DISCUSSION PAPER SERIES

IZA DP No. 2048

Ugly Criminals

Naci Mocan
Erdal Tekin

March 2006

Forschungsinstitut
zur Zukunft der Arbeit
Institute for the Study
of Labor

Ugly Criminals

Naci Mocan
University of Colorado at Denver
and NBER

Erdal Tekin
Georgia State University, NBER
and IZA Bonn

Discussion Paper No. 2048
March 2006

IZA

P.O. Box 7240
53072 Bonn
Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-180
Email: iza@iza.org

IZA Discussion Paper No. 2048
March 2006

ABSTRACT

Ugly Criminals*

Using data from three waves of Add Health we find that being very attractive reduces a young adult's (ages 18-26) propensity for criminal activity and being unattractive increases it for a number of crimes, ranging from burglary to selling drugs. A variety of tests demonstrate that this result is not because beauty is acting as a proxy for socio-economic status. Being very attractive is also positively associated adult vocabulary test scores, which suggests the possibility that beauty may have an impact on human capital formation. We demonstrate that, especially for females, holding constant current beauty, high school beauty (pre-labor market beauty) has a separate impact on crime, and that high school beauty is correlated with variables that gauge various aspects of high school experience, such as GPA, suspension or having being expelled from school, and problems with teachers. These results suggest two handicaps faced by unattractive individuals. First, a labor market penalty provides a direct incentive for unattractive individuals toward criminal activity. Second, the level of beauty in high school has an effect on criminal propensity 7-8 years later, which seems to be due to the impact of the level of beauty in high school on human capital formation, although this second avenue seems to be effective for females only.

JEL Classification: I1, I2, K4, J2, J3

Keywords: beauty, crime, criminal, ugly, physical attractiveness

Corresponding author:

Erdal Tekin
Department of Economics
Andrew Young School of Policy Studies
Georgia State University
University Plaza
Atlanta, GA 30303-3083
USA
Email: tekin@gsu.edu

* We thank Michael Grossman, Richard Boylan, Andrew Rettenmaier, participants at Texas A&M Applied Economics Seminar, Rice University/U of Houston Empirical Economics Seminar, 2005 IZA/SOLE Meetings, 2005 Southern Economic Association Meetings, and 2006 American Economic Association Meetings, and especially Daniel Hamermesh for useful comments. Umut Ozek, Roy Wada, and Michelle McCown provided excellent research assistance. The views expressed herein are those of the author(s) and do not necessarily reflect the views of the National Bureau of Economic Research.

Ugly Criminals

"I am too ugly to get a job"
A Miami man's statement in 2003 as to why he committed robberies.

I. Introduction

It has been shown that beauty is positively related to earnings in the labor market (Hamermesh and Biddle 1994, Biddle and Hamermesh 1998, Harper 2000, Hamermesh, Meng and Zhang 2002). It has also been shown that better-looking people sort themselves into occupations, and sectors within occupations, where an earnings premium exists on beauty (Hamermesh and Biddle 1994, Biddle and Hamermesh 1998). Persico, Postlewaite and Silverman (2004) demonstrate that taller workers receive a wage premium, which can be traced back to their height in high school, and that this effect is due to the impact of height on participation in high school sports and clubs. Along the same lines, Kuhn and Weinberger (2005) show that leadership skills in high school generate positive wage effects later in life.

These are important and provocative findings regarding the development of a more complete understanding of wage determination, because they underline the significance of non-cognitive factors in determining worker rewards, and also because they point to non-traditional human capital components (e.g. skills acquired through socialization in high school) that are evidently valued in the labor market.

These findings give rise to an interesting hypothesis regarding workers' response to labor market incentives. If beauty commands a positive earnings premium in the legal labor market, and if criminal activity is a labor market choice of rational agents where the decision to engage in crime is made by comparing the financial rewards from crime to

those obtained from legal work[1], then it is expected that less attractive people sort themselves into the criminal sector.

In this paper, we provide evidence regarding the impact of beauty on the extent of criminal activity of individuals. We find that unattractive individuals commit more crime in comparison to average-looking ones, and very attractive individuals commit less crime in comparison to those who are average-looking. This relationship holds for a number of self-reported criminal activity measures. Beauty also impacts individuals' interaction with the criminal justice system. The results reveal that, conditional on criminal involvement, attractive females are less likely to get detained.

Consistent with previous research (Hamermesh and Biddle 1994, Biddle and Hamermesh 1998), we find that in our data set beauty is positively related to wages. We also show that beauty is positively related to the scores received on an adult achievement test, which suggests that being an unattractive student in high school may have hindered human capital development -- possibly through teacher and peer interactions. We provide evidence supporting this hypothesis in models where the extent of pre-labor market beauty (beauty in high school) explains adult crime, controlling for adult beauty and an extensive array of background characteristics. This result is consistent with empirical evidence reported by Figlio (2005) who shows that teachers in a Florida school district have lower expectations of children[2] who have names that are associated with low socio-economic status. Our results are also consistent with recent experimental evidence provided by Mobius and Rosenblat (2005) who find that physically attractive individuals

[1] Individuals also take into account the probabilities of apprehension and conviction, and the severity of punishment (Becker 1968, Ehrlich 1973, Block and Heineke 1975, Mocan, Billups and Overland 2005).

[2] More specifically, teachers treat children differently in terms of referrals to gifted programs and promotion to the next grade.

have better communication skills, which are translated into higher wages. Mobius and Rosenblat (2005) cite Hatfield and Sprecher (1986) to suggest that preferential treatment of better-looking kids by teachers generates confidence and social skills in these kids which lead to better communication skills and higher wages.

Given the result that high school beauty is related to criminal involvement in post-high school years (controlling for beauty in post-high school years), we investigate whether this result emerges because beauty in high school is related to aspects of human capital formation in high school. Our analysis shows that high school beauty is indeed correlated with variables gauging high school experience of students, such as grade point average, problems with teachers and suspension from high school.

Taken together, our results suggest two mechanisms through which beauty affects crime. First, a labor market reward to beauty motivates young adults (ages 18-26) to sort themselves on the margin such that unattractive ones find it more advantageous to engage in crime. Second, beauty in high school has a separate, independent effect on crime. Here, the pathway is from being unattractive in high school to undesirable high school experience and diminished human capital formation in high school. This second mechanism through which beauty affects crime is more pronounced for females.

It is of course critically important to establish causal effects from beauty to criminality, and therefore to investigate whether beauty is acting as a proxy for some unobserved background characteristic. Various analyses in the paper indicate that this is not the case. In Section 2, we provide the basic analytical framework. Section 3 describes the data, and Section 4 presents the results and extensions. Section 5 is the conclusion.

II. Analytical Framework and Empirical Implementation

Standard economic models of crime suggest that individuals engage in crime based on a comparison of the expected utility from criminal activity to the utility associated with legal work. Specifically, let the expected utility of the individual in the criminal sector be

$$E[U(W)]= (1-p)\, U(W_{cr})+pU(W_a), \quad (1)$$

where W_{cr} is the earning in the criminal sector when criminal activity is successful, W_a stands for the earnings if criminal activity is unsuccessful (i.e. the person is apprehended), p stands for the probability of apprehension, U represents utility, and E is the expectations operator. $W_a<W_{cr}$ because there are monetary losses associated with apprehension and punishment, and psychic and reputational costs are monetized in W_a. The individual engages in crime if

$$(1-p)U(W_{cr})+pU(W_a) > U(W_l), \quad (2)$$

where W_l represents earnings in the legal sector, which are determined as follows:

$$W_l = \gamma B+\boldsymbol{\beta}\mathbf{X}. \quad (3)$$

In Equation (3), **X** is a vector of standard human capital determinants of labor market earnings, and B stands for an indicator of beauty. If $\gamma>0$, then beauty commands a premium in the labor market. In that case, the right-hand side of the inequality in (2) is smaller for unattractive individuals, which makes them more likely to participate in the criminal sector in comparison to good-looking ones. It is interesting to note that there is research which indicates that criminals who have their physical appearance surgically enhanced are less likely to return to prison (Lewison 1974).

Good looks may enhance utility in the criminal sector. This can happen, for example, if beauty instills trust, which would increase the returns from crime. In addition, the probability of apprehension, *p*, may be a function of beauty [p(B)], such that, good looks may reduce the probability of apprehension and conviction ($dp(B)/dB<0$) (Efran 1974, DeSantis and Kayson 1997). In this case, good-looking people would have an advantage in both legal and criminal sectors, and the net impact of beauty on crime could be ambiguous. However, for most types of crimes, the effect of being attractive on criminal earnings (W_{cr}) is likely to be small.[3]

If the beauty premium in the criminal sector is zero, or if it is smaller than the premium in the legal labor market, this would result in sorting of more attractive individuals into the labor market and less attractive ones into the criminal sector. In addition, if some component of the beauty premium in the legal labor market results from differential treatment by employers, one would expect a higher concentration of unattractive individuals in the self-employment sector.[4] To the extent that most criminals are self-employed, this would motivate sorting of unattractive individuals into the criminal sector and attractive individuals into the legal labor market.[5] Thus, the average level of beauty would be higher in the labor market in comparison to the criminal sector.

It should be noted that sorting into different sectors based on attractiveness is likely to be incomplete, i.e., both attractive and unattractive individuals are likely to be found in both sectors (Hamermesh and Biddle 1994). For example, unattractive

[3] One can especially argue that in some white-collar crimes, such as financial fraud, attractiveness may be an advantage by helping the criminals gain trust of their victims as discussed above. However, fraud is not among the crime types analyzed in this paper.
[4] In the context of the choice between criminal sector and labor market, customer discrimination would have the same effect as the employer discrimination.
[5] For a more detailed discussion on the process of sorting into different sectors, see Biddle and Hamermesh (1998).

individuals who are endowed with a relatively high level of human capital may choose to participate in the legal labor market although attractiveness is rewarded and/or unattractiveness is penalized in that market. Likewise, attractive individuals who are endowed with a relatively low level of human capital may choose the criminal sector even though attractiveness brings little in the criminal sector compared to the labor market.

Empirical crime supply functions take the following form (Grogger 1998, Levitt 1998, Corman and Mocan 2000, Mocan and Rees 2005):

$$CR_i = f(X_i, A, W_l, K_i), \quad (4)$$

where CR_i stands for a measure of the extent of the criminal activity of the i^{th} individual when she/he is a young adult, X_i represents the characteristics of the person such as age, gender, race, ethnicity and religious beliefs. *A* stands for deterrence variables such as the arrest rate and the size of the police force, and W_l represents the extent of legal labor market opportunities available to the individual, such as the pertinent wage rate. K_i stands for a vector of family and contextual variables that may influence criminal participation. Replacing W_l in (4) by its determinants, including beauty, depicted in (3) gives

$$CR_i = g(X_i, A, B_i, K_i), \quad (5)$$

We estimate variations of equation (5) to investigate the impact of beauty on criminal activity.

