**ARE GOOD-LOOKING PEOPLE
MORE EMPLOYABLE?**

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Are Good-Looking People More Employable?

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Abstract: Job applicants in Europe and in Israel increasingly imbed a headshot of themselves in the top corner of their CVs. We sent 5312 CVs in pairs to 2656 advertised job openings. In each pair, one CV was without a picture while the second, otherwise almost identical CV contained a picture of either an attractive male/female or a plain-looking male/female. Employer callbacks to attractive men are significantly higher than to men with no picture and to plain-looking men, nearly doubling the latter group. Strikingly, attractive women do not enjoy the same beauty premium. In fact, women with no picture have a significantly higher rate of callbacks than attractive or plain-looking women. We explore a number of explanations and provide evidence that female jealousy of attractive women in the workplace is a primary reason for the punishment of attractive women.

Keywords: beauty, discrimination, experimental economics.

JEL **classification nos.**: C93, J71.

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1 Introduction

Beauty is an age-old industry. For thousands of years, men and especially women have pursued varied means to accentuate their facial and bodily features. The Ancient Egyptians employed makeup to enhance their eyes and other cosmetics to paint their faces. Cosmetics continued to be widely sought after by the Ancient Greeks, Romans and Israelites. The Polynesians have considered intricate tattoos a sign of beauty for many centuries. Ear, nose, lip, tongue and body piercings all predate the modern era as means of adornment. Similarly, ancient customs and practices like the use of skin-care products, hairstyles, jewelry, fashion, fragrances and even plastic cosmetic surgery contribute to today's multi-trillion-dollar beauty industry worldwide. The goals of beauty enhancement are no doubt multifaceted: improved mate selection, increased confidence and self-esteem, and signaling wealth or social status, to name a few. As economists, we may well ask to what extent does physical attractiveness help one's career?

In this paper, we address one aspect of the economic value of beauty by exploring its role in the earliest stage of the hiring process. We sent 5312 CVs in six different versions in response to 2656 advertised job postings in Israel. Half of these CVs contained a picture of an attractive or plain-looking male or female job candidate. Each of these picture CVs was paired with an otherwise identical control CV with no picture. In Israel it is neither taboo to embed a headshot of oneself in the top corner of one's job resume (as in Anglo-Saxon countries such as the U.S., Canada, the U.K. and Australia), nor is it a social norm (as in most continental European countries). Rather the choice to include a photograph on one's job resume is left to the candidate with the result that some do, while others don't. This fact makes Israel an opportune location to explore the effect of a picture and its attractiveness (or lack thereof) on the likelihood of being invited for a job interview.

We find that attractive males are significantly more likely to be called back and invited for an interview than no-picture males and more than twice as likely as plain males. Surprisingly, among female candidates, no-picture females have the highest response rate, 22% higher than

plain females and 30% higher than attractive females. These orderings are largely robust to a number of job characteristics such as whether the job requires previous work experience and even whether the job involves face-to-face dealings with the public. The penalization of attractive women contradicts robust findings from the psychology and organizational behavior literatures on beauty that associate attractiveness, male and female alike, with almost every conceivable positive trait and disposition.

Our design strategy of sending CVs in pairs (i.e., one picture CV and one identical no-picture CV) allows us to eliminate job selection as a possible explanation for these differences. Who does the hiring provides a first clue as to the source of the punishment of attractive women: when employment agencies are in charge of hiring, attractive female candidates are no worse off than plain candidates and penalized only modestly compared to no-picture females; whereas, when the companies at which the hired candidate will work are responsible for hiring, attractive females are singled out for punishment, with a response rate of nearly half that of plain and no-picture women. Additional analyses and a post-experiment survey on a number of companies in our sample address other explanations related to both statistical and taste-based discrimination. We are able to refute some of the statistical explanations and present considerable evidence in support of one taste-based explanation, namely, female jealousy.

In the next section, we review some of the relevant beauty literature from psychology, organizational behavior and economics. Of particular interest, Hamermesh and Biddle (1994) present empirical evidence that plain-looking males earn 9% less than attractive males, while plain-looking females earn 14% less than attractive females. Our paper complements theirs by focusing on beauty-based labor-market discrimination with respect to job search opportunities rather than differential salaries. Another distinction between our papers is that Hamermesh and Biddle may not be aware of candidates' qualifications and abilities to the same degree as the employer. Our experiment affords the researcher complete control and observability of candidates' backgrounds. In fact, all of our job applicants are identical in every respect including their education, work experience and language and computer skills.

The only difference between candidates' CVs is the picture or absence thereof. This feature allows us to attribute confidently any differences in response rates between CVs to the picture.

Section 3 details the research design and experimental procedures. In section 4, we present the results and analyses. Section 5 explores several possible explanations for our findings. Section 6 concludes with some implications for job search and for hiring.

2   Related Literature

2.1   Perceptions of Physically Attractive People

Decades of beauty research in psychology have firmly established that individuals attribute a broad range of positive traits to physically attractive people. Dion et al.'s (1972) pioneering study reveals that attractive people are believed to have better career prospects, to possess socially desirable traits (such as sensitivity, kindness, poise, modesty and outgoingness), to be better spouses, lead happier lives and to be happier overall. In fact, the paper's title summarizes the results, "What is beautiful is good". This paper spawned a large beauty literature surveyed in Feingold (1992). His meta-analysis of this literature demonstrates a robust association for both men and women between physical attractiveness and numerous personality traits, social skills, mental health and intelligence.

Using several well known experimental economics games, researchers have similarly found that physical beauty elicits altruistic, trusting and cooperative behavior among student participants. For instance, Solnick and Schweitzer (1999) show that although ultimatum-game offers of attractive and unattractive players do not differ from one another, attractive respondents receive significantly higher offers than unattractive ones.

In the trust game, Wilson and Eckel (2006) demonstrate that attractive trustees are trusted more but that attractive trusters are also expected to trust more. When the latter does not hold, the trustees return less in the second stage of the game. In the public goods

game, Andreoni and Petrie (2006) find that attractive players earn more not because they contribute less to the public good but because the presence of an attractive group member increases other players' contributions. Like Wilson and Eckel, Andreoni and Petrie also observe that individuals expect attractive players to behave more pro-socially. When this expectation is not met, contributions decline in subsequent rounds relative to groups with no attractive members. In both of these studies, the observed "beauty premium" is unrelated to attractive players' actions. Instead, consistent with the psychology literature above, others' expect attractive people to be more trusting and cooperative in the respective games. In surveys, there is no downside to these elevated expectations. In incentivized two-player games, however, the failure to meet these expectations can lead to a "beauty penalty".

Berggren et al.'s (2010) study of political elections in Finland shows that a one-standard deviation in beauty increases the average non-incumbent candidate's votes by 20%. However, no significant beauty effect is found for incumbent candidates (with whom the electorate is well acquainted). One explanation for these divergent findings is that in the absence of reliable information about candidates, voters make positive inferences based on attractiveness.

To state the well known, people draw inferences based on others' appearances. Eckel and Petrie (2010) find that trusters and trustees in laboratory trust games are both willing to pay to see a (non-payoff-relevant) photograph of their partner. The observations that trusters (whose transfer decision is risky) exhibit a higher demand for photos than trustees and that trusters who purchase photos use them to differentiate their trust suggest the strategic value in photographs. In other words, people are willing to pay see the faces of those with whom they transact. They then use this information to discriminate between individuals in their choices. We ask whether face discrimination exists in a competitive hiring environment.

2.2 Beauty in the Labor Market

There are a number of laboratory experiments that relate to the role of beauty in the labor market. In Heilman and Saruwatari's (1979) early study, 45 undergraduates participated

in a decision-making scenario in which they were asked to evaluate different job packets for potential managerial and clerical positions. The job packets contained relevant materials including a picture of an attractive or unattractive male or female candidate. The authors find that while attractiveness is advantageous for men in both types of jobs, attractive women are favored over unattractive women for clerical jobs only. Attractive women are rated lower for managerial positions. Cann, Siegfried and Pearce (1981) employ a similar methodology using 244 psychology undergraduates. They ask whether the robust preference for male and for attractive candidates that others had found can be negated if subjects first rate candidates' specific qualifications before judging their overall suitability for the job. Their results show that men and attractive candidates continue to be significantly preferred even after specific qualifications have been evaluated.

Yet, these and other studies like them rely on small samples of student subjects participating hypothetical scenarios modeled after hiring decisions. Our research, by contrast, is based on a much larger sample of real job opening posted by actual employers. Our design allows us to examine whether there exists a preference for attractive candidates, whether this preference interacts with the applicant's sex and whether this preference depends on a number of observable job characteristics.

More recently, Mobius and Rosenblat (2006) design an incentivized experimental labor market in which employers pay wages to workers who perform a maze-solving task. Physically attractive workers are no better in solving mazes than less attractive ones. Notwithstanding, attractive workers are offered higher wages.

