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For love or money? Gender differences in how one approaches getting a job

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ABSTRACT

Extant supply-side labor market theories conclude that women and men apply to different jobs but are unable to explain gender differences in how they may behave when applying to the same job. We correct this discrepancy by considering gendered *approaches* to the hiring process. We propose that applicants can emphasize either the *relational* or the *transactional* aspects of the job and that this affects whether they are hired. Relational job seekers focus on developing a social connection with their employer. In contrast, transactional job seekers focus on quantitative and mechanical aspects of the job. We expect women to be more relational and men to be more transactional and that this behavior will contribute to differences in hiring outcomes. Specifically, we contend that being relational suggest that one is more committed to the job at hand and therefore should increases the chances of being hired – holding constant competence. We examine behaviors in an online contract labor market for graphic designers, Elance.com where we find that women are more likely to be hired than men by about 4.1%. Quantitative linguistic analysis on the unstructured text of job proposals reveals that women (men) adopt more relational (transactional) language in their applications. These different approaches affect a job seeker's likelihood of being hired and attenuate the gender gap we identified. Attenuation suggests that how one approaches the hiring process matters and that gender is correlated with a particular style of engagement.

Supply-side theories proffered to explain the gender gap in labor markets focus on individual and structural processes affecting job applicant outcomes. There are two main streams. The first, of which we term the *preference perspective*, examines the differences in the preferences of women versus men in their choice of education and careers (Correll 2001, England and Li 2006, Okamoto and England 1999, Barbulescu and Bidwell 2012). A second perspective focuses on the structural differences in the relationships women and men cultivate by identifying the differential access their social networks provide in generating leads and eventual job offers (Fernandez and Weinberg 1997, Fernandez et al 2000). We refer to this stream as *access perspectives*. Yet, together, these extant theories all focus on sorting differences which lead women and men choose *different* jobs. They are unable to explain whether supply-side differences by gender affect outcomes for the *same* job.

One reason supply-side theorists focus on sorting as their main mechanism is because of their interest in explaining job or firm segregation (Bielby and Baron 1986) which has been identified as a pivotal cause of wage difference between female and male employees. Evidence that women and men choose to apply to different types of jobs explains subsequent differences in their labor market outcomes. A tangential finding of some of these studies of sorting suggest that once the applicant pool is controlled for, there is little variance left to explain. In some settings, there is no longer a bias in the hiring of women and men when where they apply is taken into account (Petersen and Morgan 1995, Fernandez and Weinberg 1997, Petersen, Saporta, and Seidel 2000, Fernandez, Castillo, and Moore 2000).

We find this to be theoretically unsatisfying for at least two reasons. First, these extant supply-side approaches fail to unpack the black box of the hiring process: they ignore the variation that can occur within to focus on the processes that precede (c.f. Peterson et al 2000, Fernandez and Sosa 2005). That is, the question as to whether women and men, if they apply for the same position, can be considered to have engaged in the hiring process in a similar fashion has been left uninvestigated. Specifically, we recognize that beyond the skills they possess, there are actions job applicants can engage in which will either increase or decrease their chances of being hired, further underscoring the importance of understanding supply-side behaviors in the hiring process.

Second, the parallel demand-side investigations of this two-sided market has produced a number of findings regarding the preferences, behaviors, and biases of the employers' actions while similar supply-side examinations are relatively neglected. While the hiring process does present the greatest opportunity for discrimination from the demand-side (Peterson and Saporta 2004), recent findings of discriminatory behaviors of employers (e.g. Fernandez-Mateo 2009, Castilla 2008) are based on the outcome of employer-employee interactions. The two-sided nature of the hiring exchange leaves open the question: could prospective employees have acted in ways which would result in the observed outcome (Heckman 1998)? This is certainly a concern given strong social scientific evidence which points to gender behavioral differences in the domains of negotiations (Kray and Thompson 2005), social network development (Ibarra 1992, 1997), and leadership (Eagly and Johnson 1990, Eagly et al 2003). We aim to correct this imbalance. In this paper, we seek to explain variation in hiring via supply-side job seeker actions. We ask: Do women and men approach the hiring process differently? And if so, how do they differ and does that affect their likelihood of getting hired?

By examining approach we refer to the actions of a job applicant, broadly construed, as they seek employment. The fact that a job applicant's behaviors during the hiring process are consequential to their hiring success is recognized, but relatively less theorized and empirically investigated. The hiring process is highly nuanced and multifaceted; the exchange between an applicant and employer forms a richly complex interaction. For example, recent qualitative work demonstrates how employers at a professional services firm favors qualities of cultural match more than displays of ability: the employers studied preferred job applicants that were similar in terms of leisure pursuits, experiences, and self-presentation styles (Rivera 2012). In addition, this work has also highlighted the importance of emotional displays and interactions in the hiring process (Rivera 2015). Social psychologists have also focused on the interactions between job candidates and the employer in lab experiments which demonstrated that applicants displaying varying levels of emotion by smiling, hand gesturing and eye contact in simulated job interviews were rated differently on desirability as future employees. In particular, interviewees

displaying positive emotions were preferred (Fox and Spector 2000, Imada and Hakel 1977, McGovern and Tinsley 1978, Rasmussen 1984).

We propose that the approach a job applicant takes matters; this encompasses how they choose to apply, present themselves, or otherwise engage in the hiring process to secure a job offer[1]. We introduce a line of research we term the *approach perspective*. In contrast to the preference and access perspectives identified above, we believe that how a job applicant presents him/herself to an employer will affect their hiring outcomes. This presentation can take many forms; the degree of freedom a job applicant has is extensive. Presentation factors that can affect the likelihood of getting a job can include: misspellings in a CV, how one decides to dress for an interview, how a cover letter is written and what topics are covered, the level of preparedness one demonstrates at an interview, to the types of questions one asks. This paper suggests that the approach of a job applicant is correlated with their gender which subsequently affects their likelihood of being hired.

We conceptualize the hiring process as an exchange relationship whereby a job applicant seeks compensation in return for the labor they provide to an employer. We suggest that there are at least two conceptually distinct approaches one could take in applying for a job: relational versus transactional. We hypothesize that the approach women take in applying for a job will differ from men. In particular, we believe that women, enacting their gender (Ridgeway 2011) will focus on the relational aspects of the exchange: they emphasize the social, emotional aspects of the employment relationships and propose on mutually beneficial interests. On the other hand, men will be more transactional in nature: they focus more on the task at hand, their own qualifications and achievements, and highlight the quantifiable, observable and tangible aspects of the job. While both these approaches have their merits, this difference should result in variation in a person's likelihood of being hired.

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[1] We could also consider whether or how an applicant negotiates a job offer, but this is conceptually distinct from securing an offer, so we do not speculate on the gendered differences here. Indeed, there is a rich literature in negotiations which has discussed differences between women and men in how they engage in negotiations (for review see Kray and Thompson 2005).

We demonstrate the value of our perspective by using it to account for the hiring gap between male and female job applicants we observe, net of controls for underlying ability, in an online market for contract labor, Elance.com. The online setting provides a richness and granularity of data which allows us to further unpack the nuances in the strategies employed by job seekers; the transparency of the setting provides a glimpse into the black box of the hiring process. The data provides insight and access to the details of every job posting, the applicant pool, background work histories of each applicant, their photographs, how much they were willing to work for, the text of their job proposal, and the eventual winner of the job. Given this information, we examine not only the likelihood of winning a bid, but also unpack the job proposals of the job seeker during the application process.

Beyond the richness of the information afforded by the setting, the empirical context of contract work is, in itself, notable as a burgeoning phenomenon. We refer to the increasing trend towards self-employment whereby labor market participants eschew the long-term role as a corporate employee and instead participate on a contract basis, moving from job to job and working for different employers (Barley and Kunda 2004). The upward trend of the self-employment phenomenon and its evolving structural characteristics suggest that understanding the approach and hiring dynamics is valuable.