To test if the previously detected wage-beauty relationship holds in our data set, we estimate wage equations similar to Hamermesh and Biddle (1994). In addition, we

estimate models to investigate if beauty is related to a measure of human capital (adult vocabulary test score).

As described above, beauty may have an impact on the treatment provided by criminal justice system (Efran 1974, Desantis and Kayson 1997). Specifically, attractive individuals may receive preferential and more lenient treatment from the judicial system, which would reduce their probability of apprehension. This would imply an increase in expected utility from the criminal sector, which all else the same, would make the individual more likely to engage in crime. To investigate the presence of such an effect we estimate models where the probabilities of being detained, arrested, or convicted are analyzed as a function of the extent of beauty of the individual.

It is important to recognize that unattractive individuals might experience unfavorable treatment during the pre-labor market period of their lives, which may cause them to be endowed with lower levels of human capital when they reach adulthood. For example, physically attractive individuals may be liked better by their peers, teachers, and even possibly their parents, compared to their unattractive peers (Cialdini 1984, Galluci and Meyer 1984, Feingold 1992). If these attitudes influence human capital acquisition as suggested by recent research in economics (Figlio 2005; Mobius and Rosenblat 2005), they reinforce sorting of unattractive individuals into the criminal sector.

If the extent of beauty in high school impacts the formation of human capital (because beauty influences teacher attitudes and socialization experiences), then high school (i.e. pre-labor market) beauty should have a separate impact on adult crime. To test this hypothesis, we estimate models such as

$$CR_i = h\,(X_i, A, B_i, B_i^{hs}, K_i), \qquad (6)$$

where B_i^{hs} represents the level of beauty of the individual, measured in high school. If the beauty of the person in high school impacts his/her human capital and skill acquisition, which in turn impacts criminal involvement, then B_i^{hs} is expected to have a direct positive impact on CR_i, controlling for current beauty (B_i) in Equation (6).[6] Furthermore, if the impact of high school beauty on crime works indeed through this channel, then controlling for variables that aim to gauge high school learning experience, (e.g. grade point average, whether the students has problems with teachers, and whether he/she was suspended from school), would diminish the effect of high school beauty (B_i^{hs}) on crime.

III. Data

The data used in the analyses are drawn from the three waves of the National Longitudinal Study of Adolescent Health (Add Health).[7] The first wave of Add Health

[6] It can also be the case that these peer and teacher effects may motivate the physically unattractive student to devote more time studying. In this case, unattractiveness would be positively correlated with human capital formation.

[7] The Add Health project is a program project designed by J. Richard Udry (PI) and Peter Bearman, and funded by grant P01-HD31921 from the National Institute of Child Health and Human Development to the Carolina Population Center, University of North Carolina at Chapel Hill, with cooperative funding participation by the National Cancer Institute; the National Institute of Alcohol Abuse and Alcoholism; the National Institute on Deafness and Other Communication Disorders; the National Institute on Drug Abuse; the National Institute of General Medical Sciences; the National Institute of Mental Health; the National Institute of Nursing Research; the Office of AIDS Research, NIH; the Office of Behavior and Social Science Research, NIH; the Office of the Director, NIH; the Office of Research on Women's Health, NIH; the Office of Population Affairs, DHHS; the National Center for Health Statistics, Centers for Disease Control and Prevention, DHHS; the Office of Minority Health, Centers for Disease Control and Prevention, DHHS; the Office of Minority Health, Office of Public Health and Science, DHHS; the Office of the Assistant Secretary for Planning and Evaluation, DHHS; and the National Science Foundation. Persons interested in obtaining data files from The National Longitudinal Study of Adolescent Health should contact Add Health Project, Carolina Population Center, 123 West Franklin Street, Chapel Hill, NC 27516-2524 (email: addhealth@unc.edu).

was administered between September 1994 and April 1995 to 20,745 nationally representative set of adolescents in grades 7 through 12. An in-school questionnaire was given to every student who attended one of the sampled 132 U.S. schools. A random sample of approximately 200 adolescents from each high school/feeder school pair was selected for in-home interviews. The adolescents are interviewed for the second time in 1996 for Wave II, and for the third time between August 2001 and April 2002 for Wave III. We employ data from Wave III, where the individuals are in the age range of 18 to 26. The number of individuals interviewed in Wave III is 15,197. In some models we also employ data from Waves I and II.

The respondents were asked whether they had committed any of the following acts in the 12 months prior to the interview date: robbery, burglary, assault, selling drugs, damaging property, and theft. Survey administrators took several steps to maintain data security and to minimize the potential for interviewer or parental influence. First, respondents were not provided with any printed questionnaires. Rather, all data were recorded on laptop computers. Second, the respondents listened to pre-recorded questions through earphones for sensitive topics such as delinquent behavior. They then entered their answers directly on the laptops.[8]

At the end of each interview, the interviewer filled out a short survey marking his/her opinions on several characteristics of the respondent. To gauge the level of beauty of the respondents, the interviewers were asked the following question: "How *physically* attractive is the respondent?" Possible answers include: 1) very unattractive 2) unattractive 3) about average 4) attractive 5) very attractive. Table 1 shows the

[8] For less sensitive questions, the interviewer read the questions aloud, and entered the respondent's answers.

distribution of beauty ratings among respondents in the third wave when the respondents are in the age range of 18-26. Among both males and females, about 7 percent of respondents were rated as being either very unattractive or unattractive by the interviewers. Roughly half of the full sample is rated as either attractive or very attractive. The proportion rated as attractive or very attractive is higher for females than males. This is consistent with the samples from other studies (e.g. Hamermesh and Biddle 1994). The rating of females seems to be more dispersed about the average category. This is also common in other studies and is consistent with the socio-psychological literature which suggests that women's appearances generate stronger reactions (both negative and positive) than men's (Hatfield and Sprecher 1986). The ratings in our sample are somewhat more skewed toward being more beautiful than both the Canadian and the U.S. samples used in Hamermesh and Biddle (1994). However, when the QES sample used by Hamermesh and Biddle (1994) is adjusted for age, it produces a very similar beauty distribution.[9]

Beauty may be in the eye of the beholder, if beholders come from different cultures and from different points in time. As described in detail by Hamermesh and Biddle (1994), there is tremendous consistency in the standard of beauty within a culture in a given time period. Nevertheless, in the paper we address the possibility of different evaluators having different standards of attractiveness.

The beauty question was also asked in the first two waves of the Add Health survey. Evaluations were provided by *different* interviewers. Eighty-five percent of the

[9] In the QES sample used by Hamermesh and Biddle (1994), of all individuals (ages 18-64), 32 % were in top two beauty categories, and 14% were in bottom two. Among 18-26 year olds (which is the age group of this paper), the rates were 45%, and 10%, respectively. We thank Dan Hamermesh for providing this information.

sample was assigned either the same exact rating (on a scale from 1 to 5) in at least two of the three surveys. Seventy-five percent of the individuals in the sample were either assigned the same rating in each of the three waves by different interviewers, or were given the same rating in any of the 2 of the 3 waves and were off by one in the other wave. This is a high degree of consistency across evaluators and time periods, especially because six years had lapsed between the first wave and the third wave, and also because the individuals transitioned from childhood to adulthood during this time period.

Table 2 presents the descriptive statistics of the data obtained from the third wave. The variables that measure the extent of criminal activity are listed in the top section of the table. The top three variables contain information about the behavior of the individual as well as the behavior of the criminal justice system. These are indicators for whether the individual was ever arrested, convicted, or detained in the past. Other indicators of criminal activity are self-reported involvement in robbery, burglary, assault, selling drugs, theft and damaging property. We also construct an aggregate non-drug crime indicator to gauge whether the individual committed theft, burglary, robbery, assault or damaged property in the past 12 months.

A natural way to construct variables to represent beauty would be to choose a three-category distinction: above average beauty (categories 4 and 5), average (category 3), and below average (categories 1 and 2). However, this classification would result in about half of our sample lumped into the above average category. Instead, we categorize individuals into the following three groups: *Very Attractive*, which captures the individuals who received the highest rating of 5; *Unattractive*, which includes those who received a rating of 1 or 2; and the middle (control group) which consists of those who

have received a rating of 3 (about average) or 4 (attractive). To investigate the sensitivity of our results to the manner in which beauty is measured, we also present results from a four-way classification, which divides individuals into the following groups: very attractive (category 5), attractive (category 4), and below average (categories 1 and 2).

Personal characteristics of the individual are age, race and ethnicity, non-wage income, self-reported health status, whether he/she was born in the United States, birth weight, and religious affiliation.[10] These variables attempt to control for attributes of the individuals that may influence their propensity toward criminal behavior. We also control for a rich set of socio-economic background variables, which include family and parent attributes that are also potential determinants of the behavior of the individual, and may be correlated with beauty. Specifically, we control for such characteristics as the mother's education, whether the family was on welfare, family income, whether the father is biological or stepfather, the age of the mother at birth, whether the father was in jail, and birth weight. These variables are measured in Wave I, when the individual was in high school. We retained individuals with missing data on control variables by creating categories for missing information.

The definitions and descriptive statistics of the variables are presented in Table 2. Eleven percent of the sample indicated that they had been arrested at least once and about 6 percent indicated that they had been convicted of a crime in a juvenile or adult court. A little less than 20 percent of the sample was ever questioned or detained by the police for suspicious activities. Those who committed burglary or robbery are about 2 percent

[10] Currie and Moretti (2005) document strong inter-generational correlations in birth weight, and show that birth weight is an indicator of future income. Similarly, Black, Devereux and Salvanes (2005) show that within-twin estimates reveal long-run effects of birth weight on outcomes such as earnings and education. Thus, we include the birth weight of the individual to account for a measure of health at birth, which may be correlated with future socio-economic status.

each. About nine percent indicated they had damaged property and 8 percent said they had assaulted somebody. The proportion that committed theft is 3.3 percent, and the proportion that sold illicit drugs is 7.4 percent. More than 17 percent of our sample indicated that they had committed either burglary, theft, robbery, assault, or damaged property during the past 12 months. Mocan and Tekin (2006, 2005) show that rates of risky behaviors reported in Add Health, such as crime and illicit drug use are comparable to those in other national sources, and Mocan and Rees (2005) demonstrate that the extent of juvenile crime calculated from Add Health is similar to those obtained from other sources. The means for other covariates are presented at the bottom panel of Table 2 and are also largely consistent with those usually found in other studies.