Using broad household surveys in the U.S. and Canada on labor-market and demographic characteristics in which the interviewer rated the respondent's physical appearance, Hamermesh and Biddle (1994) show that plain-looking people earn less than average-looking individuals who earn less than good-looking folks. Moreover, the plainness penalty is slightly larger than the beauty premium, and both are higher for men than women. Finally, they find the beauty premium to be robust across occupations, suggesting the existence of pure employer discrimination.

Biddle and Hamermesh (1998) track the earnings over time of graduates from a prestigious law school. Based on photographs of matriculants in entering classes, the authors find a weakly positive, but insignificant, relationship between beauty and first-year lawyers' earnings. Five years after graduation, this beauty premium becomes significant and continues to grow in magnitude over the 15 years graduates were surveyed. Better-looking midcareer attorneys are both in greater demand (i.e., work more hours) and bill at higher rates.

Based on a exit survey at five restaurants, Parrett (2007) finds that attractive waitresses (but not waiters) receive higher tips. Parrett's ability to control for server productivity (through responses to a survey question on the quality of service provided by the server) leads him to conclude that the observed beauty premium for female waitresses follows from pure customer discrimination based on beauty. Our research complements these studies that find wage discrimination as a function of beauty by asking whether and what type of beauty discrimination occurs at the earliest stages of the hiring process.

The paper most similar to ours in methodology is Bertrand and Mullainathan (2004). They sent out 2435 fictitious CVs in response to advertised job openings in the Boston and Chicago areas. To investigate racial discrimination, they varied the applicant's name, using names distinctly associated with whites and with African Americans. We also respond to job advertisements by sending CVs in a number of different versions. However, our versions differ by whether they include a picture of the applicant and, if so, whether the photographed person is physically attractive or unattractive (i.e., plain-looking). To the best of our knowledge, ours is the first paper to explore beauty discrimination in the hiring process of an actual labor market (rather than a laboratory market or hypothetical decision scenario).

3 Experimental Design and Procedures

3.1 Selection of Job Candidates' Photographs

The first step in the experimental design was to collect photographs in order to choose pictures of attractive and plain-looking males and females to be included in CVs sent to employers. We solicited headshots from the general student population at Ben-Gurion University. We assured students that the pictures would be used for research purposes only and anonymously with no identifying information attached to the picture. Students whose pictures were selected were paid 50 NIS (about $14 USD) and signed a standard photograph release form.

Hundreds of pictures were submitted. After eliminating blurry, group or otherwise inappropriate photos, there remained over 300 pictures. Both researchers along with a couple of female assistants went over all of these remaining photos and further eliminated photos of students whose ethinicity could be readily identified (see below) or those who clearly fit neither extreme of attractive or plain-looking. This left us with 161 photos (78 males and 83 females) from which to choose. We formed a panel of eight judges (four male and four female) ranging in age from 28 to 49 with various professional backgrounds that include sculptor, hair stylist, public relations and economist. The judges were asked to rate on a 1-to-9 scale each of the 161 pictures along three dimensions: physical attractiveness, intelligence and likely ethnicity (where 1 equals "definitely Sephardic", 9 equals "definitely Ashkenazi" and 5 is "uncertain"). While the attractiveness ranking is our focus, the ethnicity rating is important because there exists substantial evidence that Jews of north African and Middle Eastern origin (i.e., Sephardic Jews) are discriminated against compared to Jews of European origin (i.e., Ashkenazi Jews).[1]

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[1] Fershtman and Gneezy (2001) provide laboratory evidence that Ashkenazi and Sephardic Jews alike display less trust toward Sephardic males than Ashkenazi males (identified by their family name) in a two-player trust game. Rubinstein and Brenner (2009) examine empirically the earnings of native Israelis born of interethnic marriage. They find that males born to Ashkenazi mothers and Sephardic fathers (and thus bear a Sephardic family name) earn significantly less than males born to Sephardic mothers and Ashkenazi fathers (and thus have an Ashkenazi family name).

After excluding photographed subjects that were rated below average intelligence or strongly identified with either Ashkenazi or Sephardic origins, we selected a collection of photographs with the highest and the lowest attractiveness ratings and used these pictures in the CVs we sent to employers.[2]

3.2 Creating Candidates' Identity

Each job candidate was given a fictitious identity that included: first and last name, telephone number and email address. The first names were chosen from a list of popular Jewish Israeli names. To sidestep the issue of ethnic discrimination, we employed the two most common Israeli family names (Cohen and Levi) in all of our CVs. These family names date back to Biblical times, thereby predating the Ashkenazi-Sephardic distinction and are not associated with either ethnicity.

We set up a telephone number with a voicemail box for each of the six candidate categories (male/female and attractive/plain/no picture). To avoid any unwanted (e.g. voice) influences on employers, we used the default recorded voice message, which plays the same message for all candidates and avoids mention of the candidate's name. This latter feature allowed us to use the same voicemail box for all of the pictures within the same category (that might differ in the candidates' names). For employers who prefer to respond by email, we opened up a Gmail account for each of the candidate categories and included this email address on the CV.

3.3 Preparing the Content of the CVs

The next stage in the experimental design was to prepare the content of the CVs. We sent CVs in response to advertised jobs in ten different fields of employment: banking, budgeting, chartered accountant, finance, accounts management, industrial engineering, computer pro-

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[2] This should make clear that by "plain", we mean "unattractive". We prefer the former term because it is shorter, cannot be mistaken for "attractive" by the hasty reader and is unlikely to offend anyone's sensibilities.

gramming, senior sales, junior sales, and customer service. The first six fields were chosen because they are suitable for university graduates in economics and accounting, fields for which we felt confident crafting a compelling resume on our own. The last four fields were chosen because they advertise a relatively large number of job openings. For these fields we hired an expert to help design the CVs. Notice that beauty might be relevant and contribute to worker productivity in some of these fields such as sales and customer service positions and some banking jobs, like bank tellers; whereas, beauty plays no obvious role in other included fields such as accounts management, budgeting, industrial engineering and computer programming.

In an effort to elicit as many responses as possible from employers (our dependent measure), we took several measures to create CVs as appealing as possible in all candidate categories and job fields. For example, each candidate had two years work experience at a large company in the relevant field. Moreover, all candidates in the first eight fields had completed their B.A. "with excellence" (comparable to "magna cum laude" in the U.S.) in the relevant field (economics and accounting, industrial engineering, computer science or human resources) at Ben-Gurion University or a nearby affiliated college in the case of a degree in human resources for the senior sales positions. For the two last fields (junior sales and customer service), the candidates held only a high school degree to avoid being perceived as over-qualified.

All CVs in all fields contained additional positive attributes. For example, all candidates had graduated from well known, nationally recognized high schools in the north Tel Aviv region. All possessed native and native-like language skills in Hebrew and English, respectively. Furthermore, all had completed their required military service and three years of volunteer experience. Finally, on the basis of the field of employment, the CVs in that field were tailored to include any additional skills expected of suitable candidates, such as computer skills and programming languages.

Overall, we created six versions of the same CV for each field that differ by the inclusion and type of picture. Four versions of the CV contain a picture: attractive male, plain male,

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attractive female, plain female. Two additional versions have no picture: no-picture male, no-picture female. Except for the picture, the CVs were otherwise almost identical within each field. The word "almost" refers to necessary negligible differences between versions – such as different fonts, content order and name of the large company at which the candidate had acquired two years of experience – all of which were randomized across picture versions.

3.4   Responding to Job Ads

We adopted a "paired CV" strategy for responding to job ads. Exactly two CVs were sent to each job ad, one with a picture and, as a control, the other same gender CV without a picture. To the extent that we find differences in responses rates between picture CVs, our paired CV strategy allows us to determine whether job selection can account for these differences. More precisely, if the CVs of attractive and plain-looking males were sent to similar distributions of jobs, then we would expect the response rate of the no-picture male CV paired with the attractive male and the response rate of the no-picture male paired with the plain male not to differ significantly from one another.[3]   More basically, this paired CV methodology allows us to compare cleanly the response rate of any picture CV to the otherwise equivalent no-picture CV because the two CVs were always sent to the same jobs.

All of the CVs were sent between July 2008 and January 2010. During this period, we scrutinized regularly the job postings in our ten fields of interest on three large online job service websites. Whenever we checked the websites, we noted all of the job postings in a given field and randomly assigned each one (without replacement) to one of the four picture CVs. We continued this random assignment until all of the new postings (up to a multiple of four) had been exhausted. This method ensured that at every point in time of the data collection process the number of CVs sent of each picture category, of each gender and of each beauty type (attractive and plain) was perfectly balanced. Note that the sending of the paired CVs to a job ad was staggered by a number of hours or even as much as a day to minimize the likelihood that the employer noticed that the two CVs were effectively

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[3] We will test this job-selection hypothesis in the Results section.

identical.[4]

The text of each job ad to which we responded was copied and a number of job characteristics (field of employment, office job or job dealing with the public, any experience required) and company characteristics (location, whether the company itself or an employment agency does the hiring) were included in our database. We did not send CVs to any job ad that hinted at a preference for one sex over the other (through the feminine conjugation, for example) in order to preserve an *a priori* equal chance of callbacks to male and female CVs.