Women, Men, and Labor Market Outcomes

Supply-side theories explaining gender differences in labor market outcomes can be divided into two general perspectives. The first one, which we term the *preference perspective*, focuses on the different choices that women and men make in career and education pathways. Preference perspectives demonstrate how the variation in these choices of job trajectories can be attributed to the differences in values and occupational aspirations between men and women (Okamoto and England 1999). For instance, it has been suggested that women are more concerned with altruism and finding meaning in life (Beutel and Marini 1995) and place more importance on family (Corcoran and Courant 1985). A recent study by Barbulescu and Bidwell (2013) demonstrated how women, enrolled in an MBA program, were more likely to choose to apply to general management jobs and less likely to choose finance and consulting

jobs than their male counterparts. This effect was explained by women's anticipation of a better work-life balance, their lower identification with these stereotypically masculine jobs, and their lower expectation for success in these positions. Preference differences can also stem from internal psychological biases: widely held cultural beliefs regarding gender differences in mathematical ability may bias an individual's perception of their own competence and ability, thus affecting a job seeker's career path initiations (Correll 2001, 2004). For example, Correll (2001) demonstrated experimentally how women were less likely to choose to take advanced math classes in high school and a quantitative major in college because they held lower self-assessments of their competence in mathematics, above and beyond controls for actual mathematical ability.

A second supply-side view, what we term the *access perspective*, seeks to explain differences in the social capital possessed by men and women. Beginning with Granovetter's (1981) recognition that the success of a job seeker was predicated on their network of social ties, scholars have demonstrated empirically how applicants who were employee referrals were more likely to receive an offer of an interview as well as employment (Fernandez and Weinberg 1997). To the extent that females and males differ in their social capital, theorists expected to see a difference in job outcomes as well. For example, Fernandez and Sosa (2005) demonstrate how the tendency for social networks to be homophilous by sex, led to a greater number of female applicants for a "customer service representative" position because the existing employees in this position were also female.

Taken together, these supply-side perspectives do an admirable job in explaining why women and men end up applying to different jobs, but remain unable to explain potential differences in outcomes between women and men applying to the same job. Certainly, a focus on why women and men apply to different jobs is valuable in attempting to explain gendered job segregation (Reskin and Bielby 2005, Baron et al 1991) whereby it is posited that the cause of wage differences between women and men are caused by their differential sorting into jobs which pay more or less. However, one implication of this supply-side sorting focus has been the finding that once an applicant pool is taken into account, women and men no longer suffer a hiring difference. For example, in their examination of referrals and hiring at a

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phone center, Fernandez and colleagues (2000) instead find a female advantage in hiring, once employee referrals are taken into account. Similarly, in their investigations of a high tech organization, Peterson and colleagues (2000) find no gender differences once age and education level are accounted for in applicants, and only very small differences even not accounting for these characteristics.

While these are possibly isolated cases, more direct investigation into the hiring process is warranted for at least three reasons. First, these suggestions of a lack of bias in hiring conflicts with demand-side findings which continue to uncover discrimination based on gender or race when applicants are considered for the same job. In particular, scholarly attempts at probing the black box of hiring have involved audit studies. Pager (2003), for example, demonstrated that identical job applicants encountered different outcomes depending on their race or incarceration history. And more germane to our discussion, evidence of discriminatory practices by employers by gender can be found through studies of the blind auditions of musicians (Goldin and Rouse 2000) or resume audits of restaurant workers (Neumark et al 1996). While these well-identified studies provide rich evidence of demand-side biases and preferences, audit studies are limited in the sense that they fail to capture applicant pool data; the pool of auditors does not necessarily mirror the typical applicant pool. Other criticisms of these studies invoke the fact that they are very specific occupations, symphony musicians in one and restaurant workers in the other; therefore generalizability is limited.

Second, both existing supply-side theories and demand-side audit studies neglect the question of how job seekers apply for jobs; supply-side mechanisms at the hiring interface itself are under defined and understudied. The former focuses on structural antecedents that lead up to the hiring interface; the latter fails to examine the correlation of job application behaviors with gender. Consider that demand-side scholars have proposed detailed social psychological theories as to why employers do not always choose the ideally skilled candidate or pay them as much. For example, evidence provided by Fernandez-Mateo (2009) demonstrated how employers systematically paid female employees less than males for identical jobs; Castilla (2008) showed how pay raises were also systematically different by race and gender for employees who received identical evaluations. These findings are based on hiring or promotional pay as

outcomes, yet these are the result of the interaction between an employer and employee. Placing responsibility of these consequences squarely on employers misses the nuanced nature of the interaction itself and how the actions of an employee may contribute to this conclusion. For example, perhaps women are less likely to seek out a pay raise or promotion – or less likely to complain when they don't receive them. To our knowledge, equivalent supply-side investigations into the actions of job seekers have not been proposed – thereby leaving us with the risk of not fully understanding the observed biased outcomes.

Finally, the hiring process is the first interface into organization. Given that any discussion of a wage difference is predicated on getting a job in the first place, an understanding as to the detailed interactions of how one gets a job is necessary to a full understanding of labor market outcomes. Here, the black box metaphor is twofold: it applies to both the observers and participants of the labor market. Scholars suggest that due to the lack of observer visibility into these behind the door processes, the point of hire forms the most likely step in the labor market process for discrimination to occur (Peterson and Saporta 2004). The recognition that, "the hiring process is perhaps the single most important node in employment," (Peterson et al 2000: 809) suggests to us a more detailed examination of the hiring interface itself is warranted from both sides of the market.

Gendered Approaches to Getting a Job

We outline two ways by which a job seeker can approach seeking a job: either a *relational* or a *transactional* perspective. By relational, we mean that the job seeker can view the exchange as an opportunity to develop intimacy and consensus with their partner. This relational approach would entail a focus on closeness and connection with their partner, expressions of care or understanding and shared interests, expressing preferences of equity or fairness, and having expectations for future interactions between parties. On the other hand, transactional approaches to a labor market exchange would be demonstrated by a more aggressive stance such as expressions of independence and attempts to maximize one's own outcomes. Transactional job seekers will express more concern for the task at hand (as opposed to the partnership) by focusing on the more quantifiable and mechanical aspects of the work such

as the pay, benefits, or expectations offered by an employer. This dichotomous distinction between a relational focus and a task focus parallels the differences between engagement styles in group conflict models (Jehn 1995) whereby relational conflict was identified as interpersonal disagreement related to socio-emotional differences and task conflict which reflected differences regarding the substantive content of the task. Social role theories also recognize a similar distinction between interpersonally oriented and task-oriented leaders (Eagly and Johnson 1990). Here, researchers find consistency with the stereotypical expectation that women engage in more democratic and participative and less directive styles than men.

Additional tangential evidence exists which suggests men and women may vary in how they approach social relations. In the more general literature on negotiations, men are demonstrated to be better at claiming value because of their more aggressive nature while women, due to the superior verbal skills, may be better at identifying value in integrative negotiations (for review see Kray and Thompson 2005). More germane to our labor market setting, Fernandez-Mateo (2009) found in her study of contract workers that women were more likely to continue working for a past client than men, suggesting a focus on the relation between applicant and employee. Certainly, the motivation perspective of gender and labor markets provides us with evidence that women value different things in their job (Correll 2004, Barbulescu and Bidwell 2012). Women leaders are also found to be more inclusive of the inputs from their subordinates than their male counterparts in decision making exercises (Eagly et al 2000). Finally, Burt (1998) and Ibarra (1997) both find evidence that women and men develop and utilize their networks of social contacts differently within organizations – with women developing more personal ties than professional ones.

Our belief is that women will be more likely to approach a labor market exchange with a relational mindset. Gender schema theory (Bem 1981) suggests the early development of gender roles lead women to see themselves in relation to others. Men, on the other hand, often see themselves as more independent. For example, social psychologists find that when asked to describe themselves, women were much more likely to use terms of connectedness to others by expressing concern for others and their

situations whereby men were more likely to describe themselves in terms of separateness from others in terms of reciprocity between two individuals and objectivity (Cross and Madson 1997). Findings regarding the possible differences in how boys and girls are socialized (Maccoby and Jacklin 1974, Eagly and Wood 1999) with males being more aggressive and visual-spatial and females being more verbal also contribute to our expectation that women will be concerned with the relational aspects of the job application interaction while men will be transaction and task focused. There is also additional social psychological work which suggests that women and men differ in the values they place on certain personal attributes (Feather 1984), with women appreciating honestly and a close relationship more than men.