IV. Results

Table 3 presents the results pertaining to the relationship between attractiveness and criminal behavior for females and males separately. The reported coefficients are obtained from linear probability models. Robust standard errors are in parentheses. Estimation of logit models generated similar results. The table displays the results from three specifications. Model (I) includes no control variables. Model (II) includes personal characteristics of the individual in addition to the level of beauty, which are age, race, Hispanic ethnicity, birthweight, nonwage income, health status, religious affiliation, and whether the person was born in the U.S. Model (III) contains the same explanatory variables as Model (II), but it also includes family socio-economic background characteristics which are family income when the individual was in high school, whether parents were receiving welfare, mother's education, whether the father was biological,

step father, or absent, mother's age at birth, and whether father was ever jailed. In each model only the coefficients of two beauty dummies (*Very Attractive* and *Unattractive*) are reported. The models do not include deterrence variables such as the arrest rates or the size of the police force because we have no information on the geographic location of the individuals in the data. However, the extent of the beauty of the individual and the level of deterrence in his/her locality should be uncorrelated. Therefore, the omission of deterrence variables does not bias the estimated coefficients of beauty variables.

One concern is that each interviewer may have a different standard for beauty. To the extent that these differing standards are correlated with the respondents' criminal behavior, our estimates may be biased. To guard against this potential problem, models II and III are estimated using interviewer-specific fixed effects in addition to the set of controls described above.

A number of aspects of Table 3 are noteworthy. First, the estimated coefficients are of the expected sign in overwhelming majority of the cases. For example, in case of females, the coefficient of *Very Attractive* is negative in 6 of 7 crime measures. Similarly, the coefficient of *Unattractive* is positive in 6 of 7 cases. For males, all of the coefficients are of expected signs in models with control variables. Second, the estimated coefficients are stable across specifications. Put differently, inclusion of personal characteristics (Model II) and personal and family characteristics (Model III) do not change the magnitude of the estimated beauty effects. This indicates that our measure of beauty is uncorrelated with personal or family characteristics.

In case of females, beauty has a statistically significant impact on all crimes but theft and burglary. Being a very attractive female reduces the propensity to damage

property by 1.1 percentage points, to commit non-drug crime (burglary, theft, robbery, assault, or property damage) by 2.5 percentage points, and the propensity to assault somebody by 2 percentage points in comparison to being of average attractiveness in the most comprehensive model (III). The coefficient is not quite significant (p=0.11) in case of burglary. Being an unattractive female increases the propensity for robbery by 1.5 percentage points, the propensity to assault by 2.2 percentage points, and selling drugs by 3 percentage points. For males, we observe that the coefficients of *Very Attractive* are always negative in the most comprehensive model (Model III), and the coefficients of *Unattractive* are always positive once the models include interviewer fixed-effects, although the coefficients are estimated with less precision. The finding that the effect of beauty is stronger for females is consistent with the results reported by Hamermesh and Biddle (1994), who show that unattractive females have lower labor force participation rates, and unattractive females marry badly. Specifically, all else the same, the husbands of unattractive females have less education. Thus, unattractive females likely face further income effects that force them towards criminal activity.

Another interesting exercise is to consider the sorting behavior within criminality, i.e., by sub-occupation. One can argue that there are certain sub-occupations, for example robbery or assault, where being unattractive can serve as an advantage by increasing the ability of the individual to instill terror on the victim, whereas being unattractive would have less of an impact for other crimes such as burglary, although one would still expect an effect of attractiveness on burglary because attractiveness has a positive effect on legal labor market returns.[11] In Table 3 we see some evidence of sorting behavior within crime types for females. Being an unattractive female increases

[11] We would like to thank Dan Hamermesh for bringing this point to our attention.

the propensity for robbery and assault by more, both in terms of magnitude and significance, than it does for theft.

An alternative method to categorize beauty is to use the four-way classification, as described earlier. The results from this specification of attractiveness are presented in Table 4, and are consistent with those in Table 3. As in Table 3, in overwhelming majority of the cases the coefficients are of expected sign. An interesting finding in this table is that in a vast majority of the crime measures, the relative magnitude of the effects of *Very Attractive* and *Attractive* strengthens the evidence that attractive individuals sort themselves out of the criminal sector. Specifically, the absolute value of the coefficients of *Very Attractive* are larger than those of *Attractive,* indicating that attractive individuals commit less crime in comparison to those with average attractiveness (the left-out category), and very attractive individuals commit less crime in comparison to attractive ones. Consistent with Table 3, the effect of attractiveness on criminal behavior is found to be weaker for males, but the directions of the effects are mostly consistent with our predictions.

Physical attractiveness of the young adult may be correlated with family income. For example, one can argue that individuals from low income families may have worse features such as bad teeth. In our case, these concerns are minimized as inclusion of a host of family socio-economic characteristics does not influence the estimated coefficients, suggesting that beauty is not capturing family background. We provide more evidence on robustness of the results and exogeneity of beauty in the extensions section below.

Because the hypothesis of sorting to the criminal sector is based on expected monetary payoffs in labor and criminal markets, a natural question is why assaulting somebody and damaging property are influenced by beauty. The answer seems to lie in the fact that individuals who commit assault or property damage tend to engage in other crimes as well. Thus, assault and damaging property are highly correlated with other crimes. For example, among those individuals who commit assault, the mean of robbery incident is 0.12, the mean of burglary is 0.08, the mean of theft is 0.10, and that of selling drugs is 0.22. In contrast, the corresponding means among those who have not committed an assault are: 0.01, 0.01, 0.03, and 0.06, respectively. The same is true for damaging property. Among those who damaged property, the means of committing robbery, burglary, theft, and selling drugs are 0.11, 0.12, 0.18, and 0.25. The corresponding means among those who have not damaged property are 0.01, 0.01, 0.02 and 0.09, respectively.

Beauty may also have an impact on the treatment provided by the criminal justice system.[12] To investigate whether attractive individuals are more likely to receive favorable treatment from the criminal justice system, we analyze the link between attractiveness and three variables that reflect the individual's own criminal behavior and the behavior of the criminal justice system. These are: ever being arrested, detained or convicted. We present these results in Table 5. The first column of the upper panel shows that, conditional on having committed a crime, being a very attractive female is negatively and significantly associated with ever being detained. The second column demonstrates that being a very attractive female has no impact on the probability of being

[12] Argys and Mocan (2004) show that even for inmates on death row, personal attributes, such as race and gender, are influential in determining whether they receive lenient treatment.

arrested, conditional on being detained. The same result is obtained when we control for criminal participation in column three. Columns four and five show that conditional on being arrested, beauty has no impact on the probability of conviction. Thus, the top panel of Table 5 demonstrates that being a very attractive female lowers the probability of being detained, but it has no impact on conditional arrest or conviction probabilities. This finding can be thought of as supportive evidence for beauty not being an indicator of personal or family socio-economic status. This is because if beauty were to be positively correlated with socio-economic status, then it would be expected to have an impact on the probability of conviction and perhaps of arrest, through the ability to afford higher quality legal representation and defense. For males, there is no real indication that attractiveness has an impact on the probability of being detained, arrested, or convicted.

Alternative Specifications

As an alternative analysis, we used all three beauty ratings assigned to the individuals in the three waves of the survey, and added up these three ratings. Thus, an individual's total beauty rating after three evaluations can rage from 3 (being rated 1 in each case) to 15 (being rated 5 in each case). We classified individuals into three categories: Very attractive (if total rating is greater than or equal to 14), Unattractive (if the total rating is less than or equal to 9) and Average (if total rating is between 10 and 13).

The results of this specification are reported in Table 6. They are consistent with those reported in Table 3, but here beauty has no impact on robbery for females, and it has no impact on theft for males. On the other hand, the coefficients of both Very

Attractive and Unattractive, which were not quite significant for males in Table 3, become statistically significant in this specification. In Table 6, very attractive females are about 2 percentage points less likely to damage property, and 0.5 percentage points less likely to burglarize in comparison to average-looking ones. Unattractive females are 1.4 percentage points more likely to damage property, 1.8 percentage points more likely to assault somebody, and about 1 percentage point more likely to sell drugs, and 2.8 percentage points more likely to commit non-drug crime. In case of males, unattractive individuals are about 1 percentage point more likely to commit robbery, and 1.7 percentage points more likely to sell drugs in comparison to average-looking males. Very attractive males are 4 percentage points less likely to sell drugs. These magnitudes are very similar to those reported in Table 3, which were based on Wave III data. [13]

The results presented in Tables 3, 4 and 6 indicate that unattractive individuals are more likely to commit crimes, and attractive individuals are less likely to commit crimes in comparison to average-looking individuals. The results are robust to a variety of specifications. Beauty seems to be measured rather consistently as there is a high degree of agreement between beauty ratings provided for individuals by different evaluators over three evaluations, where the first and last one were six years apart.[14]

[13] It is not feasible to analyze the impact of the change in beauty between high school and adult years on the change in crime between the same periods. There are two reasons for this. First, the ratings of beauty are highly correlated between time periods, thus first-differenced beauty ratings do not provide much information. Second, although we can take the difference in criminal activity between adult and high school periods, conceptually they are not quite comparable because adults presumably make the crime-work decision as a labor market choice in Wave III, but the decision to engage in crime in high school may have been done in a different framework.

[14] Note that measurement error in a beauty variable would make it more difficult to obtain significant coefficients.

Extensions

Robustness

One legitimate concern is that each interviewer might have a different standard for beauty. As Hamermesh and Biddle (1994) point out, these differences could be regarded as a source of measurement error, which would bias our estimates toward zero to the extent that interviewer standards are randomly correlated with the respondents' criminal propensities. Including interviewer fixed effects as we do throughout the paper, accounts for this potential confounding. It is also conceivable that male and female interviewers provided systematically different beauty ratings. A great majority of our interviewers (about 80 percent) are female, and when we estimated our models restricting the sample to female interviewers only, the results remained essentially the same.[15] A similar argument can be made for the differences in ratings between interviewers of different races. More than 77 percent of the interviewers are white. The results did not change when the models are re-estimated with white interviewers only. We also restricted the sample to white respondents who are rated by white interviewers. Estimating the models using this sub-sample did not alter the results in a systematic way. Despite the reduction in the sample size, the signs of all estimated coefficients remained the same. For females, although the impact of attractiveness on damaging property and robbery became insignificant, attractiveness became statistically significant in the burglary regression. For males, the coefficient of very attractive turned insignificant for robbery and theft, but it became significant in damage and burglary.

