

# “A Thing of Beauty is a Joy Forever”? Returns to Physical Attractiveness over the Life Course

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This article analyzes the effect of three aspects of physical attractiveness (facial attractiveness, Body Mass Index and height) on socio-economic and marital success over the life course. In a sample of high school graduates from Wisconsin followed from their late teens and until their mid-60s, I find that (1. taller men have higher earnings than shorter men throughout their careers, (2. women with more attractive faces and women with lower Body Mass Index have higher socio-economic status late in their careers, (3. men and women with more attractive faces are more likely to be married in youth, and (4. men and women's physical attractiveness is unrelated to the income and socio-economic status of their spouses. These results suggest that, first, physical attractiveness matters throughout the life course, second, attractiveness does not have a large quantitative effect on socio-economic and marital outcomes and third, different aspects of physical attractiveness matter differently for men and women.

## Introduction

Social stratification research documents that socio-economic success depends on many factors such as socio-economic background, IQ and personality traits. In addition to these usual suspects, also physical characteristics such as facial attractiveness, height and weight are increasingly being linked to socio-economic success. Following the seminal work by Gowin (1915), Perrin (1921) and Waller (1934), empirical studies have shown that physical attractiveness is positively correlated with many types of psychological, socio-economic and social outcomes. Not only are physically attractive individuals more confident, popular and extroverted, healthier and happier than less attractive individuals (e.g., Berscheid and Walster 1974; Eagly et al. 1991; Feingold 1992a; Langlois et al. 2000), they are also more successful in the sex, marriage and labor markets (e.g., Biddle and Hamermesh 1998; Feingold 1992b; Hamermesh and Biddle 1994; Hosoda et al. 2003; Mobius and Rosenblat 2006; Persico et al. 2004; Roszell et al. 1989; Sargent and Blanchflower 1994).

An important limitation in existing research on physical attractiveness and socio-economic success is that most studies use either “snapshot” cross-sectional data or “single shot” experimental data collected at one point in time. Consequently, we know little about

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whether physical attractiveness has any long-term effects on socio-economic and social outcomes over the individual's life course. Existing longitudinal studies, few and mostly based on highly selective samples, do suggest that physical attractiveness has positive long-term effects on socio-economic success. Mazur et al. (1984; see also Mueller and Mazur 1996) found that male West Point graduates with "dominant" (i.e., very masculine) facial features reached higher military ranks and advanced faster than graduates with "submissive" facial features. Frieze et al. (1991) reported that more attractive MBA graduates had higher earnings than less attractive graduates 10 years after graduation. Biddle and Hamermesh (1998) found that more attractive lawyers earned more than less attractive lawyers after 5 and 15 years of practice. Recent longitudinal studies have also shown that more physically attractive people have higher completed fertility (Jokela 2009), better health (Reither et al. 2009) and lower mortality (Hauser 2009). Thus, the existing evidence seems to support the opinion expressed by famous British poet John Keats in his 1818 poem *Endymion* and quoted in the title of this article: "A Thing of Beauty is a Joy Forever."

This research extends existing longitudinal research on physical attractiveness and socio-economic and marital success in four regards. First, I analyze the effect of physical attractiveness on outcomes over a longer period of individuals' lives than most previous studies. Research shows that individuals tend to maintain their relative position in the distribution of attractiveness throughout life (Adams 1977; Hatfield and Sprecher 1986) and, as a consequence, it is likely that advantages from being physically attractive persist over the life course. In the present analysis I use data from the Wisconsin Longitudinal Study, which allows me to analyze the effect of physical attractiveness on socio-economic and marital outcomes in a sample of U.S. respondents followed from their late teens and until their mid-60s. Consequently, the present study offers a longer time window than previous research (see also Hauser 2009; Jokela 2009; Reither et al. 2009). Furthermore, the WLS is broadly representative of white Americans who have completed at least high school (Wollmering 2007), which means that my results generalize to a broader segment of the population than most previous longitudinal studies which analyze specific occupational groups (for example, West Point graduates, MBA graduates and lawyers).

This article's second contribution is that it analyzes the effect of attractiveness over the life course on several important outcome dimensions. These dimensions are (1. socio-economic success (income, socio-economic status), (2. marital success, and (3. spouse's socio-economic status (income, socio-economic status). All outcome variables are measured several times over respondents' life course. Existing studies tend to focus on one type of outcome (psychological, marital, labor market, etc.), and in considering several outcome dimensions simultaneously this research offers a more comprehensive longitudinal account of the link between physical attractiveness and socio-economic and marital success than previous research.

This article's third contribution is that it considers three aspects of physical attractiveness: facial attractiveness derived from high school yearbook photographs, Body Mass Index and height. These three aspects have mostly been studied individually (for studies using facial attractiveness see Biddle and Hamermesh 1998; Hamermesh

and Biddle 1994; for studies using BMI or weight see Averett and Korenman 1996; Cawley 2004; Sargent and Blanchflower 1994; for studies using height see Case and Paxson 2008; Judge and Cable 2004; Persico et al. 2004). Frieze et al. (1991), Harper (2000) and French et al. (2009) are among the few studies which consider several aspects of attractiveness in the same analysis. In the present analysis I also analyze whether different aspects of physical attractiveness (facial attractiveness, BMI, height) are equally important for men and women.