A closer parallel to our context is in the gender differences with how women and men approach a negotiation (Kray and Thompson 2005). Here, in an experimental negotiation paradigm researchers find that men use more self-helpful and other-harmful information when women do (Deal 2000). For example, male subjects, when placed in an experimental situation to negotiate against funding cuts to their branch, were more likely to agree to the statement that they, "deliberately did not mention information because it could be used to argue for larger cuts to my branch," than female participants. In another experiment, men were found to tend to mention money earlier than women in a negotiation and are also less likely to discuss personal information, thereby suggesting less concern for the relationship and more concern for the transaction itself (Halpern et al 1996). Taken together, we expect:

> *Hypothesis 1:* Women will be more likely than men to utilize a relational approach to getting a job.

We now turn to an exploration of the potential consequences of this behavioral difference in approach as it pertains to our specific setting, an online market for freelancing labor.

An Online Market for Freelancing Labor

Following a similar trend in tangible product markets, labor market hiring has begun to move online. The recent proliferation of online "crowd-sourced" labor markets that mediate employers and employees, such as Monster or Career Builder; or ones that specialize in temporary contract labor, such as oDesk or Elance exemplify this change. Elance.com, the site under study here, is the oldest firm in this arena and acts as a virtual marketplace where buyers of a broad range of business services find and hire independent professionals on a contract basis to work remotely. Freelancers (bidders) bid on projects that employers post to the website. See Figure 1 for a sample job listing. There are currently over 100,000 jobs posted each month and over 2 million freelancers located worldwide on the website. Since founding in late 1999, cumulative transactions worth over $1 Billion have been completed on the website with an average job value of over $600 in 2014.

[Insert Figure 1 about here]

Once a job is listed, freelancers bid on it. Employers receive approximately ten job proposals on average for each job posting. A job proposal is a written statement made by the freelancer as to why they believe they are particularly suited to the job at hand. This is a virtual analog to the cover letter which accompanies most job applications. Other information in the bid includes the price at which the freelancer is willing to complete the task. After job proposals are submitted, an employer reviews the freelancers' proposals – see Figure 2 for a sample Job Proposal. Accompanying each proposal is also the freelancer's past history of the number and types of jobs they have completed, their feedback score received for these tasks, their earnings to date on the website, as well as a level score, which is a reputation measure that Elance calculates.

[Insert Figure 2 about here]

Because this setting is an online market for temporary services, the arms-length nature of the exchange may suggest that focusing on extracting the greatest amount of money per project and moving across the most profitable jobs would be an ideal strategy. In short, a transactional approach should be

beneficial. Indeed, the transient nature of these jobs should imply focusing on the task at hand to be strategically wise (Barley and Kunda 2004) since allegiance is not valued (Fernandez-Mateo 2009). Certainly, with the portrayal of temporary contract labor as a form of purely market-based employment (Cappelli 1999) we should expect those individuals who focus on the transactional aspects of a job to be more successful.

The face of contract labor, however, is changing. The distinction between "Contract of Service" versus "Contract for Service" is becoming increasingly salient (Purcell and Purcell 1998). In the former, contract labor is viewed as mercenary arrangements; jobs that fall into this distinction are usually low skilled with price models that represent a "race to the bottom". The contract for service distinction represents a contractor's strong internalization of job identities as a career. For instance, Leung (2014) has identified self-driven career progressions on online freelance labor markets as an analog to more traditional organizational careers. These types of jobs are becoming more salient in the workforce. Kalleberg (2009) estimates that career freelancers (the "self-employed") comprise 29% of all jobs, and this percentage is estimated to be increasing over time. However, while most temporary work is low skilled, freelancers, including those online, are mostly comprised of highly skilled individuals who work on a contract basis on jobs which require programming, writing, or design talent (Leung 2014, Osnowitz 2010, Barley and Kunda 2004). As such, jobs in online labor markets not only demand skills and expertise but also complex client specific attention. For instance, freelance jobs in industries such as design and multimedia involves not just an expert eye for taste and aesthetics, but also care and attention to the client's want and needs.

The social dynamics of contract labor now less resembles one-time, arms-length dyadic transactions, but rather loosely-coupled structural systems whereby client and contractors develop close, customized relationships (DiTomaso 2001). Freelancers on Elance not only maintain networks of multiple clients, they engage actively in the portfolio management of their jobs and the development of their own identities as freelancers (Leung 2014). The virtual nature of this medium will necessarily imply that an employer and employee will not be in spatial proximity to one another, we believe issues of commitment

will be paramount. By commitment, we refer to how much effort a freelancer will put into the project. Because the work will be completed remotely, there is little chance that the freelancer can be monitored by their employer in any effective way. Also, the complex nature of these tasks, such as the programming of a website, suggests there are many ways in which the project can be completed – some better than others. Therefore, an employer's uncertainty as to how much effort a freelancer will put into the project likely is not trivial. In this situation, we suggest one way for a freelancer to be able to convey his or her commitment to their potential employer will be to demonstrate that they have the best interests of the employer in mind. The freelancer would be best served by being able to demonstrate how their own interests are aligned with the interests of their potential employer (Hardin 2004). A simple example of this is where the freelancer is able to convince their potential employer that they value the continuance of their relationship - that they are seeking a longer term association thereby having an interest in expending additional effort towards the job.

We suggest that approaching the job application process in a way which is relational in nature, suggests that a freelancer is open to the prospect of a longer term relationship. As we mentioned above, being relational in this setting would suggest that a freelancer is able to demonstrate they care about the client and not merely the job itself. In game theoretic terms, framing an exchange in terms of a relationship would suggest a repeated game is expected. If this were the case, then the expectation of future transactions should dissuade short-term nefarious activity. A freelancer would be implying they are less likely to take advantage of the employer (Hardin 2004). This is also because referring to the relational aspects of the potential job suggests shared interests between a freelancer and employer. Because many freelancers work for several clients at once (Leung 2014), being more relational could ally fears that an employer may have as to how much commitment they can expect from a freelancer. On the other hand, discussion of the task and job details would dissuade an employer from seeing the transaction beyond the immediate exchange. While a technical approach may evince superior skills, it also could entail a lack of care for the actual interests of the employer, which may extend well beyond the task at hand. In sum, we predict:

Hypothesis 2: Job applicants with a relational approach are more likely to be hired than those with a transactional approach.

While we predict that a relational approach will be a superior engagement strategy in this domain, we also believe that this behavior is more likely to be adopted by female freelancers. Taken together, we should expect to find that women enjoy a hiring advantage over men on this website. However, there are at least two other alternative reasons why women could be more likely to win a job. First, because women may be shut out of more traditional employment opportunities, the population of female freelancers may be more skilled than the average male freelancer – who presumably would only be on this website if they could not hold onto full-time traditional employment. Second, and related to the first, the flexibility that a virtual and self-directed employment situation provides may be particularly enticing to women and therefore, the selection of women freelancers on this website will be of higher quality than men who may not value flexibility in the same way.

Yet, the causal element of our story is that, holding constant the observable skills a freelancer may have, that women may continue to enjoy a hiring advantage on this website because they are more likely to utilize a relational approach. Note, the theoretical link we attempt to make is that women are more successful at securing jobs *because* they are more likely to approach the job application with a more relational perspective – not that women are more successful because of their gender *and* that they apply with a more relational approach. For example, two separate explanations could be at work here to conspire to create the observed results. First, to the extent that women may evince more trust than men, we may expect to find that net of observable measures of quality, that we women will be more likely to be hired than men on this platform. Hypothesis 3a, below, is consistent with this notion. Second, to the extent that women and men differ in their behaviors at some fundamental level (Hyde 2005, Eagly 1995) then we may also be pre-disposed to the expectation posited in Hypothesis 1. However, we believe that because gender can be an enacted behavior in social interactions (Ridgeway 2005) that women will be

more pre-disposed to approach their job in a gender consistent manner, which accounts for their success. Formally,

> *Hypothesis 3a:* Female job applicants are more likely to be hired than males on this website.

> *Hypothesis 3b:* The difference in outcomes by gender is attenuated by their relational or transactional approach to getting a job.

