 yearbook. Due to the paucity of women and racial minorities in the yearbook, we restricted our sample to Caucasian men. Each individual's birth and death years were acquired from obituaries and genealogy websites, allowing us to calculate the target's age in the photo ($M = 24.95$ years, $SD = 3.07$) and age at death ($M = 73.24$ years, $SD = 15.11$). Because a subset of targets had moustaches ($n = 20$), glasses ($n = 8$), or both ($n = 2$), dummy-coded variables were created to statistically control for both adornments.

Procedure

American participants ($N = 212$) from Amazon's Mechanical Turk completed the study by following a link to a Qualtrics survey (Provo, UT). They viewed the faces individually and indicated how long they thought each person had lived using a slider scale ranging from 15 to 100 years. Additional participants rated the faces for perceived wealth (used as a proxy for perceived SES; $N = 31$), perceived health ($N = 30$) and related variables (attractiveness $N = 16$; facial symmetry, $N = 24$; skin quality, $N = 27$; and facial adiposity, $N = 30$), as well as both agentic (dominance, $N = 35$; facial maturity, $N = 30$) and communal (likability, $N = 23$; affect, $N = 22$) traits (see Zebrowitz et al., 2011). Participants rated the faces using 7-point scales ranging from 1 (*Not at all X*) to 7 (*Very X*) for each judgment.¹ Only data from participants who completed their entire task sets were included in the analyses. The number of participants for each task was based on achieving acceptable interrater reliability, a prerequisite for computing average scores for each target: all Cronbach's alphas $> .74$.

Results

Because we were interested in the relationship between targets' actual and perceived longevity, we aggregated participants' judgments for each face so that the target was the unit of analysis. Multiple regression revealed that targets' perceived age of death predicted their actual age of death with similar effect sizes when we controlled for moustaches, glasses, and age at picture, $\beta = .25$, $t(95) = 2.50$, $p = .01$, and when we did not, $\beta = .26$, $t(98) = 2.62$, $p = .01$; these control variables were therefore omitted from subsequent analyses. Several of the trait and physiognomic variables were significantly correlated with participants' estimates, but were also intercorrelated (see Table 1). An exploratory factor analysis of these variables using varimax rotation revealed two factors that we then used to construct composites: Health/Attractiveness (consisting of attractiveness, health, symmetry, and likability) and Power (consisting of dominance and facial maturity). We felt confident in combining traits relating to health and attractiveness into a single composite, as previous research has demonstrated that perceptions of health and attractiveness are strongly related (Jones et al., 2001; Rhodes et al., 2007). Affect, wealth, adiposity, and skin quality did not load highly enough onto either of these composites to warrant inclusion into the composites (Meyers, Gamst, & Guarino, 2005) and were therefore retained them as independent predictors (see Table 2).

To explore how these variables contributed to the accuracy of participants' estimates of longevity, we fit a path model in which the composite and independent variables predicted participants' estimates of age of death, which, in turn, predicted actual age of death. Endogenous disturbance terms were correlated in the model and pathways

were tested using bootstrap resampling with 5000 simulated resamples. The full model did not show an excellent fit: $\chi^2(5) = 14.05$, $p = .02$; comparative fit index (CFI) = .94; root mean square error of approximation (RMSEA) = .14, 90% CI [.05, .22]. Trimming affect, adiposity, and skin quality, which did not significantly contribute to the full model, provided a significantly better fit: $\chi^2(2) = 0.11$, $p = .95$; CFI $> .99$; RMSEA $< .001$, 90% CI [.00, .03]; $\Delta\chi^2(3) = 13.94$, $p < .01$ (see Figure 1).

The model revealed that perceived age of death was a significant predictor of actual age of death ($\beta = .30$, $t = 2.27$, $p = .02$). In turn, wealth ($\beta = .52$, $t = 6.48$, $p < .01$), Health/Attractiveness ($\beta = .21$, $t = 2.77$, $p = .01$), and Power ($\beta = .25$, $t = 3.32$, $p < .01$) all significantly predicted perceived age of death. Wealth predicted perceived age of death significantly better than either Health/Attractiveness or Power, however: $\Delta zs \geq 2.90$, $ps < .001$ (see Meng, Rosenthal, & Rubin, 1992).