Finally, the WLS data enables me to control for more measures of respondents' skills and endowments (IQ, education) and family background than most previous studies. Hamermesh and Biddle (1994) and Hamermesh et al. (2002) argue that it is important to control for these traits in order not to overstate the effect of physical attractiveness because more advantaged respondents may have healthier lifestyles and may invest more in beauty-enhancing products. In the WLS there is some evidence that physical attractiveness is correlated with family background since women from advantaged backgrounds (proxied by father's socio-economic status and parents' education) obtain higher facial attractiveness ratings, have lower BMI and are taller than women from less advantaged backgrounds. Furthermore, among men, an advantaged socio-economic background is associated with being taller (but not being prettier or skinnier).

## Theoretical Background

Physical attractiveness has been linked to advantageous long-term outcomes across scientific disciplines. I draw on evolutionary psychology, social psychology and social constructionist theories to develop a conceptual framework for analyzing how physical attractiveness affects socio-economic and marital outcomes over the life course. Although the explanatory mechanisms differ, the three theoretical approaches all hypothesize that physically attractive individuals are advantaged relative to less attractive individuals and that they are likely to maintain this advantage throughout life. The theories also predict gender differences in the effect of attractiveness on outcomes. I begin by presenting the evolutionary psychological approach because this approach proposes a set of basic evolutionary principles which motivate why an "attractiveness advantage" might exist in the first place. The social psychology and social constructionist approaches provide alternative and more detailed explanations of the psychological and sociological mechanisms through which the attractiveness advantage might work (see Langlois et al. 2000).

### *Evolutionary Psychology*

The core argument in evolutionary psychology is that adaptation of the human brain through natural selection was principally driven by the recurrent problems early humans faced in ancestral environments (e.g., Buss 2008; Tooby and Cosmides 2005). In these environments certain physical traits such as strength, reproductive quality and good health were instrumental for survival. As a consequence, humans developed information-processing circuits in the brain which recognize manifestations of these "survivor" traits and instinctively evaluate these traits as attractive or, in the case of deviations from

these traits, as unattractive (e.g., Thornhill and Gangestad 1994).<sup>1</sup> Thus, traits which are regarded as physically attractive in humans are traits which signal (re)productive skills. Furthermore, men and women specialize in either productive or reproductive skills, with physical strength being more important for men and reproductive health being more important for women. These fundamental mechanisms, which still operate today, explain why there is only little variation in people's ratings of others' physical attractiveness (Berscheid and Waller 1974; Feingold 1992b); why there is only little variation across cultures in people's perceptions of which facial characteristics are considered attractive and unattractive (Langlois et al. 2000; Perrett et al. 1994); and why even as infants children prefer attractive people over unattractive people (Etcoff 1999; Langlois et al. 1991). Consequently, even though many of the traits associated with physical attractiveness are no longer required for survival, evolutionary psychology predicts that there should be positive returns to physical attractiveness over the life course.

### *Social Psychology*

The principal explanation of the attractiveness advantage in social psychology is the "what is beautiful is good" stereotype (Dion et al. 1972; see also Berscheid and Walster 1974; Feingold 1992a; Langlois et al. 2000). The core argument in this stereotype is that individuals make inferences about others' traits and qualities based on their physical appearance. Physically attractive people are ascribed a range of positive traits such as high intelligence, social competence, friendliness, likeability and leadership skills (see Feingold 1992a; Langlois et al. 2000). By contrast, physically unattractive individuals, both adults and children, are ascribed negative traits. There is a rich empirical literature documenting the existence of a "what is beautiful is good" stereotype (Eagly et al. 1991; Feingold 1992a; Langlois et al. 2000). An additional implication of the stereotype is that attractive individuals, not least because attractiveness stereotyping has been shown to exist already in early childhood, may internalize outsiders' differential judgments and gradually develop differential self-views and behaviors (e.g., Darley and Fazio 1980; Eagly et al. 1991). Thus, not only are physically (un)attractive individuals perceived more (un)favorably by others, they may also change their personality in response to these outside perceptions (for example, by becoming more (or less) confident, happy or extroverted). Consequently, individuals may obtain long-term returns to physical attractiveness either because others (possibly falsely) believe they possess a range of positive traits or because they gradually change their psychological make up in ways which facilitate success.

### *Social Constructionism*

The core idea in the social constructionist explanation is similar to the "what is beautiful is good" stereotype: attractive individuals need not possess any intrinsic qualities which set them apart from less attractive individuals but, due to institutionalized social norms, they are positively discriminated against because physical attractiveness is regarded as a positive trait.<sup>2</sup> Inspired by Waller (1937), Webster and Driskell (1983) propose a sociological theory in which attractiveness is considered a "diffuse status

characteristic” (similar to sex or race), which generates expectations about a person’s other qualities and which shapes others’ behavior towards that person. In similar vein, Mulford et al. (1998) argue that physical attractiveness is a form of capital which can be used in everyday exchanges to initiate or dominate social interactions. The common idea in both approaches is that institutionalized social stereotypes create their own reality and have real-life consequences. The social constructionist perspective differs from the other perspectives because, in addition to their own attractiveness (or lack of attractiveness), individuals may also benefit via an “extended Halo” effect from being affiliated with physically attractive individuals, for example through marriage or friendship. Consequently, physical attractiveness may also pay off in the long run because it transmits positive social status onto others than the physically attractive person herself (the stereotypical example being a man benefitting socially from having a beautiful wife).