Scope Conditions

Some scope conditions are warranted at this point. First, to the extent that there is a tradeoff between being more relational versus transactional in ones approach to securing a job, we should be wary as to why caring more about a relationship may be valued above than additional details about the task at hand. For example, wouldn't an employer prefer more information from a candidate regarding their technical suitability to the job as opposed to more relational information, such as how much they would value the relationship? We suggest that once the technical requirements of a job are minimally satisfied, perhaps though the past jobs completed or educational requirements, then considerations of how relational a candidate is will affect ones decision. The offline analog could how the Resume or CV represents the hard skills necessary for satisfying a position versus the cover letter, where additional detail and nuance are incorporated into the profile of an applicant. Our sense is that being relational should not 'crowd out' or substitute in any way for the more technical skills necessary, but rather that it operates after establishment of competency.

Second, our theory should principally apply to jobs where there is enough flexibility for an applicant to demonstrate variation in their approach to being hired. For example, if the hiring process is so constrained that a job seeker is only allowed to submit information in a formalized way, then there is not enough freedom for one to demonstrate either relation or transactional tendencies. For example, some application processes request only specific information, such as name, education, and past employers to be entered into a system. Perhaps this assists employers performing an initial sort. In these situations, we do not believe our theory applies.

Third, for the two reasons identified above, we believe this theory will predominantly be operating in the later stages of a job search. That is, to the extent that an initial screen of appropriate applicants will be based on signals of competence, as suggested above, it will be in the latter stages of an employment decision that we would expect that variation in how a job applicant approaches the process matters.

DATA AND METHODS

Empirical Setting

We test our hypotheses on the online contract labor market Elance.com. Specifically, we focused on the market for Design and Multimedia jobs. Elance provides well-bounded weblogs of job applications, bids, proposals and other relevant metadata that provides the richness required for our purposes. Several aspects of the Design and Multimedia labor market on Elance make it an apt context. Together with Web Programming and Writing and Translation, the Design and Multimedia category is one of the top three categories of work on Elance, comprising over 50% of all contracts transacted on the platform. This allows us to examine a mature labor market, as opposed to an emergent or dying one which would introduce atypical dynamics. In addition, we chose Graphic Design due to its relative gender neutrality: the demographics of U.S. based graphic designers on Elance reflects this. As of 2014, we found that 52% of graphic designers are male.

Secondly, Elance promotes the establishments of persistent identities: freelancers on the website are encouraged to put up profile pictures that reflect their true identity. In addition, a dominant social norm on the website is to communicate via web-video conferencing technologies. These ensure the veracity of profile pictures: freelancers are motivated by several factors to use authentic, updated profile pictures which allow for gender coding.

Thirdly, the "auction and pitch" style of the job application process on Elance neatly separates out the two stages of "approach and presentation." On Elance, buyers select into the job category and posts their job listings, including descriptions of job deliverables and desired seller attributes. Sellers respond

by choosing whether to apply for the job listing. If they choose to do so, they enter the auction: they submit a bid, a dollar bid amount and a text proposal. The behavioral data dumps of both bids and proposal text facilitates detailed analysis of both stages to test the hypotheses as presented here.

Finally, all processes and outcomes of the bidding process is directly and fully observable. This includes bids and applications that failed to make the mark. The bidding system thus provides strong counterfactuals to test our hypotheses as we observed both successful and unsuccessful contracts. Such a design will be considerably more difficult to implement in a face-to-face "real world" context, where only successful job applicants are observed.

Data Sampling

There are many different types of 'sellers' on Elance: it includes organizations, individuals, and third-party brokers. As we are interested in gender differentiated behaviors of individual sellers, we begin by selecting a sample of individual sellers based in the United States who are active from the duration of January 2011- March 2013. The choice of United States based sellers holds constant country specific gender behavioral norms and minimizes the variance in English language proficiency. The latter is particularly important as linguistic qualities play a large part in our analyses. In addition, we limit our analysis to the cohort entering Elance between January 2009 and December 2010. This ensures that our data is not left censored, a particularly important characteristic for the examination of client-contractor relationships.

Gender Characterization

Gender is not a field that sellers have to report to participate in this labor market. To obtain the gender of sellers, we code profile pictures and profile names: images that sellers attach to their Elance profiles to visually represent themselves. As Elance greatly promotes the authentic identification of sellers, a large majority of these pictures are portrait photographs for the individual sellers. Similarly, a large number of profile names are the seller's real names. Unfortunately, there exists a minority of sellers who either use

abstract representation (e.g. logos and banners), irrelevant representation (random images) or no representation (default Elance stock pictures).

The coding process is thus two-step: we first determine if the sellers use a face portrait or otherwise, and then determine the gender of the seller. To do this, we utilize Amazon Mechanical Turk (MTurk) masters participants (henceforth "coders"). Coders are asked to determine the type of picture the seller used to portray themselves, and following which, assign the seller a gender based on both the picture of the seller and their profile names. Two coders were assigned to each profile at random.

We identified a sample of 17,000 individuals in the data that participated in the category of Design and Multimedia. We retain gender information for sellers where both coders were in agreement, and remove disagreements and "ungendered" individuals with extreme prejudice. The agreement rate was 91.5% with a total of 1414 disagreements: 564 disagreed on the type of image (photo of a person/random photograph/no image/logo etc.) and 850 disagreed on the gender of the profile. Following which, a random sample of 100 seller profiles from this resultant pool was manually coded to ascertain the results of the coding, the results held (100% agreement with manual coding). Regardless, for certainty, we require the gender codes to match between two master MTurkers. We thus purged all 1414 disagreements from our data set; we note that both image type disagreements and gender disagreements are removed from this set.

APPROACH TO TEXT

Unstructured data proves to be challenging to interpret and codify: a profile paints a thousand dimensions. The preliminary and fundamental step therefore is to both *characterize* and *understand* the textual scenery of job proposals in Design and Multimedia on Elance. We are interested in the psychological and linguistic constructs evoked and employed by the labor market participants. This will involve exploratory data analysis through unsupervised machine learning: we seek to unpack any main psycho-linguistic dimensions which participants draw from in their text proposals.

Two main tools were employed to process the unstructured proposal texts available. The Linguistic Inquiry and Word Count 2001 (LIWC) dictionary (Pennebaker, 2001) was used to code each proposal on all 70 LIWC categories. The LIWC dictionary was developed under the assumption that the ways individuals talk and write offer important hermeneutics into their affective and cognitive states. Following which, we employed exploratory Principal Component Analysis (PCA) using best practices (James et al., 2013 p. 374-385) to examine LIWC categorical co-occurrences. The resulting components here report groups of LIWC categories that co-occur in the job proposals. This process reveal dimensions of variation that reflect systematic communicative and functional differences in the proposal text data (e.g. Nagarajan and Hearst, 2009).

The text data was first preprocessed via the following steps. We first characterize the corpus. Each proposal was broken down into their constituent words, counting words that occur multiple times. These words are then stemmed, being reduced to their most "basic" forms. For instance, the words "consulting", "consultant" and "consultation" will all be stemmed to become "consult". We note that as the usage of common stop words does convey important psychological information (e.g. the frequency of usage of the words "I" and "you"), we retain *all* stop words. This forms a multinomial bag-of-stems model; we are interested in the *intensity* of the linguistic terms here. In total, we have 113,736 job proposals giving us 600,235 unique word stems. As the word frequency distributions of common text corpuses resemble a power law (Newman, 2005), a feature selection of the first 5000 most frequent word stems constitute ~97.5% of the entire corpus. We found that on average, each job proposal is constituted by ~150 word stems.

The proposals are then scored on all dimensions of the LIWC categories. We normalize each proposal into stem proportions. The occurrence of each LIWC word was then counted via proportions, and the weight of each LIWC category for each proposal thus calculated. This forms a co-occurrence matrix of LIWC categories. The co-occurrence matrix is then analyzed via PCA using the function **prcomp()** in R's base package. This exploratory data analysis not only empirically unpacks the text data,

it forms a falsification check for our constructs. If indeed job proposals vary in relational-transactional dimensions, this should be reflected by the combination of LIWC psycholinguistic categories loaded onto one of the main dimensions. This takes the form of a two-stage face validity check: firstly, the LIWC categorical combinations together should imply a "relational" versus "transactional" orientation; secondly, the retrieval of proposals that rate high on such dimensions should have high face validity.

The loadings (matrix rotation) of the first principal component is shown in Figure 3. The magnitude and direction of the loadings is further visualized in the word clouds in Figure 4. This component explains 23.6% of all text variance in our corpus. It is important to note that with PCA, the various categories that loads into the components should be made sense *in tandem*. We report the main features and their interpretations accordingly.