[15] The distribution of ratings provided by female raters were as follows by order of category: 2.01%, 4.90%, 44.72%, 36.55%, and 11.83%. The ratings provided by male interviewers were distributed as: 1.61%, 5.73%, 50.25%, 33.33% and 9.07%.

If less attractive individuals are more likely to engage in crime, and if these individuals are imprisoned quickly after high school, or if they drop out from the longitudinal survey for some other reason, our data set from Wave III (of young adults) will not include less attractive and more crime-prone individuals. However, a comparison of the beauty ratings of those who were observed in Wave I, but not since (those who dropped out of the sample), with those who were observed in Wave III demonstrated that both the means and the distributions of the beauty ratings are similar between these two groups. The same result is obtained by comparing those who were observed in Wave II, but not in Wave III, as well as those who were observed in wave I, but not in Wave II. Thus, we find that attrition is independent of beauty.

Although the beauty question explicitly asks the interviewer to rate the "physical attractiveness" of the individual, it is conceivable that individuals with a "bad attitude" during the interview were assigned lower ratings on their physical attractiveness. To control for such potential confounding, we added to the models a variable gauging the attractiveness of the personality. This variable is based on the question "how attractive is the personality of the respondent?' which was answered by the interviewer at the end of the interview. We created dichotomous variables to indicate if the respondent's personality was rated as unattractive (mean=0.023), or as very unattractive (mean=0.013) by the interviewer. Adding these personality controls did not alter the results. Similarly, based on the question "How attractive is the respondent's grooming?" we created a dummy variable for unattractive grooming (mean=0.058). Adding this grooming variable to the models did not change the results either.

Obese individuals are likely to receive lower attractiveness ratings. Strictly speaking, obesity or body mass index (BMI) should not be controlled for in the regressions, because it is part of an individual's "physical attractiveness." Controlling for BMI would imply that attractiveness is measured by facial beauty.[16] Nevertheless, using the measured high and weight of the individual, we created the BMI for each individual, and added a dummy variable to the models to indicate if the respondent's BMI is greater than or equal to 30, (the cutoff for obesity; mean=0.224). Again, the results remain unchanged.

Finally, note that estimating the models using individuals who have non-missing beauty rating in all three waves (Table 6), and using a 4-way classification of beauty (Table 4) did not alter the results.

Is it an Income Effect?

The measure of beauty is unlikely to be effected by the extent of the criminal activity of the individual. Although it can be argued that committing property crime would increase income, which would in turn allow the individual to enhance his/her attractiveness through the consumption of beauty products, Hamermesh and Biddle (1994) show that such reverse causality is not crucial even in the context of wages and beauty; so it should be even less important in case of crime and beauty. Furthermore, in

[16] This is clearly not the case in current popular culture, and the most recent evidence can be found in the TV show "Biggest Loser" on NBC, where 14 unattractive individuals –by their own declaration in some cases- were competing to lose weight. Every single contestant had beautiful facial features, but they were unattractive because of their obesity. Similarly, it was reported on NBC that when supermodel Tyra Banks wore a "fat suit" on the street, she faced laughter, stares and nasty comments (http://abcnews.go.com/GMA/BeautySecrets/story?id=1280787).

our case any such reverse causality would bias the result in the opposite direction detected in the paper.

Could beauty be picking up some other effect that is correlated with criminal activity? For example, if interviewers consistently rated poorer individuals as unattractive, then beauty would be acting as a proxy for poverty. Given that poverty is correlated with criminal activity, we might be picking up the impact of poverty on crime. Note that we control for a very large number of individual and socio-economic background variables, including personal unearned income, mother's education, whether the individual's family was on welfare, family income, whether the father was ever jailed, etc. Also note that adding to Model III all the personal and family attributes (listed in Table 2) did not alter the results in comparison to those obtained from models that omitted them, indicating that unobserved factors are not influencing the relationship between beauty and crime.

Although the models contain an exhaustive list of personal and family background characteristics (see Table 2), if interviewers consistently assigned higher beauty ratings to those individuals who live in high income, low crime neighborhoods and if these individuals have lower criminal propensities, beauty might be picking up this neighborhood effect. To account for this possibility, we estimated the most comprehensive models with the addition of county-specific contextual variables. These pertain to the county of residence when the individual was in high school. These additional variables are the proportion of population living in rural area in the county of the individual in 1990, population density (number of persons per sq. km) in 1990, proportion black in the county in 1990, proportion Hispanic in the county in 1990,

median household income in the county in 1990, the unemployment rate in the county in 1990, the total crime rate per 100,000 population in county in 1993, the proportion voting democratic in the1992 presidential election in the county, and proportion voting for Ross Perot in the 1992 presidential election in the county. Estimating the models with these variables did not alter the results. Alternatively, we added to the models county dummies to control county-level unobservables, which did not change the results either.

Wages and Beauty

For the sorting mechanism to be effective, there should be a labor market premium to beauty as discussed in the introduction. Although earlier papers have demonstrated this effect, it is important to investigate its existence in this data set as well. We estimated models where the logarithm of hourly wages of the individuals are regressed on the same large set of explanatory variables and the beauty dummy variables. The results obtained from the third wave, as well as from the sample of all three waves with non-missing beauty ratings revealed wage premiums for beauty similar to those reported earlier (e.g. Hamermesh and Biddle 1994, Biddle and Hamermesh 1998).[17]

Is there a human capital impact of beauty?

The positive impact of beauty on wages reported earlier and also identified in these data may reflect some unobserved factor that may be correlated with beauty. For example, it has been shown that good-looking people have higher test scores, and it has been hypothesized that this could be because they receive more attention at school (Bull and Rumsey 1988). Also, attractive individuals are considered more trustworthy (Wilson

[17] These results, which are not reported in the interest of space, are available upon request.

and Eckel 2005), and for young adolescents' physical attractiveness is related to peer relations and academic performance (Lerner et al, 1990). Interestingly, good looking people receive more attention even from babies (Samuels and Elwy 1985). On the other hand, it can also be argued that unattractive students may devote themselves to studying because they may have difficulties in social aspects of schooling. The net impact of beauty on school outcomes, therefore, could be uncertain.

During the third wave of the survey (when the individuals are in the age range of 18-26), they were given the adult version of the Peabody Vocabulary Test. Table 7 reports the results from the models where these test scores are explained by beauty and all other personal and family characteristics. As can be seen, very attractive females in Wave III (the top panel) score 3 percentage points higher in comparison to average-looking females, and unattractive females score 2.3 percentage points lower. In case of males, very attractive ones score 3.7 percentage points higher, and unattractive ones score 1.8 percentage points lower than average-looking males, although the latter impact is not significantly different from zero. The results from the sample of all three waves (lower panel of Table 7) are similar: the coefficients of being very attractive are positive and the ones for being unattractive are negative for both males and females, and they are all significant.

These findings are consistent with prior research which shows that attractiveness influences achievement and even psychological well-being (Umberson and Hughes 1987), and suggest a secondary mechanism through which beauty affects crime. If less attractive students face social and educational disadvantages in high school which hinder their human capital accumulation, then high school beauty would have an impact on

current crime because it would act as a proxy for the extent and quality of human capital formation in high school. For example, there is research to indicate that attractive children receive more attention in the classroom than do unattractive children (Clifford and Walster 1973), and attractiveness influences perceptions of intellectual competence in both adults and children (Jackson, Hunter, and Hodge 1995).

To investigate the extent to which beauty in high school has an impact on current (adult) crime, we estimate models where current crime is explained by beauty in high school, conditioning on all other explanatory variables. To create a beauty rating for high school, we averaged the ratings assigned to individuals in Waves I and II. The average of the two years' beauty ratings ranges from 1 to 5. Of the 11,567 individuals with non-missing beauty ratings in Waves I and II, 5.6 % received an average rating of 2.5, and 5.1% received an average rating of 5. Two dummy variables are created (*Very Attractive-High School*, and *Unattractive-High School*) to identify these ratings, which are added as additional explanatory variables to model III.

The results, which are reported in the first panel of Table 8A for females, show that beauty in high school has a statistically significant effect on current criminal activity in the cases of damaging property, assault and non-drug crime, controlling for all other explanatory variables that are included in Model III. In the bottom panel of Table 8A we present the results of the models for females, where in addition to the complete set of explanatory variables measuring personal attributes and family background characteristics, beauty in high school as well as current beauty are included as additional explanatory variables. As explained earlier in the paper, beauty ratings that were assigned in high school and those that were assigned when the individuals were young

adults are highly correlated, although they are assigned by different interviewers 7-8 years apart. The lower panel of Table 8A shows that, despite the high correlation between high school beauty and adult beauty, inclusion of adult beauty does not impact the magnitude or the statistical significance of the estimated coefficients of high school beauty. Furthermore, adult beauty has a separate effect on adult crime in five different crimes. Thus, even though beauty ratings are highly correlated between high school years and when the individuals are young adults, adult beauty and high school beauty have separate impacts on current crime for females.

Table 8B displays the results for males. The top panel shows that high school beauty has an impact on current crime only in case of selling drugs, and the bottom panel demonstrates that adding current beauty does not eliminate this effect.

If high school beauty is indeed a proxy for the learning experience of the individual when in high school, then adding measures of high school learning environment would reduce the size of the coefficients of high school beauty. Tables 9A and 9B report the results of the models where in addition to all explanatory variables and current and high school beauty measures, six additional variables are included which aim to capture various aspects of the students' high school experience. These variables are the grade point average of the student in high school (in Wave I), whether they were suspended from school, expelled from school, whether they had problems with teachers, whether they had problems with other students, and whether they felt part of school.

Table 9A shows that in case of females, higher high school GPA is negatively correlated with current criminal activity. Suspension in high school, and problems with teachers increase the likelihood of current crime. Note that the models used in the bottom

panel of Table 8A and the model in Table 9A are very similar; the only difference being the six additional high school environment variables that are included in the latter. Comparison of the bottom panel of Table 8A and Table 9A shows that inclusion of these high school variables reduces the magnitude of the estimated high school beauty effects, and eliminates the statistical significance of these high school attractiveness coefficients in cases of assault and non-drug crime. This suggests that the impact of high school beauty on current crime is due to the correlation between high school beauty and the variables that capture high school experience for females. The coefficients of current beauty remain significant; that is, adding high school environment variables does not influence the impact of current beauty on current crime.

