Stereotypes and Earnings - Hair Color Matters

Evgenia Dechter

December 2010
Introduction - wage differentials

Wage differential = differences in total pay or in wage rate.

- Gender
- Race/ Ethnicity
- Age
- Residential status
- Immigration status
- Accent
- Physical appearance

etc...

- Victoria, Australia prohibits discrimination based on physical features under the Equal Opportunity Act of 1995.
- US anti-discrimination law was written to prevent the denial of employment based on “height, weight, and personal appearance.”

Is there such discrimination?
Stereotypes and Earnings, physical appearance

**Attractiveness:**
Dion, Berscheid, and Walster (1972) labeled the attribution of positive characteristics to attractive people the “beauty-is-good” stereotype. Better looking people are viewed as superior along several dimensions: personality traits (sociability, dominance, modesty, character), mental health, intelligence and academic ability, and social skills.

**Weight:**
Obese persons have been depicted as lazy, greedy, and selfish; but they are also recognized as fun loving, generous, and trustworthy (Galper and Weiss, 1975).

**Height:**
Surveys of attitudes reveal that people both perceive and treat people of shorter stature as inferior. Some jobs do require or at least favor tall people.

**Blonde woman:**
A blonde woman is often perceived as making little use of intelligence, as a "woman who relied rather on her looks rather than on intelligence" (Victoria Sherrow, 2006).
Economists have known for a long time that it pays to be tall. Multiple studies found that an extra inch of height can worth an extra $1,000 a year or so in wages, after controlling for education and experience.

Persico, Postlewaite and Silverman (2004): (use US data, NLSY79)

- Estimate the effect of height on wages. One more inch adds about 2.5% to real hourly wage.
- Show that height at adolescence is more important than height in adulthood.
- Persons who were taller at 16 years old - earn more as adults.
- Possible explanations: taller children are more likely to participate in social activities that build self-esteem and social skills.
Case and Paxton (2008):

- Use British Household Survey and show that each inch of height is associated with a 1.5% increase in wages, for both men and women. This premium is about 2% per inch when using US data.
- Show that taller children have higher average cognitive test scores, and that these test scores explain a large portion of the height premium in earnings.
- Children who have higher test scores also experience earlier adolescent growth spurts, so that height in adolescence serves as a marker of cognitive ability.
- Then, height and cognitive ability might be related to nutrition at very early development stages.
Weight and Earnings

Cawley (2004), using US data (NLSY79):

- John Cawley found that an extra 65 pounds typically cost a white woman 7 percent of her wages.
- For an overweight white woman, losing 65 pounds is likely to be as lucrative as an extra year of college or three extra years of work experience.
- (The people in Cawley’s study self-reported their weights.)

Why such a wage difference?

- Maybe due to heterogeneity in personal characteristics.
- Or, due to workplace discrimination.
Weight and Earnings

Morris (2004): (British survey data)
- Finds that being overweight reduces probability to find a job by 11.3%.

Brunello and Hombres (2007): (Data on nine European countries)
- Find that a 10% increase in average body mass index reduces real earnings of males and females by 3.27% and 1.86%, respectively.

Han, Norton, Stearns (2009): (US data)
- Find that the negative relationship between weight and wages is larger in occupations requiring interpersonal skills and social interactions.
- Their results for the obesity–wage association can be explained by either consumers or employers having distaste for obese workers.
Beauty and Earnings

Hamermesh and Biddle (1994):

- Methodology: Beauty was assessed by panels of people who judged photographs of the study’s subjects.
- Estimate that those who perceived as beautiful, earn about 5 percent more than their ordinary-looking counterparts.
- Below-average looking women earn about 5 percent less than other women, and similarly perceived men earn about 10 percent less than other men.
- Better-looking men get more job offers, higher starting salaries, and better raises.
- For women, good looks will get you better raises but usually not better job offers or starting salaries.
- Unattractive women have lower labor-force participation rates and marry men with less human capital.
Beauty and Earnings

**Why there is a beauty premium?**

- Do some people look better because they earn more, or do they earn more because they look better?
- The more you earn, the more you can spend on cosmetics, health care, and plastic surgery. And higher earnings can lead to higher self-esteem, which in turn leads to better eating habits.
- But Hamermesh, Biddle, Cawley and others believe these effects are small.
- If high wages don’t cause beauty, then presumably beauty causes high wages. Here are possible reasons:
  - Better looks can lead to higher self esteem and better social skills and therefore to higher wages.
  - Better-looking people sort into occupations where beauty may be more productive;
  - But the impact of individuals’ looks is mostly independent of occupation, suggesting the existence of pure employer discrimination.
Mobius and Rosenblat (2004):

- **Beauty and Ability:**
  - After controlling for all labor market characteristics, find no evidence of a relationship between actual ability and physical attractiveness.