In total, 5312 CVs were sent in response to 2656 job postings. Table 1 presents some summary statistics about the job candidates, and advertised job and company characteristics in our database. The table shows the outcome of our paired CV strategy and our balanced random assignment without replacement of each job posting to a picture CV: an equal number (2656) of male and female CVs and an equal number (1328) of attractive and plain-looking CVs were sent, half as many as the no-picture CVs. The distribution of CVs sent by field of employment reveals that no field received more than 18% of the total CVs sent, with five fields receiving 10% or more. Twenty-seven percent of the job openings to which we applied are defined as jobs dealing with the public, with the remaining 73% being office jobs involving little or no interaction with the public. Forty-one percent of the jobs required no previous job experience and three-quarters of the job ads are placed by employment agencies with only one-quarter placed by the company itself. We will explore the role of these candidate and job characteristics on the employer's decision to callback the candidate in the next section.

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[4] It seems reasonable that any company that spots that the two CVs are the same will simply ignore both of them. The extent to which this occurs reduces the chances of obtaining significant differences between CV types.

4   Results

4.1   Main Results

Half of the 5312 CVs we sent included a picture of either an attractive or plain-looking candidate, while the other half were without a picture. Our dependent measure is whether the employer emails or calls back the candidate for an interview. Overall, the response rate was 14.5%.

We begin by asking, what is the effect of a picture on a CV? Column (1) in Table 2 reports the marginal effects from a Probit regression where, as in all subsequent regressions presented, the response variable equals one if the employer called or emailed the candidate to invite him/her for an interview and 0 if no such call or email was initiated. The standard errors cluster on the job advertisement to which applicants responded.[5]   Regression (1) shows that the inclusion of a picture has a small, negative and only marginally significant effect. The callback rate to CVs with pictures was 1.4 percentage points lower than to equivalent CVs with no picture ($p = .07$).

This finding masks considerable variation in the response rates across picture types. The bar graph in Figure 1 displays the average response rate by CV type. The figure reveals a sizeable beauty premium for males: CVs of attractive males elicit a 19.7% response rate on average, nearly 50% higher than the 13.7% response rate of no-picture male and more than twice the 9.2% response rate of plain-looking males. Put differently, an attractive male needs to send on average five CVs in order to obtain one response, whereas a plain-looking male requires 11 CVs for one response. This ordering among males is intuitive and could be reasonably anticipated from the beauty literature. Attractive males are rewarded relative to the no-picture and unattractive males, while unattractive males are punished.

The ordering of response rates among females is surprising and more difficult to make sense of. Among females, no-picture CVs elicit the highest response rate at 16.6% followed

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[5] Since some employers posted multiple ads – employment agencies in particular – we also clustered on the employer. All of our qualitative results are robust to the choice of cluster cell.

by plain females at 13.6% and attractive females at 12.8%.

Regression (2) in Table 2 includes a dummy variable for males as well as a male dummy interacted separately with the two beauty categories (attractive and plain) and a female dummy interacted separately with the two beauty categories. Thus, the highly significant marginal effect of $-.029$ on the male dummy implies that a no-picture CV from a male is 2.9% less likely to generate a callback than the equivalent CV from a female (p=.035).[6] Although not the focus of the paper, this result uncovers significant discrimination against male candidates.[7]

The remaining marginal effects compare the response rate of the indicated beauty category that of the same-sex no-picture CV. For instance, attractive males enjoy a 6% beauty premium compared to no-picture males, while the response rate for plain males is 4.5% lower than for no-picture males (both $p < .01$). Callbacks to attractive and plain females, respectively, are 3.8% and 3.1% lower than to no-picture females – both differences are highly significant. However, the response rates of attractive and plain females are not significantly different from one another (Wald test $p = .69$).

Our paired CV methodology allows us to analyze responses not only by candidate type, but also at the job advertisement level. To each employment ad, a picture and otherwise equivalent no-picture CV were sent. Table 3 displays the percentages of instances in which the employer called back only the picture CV ("Picture Favored"), only the no-picture CV ("No Picture Favored") and the percentage of cases in which the paired CVs were treated equally. This latter category is further broken down into cases in which neither candidate was called ("No Callback") and those in which both were called back ("Callback to Both").

Focusing on outcomes in which the paired CVs were treated differently, attractive males were preferred to no-picture males nearly twice as often as the other way around (11.3%

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[6] Our standard errors in this and all subsequent Probit regressions are computed using the delta method because our calculations of the marginal effects involve linear combinations of our estimated coefficients in this non-linear model.

[7] Discrimination against males is also highly significant in all subsequent regressions with a marginal effect equaling or exceeding 2.9%. In the subsequent presentation of the results, we will not always discuss this effect since this research and the balance in the experimental design focus on beauty discrimination.

versus 6.2%). However, this relationship reverses for plain-looking males: no-picture males are preferred to plain males 7.8% of the time compared to the opposite preference for only 3.8% of total outcomes. A chi-square test of proportions confirms the differential treatment of attractive and plain male CVs when paired with no-picture male CVs ($\chi^2(2)$=27.3, $p < .001$). Among females, a higher percentage of employers prefer the no-picture CVs both when paired with attractive and with plain-looking females. For both comparisons, the no-picture female CV is favored about 50% more often than the picture version. Yet consistent with the regression results, a chi-square test of proportions shows that the distributions of outcomes ("Picture Favored", "No Picture Favored" and "Equal Treatment") are not significantly different from one another ($\chi^2(2)$=1.7, $p = .43$).

At this point, one might argue that the observed difference in response rates between attractive and plain males or the lack of difference between attractive and plain females may be the result of job selection. Specifically, despite randomly matching job ads to CVs and maintaining an equal number of attractive and plain CVs sent within each field of employment at every stage of the research, there could remain unobservable job or employer characteristics that differentiate the distributions of job ads to which attractive and plain CVs were sent. For instance, perhaps unknowingly the attractive male CVs were sent to jobs more likely to elicit a response.

Our paired CV strategy allows us to address this selection hypothesis. If there are unobservable differences in the distributions of job ads to which we replied, these differences ought to show up in differential response rates between the identical no-picture CVs as a function of the picture CV with which they were paired. Table 4 provides this data. The table reveals that the 14.6% response rate to no-picture male CVs paired with attractive male CVs is not significantly different from the 12.8% response rate to no-picture male CVs paired with plain males ($\chi^2(1)$=0.9, $p = .34$). For no-picture female CVs, the response rate is identical (16.6%, $\chi^2(1)$=0, $p = 1$) regardless of whether they were paired with attractive or plain females. Thus, the job selection hypothesis cannot account for the observed male beauty premium nor the penalization of attractive and plain-looking females compared to

no-picture females. The next several subsections will explore whether observable job and employer characteristics can account for variation in the response rates across resume types.

4.2 The Role of Required Job Experience

Fifty-nine percent of the job openings to which we applied required some previous job experience, while the remaining 41% made no such requirement. How might jobs requiring work experience relate to the beauty premium? One hypothesis is that such jobs are, on average, more senior positions in which the employee has more authority and responsibilities, and thus more impact on the company's bottom line. Employers can thus ill afford to discriminate on the basis of factors not related to productivity for these more senior posts. On the other hand, we know from previous research on beauty that physical attractiveness is associated with a host of positive traits. For more competitive positions where multiple candidates appear equally able, employers might, consciously or not, invoke a candidate's physical appearance and the associations that it engenders as a source of additional information. Put bluntly, beauty may serve as a tie-breaker when employers face a difficult decision involving similarly qualified candidates. To the extent that jobs demanding experience are also more competitive, this line of reasoning suggests that the observed male beauty premium will be augmented and the penalization of attractive females lessened.

Table 5 addresses the interaction between required job experience and the candidate's looks. Note first of all that males again suffer from highly significant discrimination: no-picture males are 3.7% less likely to receive a callback than no-picture females. As for job postings requiring previous work experience, the highly significant marginal effect of $-.076$ implies that identical no-picture candidates are nearly 8% more likely to receive a callback from a job that requires no previous experience than one that requires experience. Jobs requiring experience indeed appear to be more competitive. As such and in line with the above reasoning, attractive males benefit primarily from jobs requiring experience: they are 8.4% more likely to be called back than no-picture males and 12% more likely than plain

males; whereas, for jobs requiring no experience, the marginal effect of attractive males is positive but not significant. Plain males, on the other hand, are significantly penalized with respect to both attractive and no-picture males for both categories of job experience. Figure 2a highlights the consistently lower response rates for plain males regardless of whether the job requires experience. Notice also that attractive males maintain a near 20% response rate for both categories of experience.

The female beauty penalty (with respect to no-picture female CVs) is significant only for jobs requiring experience, whereas the female plain-looking penalty (again, with respect to the no-picture female CVs) is significant for jobs not requiring experience. More specifically, the marginal effects for attractive females are $-.038$ and $-.036$ when interacted with experience and no experience positions, respectively. However, only the former effect is highly significant ($p = .02$); the latter effect isn't quite significant ($p = .11$). Plain females are 4.5% more likely to receive a callback than no-picture females for jobs not requiring previous experience ($p = .06$) and not significantly less likely to receive a callback for experience positions ($p = .21$). Figure 2b displays these differences for females.

