Networks or Lemons?
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ABSTRACT

Past research has argued that hiring personnel use employment as a signal of worker quality. If firms tend
to keep high ability workers, then those who are not employed will tend to be “lemons,” labor market
leftovers who are of uncertain quality. To the extent that employers rely on employment as a signal, then
well-qualified, but out-of-work job seekers will be stigmatized simply by being out of work.
“Networking” is commonly prescribed as a means for job seekers to overcome the negative signals of
being out of work. But for networking to work, someone must be willing to provide a connection for the
unemployed person. This begs two important questions: 1) will potential referrers also view
unemployment as a negative signal? and, 2) does the willingness to help depend on the strength of the
network tie? We design a survey vignette experiment to study how potential referrers react to the signal
of unemployment, and how their decisions to refer job candidates depend on whether the potential
referral is a friend vs. stranger. We find that referrers generally do react negatively to unemployed
job seekers. However, despite the risk to their reputation, friends are more likely to refer the unemployed, and
do so without distancing themselves from the unemployed candidate. This suggests that networking can
indeed solve the lemons problem confronting unemployed job seekers.

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There is a widespread belief that the unemployed suffer in the labor market simply by virtue of being unemployed. Akerlof’s (1970) “Lemons” paper argues that in market contexts where there is information asymmetry about quality, actors will rely on signals (Spence 1973, 1974) that are correlated with quality during screening decisions. Gibbons and Katz (1991) extend this reasoning to the labor market. If prior employers have good information about workers’ quality, they will tend to keep the best workers and let go of lower quality workers. To the degree that potential employers anticipate this behavior, unemployed job seekers will be assumed to be lower quality, and thus suffer from a “lemons” problem. If there is a nominal disadvantage to unemployment, then initial joblessness can lead to additional round effects where joblessness causes further joblessness. These issues are of concern from a public policy perspective, and have recently entered the broader popular discourse as well.

If, as suggested by the logic of the “lemons” argument, information asymmetry is an important source of disadvantage when hiring the unemployed, then finding connections who can bridge that information gap between unemployed candidates and hiring managers should lessen the reliance on signals and lead to better employment chances for unemployed, but qualified job seekers. A broad theme within sociology especially is the idea that network connections can be used to help the labor market prospects of the unemployed. Granovetter’s (1974) study of job-changers in the professional, technical and managerial labor markets in Newton, MA identified networks as a key matching mechanism for job-changers. He further proposed proactively creating network ties as a way of overcoming obstacles for the usually hard to employ (Granovetter 1979; see also Fernandez 2010). To the degree that networks improve information, they can mitigate the lemons problem suffered by the unemployed. This theme that “networks can help the unemployed” has continued in scholarship (e.g., Kasinitz and Rosenberg 1996), in popular HR job search practices (see e.g., Sharone’s [2014] discussion of networking clubs for job seekers), as well as in popular press discussions.

Networks for the Unemployed?

Labor market networks operate through the actions of three sets of actors: job seekers, connectors, and screeners (Rubineau and Fernandez 2015; Bidwell and Fernandez-Mateo 2008). However, for networking to help job seekers, someone must be willing to make connections for that job seeker. The fact that a network intermediary might have distinct incentives and goals raises the possibility that the intermediary – and not only the screener – might also suffer lemons problems when considering whether or not to connect people to jobs. While a number of papers have empirically explored who people refer for jobs using non-experimental quantitative data (e.g. Fernandez and Castilla 2001; Fernandez and Sosa 2005; Fernandez and Fernandez-Mateo 2006), the qualitative work of Smith (2003, 2005, 2007, 2008) is of particular interest here. She reports that network intermediaries in her sample of low-income, economically vulnerable workers are often concerned about the quality of the person they might refer to job openings out of fear that being associated with low quality candidates might reflect badly on them in the eyes of their employers.

While labor market networks may operate in a number of ways, we focus on employee referrals to study whether potential connectors exhibit a “lemons” logic in their networking. Referring is a

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1 See e.g., http://www.npr.org/2010/11/16/131367533/some-will-only-hire-if-you-already-have-a-job?sc=17&f= and http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2014/08/25/hiring-bias-against-the-unemployed-should-there-be-a-law, and http://latimesblogs.latimes.com/money_co/2011/02/unemployment-discrimination.html. From the LA times article: “… a Texas electronics company said online that it would "not consider/review anyone NOT currently employed regardless of the reason"; an ad for a restaurant manager position in New Jersey said applicants must be employed; a phone manufacturer's job announcement said "No Unemployed Candidates Will Be Considered At All"…”.

dominant mode for job matching in the US labor market (Smith et al. 2014), and recent studies report that the majority of referrals come from employee referrals: 55% of respondents in 2012 GSS reported their referrer already worked at the employer offering the job (Rubineau 2015). As intermediaries already employed at the hiring firm, employee referrers provide a unique perspective into how signals regarding unemployment are likely to be interpreted locally. Studying how employee referrers behave given various unemployment signals is important for shedding light on what factors matter in bridging the information gap between employers and candidates, and how networks can be used to mitigate the disadvantage of unemployment. Further, in contrast with network intermediaries not employed at the company, referrers employed at the hiring firm have “skin in the game,” and are likely to be attentive to the reputational implications of their referral choices (Saloner 1985; Smith 2005).