[Insert Figure 3 about here]

[Insert Figure 4 about here]

To begin, we note that the categories that failed to load on the main principal component have good face validity; in Figure 3, these are the categories that are in the middle of the y-axis. As expected, we do not find much variance or indeed references to linguistic categories that reference sex, religion and bodily functions, for example. Interestingly, we also do not find significant loadings in negation words and negative emotions. Clearly, there are main conventions of "what not to do" when it comes to setting down job proposals.

As for the categories that load significantly, in the positive direction we have, in order of magnitude: pronouns, proper pronouns, social words, "you" words", positive emotions, affective words and "I" words. In the negative direction: relativity words (words relating to space and time), cognitive mechanisms, inclusivity words, work, achievement and quantitative words. At first glance, the positive categories *together* can be interpreted as text that seeks to evoke interpersonal and social positivity. While

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the negative categories refer to text that evoke thought mechanisms work concerns, processes and deliverables.

We interpret these two directions as corresponding to "relational" versus "transactional" functions. While the linguistic and psychological categories suggest as such, we further verify this by randomly retrieving samples of job proposals that score high in magnitude in this component. Every proposal is scored on the first principal component by multiplying their normalized LIWC categorical counts with the first component loadings. Random retrieval gives good face validity: two examples of proposals that load high and low (2 standard deviations away from the mean) are reported in Figure 5. As such, we interpret the first principal component loadings as the relational-transactional score of the proposal.

[Insert Figure 5 about here]

There remains characteristics of the text as revealed by PCA that are of note. Firstly, we note that these two components, are significantly correlated. This is shown in Figure 6, which represents each job proposal on a spectrum from relational to transactional measures. As such, job proposals that have high counts in the LIWC categories that make out the positive, relational dimension are more likely to have low counts in the LIWC categories that make out the negative, transactional dimension. Given this, we treat the relational-transactional score as one singular dimension. Secondly, Figure 6 also shows that the corpus of proposals are well-behaved and normally distributed across the relational-transactional component. No clustering occurs in this dimension: we normalize the relational-transactional scores of each proposal to mean 0 and standard deviation 1 as our independent variable of interest.

[Insert Figure 6 about here]

CONTROL VARIABLES: REPUTATION AND EXPERIENCE

In order to address the alternative explanation that women on this website may be observably more skilled than men, we include reputation and experience as main covariates. These variables are also used in a matching strategy for robustness checks and identification. Elance implemented two reputation systems in this time period. Star ratings form the canonical, and indeed institutionalized, rating and reputation system. Buyers who have had a contract completed with a seller can rate the seller from 1-5 stars; these ratings appear in the profile both as individual job ratings (displayed alongside the detailed job histories) and as aggregate seller profile ratings (displayed as an overall average star rating on the seller profile). While research have shown that these ratings do matter (e.g. Resnick et al., 2006), the platform has faced a serious issue of ratings inflation. In our examination period, the mean aggregate star ratings held by all sellers is 4.89 out of 5 stars.

To remedy this, an in-house algorithm and score that tracks both behavioral and feedback statistics was implemented. This constitutes the second reputation system known as the *level score*. The level score tracks seller activity and job performance within the seller's active industries; 3 main criteria are used to determine the seller's level score: *job performance*, *relationship management* and *marketing*. While the actual details and gears of the level score algorithm is classified as the company's "secret sauce", the main purpose of the level score serves as a *quality signal* to the prospective buyer: for all intents and purposes, the buyer can normally expect two sellers of the same level to deliver work of similar quality.

The implementation of the level score introduces greater variability of reputation between sellers: this is shown in Figure 7. In addition, we note that while there are minor differences between the distribution of level scores between male and female sellers, these are not significant. In our specifications, we include both level scores and seller star ratings as quality and reputation controls.

[Insert Figure 7 about here]

Finally, we control for experience and dyadic ties as it is plausible that these variables will correlate with gender. The former is controlled for by tracking the number of jobs completed by the seller; the latter is controlled for via an indicator dummy variable that codes 1 if the seller bids on a buyer whom she has had prior work done before. In addition to the control variables for skill, experience and relationships, we include the logarithmic bidding price as a *price* control variable. Jobs in Design and Multimedia are further classified into 35 subcategories such as "Web Design" and "Logos". These subcategories allow fixed effects specifications to control for *job type*. A list of these subcategories is found in Appendix A.

MODELS AND RESULTS

Overall Statistics

The jobs in our analysis sample attracts on average 9.88 bidders. This includes bidders not limited to the U.S., as well as bidders who identify as brokers and organizations (bidders outside of our analysis set). As such, the base rate of hire (if bidders were to be picked randomly) is 10.12%. Of these bids, 3.6% of all bids are "repeat bids": bids made with buyers that the seller has worked with before. Of all hires, 35% are "repeat hires": in these cases, buyers chose to hire sellers who have made a "repeat bid."

Establishing the Hiring Gap

We first attempted to ascertain whether there was any hiring gap among women and men. To do so, we ran a linear probability model with sub-category fixed effects. As such, the first set of models seeks to descriptively establish Hypothesis 3. While the binary nature of the dependent variable suggests a logistic regression specification which estimates a dependent variable bounded by 0 and 1 (Long 1997), we use and report Linear Probability Models (LPM). We do note that the results are robust to logit specifications. Here, we code 1 as a bid that wins a contract and 0 as one that does not.

To the extent that there are particular jobs that may require more or less relational attention, and to the extent that women could be better at identifying those and applying, we would see a similar pattern of results. We have attempted to deal with this potentially confounding issue in two ways. We specify our model with job category fixed-effects. For example, Logo Design and Banner Design are separate sub-categories of work which we were able to distinguish. If we believe that jobs at this level of specificity may vary in the importance placed on how relational an applicant is, then we will be able to net out this effect by considering the average effect within each of these job categories. Second, we understand that there may still be heterogeneity within these job categories, and in order to account for this, we clustered the standard errors by the specific job.

Results

Estimated model coefficients are reported in Table 1. Model 1 estimates the effect of gender on the likelihood of getting hired for the entire analysis sample. Overall, we find that female sellers have a 0.9% increased advantage getting hired. While this number seems low, we note that the model base rate of getting hired (intersect) is 7.62%; as such, being female grants an overall 11.8% increased likelihood advantage in getting hired – a non-trivial effect size.

Considering the control covariates, we find a small advantage for more experienced buyers, with larger advantages accrued for having good reputation and quality signals: a unit increase in level score gives an advantage of about 0.9%. Of note is that with the inclusion of level score, star ratings no longer play a significant role in the hiring calculus. Also interesting is the comparison of the gender advantage with level score: being female equates to about a 1 level score advantage on the platform. The other covariates behave as expected, with the exception of price. Surprisingly, the effect of bid amount is positive and significant: without attributing too much to this coefficient, we suggest that the price of the job is a variable that is multifaceted. While it might seem that buyers will naturally be attracted to lowest price sellers, in actuality, the bid amount suggests also a signal of seller quality and worth. The positive

effect suggests that in the category of design and multimedia, the price and value of jobs is not a proverbial race to the bottom.

Models 2 & 3 enters the dyadic tie or prior relationship variable as a control. We found that having a prior relationship heavily biases the hiring decision in favor of the seller: model 2 shows that without the gender variable, sellers who bid on buyers whom they have worked before have a 91% increased likelihood of winning a job. When entering this covariate with the gender variable, we find that the gender gap is attenuated but still significant: the advantage accrued to women is reduced from 0.9% to 0.3%: this advantage when compared to the model base rates is attenuated by the prior relationship variable from 11.8% to 4.0%. Evidently, women tend to bid on buyers with whom they have worked before, which works out to their favor. This result replicates the findings of Fernandez-Mateo (2009).

While it may seem that the prior relationship variable is the one that explains most of the variance in the hiring calculus, we note that such "prior relationship" bids and hires make up a minority of all Design and Multimedia hires on Elance. Only 3.6% of all bids were made to buyers with whom the sellers have worked before. Of all hires, the majority were "fresh hires": 65% of all contracts awarded during this period were awarded to sellers with whom the buyers have not contracted with before. While prior relationships may prove to be very important for the likelihood of the seller getting a job, evidently the dynamics of a fresh hire is just as important.