### *Socio-economic Success*

It follows from all three theoretical approaches that physical attractiveness should have lasting positive effects on socio-economic success. The evolutionary explanation hypothesizes that physically attractive individuals (both men and women), from nature or through preferential treatment by parents, are endowed with skills which are productive in the labor market (for example higher IQ, see Buss 2008; Daly 1990). As a consequence, attractive individuals should have higher earnings and occupational status throughout their careers.<sup>3</sup> The social psychology and social constructionist explanations also predict that attractiveness has lasting positive effects on socio-economic outcomes. Here, however, the positive effect arises from discrimination in the labor market in that others (colleagues, managers, promotion boards, etc.) unconsciously impute positive traits to physically attractive individuals. These positive traits include both skills specific to the labor market (IQ, perceived qualifications, perceived high likelihood of success; see Hosoda et al. 2003) but also general skills (social competence, friendliness, extroversion, see Eagly et al. 1991; Feingold 1992a; Langlois et al. 2000), all of which may lead to socio-economic success. Also, it may be the case that physically attractive individuals over time change their personality in response to others’ positive evaluations and acquire personality traits (such as high confidence) which might have an independent positive effect on their socio-economic success. The three theoretical perspectives do not predict gender differences in the effect of physical attractiveness on labor market success.

### *Marital Success*

According to evolutionary psychology, physical attractiveness is very important for mate selection and marital success (e.g., Buss 1998, 2008; Gangestad and Buss 1993; Symons 1979). Men and women have different mating strategies and appreciate different qualities in potential mates. Men value high reproductive quality and good health in women. By contrast, women value reproductive quality in men and, equally importantly, providing skills. Empirical studies show that men value attractiveness in partners more than women do, and women value status and material resources more than men do (e.g., Buss 1989;

Sprecher et al. 1994). Consequently, evolutionary psychology suggests that physical attractiveness is more important for women's marital success than for men's because, in theory, men look only for reproductive quality and health when evaluating potential mates (which to some extent can be determined via physical appearance), whereas women look for both reproductive quality and providing skills (the latter quality being more difficult to deduct from physical appearance alone; Hatfield and Sprecher 1986; Jackson 1992). The evolutionary explanation does not make any predictions regarding the effect of physical attractiveness on marital success after reproductive age. However, the social psychology explanation predicts that there may be lasting positive effects of attractiveness (both for men and women) on marital success because, first, a physically attractive spouse may be attributed lasting "what is beautiful is good" qualities by her partner; second, a physically attractive spouse may change her personality over time in response to others' positive evaluations and improve her personal skills. Third, a physically attractive spouse may generate "extended Halo" social status returns to her partner.

### *Spouse's Socio-economic Status*

Evolutionary psychology predicts that not only are physically attractive individuals more likely to find a mate, they are also more likely to find a high-quality mate. An individual's "overall mate value" (Buss 1998) depends on factors such as reproductive quality and resource acquisition skills. Men and women differ in the relative importance of these qualities in their overall mate value, with reproductive quality being more important than resource acquisition skills for women and vice versa for men. According to the evolutionary argument, individuals sort into couples based on their overall mate values, thus coupling physically (un)attractive women with highly (un)productive men (Buss and Shackelford 2008; Gangestad and Buss 1993). This argument entails that physical attractiveness is more strongly linked to spouse's socio-economic status among women than among men. Some studies suggest that women's physical attractiveness is positively correlated with their husbands' occupational status (e.g., Elder 1969; Illsley 1955; Taylor and Glenn 1976; Udry and Eckland 1984), although the opposite scenario (the correlation between men's attractiveness and their wives' socio-economic success) appears to remain unexplored. Again, the longitudinal predictions from the evolutionary approach after reproductive age are unclear. However, the social constructionist explanation suggests that physical attractiveness, being a status resource which may yield social status or may be exchanged for other types of resources (for example, a high-earning husband or wife), should not lose its power over time. Consequently, physical attractiveness would be hypothesized to be positively related to attracting or retaining a high-quality spouse throughout the life course.

## **Data and Variables**

### *Data*

I use data from the Wisconsin Longitudinal Study. The WLS is a longitudinal study of a sample of 10,317 men and women who graduated from Wisconsin high schools in

**Table 1: Descriptive Statistics for WLS Sample**

Approximate Age	18	25	35	54	65
<b>Outcomes</b>					
Personal income in \$1,000			24.787 <sup>a</sup> (29.075)	31.690 (36.727)	
Socio-economic status			47.886 (23.280)	49.862 (22.842)	
Married		.740 (.437)	.881 (.323)	.822 (.382)	.781 (.414)
Spouse's personal income in \$1,000			23.150 <sup>a</sup> (27.480)	26.937 (31.823)	
Spouse's socio-economic status			47.307 (24.020)	48.346 (23.605)	
<b>Physical Attractiveness</b>					
Facial attractiveness	0 (1.204)				
Body mass index	-.001 (.821)			26.761 (4.532)	27.900 (4.954)
Height				67.411 (3.856)	67.235 (3.942)
<b>Controls</b>					
Sex (female)	.516 (.500)				
IQ	100.459 (14.916)				
Years of schooling		13.389 (2.149)			
Number of siblings	3.247 (2.572)				
Parental income in \$1,000	6.331 (6.028)				
Father's years of schooling	9.791 (3.396)				
Mother's years of schooling	10.509 (2.815)				
Father's socio-economic status	32.629 (21.301)				
Grew up in a single-parent family	.094 (.292)				
Spouse's years of schooling			13.114 (2.431)	13.136 (2.433)	

Notes: <sup>a</sup> Income at age 35 indexed to age 54 level.