- **Confidence and Beauty**
  - There is a strongly significant effect of physical attractiveness on confidence. Raising beauty by one standard deviation increases confidence about 13%.
  - This effect is very large: defining a ‘beautiful’ person to be one standard deviation above the mean and a ‘plain’ person to be one standard deviation below then the plain person is about 26% less confident than the beautiful one.
  - Interestingly, there is no difference in confidence between men and women in this setting (once controlling for actual ability).
Mobius and Rosenblat (2004):

- Policy Implications

  - Job interviews are the most common method of employee selection.
  - Direct discrimination can be minimized by reducing face-to-face interactions and relying on telephone interviews instead or hard data like test scores.
  - For example, Goldin and Rouse (2000) have found that blind auditions reduce gender discrimination in hiring women musicians.
  - They find that blind interview procedures (like telephone interviews) can reduce beauty premium by 40% (due to elimination of direct stereotype effects).
Hair Color and Earnings:

Analysing another aspect of physical appearance - the hair color.

- Previously: beauty, body weight and height significantly affect earnings.
- Why? Associations with unobservable characteristics which are positively correlated with productivity; or discrimination against workers who are plain looking or overweight.
- Here: focus on another aspect of physical appearance - the hair color.
- Find that hair color has a significant effect on entry wages and on returns to experience of young women, but not of men. But does not have any effect on educational achievement, attitudes or cognitive ability.
- Evaluate various theories to explain the findings.
Data:

- 1985 - Health supplement, a few questions about physical appearance.
- Some constraints: non-black and non-hispanic individuals, not enrolled at school or military service, and working for pay at least 10 hours per week.
- Blonde hair individuals - 18% of the sample, 19% of women have blonde hair and 16% of men.
Summary Statistics:

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Blonde, [0,1]</td>
<td>0.2 0.4</td>
<td>0.2 0.4</td>
<td>0.2 0.4</td>
<td>0.2 0.4</td>
<td>0.2 0.4</td>
<td>0.2 0.4</td>
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<td>Education</td>
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<td>12.7 2.3</td>
<td>12.7 2.4</td>
<td>12.7 2.4</td>
<td>12.6 2.5</td>
<td>13.0 2.2</td>
</tr>
<tr>
<td>Metro, at age=14</td>
<td>0.8 0.4</td>
<td>0.8 0.4</td>
<td>0.7 0.4</td>
<td>0.8 0.4</td>
<td>0.8 0.4</td>
<td>0.8 0.4</td>
</tr>
<tr>
<td>South, at age=14</td>
<td>0.3 0.5</td>
<td>0.3 0.5</td>
<td>0.3 0.5</td>
<td>0.3 0.5</td>
<td>0.3 0.5</td>
<td>0.3 0.5</td>
</tr>
<tr>
<td>AFQT</td>
<td>0.2 1.0</td>
<td>0.2 1.0</td>
<td>0.2 0.9</td>
<td>0.2 1.0</td>
<td>0.2 1.0</td>
<td>0.4 1.0</td>
</tr>
<tr>
<td>Mother's educ</td>
<td>10.9 3.5</td>
<td>10.8 3.6</td>
<td>11.3 3.4</td>
<td>10.9 3.9</td>
<td>10.8 3.8</td>
<td>11.4 3.9</td>
</tr>
<tr>
<td>Father's educ</td>
<td>10.5 4.9</td>
<td>10.3 5.0</td>
<td>11.1 4.4</td>
<td>10.8 4.9</td>
<td>10.7 4.9</td>
<td>11.1 5.0</td>
</tr>
<tr>
<td># siblings</td>
<td>3.3 2.2</td>
<td>3.3 2.2</td>
<td>3.3 2.3</td>
<td>3.2 2.3</td>
<td>3.2 2.3</td>
<td>3.3 2.5</td>
</tr>
</tbody>
</table>

Table 1a: Means and Standard Deviations of Important Variables

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Stereotypes and Earnings
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### Summary Statistics:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blonde, [0,1]</td>
<td>0.2</td>
<td>0.4</td>
<td>0.2</td>
<td>0.4</td>
<td>0.2</td>
<td>0.4</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Average hours</td>
<td>37.4</td>
<td>10.0</td>
<td>37.3</td>
<td>10.1</td>
<td>37.4</td>
<td>10.0</td>
<td>43.9</td>
<td>9.8</td>
</tr>
<tr>
<td>Real hourly wage</td>
<td>6.6</td>
<td>3.7</td>
<td>6.9</td>
<td>4.2</td>
<td>6.5</td>
<td>3.6</td>
<td>8.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Age</td>
<td>27.8</td>
<td>4.4</td>
<td>27.5</td>
<td>4.4</td>
<td>27.9</td>
<td>4.5</td>
<td>27.9</td>
<td>4.4</td>
</tr>
<tr>
<td>Tenure</td>
<td>3.3</td>
<td>3.3</td>
<td>3.2</td>
<td>3.3</td>
<td>3.3</td>
<td>3.3</td>
<td>3.6</td>
<td>3.6</td>
</tr>
<tr>
<td>Married, [0,1]</td>
<td>0.9</td>
<td>0.3</td>
<td>0.8</td>
<td>0.4</td>
<td>0.9</td>
<td>0.3</td>
<td>0.9</td>
<td>0.4</td>
</tr>
<tr>
<td>Children, [0,1]</td>
<td>0.8</td>
<td>0.4</td>
<td>0.7</td>
<td>0.4</td>
<td>0.8</td>
<td>0.4</td>
<td>0.8</td>
<td>0.4</td>
</tr>
<tr>
<td>Potential Experience</td>
<td>8.9</td>
<td>4.6</td>
<td>8.6</td>
<td>4.5</td>
<td>8.9</td>
<td>4.6</td>
<td>9.4</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Table 1b: Means and Standard Deviations of Important Variables