[Insert Table 1 about here]

Having established the existence of a gender difference in hiring on this platform, we now turn to demonstrating that the mechanism driving this result is due to the relational approach women take in applying for jobs. We consider this by considering the subset of bids made with no prior relations.

In Table 2, Model 4 tests whether or not women demonstrate a greater propensity in using relational language in their proposals. Here, our dependent variable is a measure of how relational a job proposal is. We see that controlling for a host of observable variables, women are indeed more likely to utilize language in their job proposals which are more relational versus transactional in nature.

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Specifically, females use approximately, 0.14 standard deviations more relational language. Hypothesis 1 is therefore supported.

Finally, we test the mechanism that the gender gap we observed above can be attributed to this difference in approaches between women and men. In Table 3 we again test the likelihood of a job applicant winning a bid as the dependent variable of interest. Model 5 replicates the results seen in Model 3 in Table 1 – as noted before, we now focus on the subset of bids are only those made by freelancers to employers they have never worked with in the past. For this subset, women are 4.1% more likely to be hired than men when compared with model the base rate (intersect); this is consistent with Model 3.

Model 6 then includes the relational-transactional variable. We find that job proposals that are 1 standard deviation away from the mean are 5.8% more likely to win a job as compared to the model base rate. This demonstrates support for our Hypothesis 2. Finally, in Model 7 we formally test hypotheses 3 by including both the relational-transactional measure of a job proposals text and the gender of the freelancer. We see that the measure of relational-transaction language remains highly significant; in addition, the effect size relational-transactional variable remains consistent. However, our indicator for female bidder is significantly attenuated and is no longer significant at the $p<0.05$ level. In summary, we find support that the hiring gender gap is significantly attenuated with the inclusion of a measure for how relational versus transactional one job proposal was.

[Insert Tables 2 and 3 about here]

DISCUSSION

We set out to fill a gap in the hiring literature by examining the potential supply-side differences between how women and men job seekers may approach the hiring process. While extant supply-side labor market research has focused on explanations for why women and men may choose different jobs – we concerned ourselves with examining gender differences in applying to the same job. We theorized that one dimension of difference between a female and male job seeker is whether they choose to emphasize relational versus transactional aspects in their job application. We demonstrated that women emphasize

relational aspects and men to emphasize transactional ones. Furthermore, we proposed and found support that this mechanism could explain an observed gender gap identified in our setting – an online market for freelancing services. In particular, because women approached the hiring process with a more relational perspective, we believed that employers were more likely to hire them because being relational evinced more commitment to the task at hand – thereby making them more attractive, net of observable measures of skill and ability.

Our paper attempted to bring further nuance to the literature on gender and labor markets in general (Correll 2001, 2004, Fernandez and Sosa 2005, Fernandez-Mateo 2009, Castilla 2008, Barbescule and Bidwell 2012), and in particular, to the literature which has attempted to emphasize the importance unpacking the highly nuanced black box of the hiring process (Peterson et al 2000, Peterson and Saporta 2004). To do so, we sought to highlight the importance of the micro-mechanisms of a job seeker's actions and suggest this as a fruitful line of research to engage in. The qualitative work which demonstrates how interactions related to work and employment (Turco 2010, Rivera 2012) affect career and labor market outcomes compels us to investigate the details of the hiring interface. We support these efforts with complementary quantitative analyses and submit that one fruitful path forward is to continue to investigate the interactions between job seekers and employers.

Significant work has been made in sociology and social psychology on establishing the potential for gender differences in behavior and preferences (Correll 2001, Ridgeway 2008, Eagly et al 2003) and we agree that a worthwhile direction is to consider the role of gender norms in labor markets. While prior research has demonstrated how gender norms of behavior generally lead to disadvantaged outcomes for women in business settings (Ibarra 1992), there is the potential for further investigation into what situations traditionally female behaviors may prove superior. For example, negotiation research suggests that because women are better at seeking out mutually beneficial outcomes that they will excel over their male counterparts in negotiations which grow the pie (Kray and Thompson 2005). There is also nascent evidence that women are more successful in raising money in online crowdfunding markets (Greenberg and Mollick 2014) because they are more willing to support one another with donations. The increase in

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communication between women grape growers in a traditionally male occupation leads them to be able to charge higher prices (Ody-Brasier and Fernandez-Mateo 2015).

We also bring to the forefront discussions regarding evaluations of commitment by an employer. Labor theorists generally agree on two distinct components as to how job applicants are evaluated by employers: competence and commitment. Competence judgment relate to an applicant's ability or skill in being able to perform the task at hand and has been the focus of much previous research. Commitment, on the other hand, relates to evaluations of the amount of effort, broadly construed, that a job applicant can be expected to put towards their endeavor. We agree with Correll and Bernard's (2006) contention that employee commitment is a valuable piece of the puzzle that labor theorists have neglected to date. One reason we believe this to be the case is the difficulty in actually capturing what aspects of an applicant would be indicate the commitment they plan on putting into the task. Commitment is a broad enough definition to be less clearly identifiable. Though nascent work has begun to ask the question and attack it by attempting to control for underlying and observable skill (Leung 2014). However, there is much more to do in terms of unpacking what commitment means, how it interacts with skill, what behaviors are attributed to one or the other, and how they may interact.

Given these findings, a reasonable question would be to ask if men who adopt behaviors which are more traditionally associated with women, would be successful or not. Gender role expectations would likely predict that men would not receive the same benefits from mimicking this behavior as women – as the potential for inconsistency would result in negative impressions. For example, women who exhibit more traditionally masculine behaviors are evaluated as being less likeable. However, this effect may be asymmetric in that men could adopt behaviors of women successfully. For example, theories on leadership (Eagly and Johnson 1990, Eagly et al 2003) suggest that need to adopt a broad toolkit of behaviors. We followed up on this notion by interacting the relational variable with the gender variable. If we believed that only women should benefit from acting relational because this was a more gender normative and that men would be punished for doing so, we should see this reflected in a positive interaction between being a women and using relational language. Our results demonstrated that this

interaction was not significant, suggesting that men could benefit from such behaviors on this website. Further in-depth, non-parametric analyses identified very successful male freelancers do indeed approach the job application with relational language – underscoring the fact that it is the behavior and not the gender per se in this case.

Another valuable contribution this paper makes is the use of linguistic measures of text data. The digital footprints left from online transactions are a rich source of insight into social behavior that is often very difficult to capture in offline settings. The text used to apply to jobs is merely one example of the granular data that could be available for investigation of both previously theorized, but difficult to test ideas or even novel theoretical insights. Yet, rich data is only the beginning and challenges remain to actually taking advantage of such information. In our setting, the text used in applying for a job was usefully analyzed utilizing computation text mining tools. We suggest that this is only a very nascent attempt at making sense of data such as these. Indeed, computer scientists have been at the forefront of creating tools to take advantage of these interactions as well. This paper is an early attempt at incorporating such techniques to identify relevant social interaction patterns.

A reader could ask whether the setting we chose is a special case, thereby limiting the results of the study. Regarding the online setting, it is certainly reasonable to contend that other forces are at play in an offline context, which wouldn't necessarily result in the same outcomes. For example, offline settings allow much more latitude in how one approaches the job application process. Holding aside the realization that much human interaction is quickly moving to online platforms – one thing to recognize is that our perspective (and not necessarily the precise estimates) should continue to matter in offline and more general labor markets. That is the behaviors one exhibits will continue to affect to employment outcome. What we are bringing to the conversation is a specific instance of a broader view that behavior at the hiring interface should be of concern to scholars of labor markets. Subject to the scope conditions outlined above, we believe that there are many other examples of instances in offline settings where a perspective such as this can be fruitful. For example, the stream of work on race and job search behaviors suggests differences in likelihood of acting as a reference by race (Smith 2005).