1957. Interviews with the respondents or their parents were conducted in 1957, 1964, 1975, 1992/1993 and 2004 (see Wollmering 2007). The WLS includes multiple proxies of physical attractiveness. These proxies include an indicator of facial attractiveness based on respondents' high school yearbook photos taken at about age 18 (collected for a random sub sample of the WLS respondents), Body Mass Index and height (Hauser 2009; Jokela 2009; Reither et al. 2009). All three types of measures have been used as proxies for physical attractiveness in previous research. Second, the WLS has collected

data on respondents from their late teens and until their mid-60s. This extremely long observational period allows me to analyze the effect of physical attractiveness on socio-economic and marital outcomes over a large part of respondents' life course.

### *Variables*

#### *Outcomes*

I analyze the effect of physical attractiveness on three sets of outcomes: (1. income and socio-economic status, (2. marital status, and (3. spouse's income and SES. These outcomes include important dimensions of overall socio-economic and marital success which have been analyzed extensively in previous social stratification research. Outcomes are observed two or four times over the life course. Table 1 shows descriptive statistics.

Respondents' *income* is measured by their annual earnings in thousands of U.S. dollars and is observed at approximately age 35 (in 1974) and 54 (in 1993). To facilitate comparisons of results at different ages I have indexed respondents' earnings at age 35 to their age 54 level based on changes in the Consumer Price Index. Respondents' *SES* is measured via Duncan's (1961) SEI scale and is observed at age 35 and 54. *Marital status* is measured by a dummy variable for being married and is observed at age 25, 35, 54 and 65. *Spouse's income* and *SES* is measured in the same way as respondents' income and SES. Information on spouse's income and SES is available at respondents' ages 35 and 54.

#### *Attractiveness Measures*

I use three measures to proxy respondents' physical attractiveness: facial attractiveness, BMI and height.

Data on *facial attractiveness* was collected in 2004 for a random subsample of the WLS respondents from their 1957 senior year high school yearbook photo (taken at about age 18). Each photo was rated by a panel of six male and six female raters ages 63-91 (mean age = 78.5) who were participants in the Madison Senior Scholars Program. The use of multiple raters to evaluate attractiveness ratings is common in the literature (Biddle and Hamermesh 1998; Mobius and Rosenblat 2006; see also Langlois et al. 2000), as are also attractiveness ratings carried out by interviewers (French et al. 2009; Hamermesh and Biddle 1994). The rating scale used in the WLS had 11 points with end points labeled as "not at all attractive" (= 1) and "extremely attractive" (= 11). The reliability (Cronbach's Alpha) of the attractiveness ratings is .87 (Hauser 2009) and is similar to that reported in most previous research (see Langlois et al. 2000). In the empirical analysis I use the average facial attractiveness rating across the male and female panels (information on each rater is not available). In the public release version of the WLS the facial attractiveness variable is standardized and is bottom and top coded at -3 and 3.

BMI, defined as a person's height in meters divided by her weight in kilograms squared, is measured at ages 18 (in 1957), 54 and 65. BMI at ages 54 and 65 is calculated from respondents' self-reported height and weight. BMI at age 18 is based

on a proxy measure calculated by the WLS staff. A team of six graduate students (ages 25-33) at the University of Wisconsin-Madison coded the senior yearbook photos of 3,027 WLS respondents for Relative Body Mass. For every photo, coders recorded a RBM score ranging from 1 to 11 (Reither et al. 2009). The RBM variable used in the analysis is the standardized mean RBM across the six individual coders. The reliability (Cronbach's Alpha) of the RBM ratings is .91 (Hauser 2009). For simplicity, I use the term BMI to refer to both RBM and BMI.

It should be noted that, unlike facial attractiveness and height, which might be hypothesized to be one-dimensional (being more beautiful and taller is always better than being less beautiful and smaller, at least within the normal range) and which can reasonably be treated as simple continuous variables in the empirical analysis, BMI is more complex. The reason why is that having a very low BMI (underweight) or a very high BMI (obese) is arguable considered unattractive by most people while having a normal BMI is considered attractive. This relationship would entail that BMI is related to the different outcomes in an inverted U-shaped way and that simple "higher values mean higher attractiveness" reasoning is inappropriate. However, this problem exists only to a limited degree in the WLS because almost none of the respondents are underweight and, consequently, the BMI variable is more or less one-dimensional. At age 54 less than 1 percent of the respondents are underweight (typically defined as a BMI lower than 18.5) and at age 65 none of the respondents are underweight (the lowest recorded BMI in the WLS at age 65 is 19). Consequently, from age 54 onwards all respondents lie in either the normal (BMI 18.5-25), overweight (BMI 25-30), or obese (BMI over 30) range. I have run all empirical analyses using dummy coding of BMI (with normal BMI as the reference group) instead of a continuous BMI variable, and none of the substantive results change.<sup>4</sup> As a consequence, I use the simpler continuous BMI variable in the analyses.

*Height* is measured in inches at ages 54 and age 65.

In the empirical analysis I have standardized all the physical attractiveness variables (height is standardized within sexes to account for different distributions).

Table 2 shows correlations between the different attractiveness variables separately for men and women. Among women, facial attractiveness at age 18 is negatively correlated with BMI throughout life. The different measures of BMI are positively correlated at ages 18, 54 and 65. BMI and height is negatively correlated at ages 54 and 65. Among men, facial attractiveness is only significantly correlated with BMI at age 54 (but not at ages 18 and 65) and is uncorrelated with height. For men, BMI is also positively correlated at ages 18, 54 and 65, but height and BMI are uncorrelated at all ages. Interestingly, the main gender differences in the interrelatedness of the three aspects of physical attractiveness are that, first, among women facial attractiveness is linked to BMI while this is not the case for men and second, among women, BMI is linked to height while this is not the case for men. Consequently, the three aspects of physical attractiveness appear more interlinked among women than among men.