In addition, we conducted a multiple regression using bootstrap resampling to examine whether the variables that predicted perceived age of death (Health/Attractiveness, Power, and wealth) related to actual age of death directly. Neither Health/Attractiveness, $\beta = .03$, $t(96) = 0.31$, $p = .76$, Power, $\beta = .06$, $t(96) = 0.50$, $p = .62$, nor wealth, $\beta = .19$, $t(96) = 1.60$, $p = .11$, predicted actual age of death. Thus, actual age of death could not be adequately predicted by judgments of any of Health/Attractiveness, Power, or wealth. Rather, inferences of these qualities in combination supported perceptions of age of death, which accurately predicted targets' actual age of death.

The results of the path analysis suggest that judgments of Power, Health/Attractiveness, and especially wealth form judgments of perceived age of death, which in turn predicts actual age of death. Although we had no a priori reason to suspect that perceived age of death may alter judgments of wealth, we tested an alternative model in which perceived wealth mediated the relationship between perceived age of death and actual age of death. This mediation model, however, was saturated and showed a poor fit: CFI $< .01$; RMSEA = .47, 90% CI [.38, .57]. The mediation model was therefore not considered a realistic representation of the data.

We examined which traits related to perceptions of wealth by entering all of our sampled variables into a multiple regression using bootstrap resampling to predict targets' perceived wealth. Health/Attractiveness, $\beta = .34$, $t(94) = 3.40$, $p < .01$ and Power, $\beta = .42$, $t(94) = 4.80$, $p < .01$, both independently correlated with perceived wealth, whereas neither skin quality, $\beta = .17$, $t(94) = 1.81$, $p = .07$, affect, $\beta = -.02$, $t(94) = -.19$, $p = .85$, nor adiposity, $\beta = .07$, $t(94) = 0.77$, $p = .44$, predicted perceived wealth. These results suggest that perceptions of wealth, which are the best predictor of perceived age of death, are significantly related to independent judgments of Health/Attractiveness and Power.

Finally, to assure that the effects observed were not simply due to peripheral cues to wealth, such as variations in hairstyles or visible clothing in the photos, we borrowed the control procedures used by Samochowiec, Wanke, and Fiedler (2010) and Zajonc, Adelmann, Murphy, and Niedenthal (1987) to rule out the contribution of such extrafacial

¹ Instructions for each task were as follows: Facial maturity—"How baby-faced is this individual?" (*Facially mature to Babyish*, reverse-coded); Affect—"What emotion is this person expressing?" (*Neutral to Very happy*); Skin quality—"How clear is this person's skin?" (*Not at all clear to Very clear*); Adiposity—"How fat is this individual?" (*Not at all fat to Very fat*); Facial symmetry—"How symmetrical is this person's face?" (*Not at all symmetrical to Very symmetrical*); and "How [attractive, dominant, healthy, wealthy, likable] is this individual?" (*Not at all [attractive, dominant, healthy, wealthy, likable] to Very [attractive, dominant, healthy, wealthy, likable]*), respectively, for the remaining judgments.

Table 1
Means, Standard Deviations, and Relationships Between Independent and Dependent Variables in the Analysis