Table 9B demonstrates that for males, GPA, suspension, having being expelled and problems with teachers are significant determinants of current crime, but inclusion of high school environment variables to the models does not reduce the estimated coefficients of high school beauty in a systematic and meaningful way. These results suggest that the extent of beauty in high school has an impact on human capital formation in high school for female students, while the same is not the case for male students.

V. Conclusion

It has been shown that beauty commands a wage premium in the labor market (Hamermesh and Biddle 1994). If crime is as a labor market activity where the individuals make decisions based on expected payoffs from the criminal sector and the legal labor market, then on the margin less attractive individuals should engage in

criminal activity more frequently because they face a wage penalty in the legal labor market.

In this paper we use data from three waves of Add Health (a nationally representative data set of U.S. young adults, designed to provide information about risky behavior) to investigate the relationship between attractiveness and criminal activity of young adults, aged 18 to 26. Beauty ratings are assigned by interviewers on a scale from 1 to 5, and they are rather consistent between the ratings assigned by different interviewers in different years of the survey.

We find evidence which indicates that very attractive females receive favorable treatment from the criminal justice system. Specifically, conditional on criminal activity, very attractive females are less likely to be detained. No unfavorable treatment is detected for unattractive individuals, or males. Despite this effect, being very attractive reduces the individual's propensity for criminal activity and being unattractive increases it for a number of crimes, ranging from burglary to selling drugs. The effect of beauty on crime is estimated with more precision for females than for males. It has been shown by prior work that unattractive females have lower labor force participation rates, and have husbands who have less education (Hamermesh and Biddle 1994). Thus, unattractive females face additional labor- and marriage-market handicaps that may translate into an income effect, which would reinforce the beauty-crime connection.

Beauty could be related to socio-economic background characteristics. However, our analyses demonstrate that the estimated relationship between beauty and criminal activity is not because beauty is acting as a proxy for socio-economic status. This is because the results are insensitive to inclusion of a large number or personal and family

characteristics ranging from income of the family when the individual was in high school to family's welfare participation; from whether the father was ever jailed to birth weight, to a variety of contextual variables measured at the county-level. Furthermore, the results are robust to a number of tests, such as classification of beauty, measurement of beauty by different interviewers in different years, inclusion/exclusion of explanatory variables, accounting for potential interviewer effects, and inclusion of county-level contextual variables.

For unattractive individuals to sort themselves into the criminal sector, they should face an earnings penalty in the legal labor market based on their looks. Consistent with prior research, we find that being a very attractive young adult is positively associated with wages and being unattractive is associated with a wage penalty. We also show that beauty is related to adult vocabulary test scores, which suggests the possibility that beauty may have an impact on human capital formation.

Recent research has shown that a student's height, and even a student's name, which sounds like it was given by uneducated parents, influence the student's human capital and skill formation during school. Height influences participation in club activities (Persico, Postlewaite and Silverman 2004), and names that signal lower socio-economic status generate lower teacher expectations (Figlio 2005). There is also an extensive psychology literature which shows that people prefer to interact with individuals who have attractive features, and attractive children receive more attention in the classroom than do unattractive children (Clifford and Walster 1973). Thus, it can be conjectured that looks influence human capital formation in school through the attention received from teachers, and interactions with other students. This would impact the

learning experience of unattractive students, by adversely influencing their quantity and quality of schooling, although a counterbalancing argument can be made based on the assumption that unattractive students may devote themselves to studying as a defense mechanism.

We demonstrate that, especially for females, holding constant current beauty, high school beauty (pre-labor market beauty) has a separate impact on crime, and that high school beauty is correlated with variables that gauge various aspects of high school experience, such as GPA, suspension or having being expelled from school, and problems with teachers. Thus, high school beauty seems to acts as a proxy for the extent and quality of human capital formation in high school.

Taken together, these results suggest two handicaps faced by unattractive individuals. First, a labor market penalty provides a direct incentive for unattractive individuals toward criminal activity. Second, the level of beauty in high school has an effect on criminal propensity 7-8 years later, which seems to be due to the impact of the level of beauty in high school on human capital formation, although this second avenue seems to be effective for females only.

Table 1
The Distribution of Attractiveness
Among Young Adults (ages 18-26) in Wave III

Category	Full Sample	Males	Females
1) Very unattractive	1.94%	1.37%	2.44%
2) Unattractive	5.01%	5.22%	4.81%
3) About average	45.87%	51.82%	40.55%
4) Attractive	35.96%	33.66%	38.00%
5) Very attractive	11.23%	7.92%	14.19%
N:	15,179	7,159	8,020

Table 2
Definitions and Descriptive Statistics

Variable Name	Definition	Mean	Standard Error
Outcome Variables			
Arrest (N=15,071)	=1 if ever been arrested or taken into custody by the police, =0 otherwise	0.110	0.313
Convict (N=15,152)	=1 if ever been convicted of crime in a juvenile or an adult court, =0 otherwise	0.061	0.238
Detain (N=15,020)	=1 if ever been stopped or detained by the police for questioning about the activities, =0 otherwise.	0.193	0.395
Damage (N=15,006)	=1 if deliberately damaged property that belonged to someone else in the past 12 months, =0 otherwise	0.087	0.282
Burglary (N=15,052)	=1 if went into a house or building to steal something in the past 12 months, =0 otherwise	0.019	0.135
Robbery (15,049)	=1 if used or threatened to use a weapon to get something from someone else in the past 12 months, =0 otherwise	0.020	0.141
Theft (N=15,041)	=1 if stole something worth more than 50 dollars in the past 12 months, =0 otherwise	0.033	0.180
Assault (N=15,150)	=1 if pulled a knife on someone, shot someone, or badly hurt someone in the past 12 months, =0 otherwise	0.080	0.272
Sold Drugs (14,994)	=1 if sold marijuana or other drugs in the past 12 months, =0 otherwise	0.074	0.261
Non-drug Crime (N=15,069)	=1 if committed burglary, theft, robbery, assault or damaged property into past 12 months, =0 otherwise	0.174	0.379
Labor Market and Human Capital Outcomes			
Wage (9,641)	=hourly wage rate	10.646	7.008
PPVT percentile (N=14,634)	=Percentile ranking from the Add Health Peabody Picture Vocabulary test score	50.000	29.667
Expelled from school (15,164)	=1 if ever expelled from school, =0 otherwise	0.073	0.261
Explanatory Variables			
Age18 [a]	=1 if 18 years old, =0 otherwise	0.010	0.098

Age19	=1 if 19 years old, =0 otherwise	0.095	0.293
Age20	=1 if 20 years old, =0 otherwise	0.132	0.339
Age21	=1 if 21 years old, =0 otherwise	0.161	0.367
Age22	=1 if 22 years old, =0 otherwise	0.190	0.392
Age23	=1 if 23 years old, =0 otherwise	0.191	0.393
Age24	=1 if 24 years old, =0 otherwise	0.161	0.368
Age25	=1 if 25 years old, =0 otherwise	0.052	0.221
Age26	=1 if 26 years old =0 otherwise	0.009	0.093
Hispanic	=1 if hispanic ethnicity,=0 otherwise	0.163	0.369
Hispanic missing	=1 if ethnicity is missing, =0 otherwise	0.002	0.042
White	=1 if white, =0 otherwise	0.648	0.478
Black	=1 if Black, =0 otherwise	0.226	0.418
Other race [a]	=1 if other race, =0 otherwise	0.110	0.313
Race missing	=1 if race is missing, =0 otherwise	0.016	0.127
Nonwage1	=1 if nonwage income is negative or zero dollars, =0 otherwise	0.529	0.499
Nonwage2	=1 if nonwage income is between 0 and 5,000 dollars, =0 otherwise	0.298	0.458
Nonwage3	=1 if nonwage income is between 5,000 and 10,000 dollars, =0 otherwise	0.051	0.220
Nonwage4 [a]	=1 if nonwage income is more than 10,000 dollars, =0 otherwise	0.122	0.327
Nonwage missing	=1 if nonwage income is missing, =0 otherwise	0.069	0.254
Healthy	=1 if in good or better health, =0 otherwise	0.954	0.210
Healthy missing	=1 if health is missing, =0 otherwise	0.0001	0.011
USborn	=1 if born in the U.S., =0 otherwise	0.919	0.272
USborn missing	=1 if Usborn is missing, =0 otherwise	0.0001	0.014
Catholic	=1 if religion is Catholic, =0 othwerwise	0.251	0.433
Protestant	=1 if religion is Protestant, =0 otherwise	0.398	0.489
No Religion	=1 if believes in no religion, =0 otherwise	0.202	0.401
Other religion [a]	=1 if believes in other religion, =0 otherwise	0.134	0.341
Religion missing	=1 if religion is missing, =0 otherwise	0.016	0.125
Jailed Father	=1 if father was ever jailed, =0 otherwise	0.137	0.344
Jailed Father missing	=1 if Jailed Father is missing, =0 otherwise	0.070	0.256
Mother High-school – [a]	=1 if mother has less than high-school degree, =0 otherwise	0.144	0.351
Mother High-school	=1 if mother has high-school degree, =0 otherwise	0.316	0.465
Mother High-school+	=1 if mother had more than high-school degree, =0 otherwise	0.436	0.496
Mother education missing	=1 if mother's education is missing, =0 otherwise	0.104	0.305

Parental welfare	=1 if parents were receiving welfare during Wave I, =0 otherwise	0.075	0.265
Parental welfare missing	=1 if parental welfare is missing, =0 otherwise	0.141	0.348
Biological Father	=1 if biological father was present during Wave 1, =0 otherwise	0.582	0.493
Step Father	=1 if step father was present during Wave 1, =0 otherwise	0.109	0.311
Father absent	=1 if the father is absent during Wave 1, =0 otherwise	0.306	0.461
Father information is missing [a]	=1 if the father information is missing during Wave 1, =0 otherwise	0.003	0.057
Mother's age at birth 1 [a]	=1 if mother's age at birth was less than 19, =0 otherwise	0.076	0.265
Mother's age at birth 2	=1 if mother's age at birth was between 20 and 30, =0 otherwise	0.514	0.500
Mother's age at birth 3	=1 if mother's age at birth was between 31 and 40, =0 otherwise	0.133	0.339
Mother's age at birth 4	=1 if mother's age at birth was 41 or more, =0 otherwise	0.006	0.079
Mother's age at birth missing	=1 if mother's age at birth was missing, =0 otherwise	0.271	0.445
Parental Income1 [a]	=1 if total parental income was less $10,000, =0 otherwise	0.059	0.235
Parental Income 2	=1 if total parental income was between $10,000 and $25,000, =0 otherwise	0.159	0.366
Parental Income 3	=1 if total parental income was between $25,000 and $75,000, =0 otherwise	0.427	0.495
Parental Income 4	=1 if total parental income was between $75,000 and $125,000, =0 otherwise	0.091	0.287
Parental Income 5	=1 if total parental income was more than $125,000, =0 otherwise	0.020	0.139
Parental Income missing	=1 if total parental income was missing, =0 otherwise	0.244	0.430
Birthweight1	=1 if birth weight was less than 1,500 grams, =0 otherwise	0.018	0.134
Birthweight2	=1 if birth weight was between 1,500 and 2,500 grams, =0 otherwise	0.074	0.262
Birthweight3 [a]	=1 if birth weight was more than 2,500 grams, =0 otherwise	0.725	0.447
Birthweight missing	=1 if birth weight is missing, =0 otherwise	0.183	0.386
Number of observations		15,179	

[a] Omitted category.