**Table 2: Correlations between Physical Attractiveness Measures at Different Ages by Gender**

	Facial Attractiveness Age 18	BMI Age 18	BMI Age 54	BMI Age 65	Height Age 54	Height Age 65
Facial attractiveness age 18	—	.038 <sup>ns</sup>	.091	.059 <sup>ns</sup>	-.014 <sup>ns</sup>	.027 <sup>ns</sup>
BMI age 18	-.239	—	.328	.256	-.034 <sup>ns</sup>	-.047 <sup>ns</sup>
BMI age 54	-.145	.293	—	.817	-.002 <sup>ns</sup>	.028 <sup>ns</sup>
BMI age 65	-.142	.237	.843	—	.003 <sup>ns</sup>	-.030 <sup>ns</sup>
Height age 54	-.019 <sup>ns</sup>	.025 <sup>ns</sup>	-.094	-.040	—	.929
Height age 65	.020 <sup>ns</sup>	.019 <sup>ns</sup>	-.082	-.085	.906	—

Notes: All correlations significant at  $p < .05$  or better unless marked <sup>ns</sup>.

Correlations for men in upper diagonal and correlations for women in lower diagonal.

### Controls

A range of control variables are included to account for respondents' human capital and family background. Table 1 summarizes descriptive statistics.

First, I control for the respondents' IQ. To measure IQ, I use the respondent's score on the Henmon-Nelson Test of Mental Ability at about age 18 (see Warren et al. 2002 for information on this test). Second, I control for respondents' educational attainment measured by years of completed schooling. I also control for several family background characteristics. These family background characteristics are parents' total income in thousands of U.S. dollars in 1957 (at around age 18), mother and father's years of completed schooling, father's SES, family type (with a dummy variable for being brought up in a single-parent household), and number of siblings. Furthermore, in the models for spouse's income and SES, I also control for spouse's education.<sup>5</sup>

### Empirical Approach

I use Ordinary Least Squares regression models in the analyses of respondents and spouses' income and SES and binary logit models in the analyses of marital success. I report unstandardized regression estimates in the OLS models and log-odds estimates and average partial effects in the binary logit models.

I carry out all analyses separately by gender in order to assess gender differences in the effect of physical attractiveness on (own and spouse's) socio-economic success and (own) marital success over the life course. Due to sample selection problems which are endemic in most analyses of gender differences in labor market outcomes, it is important to apply careful interpretations of the physical attractiveness effects I find. In the WLS almost all male respondents (and male spouses) have an observed income > \$0 and a valid SES score at ages 35 and 54. By contrast, as much as 40 percent of female respondents do not report an income > \$0 and a valid SES score at age 35, mostly due to not being active in the labor market (at age 54 this problem is much smaller since only about 16 percent of female respondents do not report an income > \$0 and only about 6 percent do not report an SES score). Consequently, in the models for respondents' income and SES my estimates may be interpreted as approximate

**Table 3: Results from OLS Regressions of Personal Income and Socio-economic Status on Physical Attractiveness Separately by Gender**

Outcome Variable	Personal Income in \$1,000		Socioeconomic Status	
	35 <sup>a</sup>	54	35	54
<b>Men</b>				
Approximate age				
Facial attractiveness	1.246 (1.010)	.750 (.490)	1.143 (1.560)	1.240 (1.630)
Body mass index	.941 (.760)	-2.595 (-1.300)	-.507 (-.690)	-1.239 (-1.300)
Height	3.829** (3.040)	5.461*** (3.530)	.785 (1.050)	.041 (.050)
Adjusted R <sup>2</sup>	.055	.141	.364	.279
Number of observations	696	653	719	745
<b>Women</b>				
Facial attractiveness	-.446 (-.690)	-.720 (-1.030)	.972 (1.260)	1.693* (2.550)
Body mass index	.027 (.040)	-1.008 (-1.550)	-1.461# (-1.900)	-1.891** (-3.140)
Height	.443 (.730)	.463 (.680)	1.430# (1.950)	.947 (1.430)
Adjusted R <sup>2</sup>	.032	.089	.258	.176
Number of observations	529	687	601	854

Notes: #p < .10 \*p < .05 \*\*p < .01 \*\*\*p < .001 <sup>a</sup>Personal income at age 35 indexed to age 54 level. Models are estimated for respondents with income > \$0 and SES > 0 and also control for IQ, years of schooling, number of siblings, parental income, father's years of schooling, mother's years of schooling, father's socio-economic status, and growing up in a single parent family.

population parameters in the *male* sub sample but not in the female sub sample (in the female sub sample my results apply only to the non-random sub sample of female respondents who are active in the labor market). By contrast, in the models for spouse's income and SES my estimates are approximate population parameters in the *female* subsample (since almost all male spouses are active in the labor market), whereas my estimates for the male subsample are not.<sup>6</sup> In the models for marital success I have no sample selection problems because all WLS respondents are included in the analysis. All empirical analyses were carried out using Stata.

## Results

### *Physical Attractiveness and Socio-economic Success*

Table 3 shows estimates of the effects of physical attractiveness on personal income and SES at ages 35 and 54. The table presents results separately for the male and female WLS sub samples.