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Actual age	73.24	15.11	.26*	.22*	.08	.02	.07	.08	-.20*	-.19	.14	.05	.11	.05	-.07	.10	
2. Perceived age	63.17	1.63	.25*	.68**	.28**	.31**	.32**	.22*	.06	.20*	.43***	.28**	.21*	.10	-.04	.01	
3. Wealth	3.90	.43	.23*	.69***	.25*	.29**	.35***	.13	.02	.19	.34**	.31**	.14	.02	-.03	-.10	
4. Attractiveness	2.98	.55	.10	.34**	.29**	.51***	.67***	.17	-.25*	.15	-.10	.23*	.56***	-.30**	.08	.13	
5. Symmetry	4.18	.50	.02	.34**	.30**	.49***	.51***	.20*	-.10	.21*	-.11	.12	.32**	-.19	-.04	.05	
6. Health	4.44	.45	.08	.37**	.40***	.63***	.50***	.32**	-.14	.29**	-.04	.19	.49**	-.28**	.08	.21*	
7. Affect	2.13	.71	.08	.23*	.15	.15	.20	.31	.11	.20*	.00	-.09	.55**	-.05	.11	.06	
8. Adiposity	2.26	.61	-.24*	.02	.01*	-.16	-.04	-.05	.14	.00	-.03	.20	-.16	.30**	-.08	-.04	
9. Skin quality	4.22	.44	-.18	.21*	.20*	.12	.21*	.28	.19	.03	-.13	-.10	.20*	-.08	.09	-.01	
10. Facial maturity	4.69	.82	.13	.42***	.34**	-.02	-.07	.05	.03	-.11	-.11	.52***	-.33**	-.22*	-.07	-.09	
11. Dominance	3.71	.46	.03	.27**	.32**	.33**	.18	.29**	-.08	.14	-.08	.49***	-.27**	.24*	-.01	-.01	
12. Likeability	3.83	.47	.14	.26*	.17	.51***	.30**	.44***	.54	-.07	.18	-.27**	-.22*	-.25*	.12	.12	
13. Age at picture	24.95	3.07													.10	-.04	
14. Moustache																.04	
15. Glasses																	

Note. Values above the diagonal ($df = 98$) represent bivariate correlations; values below the diagonal ($df = 95$) represent partial correlations controlling for age at picture, targets with moustaches (dummy-coded), and targets with glasses (dummy-coded).

* $p < .05$. ** $p < .01$. *** $p < .001$.

features. Accordingly, we placed opaque white ellipses drawn over each target's eyes, nose, and mouth so that only the targets' extrafacial information (i.e., clothes, hair, and background) were visible. We then asked additional participants either to estimate the age of death of the faceless targets ($N = 202$) or to judge the apparent wealth of the targets ($N = 32$) based on these peripheral cues. Results showed that estimates of longevity based on faceless photos did not predict actual longevity, $\beta = .04$, $t(98) = 0.40$, $p = .69$, and controlling for these judgments in a regression with the estimates from the main study showed that the prediction of longevity based on the full photos was undiminished when accounting for the variance contributed by the extrafacial features, $\beta = .25$, $t(97) = 2.58$, $p = .01$.² Similarly, judgments of wealth showed no relationship to perceived age at death, actual age at death, or the wealth judgments from the full photos (all t s $< .13$, all p s $> .21$). These data suggest that extrafacial information, particularly that related to personal grooming and clothing choice, did not account for targets' perceived wealth or longevity.

Discussion

Here, we found that direct judgments of how long a person was believed to have lived significantly predicted his actual life span. Perceptions of Health/Attractiveness, wealth, and Power played important roles in guiding these estimates. Previous studies have sug-

gested that singular dimensions of facial appearance, such as attractiveness, smiling intensity, and weight correlate with longevity (Abel & Kruger, 2010; Henderson & Anglin, 2003; Reither et al., 2009). The present data suggest that perceivers actively integrate these and other facial cues to explicitly predict longevity, and that perceived wealth is the most strongly related trait.

The implications of these findings are intriguing: a man's mortal fate can be estimated from his facial characteristics. Although we do not report the current findings to recommend that facial appearance be used to evaluate the timeframe of one's ultimate demise, the observation that judgments of separate physical and social parameters related to actual life span are integrated to form accurate judgments of longevity from faces is enlightening from a psychological perspective. These results extend previous research on accuracy in facial cues to health, attractiveness, wealth, and personality by showing that perceivers integrate their perceptions of multiple life-span-relevant characteristics to accurately assess longevity.