Wave I pertains to 1994-1995, when the respondents were first surveyed while they were in high school.

Table 3

The Effect of Beauty on Crime, Wave III

		FEMALES						
		Damaging Property	Burglary	Robbery	Theft	Assault	Non-drug Crime	Selling Drugs
	Very Attractive	-0.013**	-0.005*	-0.0005	0.001	-0.023***	-0.031***	-0.004
		(0.006)	(0.002)	(0.003)	(0.005)	(0.005)	(0.009)	(0.006)
	Unattractive	-0.005	0.007	0.017***	0.001	0.031***	0.019	0.029***
I		(0.009)	(0.006)	(0.007)	(0.006)	(0.011)	(0.014)	(0.011)
	Control Variables	No	No	No	No	No	No	No
	Interviewer Fixed Effects	No	No	No	No	No	No	No
	Very Attractive	-0.012*	-0.004	-0.0004	0.003	-0.021***	-0.026***	-0.005
		(0.006)	(0.003)	(0.003)	(0.005)	(0.005)	(0.009)	(0.006)
	Unattractive	-0.006	0.008	0.015**	0.003	0.022**	0.012	0.029***
II		(0.009)	(0.006)	(0.007)	(0.007)	(0.011)	(0.014)	(0.011)
	Control Variables	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes
	Interviewer Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Very Attractive	-0.011*	-0.005	-0.0002	0.003	-0.020***	-0.025***	-0.006
		(0.006)	(0.003)	(0.003)	(0.005)	(0.005)	(0.009)	(0.006)
	Unattractive	-0.006	0.008	0.015**	0.004	0.022**	0.012	0.030***
III		(0.009)	(0.006)	(0.007)	(0.007)	(0.011)	(0.014)	(0.011)
	Control Variables	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES
	Interviewer Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Number of Observations	7,959	7,976	7,974	7,974	8,003	7,966	7,960

Table 3 (concluded)

		MALES						
		Damaging Property	Burglary	Robbery	Theft	Assault	Non-drug Crime	Selling Drugs
	Very Attractive	-0.006	0.001	-0.011*	-0.004	-0.009	-0.009	-0.022*
		(0.015)	(0.007)	(0.006)	(0.009)	(0.014)	(0.019)	(0.013)
	Unattractive	0.013	0.009	0.023**	0.031**	0.023	0.036*	0.017
I		(0.017)	(0.009)	(0.011)	(0.013)	(0.017)	(0.022)	(0.016)
	Control Variables	No	No	No	No	No	No	No
	Interviewer Fixed Effects	No	No	No	No	No	No	No
	Very Attractive	-0.002	-0.002	-0.012*	-0.006	-0.012	-0.012	-0.023
		(0.016)	(0.008)	(0.007)	(0.010)	(0.014)	(0.020)	(0.014)
	Unattractive	0.011	0.001	0.023**	0.025*	0.010	0.019	0.005
II		(0.019)	(0.009)	(0.011)	(0.013)	(0.018)	(0.023)	(0.017)
	Control Variables	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes
	Interviewer Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Very Attractive	-0.001	-0.001	-0.010	-0.006	-0.006	-0.006	-0.021
		(0.016)	(0.008)	(0.007)	(0.009)	(0.014)	(0.020)	(0.014)
	Unattractive	0.012	0.001	0.023**	0.024*	0.005	0.017	0.004
III		(0.019)	(0.009)	(0.011)	(0.013)	(0.018)	(0.023)	(0.017)
	Control Variables	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES
	Interviewer Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Number of Observations	7,047	7,076	7,075	7,067	7,147	7,103	7,034

The number of observations remain the same between Models I, II, and III for each crime. Robust standard errors are in parentheses. A * indicates that the estimated coefficients is statistically different from zero at the 10% level, ** indicates significance at 5%, and *** stands for significance at 1% or better. Model I includes no control variables. Model II includes age, race, Hispanic ethnicity, nonwage income, health status, religious affiliation, and whether the person was born in the U.S. Model III contains the same explanatory variables as Model II, but it also includes family socio-economic background characteristics which are family income in 1994, mother's education, whether the father was biological, step father, or absent, mother's age at birth, whether father was ever jailed, whether parents were receiving welfare.

Table 4
The Effect of Beauty on Crime (Four-Way Classification of Beauty), Wave III

		FEMALES						
		Damaging Property	Burglary	Robbery	Theft	Assault	Non-drug Crime	Selling Drugs
I	Very Attractive	-0.017***	-0.007***	-0.001	-0.002	-0.030***	-0.043***	-0.006
		(0.007)	(0.003)	(0.003)	(0.005)	(0.006)	(0.009)	(0.006)
	Attractive	-0.008	-0.005**	-0.001	-0.007**	-0.015***	-0.025***	-0.003
		(0.005)	(0.003)	(0.002)	(0.003)	(0.005)	(0.008)	(0.005)
	Unattractive	-0.009	0.005	0.016**	-0.002	0.024**	0.007	0.028***
		(0.009)	(0.006)	(0.007)	(0.007)	(0.011)	(0.015)	(0.011)
	Control Variables	No	No	No	No	No	No	No
	Interviewer Fixed Effects	No	No	No	No	No	No	No
II	Very Attractive	-0.017**	-0.007**	-0.0007	-0.0002	-0.026***	-0.036***	-0.007
		(0.007)	(0.003)	(0.004)	(0.005)	(0.006)	(0.010)	(0.007)
	Attractive	-0.010*	-0.005*	0.000	-0.006*	-0.010*	-0.019**	-0.002
		(0.006)	(0.003)	(0.003)	(0.004)	(0.005)	(0.008)	(0.005)
	Unattractive	-0.011	0.005	0.015**	0.0002	0.018*	0.003	0.028***
		(0.009)	(0.006)	(0.007)	(0.007)	(0.011)	(0.015)	(0.011)
	Control Variables	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes
	Interviewer Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
III	Very Attractive	-0.016**	-0.007**	0.0004	-0.0008	-0.025***	-0.034***	-0.007
		(0.007)	(0.003)	(0.004)	(0.005)	(0.006)	(0.010)	(0.007)
	Attractive	-0.010*	-0.005*	0.0003	-0.007*	-0.009*	-0.018**	-0.003
		(0.006)	(0.003)	(0.003)	(0.004)	(0.005)	(0.008)	(0.005)
	Unattractive	-0.011	0.005	0.016**	0.0005	0.018	0.003	0.028***
		(0.009)	(0.006)	(0.007)	(0.007)	(0.011)	(0.015)	(0.011)
	Control Variables	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES
	Interviewer Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Number of Observations	7959	7976	7974	7974	8003	7966	7960

Table 4 (concluded)

		MALES						
		Damaging Property	Burglary	Robbery	Theft	Assault	Non-drug Crime	Selling Drugs
I	Very Attractive	-0.004	-0.001	-0.012*	-0.004	-0.011	-0.008	-0.027**
		(0.015)	(0.008)	(0.007)	(0.009)	(0.014)	(0.020)	(0.014)
	Attractive	0.005	-0.004	-0.003	-0.001	-0.003	0.001	-0.013
		(0.009)	(0.004)	(0.004)	(0.006)	(0.009)	(0.011)	(0.008)
	Unattractive	0.015	0.007	0.022**	0.031**	0.021	0.036*	0.012
		(0.018)	(0.009)	(0.011)	(0.013)	(0.017)	(0.022)	(0.017)
	Control Variables	No	No	No	No	No	No	No
	Interviewer Fixed Effects	No	No	No	No	No	No	No
II	Very Attractive	-0.002	-0.004	-0.012*	-0.007	-0.016	-0.014	-0.028**
		(0.017)	(0.008)	(0.007)	(0.010)	(0.015)	(0.021)	(0.015)
	Attractive	0.000	-0.004	-0.002	-0.003	-0.007	-0.005	-0.012
		(0.010)	(0.005)	(0.005)	(0.006)	(0.009)	(0.012)	(0.009)
	Unattractive	0.011	-0.001	0.023**	0.024*	0.007	0.017	0.000
		(0.019)	(0.010)	(0.012)	(0.013)	(0.018)	(0.024)	(0.017)
	Control Variables	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes
	Interviewer Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
III	Very Attractive	-0.002	-0.004	-0.011	-0.008	-0.009	-0.009	-0.026*
		(0.017)	(0.008)	(0.007)	(0.010)	(0.015)	(0.021)	(0.015)
	Attractive	-0.002	-0.005	-0.001	-0.003	-0.005	-0.005	-0.013
		(0.010)	(0.005)	(0.005)	(0.006)	(0.009)	(0.012)	(0.009)
	Unattractive	0.011	-0.001	0.022**	0.023*	0.003	0.015	-0.001
		(0.019)	(0.010)	(0.012)	(0.013)	(0.018)	(0.024)	(0.017)
	Control Variables	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES	Personal Attr. and SES
	Interviewer Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Number of Observations	7047	7076	7075	7067	7147	7103	7034

See notes to Table 3.