In the male subsample I find that while facial attractiveness and BMI is unrelated to income, then height is a highly significant predictor of income at ages 35 and 54. By contrast, in the female subsample none of the physical attractiveness characteristics affect

income. My results for men fit previous cross-sectional research documenting that height carries a significant earnings premium (e.g., Case and Paxson 2008; Gowin 1915; Judge and Cable 2004; Persico et al. 2004). Furthermore, my results extend previous research by showing that this earnings premium persists throughout men's careers (the estimated effects of height on income do not differ significantly at ages 35 and 54, thereby suggesting that the earnings premium is largely constant over time). In quantitative terms, the effect of an increase in height of one standard deviation is associated with an increase in earnings of about 13-15 percent of a standard deviation in the distribution of earnings at ages 35 and 54—a substantial effect. Following the evolutionary explanation, the earnings premium among men could arise from genetic endowments associated with tallness, taller men having better childhood health, receiving better nutrition and, perhaps as a consequence, having higher IQs. However, I also control for observable IQ, education and a range of family background characteristics, so it is unlikely that the positive relationship between height and earnings captures mainly genetic or early environmental factors.<sup>7</sup> The social psychology and social constructionist theories suggest another explanation, which is that tallness is rewarded in the labor market because tall men are thought to possess other productive traits and are positively discriminated against. My empirical findings for men are also consistent with this interpretation.

It is interesting that none of the physical attractiveness variables predict women's earnings. One explanation of this finding might be that gatekeepers (colleagues, managers, promotion boards, etc.) in the labor market are predominantly male and implicitly use male physical attractiveness standards for inferring positive qualities about people. Women may be disadvantaged because gatekeepers, using male standards, are less able to link physical attractiveness in women with productive skills. Consequently, the "what is beautiful is good" stereotype might work less well in the labor market for women than for men. A second explanation might be that the women in the WLS sample who are active in the labor market represent a selective group with less variation in earnings and physical attractiveness than the male sample, thereby leading to low statistical power and insignificant results.

Table 3 also shows that physical attractiveness is significantly associated with SES among women but not among men. Among women, I find a positive effect of facial attractiveness on SES at age 54, negative effects of BMI at ages 35 and 54, and a weakly significant positive effect of height at age 35. Generally, for women, physical attractiveness effects seem to materialize late rather than early in their careers, and the direction of effects are consistent with theoretical explanations. The gender differences are intriguing: Why does physical attractiveness (height) predict men's earnings (but not their SES) while physical attractiveness (especially facial attractiveness and BMI) predicts women's SES (but not their earnings)? My results indicate that physically attractive (taller) males earn more than less attractive males irrespective of occupational status. By contrast, physically attractive women do not earn more than less attractive women but tend to occupy more prestigious occupations. This finding suggests that the link between women's physical attractiveness and their

socio-economic success is more closely tied to occupational status (captured by the Duncan SEI scale) than to “pure” income differentials (i.e., women’s attractiveness pays off in a different dimension of socio-economic success). The effect could also to some extent be driven by occupational sorting because men and women work in different occupations which might have different internal promotion hierarchies (some aspects of physical attractiveness, for example tallness, may be more reward-

	25		35		54		65	
	Log-Odds	APE	Log-Odds	APE	Log-Odds	APE	Log-Odds	APE
<b>Men</b>								
Approximate Age								
Facial attractiveness	.150 <sup>#</sup> (1.780)	.032	.219 (1.570)	.016	-.087 (-.790)	-.010	.023 (.210)	.003
Body mass index	.012 (.140)	.003	.112 (.800)	.008	.338 <sup>*</sup> (2.300)	.040	.308 <sup>*</sup> (2.250)	.037
Height	.031 (.370)	.007	.087 (.630)	.007	.171 (1.540)	.020	-.069 (-.600)	-.008
Pseudo R <sup>2</sup>	.023		.028		.152		.047	
Log-Likelihood	-416		-196		-280		-278	
Number of observations	677		727		747		745	
<b>Women</b>								
Facial attractiveness	.260 <sup>*</sup> (2.490)	.034	.150 (1.260)	.015	.032 (.350)	.005	.101 (1.280)	.021
Body mass index	-.133 (-1.340)	-.017	-.020 (-.170)	-.002	-.120 (-1.510)	-.018	-.164 <sup>*</sup> (-2.410)	-.033
Height	-.169 <sup>#</sup> (-1.710)	-.022	-.005 (-.004)	-.0005	-.056 (-.620)	-.008	-.014 (.170)	.003
Pseudo R <sup>2</sup>	.127		.082		.048		.125	
Log-Likelihood	-347		-284		-411		-528	
Number of observations	849		900		918		896	

Notes: <sup>#</sup>p < .10 <sup>\*</sup>p < .05 <sup>\*\*</sup>p < .01 <sup>\*\*\*</sup>p < .001. APE = Average Partial Effect (The APE is the marginal effect of an increase in physical attractiveness of one standard deviation calculated for each respondent while holding all other characteristics fixed, and averaged over the sample). Models also control for IQ, years of schooling, number of siblings, parental income, father’s years of schooling, mother’s years of schooling, father’s socio-economic status, and growing up in a single-parent family.

ing in “male” occupations than in “female” occupations and vice versa). Finally, the selective composition of the female analysis sample may play a role.

### *Physical Attractiveness and Marital Success*

Table 4 shows results from binary logit models of the likelihood of being married at ages 25, 35, 54 and 65 (now using the whole WLS sample). To recall, the evolutionary approach predicts that physical attractiveness is important for mate selection and that attractiveness is more important for women than for men. By contrast, the social psychology and social constructionist approaches suggest that attractiveness should have a positive effect on marital success throughout life both for men and women.