It may seem surprising that judgments of wealth played a greater role in perceivers' accurate judgments of longevity than Health/Attractiveness did. The benefits of wealth may impact a range of factors that influence longevity, however, including improved access to health care, high-status occupations and lifestyles, and more favorable wealth trajectories (Hayward & Gorman, 2004). The effects of wealth and SES therefore alter several other influences on longevity, including health, which may explain the relatively stronger relationship between perceived wealth and age at death than we found here.

We also found that judgments of Health/Attractiveness and Power independently related to perceived wealth. Given that we employed a cross-sectional design, the current research is limited by not being able to determine the direction of these relationships. It is possible that perceptions of health and personality rely on judgments of wealth; however it is equally plausible that the reverse is true. Although the main focus of the present research was to examine how these traits contributed to accurate judgments of longevity, future research may be useful for exploring how the variables supporting these judgments relate to each other in greater detail.

We found it interesting that judgments of adiposity did not significantly predict perceived longevity. Previous work found that judgments

Table 2
Exploratory Factor Analysis Solutions Following Varimax Rotation

Variable entered	Health/Attractiveness	Power	Component 3
Health	.80	.15	.27
Attractiveness	.87	.07	.03
Symmetry	.68	.10	.17
Likability	.63	-.38	.45
Dominance	.10	.85	-.08
Facial maturity	-.11	.79	-.14
Affect	.22	-.07	.75
Wealth	.35	.59	.26
Adiposity	-.50	.25	.59
Skin quality	.24	-.07	.48
Variance explained	28%	19%	15%

Note. Variables loading together for composite formation are indicated in bold.

² The faceless photos continued to show a nonsignificant relationship with target's age of death in this model: $\beta = .01$, $t(97) = .15$, $p = .89$.

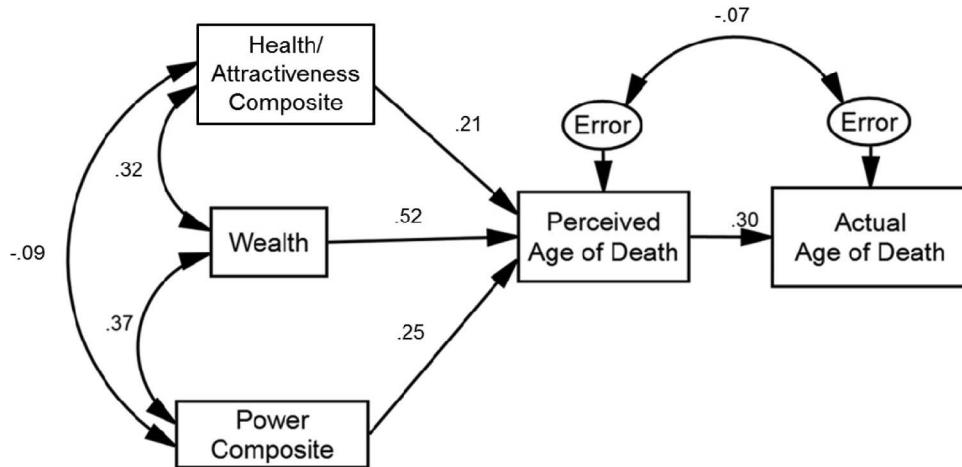


Figure 1. Path model with standardized (β) estimates in which Power (an average of facial maturity and dominance), Health/Attractiveness (an average of perceived health, attractiveness, symmetry, and likability), and perceived wealth predicted perceived age of death, which predicted individuals' actual age of death.

of weight from faces predicted longevity among individuals participating in a longitudinal health study (Reither et al., 2009). That research showed that people whose faces looked overweight were increasingly likely to die prematurely and were more likely to die from heart disease. Thus, the relationship between adiposity and longevity in that sample may have been driven by a subgroup of overweight individuals. In the current sample of 100 yearbook photos, the mean adiposity rating was relatively low (2.25 out of 7.00). It is therefore likely that the current sample did not cover a wide enough range in apparent weight to observe a relationship between adiposity and life span, as the students were all perceived as relatively slim. We also found no relationship between affect and actual longevity, though another study demonstrated a relationship between smiling intensity and longevity in a sample of baseball players (Abel & Kruger, 2010). That study used coders to classify smiles into three categories of increasing smile intensity, with approximately 58% of players exhibiting partial or full smiles. The current sample of yearbook photos had a mean affect rating of 2.13 out of 7.00, indicating that the large majority of faces did not look very happy. As with adiposity, it is therefore possible that a wider range of emotional expressivity is needed to capture the relationship between perceived affect and actual longevity. Future research may therefore clarify both of these relationships.