Another further nuance that we could explore is whether the preference for relationally minded freelancers is the result of an employer valuing commitment in their employees. Given this is an online, spot-market, for labor, we could posit that this is actually a stronger test of our contention – because commitment should be even less important in this case, where there is little employer specific knowledge to be gained. However, instead of commitment, could these results be driven by liking or affinity for the freelancer – as opposed to commitment? To explore this, we examined whether the importance of relational language changed as a function of how costly a job was. We posited that commitment will be more directly related to the job or task, whereas liking is a more diffuse. Given this, we expected to see that the effect of relational language on being hired to be stronger for more costly jobs – whereas if the effect was a function of liking, then there shouldn't necessarily be a change. Results unreported for brevity demonstrate that as jobs increase in cost, relational language became more important and valued by an employer. This suggested to us that commitment, and not necessarily liking, was a more direct explanation of these results.

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Figure 1
Elance Job Listing

Logo & Business Card Design ☆ Add to Watch List

Design & Multimedia > Logos

Posted: 3h, 1m ago | Budget: Less than $500

Time Left: 14d, 20h | Fixed Price Job

Location: Anywhere | Elance Escrow Protection

Start: Immediately | U.S. freelancers must have W9

Less Detail ▲

I need a logo and business card designed as soon as possible. Creativity is important as I need the logo to convey a specific message. I need 6 different original logo concepts by 6 different designers. After the logo is approved, I will need 6 different original business card concepts by 6 different designers. I need the first drafts of the logo within 24-36 hours of accepting the job. Depending on your work, I may require multiple revisions of the logo and/or business card.

Figure 2
Freelancer Job Proposal

Carol H. . ☆

🇿🇦 South Africa | Design & Multimedia | $27,623 Earnings | ★★★★★ 4.9 | ▶ Portfolio

Rate Proposal ○○○○○

Proposal

Nov 23, 2013 - 9:04 AM ET

I'd be pleased to work with you on designing your logo. I'm very creative, detail oriented and have never missed a deadline. I am the direct contact and will respond to you within minutes while working together on a project. Thank you.

Send a message to this Freelancer »

View More ▼ | Print

Bid ID: 49681086

$154.01 Delivery within 3 days

Collapse Proposal ▲

⊖ Hide | **Select**

Figure 3

First Principal Component Loadings of LIWC Categories

Figure 4
Word Clouds visualizing non-zero LIWC categories first component loadings
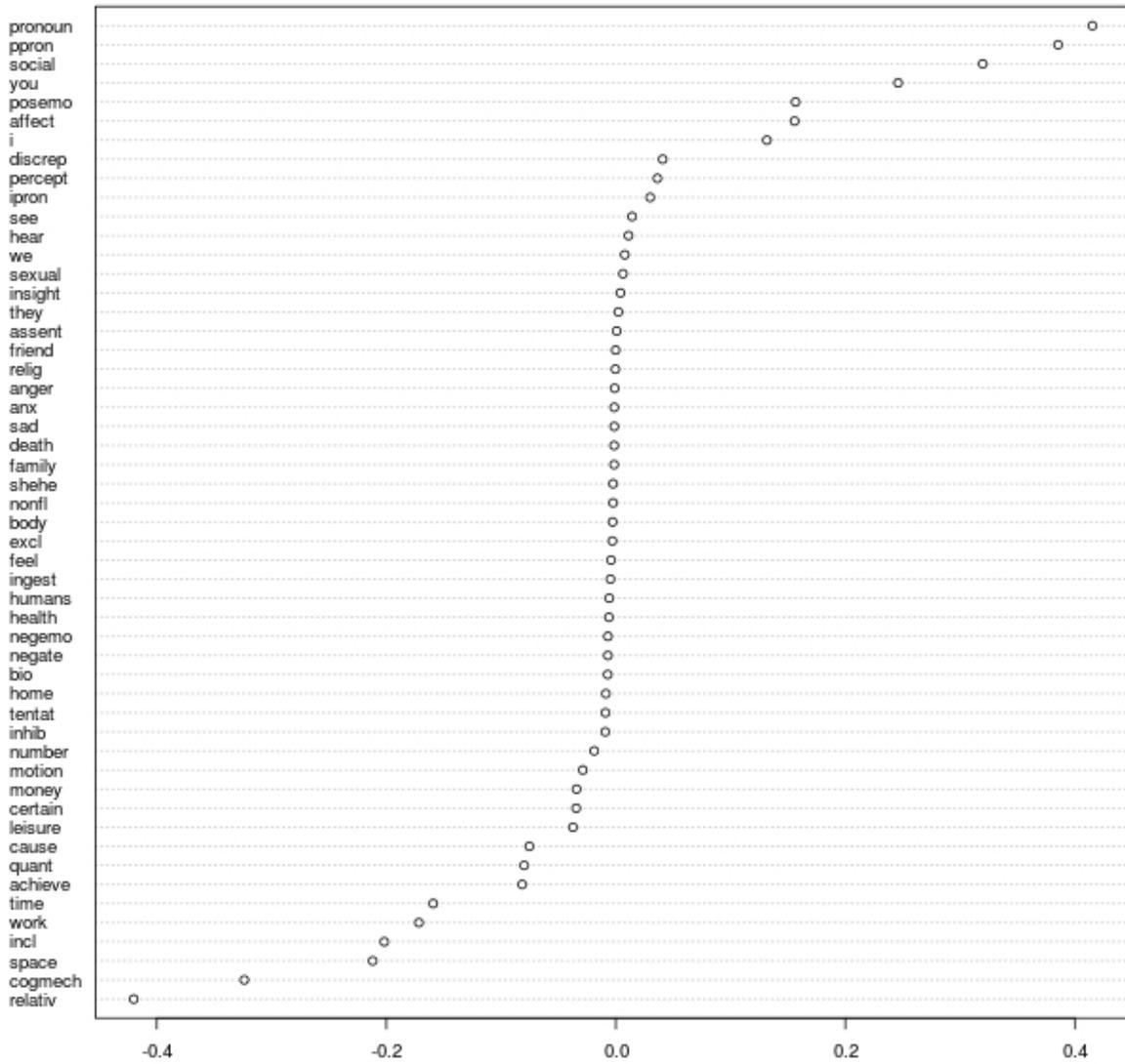Red = Positive; Blue = Negative

Figure 5

Anonymized High and Low Relational-Transactional Job Proposals (±2 s.d)

High Relational, Low Transactional (≥ 2 in relational-transactional score)

Bid ID: 323248
Thanks for your consideration. Your satisfaction is my paramount concern. Attaching a :30 demo from your attachment. Again, thanks...:)

Bid ID: 203058
I'd be pleased to work with you on designing your flyers. I'm very creative, detail oriented and have never missed a deadline. I am the direct contact and will respond to you within minutes while working together on a project. Thank you. [Name],[Company Name]

High Transactional, Low Relational (≤ 2 in relational-transactional score)

Bid ID: 438560
Web Designer / Graphic Designer
    7 years of experience in Media company
    Worked for International company like Cartoon network also as a freelancer for designing banners.
    Please find the attach resume.

Bid ID: 338180
Hello, I can see a few options right away, for example, making the g"resemble an 8, or using a 3 or backwards 3 for the E." Could also inset a clock at 8 inside the Q.
All simple ideas that wouldn't take long to execute inexpensively. This entire logo process probably could be done in less than a week, possibly a matter of days. I aim for 3 or so initial mock-ups and then with input, move forward (or backward) from that point.
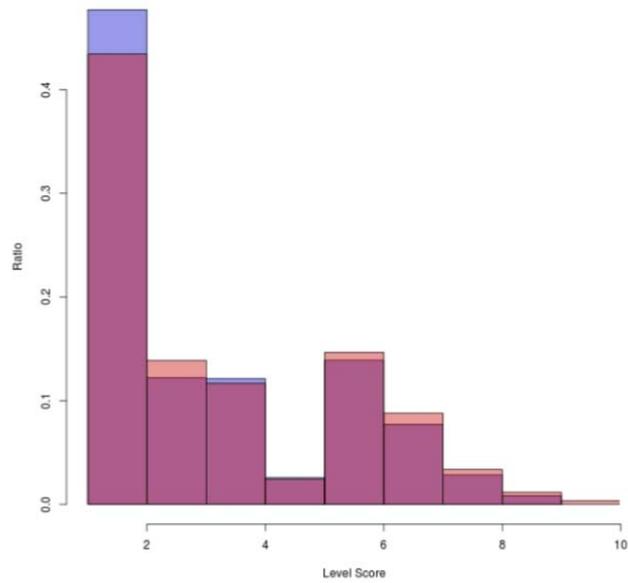[Website]
Thanks.