From Table 4 I find that both for men and women facial attractiveness has a positive effect on the likelihood of being married at age 25. Table 4 reports Average Partial Effects showing that increasing facial attractiveness by one standard deviation on average increases the likelihood of being married at age 25 by 3.2 percent among men and 3.4 percent among women. Consequently, there is empirical evidence that facial attractiveness matters, but also that the positive effect of facial attractiveness is modest. The evolutionary theory hypothesizes that physical attractiveness should be more important for women’s marital success than for men’s. However, taking into account that the estimate of the facial attractiveness effect at age 25 is marginally more significant in the female subsample than in the male subsample (and also that there are more observations in the female subsample), facial attractiveness thus appears to be equally important for men and women’s early marital success. Table 4 also shows that facial attractiveness does not predict marital success after age 25. If facial attractiveness signals reproductive quality and health, as suggested by the evolutionary perspective, it makes sense that this aspect of physical attractiveness does not influence marital success after peak reproductive age (especially for women). By contrast, my result does not support the social psychology and especially the social constructionist explanations suggesting that there should be lasting positive effects of attractiveness on marital success. Note that among women there is a marginally significant negative effect of height on the probability of being married at age 25 (but not a positive effect among men). Consequently, being tall appears to be detrimental to young women’s marital success.

Later in life it turns out that BMI (but not height) is significantly associated with the likelihood of being married both among men and women. Among men, I find that increasing BMI by one standard deviation at ages 54 and 65 is associated with an increase in the likelihood of being married by about 4 percent. Again, this is a modest effect. Among women, I find that increasing BMI by one standard deviation at age 65 decreases the likelihood of being married by slightly more than 3 percent. Consequently, it appears that later in life being heavier is beneficial to men’s marital success but detrimental to women’s success. It is important to keep in mind that, unlike facial attractiveness and height which are relatively fixed traits, BMI may change substantially over the life course and may be endogenous to marital success. Studies show that married individuals have higher BMI than never-married individuals, and

**Table 5: Results of OLS Regressions of Spouse's Personal Income and Socio-economic Status on Physical Attractiveness Separately by Gender**

Outcome variable	Spouse's Personal Income in \$1,000		Spouse's Socio-economic Status	
	35 <sup>a</sup>	54	35	54
<b>Men</b>				
Approximate age				
Facial attractiveness	-.159 (-.460)	.210 (.320)	1.907 <sup>#</sup> (1.810)	.998 (1.150)
Body mass index	-.522 (-1.530)	-.189 (-.220)	-.817 (-.077)	-.210 (-.190)
Height	.316 (.920)	.643 (.970)	-.851 (-.810)	.038 (.040)
Adjusted R <sup>2</sup>	.027	.099	.284	.138
Number of observations	669	513	291	504
<b>Women</b>				
Facial attractiveness	1.076 (1.020)	.974 (.580)	.671 (.890)	.729 (.890)
Body mass index	.378 (.340)	-2.672 (1.640)	-.499 (-.640)	-2.187 <sup>**</sup> (-2.690)
Height	.673 (.650)	-1.097 (-.660)	-.845 (-1.150)	.278 (.330)
Adjusted R <sup>2</sup>	.097	.160	.378	.373
Number of observations	799	560	783	641

Notes: <sup>#</sup> $p < .10$  \* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$  <sup>a</sup>Personal income at age 35 indexed to age 54 level. Models are estimated for spouses with income > \$0 and SES > 0 and also control for IQ, years of schooling, number of siblings, parental income, father's years of schooling, mother's years of schooling, father's socio-economic status, growing up in a single-parent family, and spouse's years of schooling.

this difference increases with age (e.g., Jeffery et al. 1989). Consequently, the positive relationship between BMI and marital success I observe among men may also be driven by married men being and gradually becoming heavier than unmarried men (rather than BMI having a causal effect on marital success). On the other hand, the negative relationship between BMI and women's marital success at age 65 might be indicative of a true attractiveness disadvantage.<sup>8</sup>

### *Physical Attractiveness and Spouse's Socio-economic Status*

Table 5 shows results from OLS regressions of spouse's income and SES separately for men and women. Both the evolutionary, social psychology and social constructionist perspectives hypothesize that physical attractiveness, being an important component in a person's overall "mate value," can be exchanged for other commodities, for example a high-quality spouse. Furthermore, the evolutionary argument predicts that returns to physical attractiveness in the marriage market should be higher for women than for men.

The results from the regressions of spouse's income presented in Table 5 show that, both for men and women, physical attractiveness is not linked to spouse's income at any time over the life course. Furthermore, with the exceptions of a weakly significant ( $p < .10$ ) positive effect of facial attractiveness on spouse's SES at age 35 among men and a negative effect of BMI at age 54 among women results from the regressions of spouse's SES are identical to the results for spouse's income. Consequently, although physical (facial) attractiveness was found to have a positive effect on the likelihood of attracting a mate in youth there is little evidence that being physically attractive also increases the socio-economic quality of the mate.<sup>9</sup>

## Discussion

Is Keats' dictum: "A Thing of Beauty is a Joy Forever" cited in this article's title true? Based on the results from this analysis the answer must be: To some extent. My analysis of a sample of Wisconsin high school graduates shows that several aspects of physical attractiveness: facial attractiveness derived from high school yearbook photos, BMI and height are linked to socio-economic and marital outcomes over the life course. For men, being tall has a substantial positive effect on earnings throughout their careers. For women, physical attractiveness does not affect earnings but is positively linked to occupational prestige: Women with more attractive faces and women with lower BMI reach more prestigious occupations, especially later in their careers. My analysis furthermore shows that, both for men and women, facial attractiveness affects the likelihood of being married, but mostly in youth. Thus, although the substantive effect is small it does pay off to be good looking when searching for a mate. Finally, I find that physical attractiveness does not affect the socio-economic quality of one's spouse, which suggests that attractiveness is not exchangeable for other socio-economic benefits.