The current study only tested whether longevity could be accurately assessed from university yearbook photos of Caucasian men. This sample was intentionally homogeneous to restrict possible confounds of race or sex, as Caucasians are generally wealthier than racial minorities (Oliver & Shapiro, 1989), and men have higher average incomes than women (Oostendorp, 2009)—both inequalities in wealth that were much greater in the early half of the 1900s, when our targets were sampled (Polacheck & O'Neill, 1993; Wilson, 1978). Furthermore, our sample of faces came from a university yearbook from 1923, a time when the vast majority of undergraduates were Caucasian men, making it difficult to obtain a sufficient sample of photos of women or other racial groups. It is possible that the effects reported here generalize across gender and ethnicity; however, there is reason to speculate otherwise. For example, from an evolutionary perspective, women's physical appearance should reflect cues of physical attractiveness more than men's, and should be a less reliable cue to physical dominance and aggression (related to our Power composite) or to the potential to acquire resources (an ability that is related to wealth in modern times; Puts, 2010). If women's faces do not purvey power and wealth as accurately as men's faces do, then judgments of longevity in women's faces may either (a) be less accurate, or (b) rely

on other cues. Likewise, racial minority groups in North America generally have less access to medical care, poorer general health, higher premature death rates (e.g., due to violence), and overall lower life expectancies than do Caucasians (Centers for Disease Control & Prevention, 2014; National Center for Health Statistics, 2010). These factors may reduce the reliability of perceived wealth or health in forming judgments of longevity from the faces of non-White racial groups. Future studies may therefore wish to extend the present investigation to more diverse groups to elucidate these possibilities.

Also noteworthy is that the current sample consisted entirely of relatively young adults. Thus, although SES may be a more salient cue to longevity than health, attractiveness, or personality among young adults, it is conceivable that this pattern of results may vary with age. Indeed, a population of older adults may transcend the effects of SES on life span, as they have already reached old age. In this case, a different parameter (presumably health, possibly even via adiposity) may be a better predictor of older adults' remaining longevity. Further research could examine whether the integration of social cues in estimating longevity shifts to emphasize different predictors based on target age.

Finally, we analyzed the present data with targets serving as the unit of analysis, aggregating across participants' ratings for each target. Alternatively, one could ask the same participants to complete every perceptual judgment, and then examine correlations between those judgments within each participant. This type of participant-level analysis would be useful for contrasting the relative weight of the perceivers' judgments during the decision-making processes involved in forming impressions of longevity; that is, it would allow one to generalize about perceivers' behavior when evaluating longevity. The aim of the present research was to examine the traits that predicted longevity across a sample of faces, however; the current target-level analyses were therefore a better fit for answering this question. Furthermore, there may be practical limitations to having the same set of participants rate a large sample of faces for the number of judgments utilized here. The current findings may thus help to narrow the traits relevant for evaluating longevity for future researchers seeking to examine individual differences in perceivers' ability to judge longevity from faces.

Conclusion

In the current work, we found that longevity could be predicted from facial appearance alone. Judgments of wealth predicted longevity over

and above judgments of health/attractiveness and power. Wealth and SES predict longevity in the real world (Backlund et al., 1999); thus, the accuracy of longevity judgments based on perceived wealth may suggest the proper utilization of wealth as a valid cue to life span. The current findings revealed that impressions of health/attractiveness, wealth, and personality traits related to power from photos of faces combine to form accurate estimates of individuals' life spans, showing that one's fate, in terms of actual life longevity, can be predicted from one's face.

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