4.3   The Role of Office Jobs and Jobs Dealing with the Public

If a beauty premium in hiring practices is to appear anywhere, one would think it most likely and most easy to rationalize for jobs in which the employee deals face-to-face with the public. Attractive employees who interact in person with their customers may contribute to the company's profitability through increased sales or to the customer's utility through a more enjoyable interaction, which may ultimately increase sales.[8]   Both outcomes justify a preference for attractive employees.

Twenty-seven percent of the job openings in our sample are positions that require the employee to work with the customer in person, while the remaining 73% are office jobs or positions that otherwise involve no regular in-person contact with the customer. Figure 3a

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[8] Barro (2003, pp. 68-69) makes a similar point, ultimately arguing that wages based on beauty are fundamentally the same as wages based on intelligence. Both contribute to the national product.

reveals the same ordering of male response rates that we've observed until now for both jobs dealing with the public (abbreviated henceforth as "public") and office jobs; namely, attractive males have the highest response rate (23.3% and 18.3%, respectively), followed by no-picture males (16.7% and 12.6%) and lastly plain males (10.7% and 8.6%). Strikingly, each of the three male categories does better for public than office jobs, eliciting a 25% to 33% higher response rate for the former than the latter category. By contrast, none of the female types receives higher callback rates for public posts: plain and attractive females are both worse off applying for public jobs, while no-picture females do similarly well for both public and office jobs. It is particularly puzzling that attractive women's response rate actually drops to 10.2% for public jobs compared to 13.7% for office jobs (while at the same time, the response rate for no-picture females remains steady at 16% for both job categories).

Regressions (4) and (5) in Table 6 display the controlled magnitudes and statistical significance of these differences. Overall, the response rates for public and office jobs do not differ significantly from one another. Again, we observe that females are preferred to males: the response rate for females is 2.9% higher than that for males ($p = .03$). Attractive males continue to be significantly more likely to be called for an interview than no-picture males in both public and office jobs. In addition, no-picture males are significantly preferred to plain-looking males, again for both job categories. Meanwhile, the response rates for the different types of females are highly significantly different from one another for public jobs only: for office jobs, employers treat all female beauty similarly to one another. The single exception is attractive females who, according to (5), are 3% less likely to be invited for an interview for an office job than a no-picture female ($p = .06$).

Regression (5) includes an interaction term between the *male* and *public* indicators. The interaction term is not statistically different from zero, while its inclusion increases the marginal effect of being male from 2.9% to 4.2%. The implication is that employers in our sample prefer females for office jobs, but have no significant gender preference for public jobs. The inclusion of this interaction term does not effect substantially the significance of the main variables of interest, specifically, the three beauty categories for each gender

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interacted separately with office and public jobs.

4.4 Who does the hiring?

Employment agencies posted 75% of the jobs in our sample, while the companies at which the employee will work (henceforth abbreviated as "company") posted the remaining 25%. Do these different hiring sources respond differently to beauty? Figures 4a and 4b display the response rates for males and females, respectively, by beauty type and by company versus employment agency. Once again, the same robust ordering of response rates among males is observed for both employment agencies and the companies: attractive males have the highest rate of callbacks, followed by no-picture males and finally plain males.

For females, the story is more intricate. Employment agencies display a clear preference for no-picture females (16.9% response rate), with attractive and plain females facing similar discrimination (both with response rates around 13%). When the company does the hiring, attractive females are the distinct outlier with a meager 9.2% response rate, about six percentage points lower than those of plain and no-picture females.

Regression (6) in Table 7 reports the marginal effects of a Probit regression with each of the beauty categories interacted with both the employment agencies and the companies themselves. Overall, these two distinct hiring sources have nearly identical response rates (14.0% and 14.7%, respectively). Confirming their similarity, the marginal effect on the *employment agency* indicator in (6) is .001 and not significantly different from 0 ($p = .942$).[9] However, a closer look at the data reveals that for male job candidates the employment agencies rely significantly on beauty as a means to discriminate. Employment agencies are 7% more likely to invite an attractive male for an interview than a no-picture male ($p < .001$) and 12% more likely than a plain male (Wald test $p < .001$). Interestingly, when the company itself does the hiring, the coefficients on *attractive-male company* and *plain-male company*

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[9] Males again receive significantly fewer responses than females. An interaction term between *male* and *employment agency* is not significant and its inclusion does not change the significance (whether highly, marginally or non-significant) of any of the eight beauty interaction coefficients. Thus, we do not report this regression.

are smaller and not significantly different from zero ($p = .329$ and $p = .321$, respectively). In other words, the companies themselves appear to ignore the picture or absence thereof and treat the otherwise equivalent CVs equally.

Nor do the companies discriminate against plain-looking females: both the plain and no-picture females have around 15% callback rates. Moreover, the *plain-female company* marginal effect in (6) is small and not significantly different from zero ($p = .592$). Attractive females are the only category of applicant, male or female, that companies treat differently (see also the bar graphs in Figure 4): the highly significant marginal effect on *attractive-female company* of $-.073$ in (6) indicates that attractive females are 7.3% less likely to be invited for an interview than no-picture females ($p = .004$). Furthermore, a Wald test shows that companies call back attractive females significantly less than plain females ($p = .10$). An employment agency, by contrast, calls back attractive females only 2.8% less than females without a picture, and this difference is only marginally significant ($p = .077$), while company callback rates to attractive and plain females are not significantly different from one another (Wald test $p = .70$).

To summarize, although employment agencies and the companies themselves do not differ in their overall screening percentages, they differ dramatically in their responsiveness to beauty. Employment agencies strongly prioritize male candidates according to their attractiveness and in accordance with the ranking of males observed throughout this paper: attractive males followed by no-picture males followed by plain males. At the same time, these same agencies favor no-picture females while discriminating modestly against plain and attractive females. In sharp contrast, within gender, the companies themselves treat all beauty categories equally, with the glaring exception of attractive females who are punished relative to both plain and no-picture women.

The companies' singling out of attractive women provides our first clue regarding the source of their unexpectedly low response rates. For whatever reason, those who would have to work in the same workplace as the hired candidate don't want attractive females around; whereas when the hiring is outsourced to an employment agency, discrimination against

attractive females is lessened and no different from that against plain-looking women. In the next section, we will further pursue possible explanations for these findings.

5 Discussion

Our most surprising result is the punishment of attractive women: their response rate is significantly lower than that of otherwise identical women who do not embed a picture in their CV. This result contrasts with the substantial and robust beauty premium enjoyed by attractive males. Why do employers respond to beauty differently as a function of the job candidate's sex? What explains the punishment of attractive women?

To address these questions, we can make use of certain features of our experimental design, data collection process and the data itself. Furthermore, after completing the data collection phase of our research, we conducted a telephone survey of a number of large employment agencies, all included in our sample. With questions that relate to the socio-demographic background of the person who screens incoming CVs and questions that relate to the tendency and perception of CVs with a headshot of the candidate, our aim is to distinguish further between competing explanations for our findings. Twenty-five companies completed the survey, the results of which will be invoked as needed in discussing some of the possible explanations below.

5.1 Job Selection

Perhaps unwittingly the CVs of attractive women were sent to a more competitive distribution of jobs or to employers less likely to invite candidates for an interview regardless of the content of the candidates' CV. Our experimental methodology, in particular our paired CV strategy described in section 3.4, allows us to address this job selection hypothesis. If the distribution of jobs to which the CVs of attractive women were sent can explain our finding, then this ought to show up in the form of a lower response rate for the no-picture CV paired with the attractive female CV than for the same no-picture CV paired with the

plain female CV. In section 4.1, we showed that the response rates for the female no-picture CVs were identical irrespective of pairing, thereby eliminating the job-selection story as a possible explanation for our results.

5.2   The "Dumb-Blonde" Hypothesis

The "dumb blonde" stereotype is pervasive in Western culture. The basis for the stereotype is that attractive women, typified by blondes, are able to rely on their looks to advance and thus do not make use of their intelligence. Applied to our results, employers in our sample who hold this stereotype would be reluctant to invite attractive women for an interview.

Contrary to this hypothesis runs a vast psychology literature discussed in section 2.1 that examines how attractive people are perceived. One study after another shows that individuals consistently attribute a wide array of positive characteristics and dispositions to attractive men and women alike, most importantly for our purposes, intelligence (see Feingold 1992 for a review of this literature).

What is more, the photo selection stage of our research makes available judges' ratings that enable us to test the plausibility of the dumb-blonde hypothesis directly on the collection of photos in our sample. Recall from section 3.1 that eight judges (four male and four female) rated the 161 photos on the dimensions of physical attractiveness, intelligence and ethnicity, each on a nine-point scale.[10]   Using the first two measures, Table 8 reports the marginal coefficients from OLS regressions on this panel of 974 observations. The standard errors in parentheses are robust to heteroskedasticity and corrected for possible non-independence of observations by clustering on each judge's ratings.

The coefficient on "beauty" in regression (7) reveals that for every additional point a judge assigns to a photographed person's beauty, the judge rates the same person's intelligence .29 points higher on average. This result is highly significant ($p = .027$) and contradicts the dumb-blonde hypothesis.