The results from this analysis support and extend previous research in several regards. First, existing cross-sectional studies find that physical attractiveness is positively correlated with socio-economic and marital outcomes. This article extends existing research by suggesting that while physical attractiveness has lasting positive effects in some outcome dimensions (for example, the effect of height on men's earnings which persists over the life course), it may have life-stage specific effects in other outcome dimensions (for example, the positive effect of facial attractiveness on marital success in youth). Consequently, physical attractiveness may yield varying levels of returns over the life course in different outcome dimensions. My results are preliminary, however, and more research is needed to determine whether they generalize beyond my sample of Wisconsin graduates (which is roughly representative of white Americans who have completed high school) and to other outcome dimensions.

Second, my analysis, which addresses several aspects of physical attractiveness, shows that the choice of attractiveness measure affects substantive conclusions, and different measures work in different ways for men and women. For example, height is more important for men, while facial attractiveness is more important for women. Also, BMI appears to be more strongly linked to labor market success among women than

among men. These gender differences in returns to attractiveness, which vary depending on which dimension of attractiveness one considers, are likely to be important and should be analyzed in depth in future research.

Third, my findings (and results from previous research) speak in favor of treating physical attractiveness as an independent explanatory factor in social stratification and life course research. So far, physical appearance has received little attention in mainstream sociological theories of intra- and inter-generational social mobility. Evolutionary, social psychology and social constructionist theories provide theoretical insights into the mechanisms through which physical attractiveness might affect social stratification over the life course. It is important that future research incorporates these insights into theoretical models of social mobility and the life course.

Finally, two limitations in the present analysis should be highlighted. The first limitation concerns the relatively small size of the WLS sample with information on physical attractiveness (and, in particular, information on facial attractiveness and relative BMI). The small sample size means that I have less than ideal statistical power, especially because I run the analyses separately by gender. The second limitation concerns the possibility that high-SES individuals are better able to invest in beauty-enhancing products than low-SES individuals and, as a consequence, they have higher returns to physical attractiveness over the life course because they are better able to preserve their good looks over time. This mechanism implies a potential reverse causality relationship between attractiveness and SES. I am not able to address this problem because the WLS does not include (longitudinal) information on respondents' investments in health care and beauty-enhancing products. However, if such behavior exists my estimates of the returns to education over the life course should be considered upper-bound estimates. Future research should collect longitudinal data on investments in beauty-enhancing products to remedy this potential problem.

## Notes

1. Studies in neuroscience find that specific "reward" centers in the brain are activated when individuals look at attractive faces (for a review of these studies see Senior 2003).
2. I use the term "social constructionist" to highlight that, first, this approach originates in a social science (rather than a psychological science) tradition and, second, the attractiveness advantage is conceived as a purely social construction (as opposed to reflecting real physical or psychological qualities). However, the empirical predictions from the social psychology and the social constructionist approaches are for the most part identical.
3. Existing evidence from Meta analyses on whether physical attractiveness is associated with higher intelligence or other productive skills is mixed. Feingold (1992a) and Jackson et al. (1995) find little evidence that more attractive people are also more intelligent (measured by different types of IQ tests, GPA, SAT, etc.). By contrast, Langlois et al. (2000), also including newer studies, find a statistically significant but substantively small positive relationship between attractiveness and IQ. In the WLS data analyzed here there is a statistically significant but substantively low positive correlation ( $r < .10$ ) between facial attractiveness and IQ and between height and IQ, and a similarly low negative correlation between Body Mass Index and IQ.

4. It was not possible to calculate the BMI ranges (normal, overweight, obese) for the RBM variable at age 18 because this variable did not use the traditional BMI scoring. Instead, I created dummy variables based on the observed distributions of RBM and allocated 60 percent of the WLS respondents to the normal range (i.e., the lowest-RBM range), 30 percent to the overweight range, and 10 percent to the obese range. Using these proxies for the different BMI ranges did not change any of my results.
5. I also included several variables capturing spouse's family background characteristics (father's education and SES, family type, and number of siblings). However, none of these variables had any significant effect on spouse's income and SES and, to maximize the effective number of observations, I excluded these variables from the analysis.
6. One way of addressed the sample selection problem would be to estimate Heckman-type sample selection models (e.g., Puhani 2000). However, I was unable to find credible instrumental variables in the WLS which would facilitate proper identification of the sample selection models and, because poorly identified sample selection models may yield even more biased results than standard models, I chose not to implement this framework. I have also estimated the models for respondents' (and spouses') income and SES using truncated and left-censored regression models, but the application of these models did not change my results in any substantive way.
7. I also re-ran the models including several variables measuring whether respondents had experienced any health problems during childhood (bronchitis, asthma, pneumonia, etc.), but the inclusion of these variables did not change my results.
8. Although only statistically significant at age 65, Table 4 shows that my point estimates of the effect of BMI on the likelihood of being married among women are always negative from age 25 to 65. Consequently, it is likely that these effects (especially at age 25 and 54) would have been statistically significant in a larger sample of women.
9. Additional analyses show that if the physical attractiveness variables are entered as the only explanatory variables in the models I find highly significant positive effects of facial attractiveness and BMI on husbands' income and SES in the female subsample. However, these effects are completely accounted for by assortative mating based on socio-economic (rather than physical) characteristics. Consequently, these results underscore the importance of controlling for socio-economic and family background characteristics which are correlated with physical attractiveness (Hamermesh and Biddle 1994).

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