Table 5
The Effect of Beauty on Criminal Justice Outcomes

	FEMALES				
	Detained	**Arrested**	**Arrested**	**Convicted**	**Convicted**
Very Attractive	-0.017*	-0.007	-0.007	-0.002	-0.001
	(0.010)	(0.005)	(0.005)	(0.003)	(0.003)
Unattractive	-0.005	0.004	0.004	0.001	0.001
	(0.014)	(0.007)	(0.007)	(0.005)	(0.005)
Crime	0.143***		0.043***		0.007
	(0.016)		(0.009)		(0.006)
Detained		0.412***	0.405***		
		(0.017)	(0.017)		
Arrested				0.444***	0.439***
				(0.027)	(0.027)
Control Variables	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes
Interviewer Fixed Effects	Yes	Yes	Yes	Yes	Yes
Number of Observations	7920	7960	7914	7974	7923
	MALES				
	Detained	**Arrested**	**Arrested**	**Convicted**	**Convicted**
Very Attractive	0.001	0.004	0.005	-0.0004	0.0002
	(0.020)	(0.012)	(0.012)	(0.010)	(0.010)
Unattractive	0.022	0.003	0.002	-0.004	-0.006
	(0.023)	(0.014)	0.014	(0.012)	(0.012)
Crime	0.231***		0.028***		0.019**
	(.014)		(0.009)		(0.007)
Detained		0.620***	0.614***		
		(0.011)	(0.011)		
Arrested				0.564***	0.560***
				(0.014)	(0.014)
Control Variables	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes
Interviewer Fixed Effects	Yes	Yes	Yes	Yes	Yes
Number of Observations	7009	7041	6997	7076	7027

Robust standard errors are in parentheses. A * indicates that the estimated coefficients is statistically different from zero at the 10% level, ** indicates significance at 5%, and *** stands for significance at 1% or better.

Table 6
The Effect of Beauty on Crime, Waves I, II and III (Individuals with no missing beauty information)[a]

FEMALES

		Damaging Property	Burglary	Robbery	Theft	Assault	Non-drug Crime	Selling Drugs
I	Very Attractive	-0.022***	-0.006*	-0.005	-0.005	-0.002	-0.024*	-0.008
		(0.007)	(0.003)	(0.003)	(0.006)	(0.008)	(0.013)	(0.008)
	Unattractive	0.014**	0.002	0.006*	0.001	0.025***	0.035***	0.011*
		(0.007)	(0.003)	(0.004)	(0.005)	(0.007)	(0.010)	(0.006)
	Control Variables	No	No	No	No	No	No	No
II	Very Attractive	-0.019***	-0.005	-0.004	-0.004	0.001	-0.016	-0.007
		(0.007)	(0.003)	(0.003)	(0.006)	(0.009)	(0.012)	(0.008)
	Unattractive	0.015**	0.001	0.005	0.0004	0.020***	0.029***	0.011*
		(0.007)	(0.003)	(0.004)	(0.005)	(0.007)	(0.010)	(0.006)
	Control Variables	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes
III	Very Attractive	-0.020***	-0.005*	-0.003	-0.004	0.001	-0.015	-0.007
		(0.007)	(0.003)	(0.003)	(0.006)	(0.009)	(0.012)	(0.008)
	Unattractive	0.014**	0.001	0.005	0.0003	0.018***	0.028***	0.011*
		(0.007)	(0.003)	(0.004)	(0.004)	(0.007)	(0.010)	(0.006)
	Control Variables	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes
	No. of Observations	6,091	6,103	6,098	6,099	6,126	6,100	6,090

These models do not contain interviewer fixed effects, because being attractive and unattractive are determined by the sum of all three ratings assigned by different interviewers in three different waves.
See notes to Table 3.

Table 6 (concluded)
The Effect of Beauty on Crime, Waves I, II and III (Individuals with no missing beauty information)

MALES

		Damaging Property	Burglary	Robbery	Theft	Assault	Non-drug Crime	Selling Drugs
I	Very Attractive	0.001	-0.003	0.003	-0.02	0.007	0.015	-0.045**
		(0.031)	(0.015)	(0.015)	(0.015)	(0.029)	(0.039)	(0.023)
	Unattractive	-0.009	-0.003	0.011**	0.002	0.017*	0.007	0.017*
		(0.010)	(0.005)	(0.005)	(0.006)	(0.010)	(0.013)	(0.010)
	Control Variables	No	No	No	No	No	No	No
II	Very Attractive	0.012	-0.0003	0.004	-0.016	0.011	0.025	-0.041*
		(0.031)	(0.015)	(0.015)	(0.015)	(0.029)	(0.039)	(0.023)
	Unattractive	-0.007	-0.003	0.009*	0.001	0.014	0.005	0.015
		(0.010)	(0.005)	(0.005)	(0.006)	(0.010)	(0.013)	(0.010)
	Control Variables	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes	Personal Attributes
III	Very Attractive	0.010	-0.002	0.003	-0.016	0.009	0.020	-0.040*
		(0.031)	(0.015)	(0.015)	(0.015)	(0.029)	(0.038)	(0.023)
	Unattractive	-0.003	-0.003	0.010*	0.001	0.010	0.007	0.017*
		(0.010)	(0.005)	(0.005)	(0.006)	(0.010)	(0.013)	(0.010)
	Control Variables	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes	Personal & Family Attributes
	No. of Observations	5,335	5,354	5,355	5,350	5,400	5,369	5,329

These models do not contain interviewer fixed effects, because being attractive and unattractive are determined by the sum of all three ratings assigned by different interviewers in three different waves.
See notes to Table 3.

Table 7
The Effect of Beauty on Wages and Human Capital Indicators

Data set: Wave III		
	FEMALES	MALES
	Test Score	Test Score
Very Attractive	2.999***	3.706***
	(0.906)	(1.163)
Unattractive	-2.330*	-1.800
	(1.210)	(1.326)
Control Variables	Personal & Family Attributes	Personal & Family Attributes
Interviewer Fixed Effects	Yes	Yes
Number of observations	7,753	6,881

Data set: Waves I-III using individuals with no missing beauty information		
	FEMALES	MALES
	Test Score	Test Score
Very Attractive	2.340*	4.694**
	(1.292)	(2.374)
Unattractive	-3.900***	-3.726***
	(0.850)	(0.791)
Control Variables	Personal & Family Attributes	Personal & Family Attributes
Number of observations	5,954	5,209

These models do not contain interviewer fixed effects, because being attractive and unattractive are determined by the sum of all three ratings assigned by different interviewers in three different waves.
Robust standard errors are in parentheses. A * indicates that the estimated coefficients is statistically different from zero at the 10% level, ** indicates significance at 5%, and *** stands for significance at 1% or better.

Table 8A

The Effect of Current Beauty on Crime, Conditional on High School Beauty

	FEMALES (n: 6,091-6126)						
	Damaging Property	Burglary	Robbery	Theft	Assault	Non-drug Crime	Selling Drugs
Very Attractive_High School	-0.022***	-0.006	-0.004	0.003	0.005	-0.009	-0.001
	(0.008)	(0.004)	(0.004)	(0.008)	(0.010)	(0.014)	(0.011)
Unattractive_High School	0.018	-0.005	0.001	-0.008	0.026**	0.040**	0.016
	(0.013)	(0.005)	(0.005)	(0.007)	(0.012)	(0.018)	(0.012)

	Damaging Property	Burglary	Robbery	Theft	Assault	Non-drug Crime	Selling Drugs
Very Attractive	-0.018**	-0.005	0.001	-0.001	-0.019***	-0.033***	-0.009
	(0.007)	(0.003)	(0.004)	(0.006)	(0.006)	(0.011)	(0.007)
Unattractive	-0.007	0.007	0.017*	-0.00004	0.024*	0.010	0.035***
	(0.010)	(0.006)	(0.009)	(0.007)	(0.013)	(0.017)	(0.013)
Very Attractive_High School	-0.019**	-0.005	-0.003	0.003	0.009	-0.003	0.001
	(0.008)	(0.004)	(0.004)	(0.008)	(0.010)	(0.014)	(0.011)
Unattractive_High School	0.018	-0.006	-0.0004	-0.008	0.023*	0.038**	0.012
	(0.013)	(0.005)	(0.005)	(0.007)	(0.012)	(0.018)	(0.012)

These models include the complete list of personal and family background characteristics listed in Table 2, and included in models reported in Table 3.

Robust standard errors are in parentheses. A * indicates that the estimated coefficients is statistically different from zero at the 10% level, ** indicates significance at 5%, and *** stands for significance at 1% or better.

Table 8B

The Effect of Current Beauty on Crime Conditional on High School Beauty

	MALES (n: 5,335-5400)						
	Damaging Property	Burglary	Robbery	Theft	Assault	Non-drug Crime	Selling Drugs
Very Attractive_High School	-0.024	-0.003	0.012	0.002	-0.023	-0.017	-0.054**
	(0.029)	(0.013)	(0.015)	(0.018)	(0.028)	(0.038)	(0.025)
Unattractive_High Sschool	0.012	-0.009	0.007	0.00008	0.009	0.005	-0.023
	(0.018)	(0.008)	(0.009)	(0.011)	(0.017)	(0.022)	(0.016)

	Damaging Property	Burglary	Robbery	Theft	Assault	Non-drug Crime	Selling Drugs
Very Attractive	-0.003	0.0005	-0.008	-0.011	-0.007	-0.006	-0.015
	(0.019)	(0.010)	(0.008)	(0.011)	(0.017)	(0.024)	(0.017)
Unattractive	0.004	0.0004	0.021*	0.026*	0.011	0.017	-0.003
	(0.022)	(0.011)	(0.013)	(0.015)	(0.021)	(0.027)	(0.020)
Very Attractive_High School	-0.024	-0.003	0.013	0.003	-0.023	-0.017	-0.053**
	(0.029)	(0.013)	(0.015)	(0.018)	(0.028)	(0.038)	(0.025)
Unattractive_High School	0.012	-0.009	0.004	-0.003	0.008	0.003	-0.024
	(0.018)	(0.008)	(0.009)	(0.011)	(0.017)	(0.022)	(0.016)

These models include the complete list of personal and family background characteristics, listed in Table 2, and included in models reported in Table 3. Robust standard errors are in parentheses. A * indicates that the estimated coefficients is statistically different from zero at the 10% level, ** indicates significance at 5%, and *** stands for significance at 1% or better.