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[10] So as not to burden some of the judges with too many tedious rankings, we replaced two of them (one male and one female) midway through the rating process with two different judges (one male and one female). Most photos were rated by six judges, with a few rated by all eight judges.

Regression (8) allows us to refute even more directly the dumb-blonde hypothesis with the inclusion of an indicator variable for whether the photographed person is male and an interaction term between this indicator term and the "beauty" variable. The indicator variable for male photographs is not significantly different from zero ($p = .33$): men and women are viewed as similarly intelligent on average. The coefficients on the "beauty" variable and the interaction term are both positive and highly significant ($p = .041$ and $p = .045$, respectively). The marginal effect of .26 on "beauty" suggests that a female subject who is rated one point higher for her beauty is also perceived to be an extra .26 points more intelligent on average. This finding again contradicts the dumb-blonde hypothesis and instead supports the above psychology literature. The computed marginal effect of .34 for photographed males suggests that the observed positive association between beauty and intelligence is even stronger for males.

In sum, consistent with the psychology literature that finds a positive association between brains and beauty, our results reject the dumb-blonde hypothesis as an explanation for the observed female beauty penalty. Indeed, both our results (and the psychology literature on beauty) suggest that while the dumb-blonde stereotype may occupy a place in popular folklore, it is contrary to actual perceptions of attractive people, men and women alike.

5.3   Negative Signaling

In a work culture like Israel in which attaching a picture to one's CV is optional rather than compulsory, the choice to do so may be perceived differently depending on one's physical appearance. For this reasoning to be able to explain our results, an attractive women who attaches a photograph to her CV must be viewed negatively, whereas an attractive male who attaches a picture must be viewed as signaling something positive. If women rarely embedded a photograph in their CV, while men did so more often, the above reasoning could be reconciled with our results. More explicitly, suppose there existed a cultural norm that frowned upon women including a photograph on their CV. A woman who nonetheless

chose to embed a picture in her CV would be less likely to receive a callback. However, our telephone survey reveals that no such norm exists. On the contrary, in response to our question about which sex more frequently sends a CV with a self-photograph, 12 companies (48%) answered that women do, while only two companies (8%) indicated that men do.[11] Another 11 companies (44%) responded that the two sexes do so equally often.

On the other hand, we also posed a question more directly related to the negative signaling hypothesis. We asked each company surveyed to indicate what message is conveyed by a male candidate who includes a picture on his CV and, as a separate question, what message is conveyed a female candidate who includes a picture on her CV. Thirty-six percent of the respondents reacted positively to males' inclusion of a picture, invoking terms such "presentable" and "confident". Only 28% of the respondents expressed negative associations for male photographs. By contrast, negative sentiments were the predominant response (56%) to females CVs with pictures. "Not serious" and "an attempt to market herself via her appearance" were among the reactions. A mere 12% of respondents expressed a positive association. These findings suggest that we cannot rule out the negative signaling story as a partial explanation for our observed punishment of attractive women.

5.4   Jealousy

Threats to one's status or interpersonal relationships arouse jealousy. Summarizing a body of research in evolutionary psychology, Buss and Haselton (2005) write, "women become especially distressed by threats from physically attractive rivals, whereas men become especially distressed by rivals with more resources" (p. 506). Applied to our research design, the candidate's resources are either not mentioned on the CV (e.g., financial resources) or identical across candidates (e.g., skills and educational background). On the other hand, the physical attractiveness of a candidate is conspicuous on all picture CVs. Thus, while the trigger for male jealousy is absent from our design, the trigger for female jealousy features

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[11] A binomial test establishes that this difference is highly significant: the probability that 12 or more out of 14 companies would respond that women do so more frequently is given by $B(12, 0.5) = .0065$.

prominently on the candidate's CV in the form of a picture. Moreover, numerous psychology studies demonstrate that women are more susceptible to jealousy than men (see, for example, Sagarin et al. 2003).

In light of the above, the jealousy explanation seems especially fitting when we consider that 93% of the respondents in our sample were female (as determined by their voice when they left a voicemail message, their name when they sent an email or by a discreet phone call to the company when there was any doubt as to the respondent's sex).[12]   One may be concerned that the person calling back to invite the candidate for an interview may not be the same discriminating person who screened the CVs. Yet, human resource departments in Israel and indeed throughout the West are staffed predominantly by women. To verify this stereotype, we asked to speak with the person who screens candidates' CV when conducting the post-experiment survey. In 24 of the 25 (96%) companies we interviewed that person is a female. Moreover, these woman are young (ranging in age from 23 to 34 with an average age of 29) and typically single (16/24 or 67%) – qualities more likely to be associated with a jealous response when confronted with a young, attractive competitor in the workplace.

The evidence from section 4.4 that only the companies themselves strongly punish attractive women and attractive women are the only category of females these companies punish further buttresses the jealousy explanation. Females in charge of hiring at the companies themselves may well be jealous of prospective female employees who are attractive and thus may compete with them for mates or at least the attention of male coworkers. At the same time, we saw that employment agencies do not punish attractive females relative to plain females and only weakly punish the former group with respect to no-picture females. It follows that when the hiring decision is outsourced such that the female employers do not need to work with the candidates they hire, jealousy is aroused to a lesser extent and attractive women are not treated differently than plain-looking women.

If we consider pairs of CVs for which at least one of the CVs was called back and thus

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[12] A respondent is an employer who called back one or both of the candidates who sent CVs to the employer's advertised position.

the sex of the caller is known, Table 9 displays the distribution of callbacks to CV pairs for female callers only. The table paints a familiar picture and one similar to that observed in Table 3. Female respondents call back only the attractive man in the pair nearly twice as often as they do only the no-picture man. This favoritism reverses in favor of the no-picture candidates for all other CV categories.

Table 10 breaks down the callbacks by female employers in Table 9 into job ads placed by the company itself and by employment agencies. Strikingly, the largest case of within-pair discrimination among companies is directed at attractive females: no-picture women are preferred to attractive females for 55% of the callbacks compared to a preference for attractive females for only 17% of callbacks. On the other hand, women in the companies themselves don't seem to mind hiring plain-looking women and even favor them (34.4% to 20.7%) over no-picture women. Plain women pose no threat to these female employers and therefore do not arouse their jealousy. By contrast, among employment agencies attractive females are discriminated against less than any other group: the right panel of Table 10 reveals a relatively small nine-percentage-point gap between the preference for no-picture females (36.4%) and the preference for attractive females (27.1%) – considerably less than any of the other differences, including the most closely related 21 percentage-point-preference gap for no-picture females over plain females.

Without the possibility to enter employers' minds, we cannot determine beyond all doubt their psychological motivations for choosing one identically qualified job candidate over another. Yet, we have presented a range of evidence that suggests that female jealousy is part of the observed and unexpected discrimination against attractive females. To begin, women mostly do the initial screening of CVs. When the hiring is done by the company in which the hired job candidate will work, these women discriminate strongly against attractive women and only attractive women, treating all other picture CVs similarly to the paired no-picture CV. Outside employment agencies in charge of hiring provide a control group. They differentiate significantly between the picture and paired no-picture CVs in all cases, with the attractive females being the only exception: employment agencies discrimination against

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attractive women is only weakly significant.

6 Conclusions

The findings from our field experiment make clear that attractive and plain job candidates are not treated equally. Beauty discrimination occurs at the earliest stage of job search, and not only through differential salaries as Hamermesh and Biddle (1994) establishes. To put our results in perspective, a plain male needs to send over twice as many CVs as an attractive male for an equal chance at a callback. This result is robust across industries and job and employer characteristics and ought to encourage attractive males to attach a photograph to their resumes in cultures like Israel in which the inclusion of a picture is left up to the applicant. On the other hand, attractive and plain women alike are better off omitting their photographs from their CVs since their inclusion decreases their chances of a callback by 20% to 30%. Yet if the company at which the chosen candidate will be employed is also in charge of hiring, plain women are no worse off including their photograph, while the penalty for doing so for attractive women swells to 41%.

Most of the observed orderings among attractive, no-picture and plain candidates correspond to the received wisdom and the robust research in psychology and organizational behavior and the emerging research on beauty in economics. The one finding that stands in stark contrast to this literature is that attractive females do no better than plain ones and that they are invited with significantly less frequency than females without a picture. Additional analyses and a follow-up questionnaire reveal that women are overwhelmingly responsible for deciding which candidates to invite for an interview and that female jealousy of attractive competitors in the workplace is a likely explanation for the penalization of attractive women.