Figure 6
First Component Loading for all Job Proposals
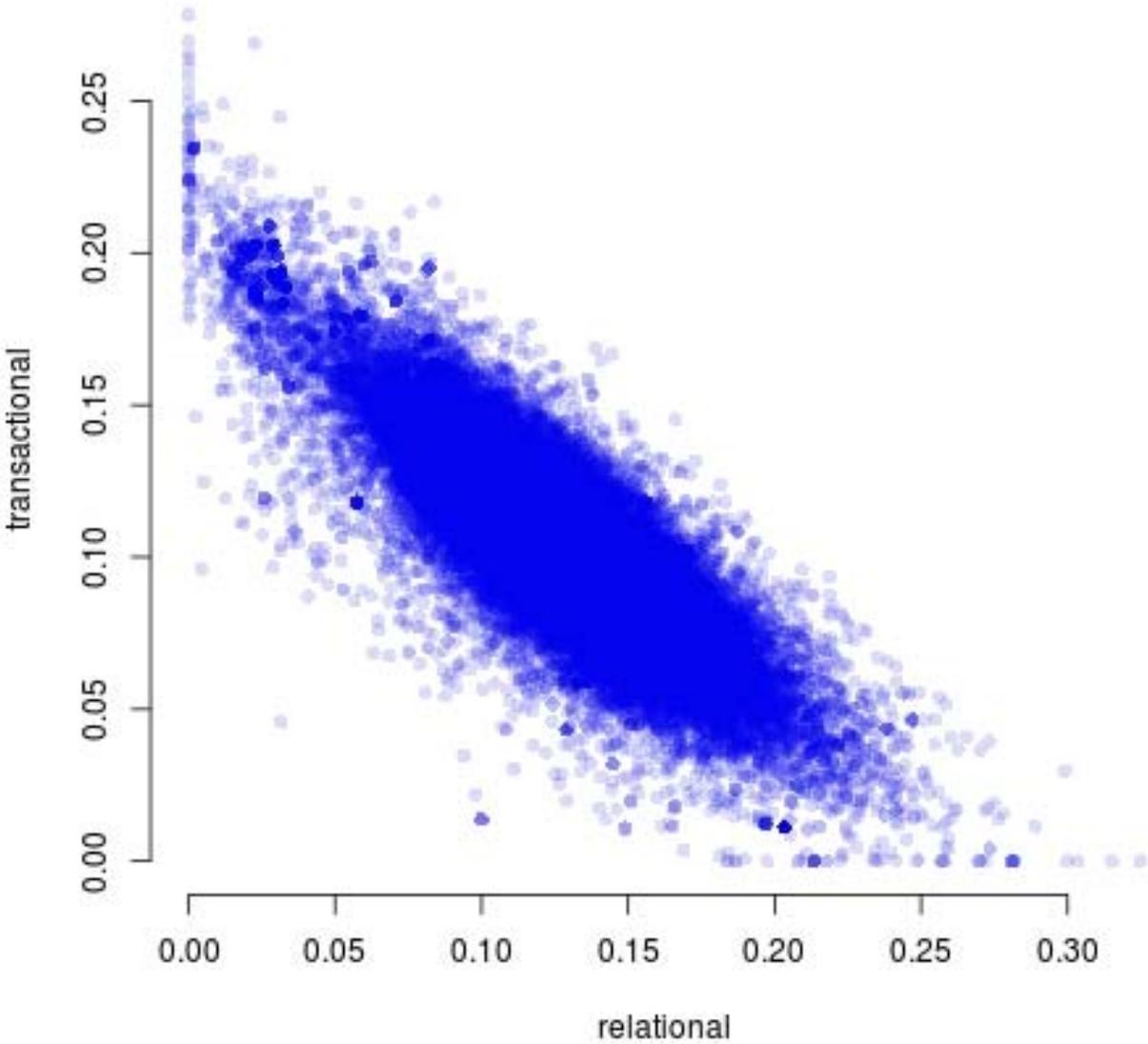
Note: First Principal Component, explains 23.6% of Text Variance in job proposals

Figure 7
Level Score Distributions of Male and Female Sellers

Note: Females and males are represented by pink bars and blue bars respectively; purple bars show overlap in distribution.

Table 1
Likelihood of Winning a Bid for All Bids in Sample
(Linear Probability Models with Subcategory Fixed Effects)

	Model 1	Model 2	Model 3
(Intercept)	0.0762 ***	0.0648 ***	0.0648 ***
	(0.0067)	(0.0055)	(0.0055)
Level Score/[levels]	0.0104 ***	0.0054 ***	0.0054 ***
	(0.0004)	(0.0003)	(0.0004)
Star Ratings/[stars]	0.0006	0.0002	0.0002
	(0.0006)	(0.0005)	(0.0005)
Experience/[jobs completed]	0.0003 ***	0.0001 ***	0.9105 ***
	(0.0000)	(0.0000)	(0.0034)
Log(Bid Amount/[USD])	0.0050 ***	0.0032 ***	0.0032 ***
	(0.0002)	(0.0001)	(0.0001)
Gender/[female]	0.0093 ***		0.0026 *
	(0.0016)		(0.0013)
Prior Relations/[yes]		0.9106 ***	0.9105 ***
		(0.0034)	(0.0034)
F	179.5 ***	2693 ***	2607 ***
df	159980	159980	159979
Adjusted R^2	0.03238	0.3354	0.3355

*Note: Standard Errors in Parentheses, * p < 0.05, ** p < 0.01, ***, p < 0.001*

Table 2
Relational-Transactional Score of Job Proposal
(Linear Probability Models with Subcategory Fixed Effects)

	Model 4
(Intercept)	-0.2794 ***
	(0.0254)
Level Score/[levels]	-0.0080 ***
	(0.0016)
Star Ratings/[stars]	0.0272 ***
	(0.0023)
Experience/[jobs completed]	0.0008 ***
	(0.0001)
Log(Bid Amount/[USD])	-0.0164 ***
	(0.0007)
Gender/[female]	0.1358 ***
	(0.0060)
F	332.6 ***
df	115817
Adjusted R^2	0.06428

*Note: Standard Errors in Parentheses, * p < 0.05, ** p < 0.01, ***, p < 0.001*

Table 3
Likelihood of Winning a Bid for Bids without Prior Relations
(Linear Probability Models with Subcategory Fixed Effects)

	Model 5	Model 6	Model 7
(Intercept)	0.0678 ***	0.0548 ***	0.0553 ***
	(0.0058)	(0.0067)	(0.0067)
Level Score/[levels]	0.0055 ***	0.0066 ***	0.0066 ***
	(0.0004)	(0.0004)	(0.0004)
Star Ratings/[stars]	0.0001	-0.0001	-0.0001
	(0.0005)	(0.0006)	(0.0006)
Experience/[jobs completed]	0.0001 ***	0.0002 ***	0.0002 ***
	(0.0000)	(0.0000)	(0.0000)
Log(Bid Amount/[USD])	0.0033 ***	0.0030 ***	0.0030 ***
	(0.0001)	(0.0002)	(0.0002)
Gender/[female]	0.0028 *		0.0021
	(0.0013)		(0.0016)
Relational-Transactional Score		0.0032 ***	0.0031 ***
		(0.0008)	(0.0008)
F	80.99 ***	63.31 ***	60.85 ***
df	154298	113693	113692
Adjusted R^2	0.01279	0.01298	0.01299

Note: Standard Errors in Parentheses, * $p < 0.05$, ** $p < 0.01$, ***, $p < 0.001$

Appendix A – Design and Multimedia Subcategories

<u>Design and Multimedia</u>
3D Graphics
Animation
Banner Ads
Brochures
Card Design
Cartoons and Comics
Catalogs
CD and DVD Covers
Commercials
Corporate Identity Kit
Digital Image Editing
Direct Mail
Displays and Signage
Emails and Newsletters
Embedded Video/Audio
Graphic Design
Illustration
Label and Package
Design
Logos
Menu Design
Music
Other - Design
Other - Multimedia
Services
Page and Book Design
Photography and Editing
Podcasts
Presentation Design
Print Ads
Radio Ads and Jingles
Report Design
Sketch Art
Stationery Design
Videography and
Editing
Viral Videos
Voice Talent