Table 9A
The Effect of Current Beauty on Crime Conditional on High School Beauty and Experience

FEMALES (n: 6,091-6126)

	Damaging Property	Burglary	Robbery	Theft	Assault	Non-drug Crime	Selling Drugs
Very Attractive	-0.016**	-0.005	0.002	-0.0004	-0.017***	-0.029***	-0.007
	(0.008)	(0.003)	(0.004)	(0.006)	(0.006)	(0.011)	(0.007)
Unattractive	-0.007	0.007	0.017*	-0.001	0.016	0.001	0.035***
	(0.011)	(0.007)	(0.009)	(0.008)	(0.012)	(0.017)	(0.013)
Very Attractive_High School	-0.017**	-0.005	-0.002	0.003	0.012	0.003	0.004
	(0.008)	(0.004)	(0.004)	(0.008)	(0.010)	(0.015)	(0.011)
Unattractive_High School	0.015	-0.006	-0.001	-0.009	0.014	0.024	0.013
	(0.013)	(0.005)	(0.006)	(0.007)	(0.012)	(0.019)	(0.012)
GPA	-0.007*	0.001	-0.003	0.003	-0.011***	-0.014**	-0.004
	(0.004)	(0.002)	(0.002)	(0.003)	(0.004)	(0.006)	(0.004)
Suspension	0.019**	0.003	0.007	0.007	0.012	0.040***	0.013
	(0.009)	(0.004)	(0.005)	(0.006)	(0.009)	(0.013)	(0.008)
Expelled	0.061***	0.024*	0.021	0.018	0.050**	0.102***	0.058***
	(0.022)	(0.013)	(0.013)	(0.013)	(0.021)	(0.029)	(0.021)
Problems with teachers	0.011**	0.003	0.002	0.005	0.008	0.025***	0.016***
	(0.006)	(0.003)	(0.003)	(0.004)	(0.005)	(0.008)	(0.006)
Problems with other students	0.007	-0.00007	0.003	0.003	0.006	0.005	0.003
	(0.006)	(0.003)	(0.003)	(0.004)	(0.005)	(0.008)	(0.005)
Felt part of school	0.007	0.007**	-0.0003	0.005	0.007	0.009	0.004
	(0.007)	(0.003)	(0.003)	(0.005)	(0.006)	(0.009)	(0.006)

These models include the complete list of personal and family background characteristics, listed in Table 2, and included in models reported in Table 3. The models are identical to those reported in the bottom panel of Table 8A, with the difference of the six high school variables listed in the table. Robust standard errors are in parentheses. A * indicates that the estimated coefficients is statistically different from zero at the 10% level, ** indicates significance at 5%, and *** stands for significance at 1% or better.

Table 9B
The Effect of Current Beauty on Crime Conditional on High School Beauty and Experience

MALES (n: 5,335-5400)

	Damaging Property	Burglary	Robbery	Theft	Assault	Non-drug Crime	Selling Drugs
Very Attractive	-0.007	0.001	-0.007	-0.011	-0.004	-0.006	-0.014
	(0.019)	(0.010)	(0.008)	(0.011)	(0.017)	(0.024)	(0.017)
Unattractive	0.008	0.004	0.021	0.030*	0.013	0.028	-0.002
	(0.022)	(0.012)	(0.013)	(0.016)	(0.021)	(0.027)	(0.020)
Very Attractive_HS	-0.021	-0.002	0.015	0.005	-0.016	-0.008	-0.046*
	(0.030)	(0.014)	(0.015)	(0.018)	(0.028)	(0.039)	(0.026)
Unattractive_HS	0.013	-0.012	-0.001	-0.006	0.001	0.003	-0.033**
	(0.018)	(0.008)	(0.009)	(0.011)	(0.017)	(0.023)	(0.016)
GPA	0.015**	-0.004	-0.003	-0.001	-0.012**	-0.001	-0.003
	(0.006)	(0.003)	(0.003)	(0.004)	(0.006)	(0.008)	(0.006)
Suspension	-0.004	0.001	0.003	0.010	0.053***	0.035**	0.038***
	(0.012)	(0.006)	(0.006)	(0.008)	(0.012)	(0.015)	(0.012)
Expelled	0.044**	0.019*	0.040***	0.035***	0.110***	0.136***	0.101***
	(0.019)	(0.011)	(0.012)	(0.014)	(0.021)	(0.025)	(0.020)
Problems with teachers	0.068***	0.013**	0.006	0.019***	0.029***	0.083***	0.057***
	(0.011)	(0.005)	(0.005)	(0.007)	(0.010)	(0.014)	(0.010)
Problems with other students	0.016	0.008	0.007	-0.013*	-0.012	0.005	-0.009
	(0.011)	(0.006)	(0.005)	(0.007)	(0.010)	(0.014)	(0.010)
Felt part of school	0.002	0.001	-0.006	0.003	0.008	0.001	-0.018*
	(0.012)	(0.006)	(0.005)	(0.007)	(0.011)	(0.015)	(0.011)

These models include the complete list of personal and family background characteristics, listed in Table 2, and included in models reported in Table 3.

The models are identical to those reported in the bottom panel of Table 8A, with the difference of the six high school variables listed in the table. Robust standard errors are in parentheses. A * indicates that the estimated coefficients is statistically different from zero at the 10% level, ** indicates significance at 5%, and *** stands for significance at 1% or better.

References

Argys, Laura, and H. Naci Mocan, "Who Shall Live and Who Shall Die? An Analysis of Prisoners on Death Row in the United States." Journal of Legal Studies 2004, 33:2, 255-82.

Becker, Gary S., "Crime and Punishment: An Economic Approach," Journal of Political Economy, 1968, 76:169-217.

Biddle, Jeff E. and Daniel S. Hamermesh, "Beauty, Productivity, and Discrimination: Lawyers' Looks and Lucre," Journal of Labor Economics, 1998, vol. 16, No. 1.

Black, Sandra E., Paul J. Devereux, and Kjell Salvanes, "From the Cradle to the Labor Market? The Effect of Birth Weight on Adult Outcomes," NBER Working Paper No: 11796, November 2005.

Block, Michael K., and John M. Heineke, "A Labor Theoretic Analysis of the Criminal Choice," American Economic Review, 1975, 65:3, pp. 314-25

Bull and Rumsey, "The Social Psychology of Facial Appearance" Springer-Verlag, New York, 1988.

Cialdini, R. B. "The Psychology of Persuasion," New York: Quill William Morrow. 1984.

Clifford, Margaret M, and Elaine Walster, "The Effect of Physical Attractiveness on Teacher Expectations," Sociology of Education, 1973, 46:2, 248-58.

Corman, Hope and H. Naci Mocan, "A Time-Series Analysis of Crime, Deterrence, and Drug Abuse in New York City," American Economic Review, Vol. 90, No. 3, June 2000, pp. 584-604.

Currie, Janet and Enrico Moretti, "Biology as Destiny? Short and Long-run Determinants of Intergenerational Transmission of Birth Weight," NBER Working Paper No: 11567. August 2005.

DeSantis, A., and W. A. Kayson (1997). "Defendants' Characteristics of Attractiveness, Race, and Sex and Sentencing Decisions," Psychological Reports, 81 (2), 679-683.

Efran, M. G. (1974). "The Effect of Physical Appearance on the Judgment of Guilt, Interpersonal Attraction, and Severity of Recommended Punishment in Simulated Jury Task," Journal of Research in Personality, 8(1), 45-54.

Ehrlich, Isaac. "Participation in Illegitimate Activities: A Theoretical and Empirical Investigation," Journal of Political Economy, 1973, V81, 521-565.

Feingold, A. "Good-looking People are not What We Think," Psychological Bulletin, 1992: 112 (1), 125-139.

Figlio, David N., "Names, Expectations and Black-White Test Score Gap," 2005, NBER Working Paper, No: 11195. March 2005.

Galluci, N. T. and R. G. Meyer (1984). "People can be too Perfect: Effects of Subjects' and Targets' Attractiveness on Interpersonal Attraction," Psychological Reports, 55 (2), 351-360.

Grogger, Jeffrey T., "Market Wages and Youth Crime," Journal of Labor Economics, Vol. 16, No. 4, October 1998, pp. 756-791.

Hamermesh, Daniel S. and Jeff E. Biddle, "Beauty and the Labor Market," The American Economic Review, 1994, vol. 84, No. 5.

Hamermesh, Daniel S, Xin Meng, and Junsen Zhan, "Dress for Success – Does Primping Pay?" Labour Economics, 2002, 9:361-373.

Harper, Barry, "Beauty, Stature and the Labour Market: A British Cohort Study," Oxford Bulletin of Economics and Statistics, 2000, 62:s1, pp. 771-800.

Hatfield, Elaine, and Susan Sprecher, Mirror, Mirror…: The Importance of Looks in Everyday Life, Albany, NY: State University of New York Press, 1986.

Jackson, Linda A., John E. Hunter, and Carole N. Hodge, "Physical Attractiveness and Intellectual Competence: A Meta-Analytic Review," Social Psychology Quarterly, 1995, 58:2, 108-22.

Kuhn, Peter and Catherine Weinberger, "Leadership Skills and Wages," Journal of Labor Economics, 2005; 23:3, pp. 395-436.

Lerner, R, Delaney M., Hess L., Jovanovic J, and von Eye, A., "Early Adolescent Physical Attractiveness and Academic Competence," Journal of Early Adolescence; 10: 4-20. 1990.

Levitt, Steven, "Juvenile Crime and Punishment," Journal of Political Economy, 1998; 106(6): 1156-85.

Lewison, E. "Twenty years of prison surgery: An evaluation," Canadian Journal of Otolaryngology, 1974. 3: 42-50.

Mobius, Markus M., and Tanya S. Rosenblat, "Why Beauty Matters," 2005, American Economic Review, forthcoming.

Mocan, H. Naci, and Erdal Tekin, “Guns and Juvenile Crime,” with Erdal Tekin (NBER Working Paper No: 9824). *Forthcoming* in Journal of Law and Economics, October 2006.

Mocan, H. Naci, Steve Billups and Jody Overland, " A Dynamic Model of Differential Human Capital and Criminal Activity," Economica, 2005; 72: 655-81.

Mocan, H. Naci, and Daniel Rees, "Economic Conditions, Deterrence and Juvenile Crime," American Law and Economics Review, 2005, 7:2, pp. 319-49.

Mocan, H. Naci and Erdal Tekin, “Drug Use and Juvenile Crime: Evidence From a Panel of Siblings and Twins,” 2005 in Substance Use: Individual Behavior, Social Interactions, Markets, and Politics, Bjorn Lindgren and Michael Grossman (eds.), Elsevier.

Persico, Nicola, Andrew Potlewaite, and Dan Silverman, “Te Effect of Adolescent Experience on Labor Market Outcomes: The Case of Height,” Journal of Political Economy. 112:5, pp. 1019-53.

Samuels CA and Elwy R Aesthetic perception of faces during infancy,” British Journal of Psychology 1985, 3:221-228

Umberson, Debra, and Michael Hughes, “The Impact of Physical Attractiveness on Achievement and Psychological Well-Being,” Social Psychology Quarterly, 1987, 50:3, 227-36.

Wilson, Rick K., and Catherine C. Eckel,” Judging a Book by its Cover: Beauty and Expectations in the Trust Game,” 2005; forthcoming, Political Science Quarterly.