A profit-maximizing firm wants to hire the most qualified candidate. Yet our results show that beauty distorts the hiring process. Suitably qualified attractive women and plain men and women may be eliminated early on from the selection process. One may retort

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that even without pictures on their CVs such candidates would eventually be eliminated, at the interview stage, for example. Not necessarily so. For one, the interviewer may not be the same person or of the same sex as the person who screened the CVs. Even if they are one and the same, the interviewer's bias against attractive women, for instance, may be attenuated after meeting the candidate in person and having first mentally processed her CV objectively without knowledge of her appearance.[13]

One way to reduce discrimination based on physical appearance (and other traits unrelated to the candidate's suitability for the job) is government legislation against, or the emergence of a social norm shunning, the inclusion of a photograph with one's job application and conducting at least initial interviews by phone rather than in person. Interestingly, several European countries have recently begun to experiment with anonymous CVs whereby candidates are forbidden to include their picture, name, age, sex, date and place of birth, nationality and marital status anywhere in their application.[14] A second recommendation that follows from our results is for company managers to pay greater attention to the gender of those responsible for hiring. A mixed-gender hiring committee would help mitigate the beauty discrimination found herein.

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[13] Babcock et al. (1995) present evidence of a similar psychological mechanism whereby experimental subjects' self-serving bias in a simulated court trial is reduced if they read the case materials without knowing which side they represent.

[14] In Belgium, anonymous CVs are compulsory in the public sector. French President Nicolas Sarkozy commissioned a pilot project in which 50 French firms volunteered to accept anonymous CVs only (Le Balch 2010). Sweden conducted a similar pilot study in 2004 and 2006. And five major German companies are currently attempting their own experiment with anonymous CVs (Donath 2010).

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Table 1 - Summary Statistics			
Candidate Characteristics	Picture	Attractive	25.0%
		Plain	25.0%
		No Picture	50.0%
	Gender	Men	50.0%
		Women	50.0%
Job Characteristics	Field	customer service	17.9%
		accounts manager	16.0%
		senior sales	14.6%
		junior sales	14.7%
		banking	10.1%
		budgeting	8.4%
		finance	8.1%
		computer programming	4.2%
		industrial engineering	3.3%
		chartered accountant	2.7%
	Public/Office	Job Dealing with Public	27.0%
		Office	73.0%
	Experience required	None	41.4%
		Less than a Year	36.6%
		Minimum 1 Year	22.0%
Company Characteristics	Who does the hiring?	Employment Agency	75.1%
		Company Itself	24.9%

Table 2 - Marginal Effects from Probit Regressions

| Variable	(1)	(2)
picture	-.014 * (.007)	—
male	—	-.029 ** (.014)
attractive-male	—	.060 *** (.016)
plain-male	—	-.045 *** (.012)
attractive-female	—	-.038 *** (.014)
plain-female	—	-.031 ** (.014)
N	5312	5312
Pseudo R^2	0.001	0.009

Notes: 1. Dependent variable: whether employer invited the job candidate for an interview.

2. Regressors are indicators for candidate characteristics such as whether the candidate embedded a picture ("picture"), was male ("male") and the candidate's gender interacted with his/her attractiveness ("attractive" or "plain"). No-picture females are the omitted category.

3. Standard errors in parentheses are heteroskedasticity robust and clustered by job advertisement.

4. Coefficient significantly different from 0 at the 1% level ***, at the 5% level **, at the 10% level *.

Figure 1 - The Role of Beauty
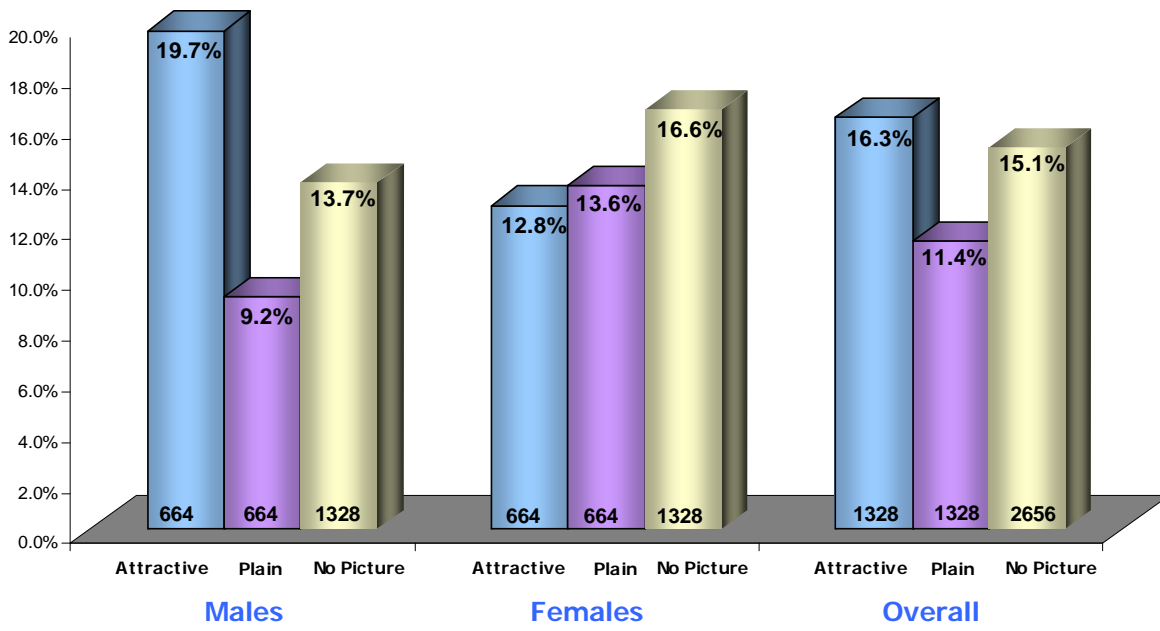
Average response rate by CV type with the number of observations at the base of each bar.

Table 3 - Distribution of Callbacks by Job Advertisement

Comparison of Picture and Paired No-Picture CVs	Men		Women	
	Attractive	Plain	Attractive	Plain
Picture Favored	11.3% [75]	3.8% [25]	5.1% [34]	6.6% [44]
No Picture Favored	6.2% [41]	7.8% [49]	8.9% [59]	9.6% [64]
Equal Treatment	82.5% [548]	88.8% [590]	86.0% [571]	83.7% [556]
No Callback	74.1% [492]	83.4% [554]	78.3% [520]	76.8% [510]
Callback to Both	8.4% [56]	5.4% [36]	7.7% [51]	6.9% [46]
Overall	100% [664]	100% [664]	100% [664]	100% [664]

Notes: 1. The table displays the distribution of observed employer callback decisions for pairs of picture and no-picture CVs by job advertisement.
2. The table divides all paired CVs into those in which the picture CV was favored (i.e. called back), those in which the no-picture CV was favored and those in which the two CVs were treated equally. This latter case is further divided into instances in which the employer called back both the picture and no-picture CVs and instances in which he called back neither one.
3. Number of job ads appear in parentheses below the percentages.

Table 4 - Distribution of Callbacks for No-Picture CVs

	Men		Women	
	w/ Attractive	w/ Plain	w/ Attractive	w/ Plain
Response	14.6% [97]	12.8% [85]	16.6% [110]	16.6% [110]
No Response	85.4% [567]	87.2% [579]	83.4% [554]	83.4% [554]
Overall	100% [664]	100% [664]	100% [664]	100% [664]
χ^2 test of proportions	$\chi^2(1) = 0.91$, p=0.34		$\chi^2(1) = 0$, p=1	

Notes: The distribution of callbacks for no-picture CVs as a function of the picture CV with which they paired. The chi-square tests compare the no-picture response distributions within gender.

Table 5 - Marginal Effects from a Probit Regression

Variable	(3)
male	-.037 **
	(.016)
experience	-.076 ***
	(.016)
attractive-male experience	.084 ***
	(.020)
plain-male experience	-.038 ***
	(.014)
attractive-male no experience	.030
	(.024)
plain-male no experience	-.051 ***
	(.021)
attractive-female experience	-.038 **
	(.017)
plain-female experience	-.022
	(.017)
attractive-female no experience	-.036
	(.023)
plain-female no experience	-.045 *
	(.024)
N	5312
Pseudo R^2	.018

Notes: Similar to Table 2 with the inclusion of interaction terms
for whether the job posting required previous work experience.