- Women: N=15715
- Blonde: N=2879
- Non-Blonde: N=12836
- Men: N=18781
- Blonde: N=2796
- Non-Blonde: N=15985
Effects of hair color on earnings:

Three main findings:

1. College educated blonde women enter the job market with lower wages. When work experience is less than 5 years, blonde hair reduces their hourly wage by 9%. There is no entry wage penalty for women with lower education.

2. Blonde women have faster wage growth. There is no wage difference for college educated with 5 or more years of experience. Lower educated blonde women with 5 to 10 years of experience have 7% higher hourly wage than non-blonde women with similar experience. This wage difference is around 5% for higher experience group.

3. These findings do not hold for male workers.
What explains the wage difference?

- Important to note young individuals of blonde hair type are not different by any measure from the rest of the sample (Table 1).
- Test whether education, IQ score and labor market experience are correlated with hair color.
- Alternative explanation: differences in motivation or attitudes towards the labor market. (1) Test whether hours of work vary by hair type. (2) Test if there are differences in work attitudes, self esteem and the perception of woman’s role at home.
- Test whether choice of occupations and industries is correlated with hair color. Test if there are differences in job mobility.
- None of the above can explain the differences in wage profile - taste-discrimination might be the main driving force behind the findings.
What explains the wage difference?

Table 5: Summary of Attitudes, by Hair Color

<table>
<thead>
<tr>
<th></th>
<th>Female Role Attitudes</th>
<th>Self Esteem</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“Woman place is at home”</td>
<td>“Women are happier at traditional roles”</td>
</tr>
<tr>
<td></td>
<td>Blonde</td>
<td>Non-blonde</td>
</tr>
<tr>
<td>strongly disagree</td>
<td>39.0</td>
<td>39.5</td>
</tr>
<tr>
<td>disagree</td>
<td>46.0</td>
<td>46.1</td>
</tr>
<tr>
<td>agree</td>
<td>12.5</td>
<td>11.0</td>
</tr>
<tr>
<td>strongly agree</td>
<td>2.6</td>
<td>3.5</td>
</tr>
<tr>
<td>N</td>
<td>544</td>
<td>2427</td>
</tr>
</tbody>
</table>
What explains the wage difference?

<table>
<thead>
<tr>
<th></th>
<th>Higher education</th>
<th></th>
<th>Lower education</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Blonde</td>
<td>Non-Blonde</td>
<td>Blonde</td>
<td>Non-Blonde</td>
</tr>
<tr>
<td>Professional, technical</td>
<td>0.17</td>
<td>0.83</td>
<td>0.23</td>
<td>0.78</td>
</tr>
<tr>
<td>(N=1841)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerical and kindred</td>
<td>0.15</td>
<td>0.85</td>
<td>0.16</td>
<td>0.84</td>
</tr>
<tr>
<td>(N=3506)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managers, officials</td>
<td>0.13</td>
<td>0.87</td>
<td>0.13</td>
<td>0.87</td>
</tr>
<tr>
<td>(N=996)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service workers</td>
<td>0.24</td>
<td>0.76</td>
<td>0.26</td>
<td>0.74</td>
</tr>
<tr>
<td>(N=1750)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales workers</td>
<td>0.17</td>
<td>0.83</td>
<td>0.19</td>
<td>0.81</td>
</tr>
<tr>
<td>(N=586)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operatives and kindred</td>
<td>0.12</td>
<td>0.88</td>
<td>0.23</td>
<td>0.77</td>
</tr>
<tr>
<td>(N=756)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Craftsmen, foremen</td>
<td>0.12</td>
<td>0.88</td>
<td>0.25</td>
<td>0.75</td>
</tr>
<tr>
<td>(N=229)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Private household</td>
<td>0.33</td>
<td>0.67</td>
<td>0.32</td>
<td>0.68</td>
</tr>
<tr>
<td>(N=163)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laborers, except farm</td>
<td>0.33</td>
<td>0.66</td>
<td>0.53</td>
<td>0.47</td>
</tr>
<tr>
<td>(N=173)</td>
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</table>
Conclusion

Findings:
- Higher educated blonde females enter the job market with significantly lower wages than their non-blonde counterparts.
- Blonde females have faster wage growth.

Other findings:
- No relationship between personal characteristics and hair color.
- No relationship between attitudes and hair color.
- Job segregation does not explain the wage differentials.

Conclusion: taste-based discrimination might be driving the results. (taste-based discrimination might be behind the beauty premium as well).