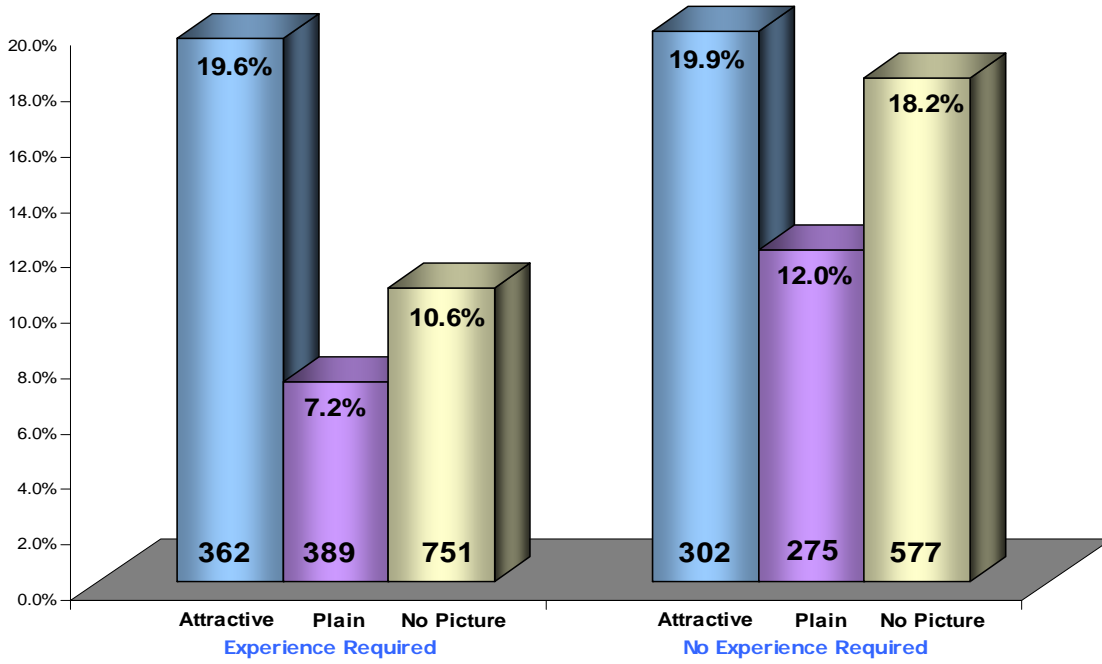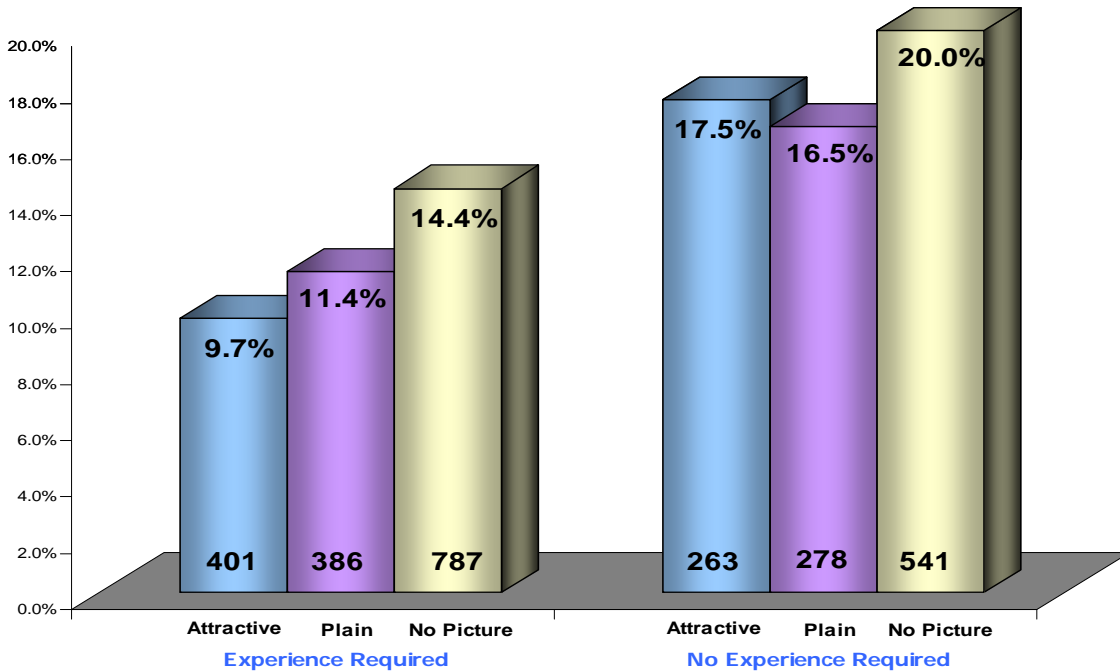## Figure 2a - Male Beauty by whether Job requires Experience

Experience Required

	Attractive	Plain	No Picture
	19.6%	7.2%	10.6%
	362	389	751

No Experience Required

	Attractive	Plain	No Picture
	19.9%	12.0%	18.2%
	302	275	577

Figure 2b - Female Beauty by whether Job requires Experience

Experience Required

	Attractive	Plain	No Picture
	9.7%	11.4%	14.4%
	401	386	787

No Experience Required

	Attractive	Plain	No Picture
	17.5%	16.5%	20.0%
	263	278	541

Average response rates for male CV types (top panel) and female CV types (bottom panel) by whether job ad indicated previous work experience was required.

Figure 3a - The Role of Male Beauty by whether the job deals with the public
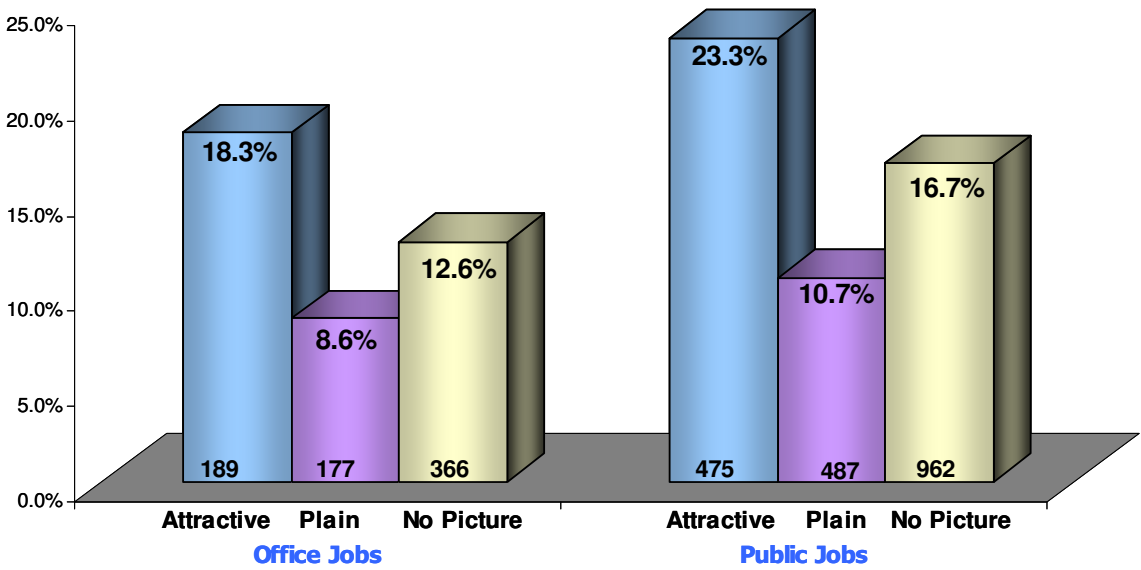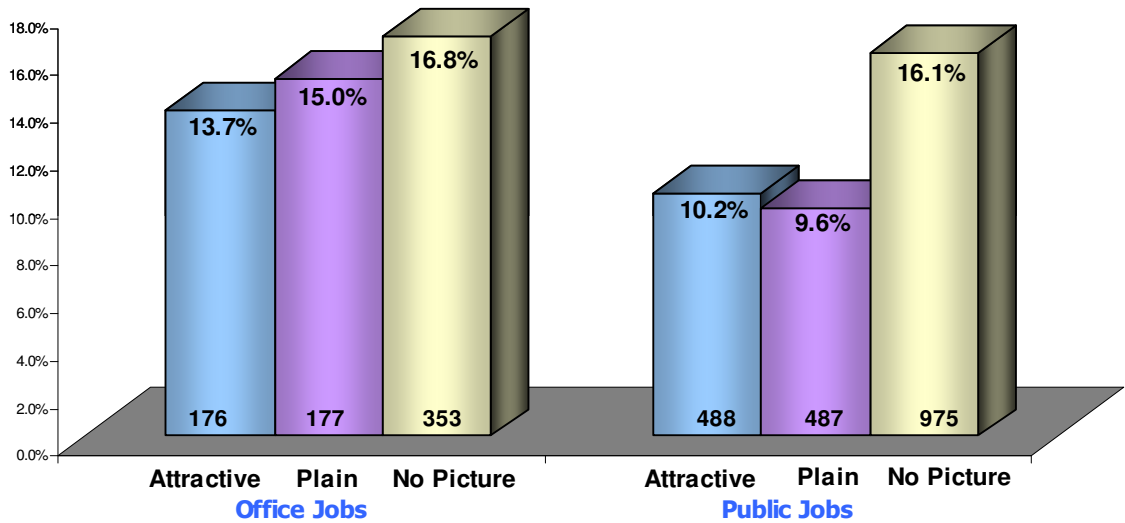

Figure 3b - The Role of Female Beauty by whether the job deals with the public

Average response rates for male CV types (top panel) and female CV types (bottom panel) by whether the job involves dealing with the public or is an office job.

Table 6 - Marginal Effects from Probit Regressions

Variable	(4)	(5)
male	-.029 **	-.042 ***
	(.014)	(.016)
public	.019	-.007
	(.017)	(.023)
male public	—	.046
		(.029)
attractive-male public	.084 ***	.066 **
	(.031)	(.032)
plain-male public	-.042 *	-.059 **
	(.025)	(.026)
attractive-male office	.051 ***	.057 ***
	(.018)	(.018)
plain-male office	-.046 ***	-.040 ***
	(.013)	(.013)
attractive-female public	-.078 ***	-.059 ***
	(.024)	(.024)
plain-female public	-.084 ***	-.065 ***
	(.025)	(.027)
attractive-female office	-.024	-.031 *
	(.016)	(.017)
plain-female office	-.012	-.018
	(.017)	(.017)
N	5312	5312
Pseudo R^2	.011	.011

Notes: Similar to Table 2 with the inclusion of interaction terms for whether the job involves dealing with the public or is an office job. In (5), the male indicator variable is interacted with whether the job deals with the public.

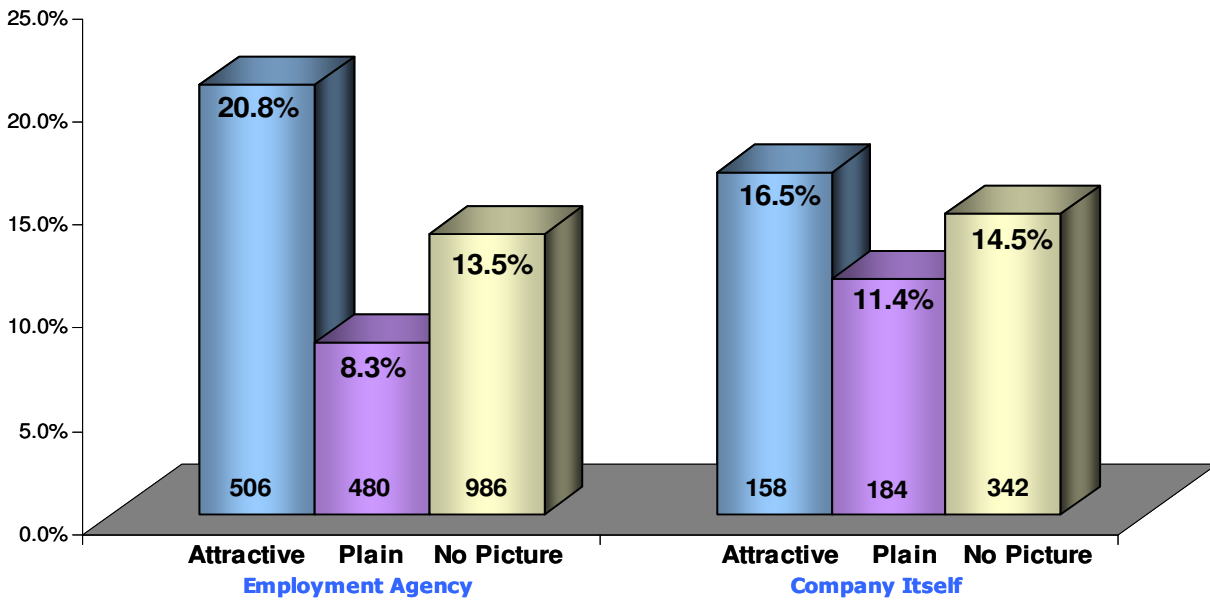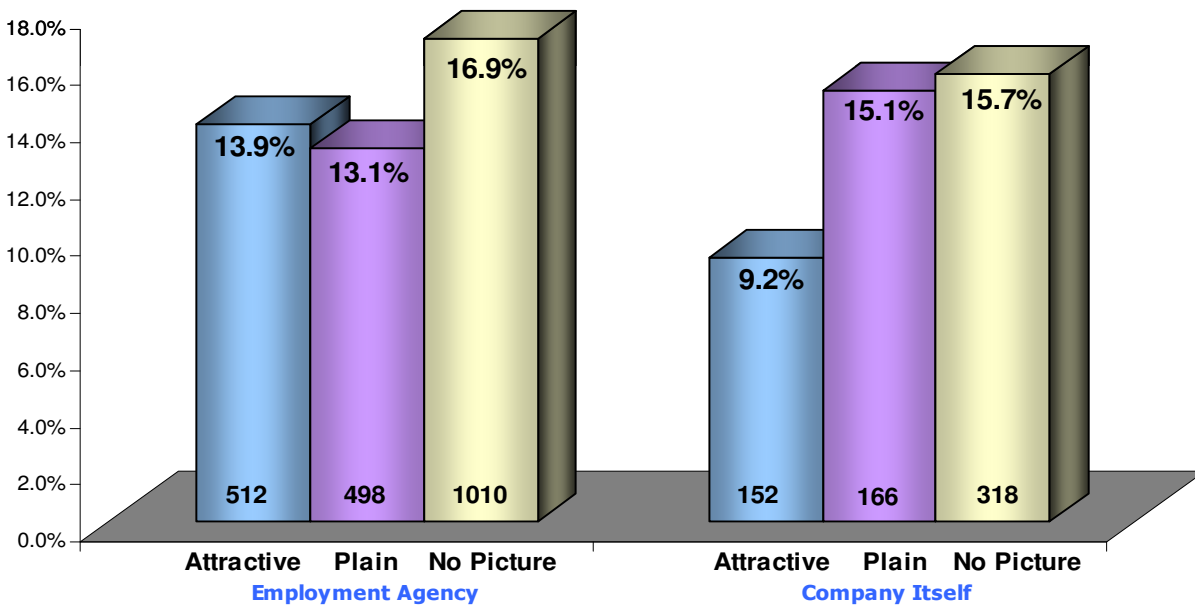# Figure 4a - Male Beauty by who does the hiring

Figure 4b - Female Beauty by who does the hiring

Average response rates for male CV types (top panel) and female CV types (bottom panel) by whether an employment agency or the company itself does the hiring.

Table 7 - Marginal Effects from a Probit Regression

Variable	(6)
male	-.029 **
	(.014)
employment agency	.001
	(.017)
attractive-male employment agency	.070 ***
	(.018)
plain-male employment agency	-.054 ***
	(.014)
attractive-male company	.028
	(.029)
plain-male company	-.022
	(.022)
attractive-female employment agency	-.028 *
	(.016)
plain-female employment agency	-.036 **
	(.017)
attractive-female company	-.073 ***
	(.025)
plain-female company	-.015
	(.028)
N	5312
Pseudo R^2	.010

Notes: Similar to Table 2 with the inclusion of interaction
terms for whether an employment agency or the company
at which the employee will work does the hiring.

Table 8 - OLS regressions on ratings of photographed subjects' intelligence

Variable	(7)	(8)
beauty	.293 ** (.103)	.260 ** (.104)
male	—	-.237 (.185)
beauty male	—	.085 ** (.035)
constant	4.28 *** (.723)	4.37 *** (.769)
N	974	974
adjusted R^2	.11	.11

Notes: 1. Dependent variable: judge i's rating (on a scale of 1 to 9) of photographed
subject j's intelligence, $i=\{1, \dots, 8\}, j=\{1, \dots, 161\}$.
2. Regressors are judge i's rating (on a scale of 1 to 9) of photographed subject j's beauty
("beauty") and an interaction term between "beauty" and whether the photographed subject was male.
3. Standard errors in parentheses are heteroskedasticity robust and clustered by judge.
4. Coefficient significantly different from 0 at the 1% level ***, at the 5% level **, at the 10% level *.

Table 9 - Distribution of Callbacks by Job Ads for Female Respondents only

Comparison of Picture and Paired No-Picture CVs	Men		Women	
	Attractive	Plain	Attractive	Plain
Picture Favored	44.0% [70]	22.9% [22]	25.0% [34]	28.0% [40]
No Picture Favored	23.3% [37]	43.8% [42]	40.4% [55]	42.0% [60]
Callback to Both	32.7% [52]	33.3% [32]	34.6% [47]	30.1% [43]
Overall	100% [159]	100% [96]	100% [136]	100% [143]

Notes: 1. The table displays the distribution of observed callback decisions for pairs of picture and no-picture CVs by job ad for cases in which at least one of the paired CVs was called back and the respondent was female.

2. The table divides all paired CVs into those in which the picture CV was favored (i.e. called back), those in which the no-picture CV was favored and those in which both CVs were called back.

3. Number of job ads appear in parentheses below the percentages.

Table 10 - Distribution of Callbacks by Job Ads and by Hiring Source for Female Respondents only

Comparison of Picture and Paired No-Picture CVs	Company Itself				Employment Agency			
	Men		Women		Men		Women	
	Attractive	Plain	Attractive	Plain	Attractive	Plain	Attractive	Plain
Picture Favored	34.4% [10]	11.1% [3]	17.2% [5]	34.4% [10]	46.1% [60]	27.5% [19]	27.1% [29]	26.3% [30]
No Picture Favored	17.2% [5]	40.7% [11]	55.2% [16]	20.7% [6]	24.6% [32]	44.9% [31]	36.4% [39]	47.4% [54]
Callback to Both	48.3% [14]	48.1% [13]	27.6% [8]	44.8% [13]	29.2% [38]	27.5% [19]	36.4% [39]	26.3% [30]
Overall	100% [29]	100% [27]	100% [29]	100% [29]	100% [130]	100% [69]	100% [107]	100% [114]

Notes: Callback rates for female respondents (Table 9) by who does the hiring (i.e. the company itself or an employment agency).