Even when the potential referrer does provide a connection, they might distance themselves from the referred person in order to protect their reputation, e.g., by asking the job seeker not to identify them as the source, thus the title of Smith’s (2005) paper: “Don’t put my name on it.” Marin (2007, 2012, 2013), too, reports examples of reluctant referring in her qualitative study of workers at a Canadian insurance firm. She found that referrers will sometimes refrain from contacting potential candidates about job openings at their firm out of concern that the candidate might misconstrue the referrer’s offer of help as suggesting that the potential candidate is in need of such help. These accounts suggest that potential referrers might hesitate when pondering potential referrals just as hiring agents are hesitant in the layoff and lemons problem.

However, potential referrers still likely face an important tension when making the decision of whether to refer a candidate to an opening. On the one hand, a referrer may approach the decision to broker a referral by adopting the perspective of the hiring manager. As argued by Smith, the risk here is that in serving as an agent of the company, the referrer will damage their relationship to the candidate and hinder the job prospects of those candidates. On the other hand, there is reason to think that to the degree to which the referrer is closely related to the candidate, the referrer can be pulled toward adopting the candidate’s rather than the hiring manager’s perspective. Heimer (1992) argues that network partners often operate primarily by obligations to connections they trust and for whom they feel some degree of obligation. Her argument that “life in organizations and networks necessarily entails obligations to concrete others that can be met responsibly only by adopting a particularistic orientation” (1992: 144). This implies that, when possible, strong ties should be helped. In other words, an “ethic of care” can guide network behavior when one party controls access to resources for a strong tie in an organizational setting. Indeed, this is the implicit intuition behind the policy suggestions telling the unemployed to “network” as means of gaining employment.

When faced with the opportunity to connect candidates to job openings, we posit that the propensity of employees to refer unemployed job candidates depends on which perspective the employee assumes: either one sharing the hiring manager’s interests, or one adopting the concerns of the unemployed job candidate. Such choices are driven by the two competing logics above: the “don’t put my name on it” social distancing, or an “ethic of care” to help friends. In order to empirically separate the extent to which these two logics drive referring behavior, we designed an experimental survey vignette study asking respondents to report their likelihood of referring a job candidate under varying employment statuses and strength of tie between the respondent and job candidate conditions.

We study two key propositions. First, as per the “don’t put my name on it” argument, referrers should be sensitive to negative quality signals that come from being unemployed. Concerns about the quality of the candidate should be particularly important when the referrer’s reputation is on the line with their employer. To the degree that screeners rely on the upstream screening benefits of referrals (see Fernandez et al. 2000), screeners are more likely to pay attention to the referring person’s referral when they are friends with the referral than when the referral is a stranger (Saloner 1985; Smith 2008, 2005, 2007, 2008). To the extent that this logic dominates, a potential referrer should be reluctant to incur the reputation risks from referring an unemployed candidate, whether or not the person is a friend or an acquaintance. Following this logic, if there is any difference in the propensity to refer, unemployed
candidates who are friends should be more strongly disfavored as potential job referrals than candidates who are strangers since the former are more closely linked to referrer in the minds of the screener.

However, according to the “ethic of care” logic, we should expect that referrers have a higher likelihood of referring an unemployed job candidate when they are a friend rather than a stranger. Importantly, we are further able to identify whether or not referrers follow an “ethic of care” logic for their friends. To the degree that unemployed job seekers are unappealing to referrers, referrers should only be more likely to refer unemployed job seekers when they can distance themselves from the candidate through anonymous referrals. The “reputation protection” logic would predict that unemployed candidates are more likely to be referred anonymously than non-anonymously, especially for friends. But such distancing through anonymity should not be in evidence to the extent that referrers are following an “ethic of care” logic for their friends.

To distinguish these processes, we adopt a comprehensive view of the negative unemployment signal and consider multiple ways in which such a signal can be interpreted. Whereas our main analyses contrast unemployed and employed job seekers, we also examine conditions where the candidate’s unemployment should be an even more strongly negative signal. Specifically, we study a number of conditions where we vary the cause for employment separation, the length of unemployment spell, and the degree of labor market competitiveness.

Experimental Survey Vignette Study Design

We study the conditions in which network connectors overcome the negative signals of unemployment and refer unemployed job seekers vs. the extent to which such network connectors guard the interests of their employer using an experimental vignette design. Vignettes present a hypothetical situation for respondents to consider theoretically relevant factors that can be systematically varied in the form of short descriptions (Rossi and Anderson, 1982). This method allows us to exogenously determine variations in the key conditions of potential referral’s employment status and the strength of the referrer’s social tie to the potential referrer. The causal inferences regarding the effects of the hypothetical conditions of employment and strength of social tie on the outcome of referral likelihood is generated by this exogenous variation. While critics argue the vignette method is deficient in external validity, evidence using behavioral benchmarks demonstrate remarkable predictive power of real-world behavior (Hainmueller, Hangartner, and Yamamoto, 2015). To strengthen the external validity of our design, we validate that the survey sample has representative experience making job referrals in the employment settings we test (discussed further below) (Hainmueller et al., 2015).

Using survey vignette experiments with between subject random assignment to condition, we assess referrers’ relative likelihood of referring equally qualified unemployed job seekers compared with employed job seekers (i.e., “active” job candidates), and employed people not actively seeking jobs (“passive” job candidates). The distinction between the two types of employed job seekers (“active” and “passive” seekers) included in this study is important as there is reason to believe that there might be a negative signal attached to actively seeking a job, even when one is employed. This is one of the reasons that people work through executive search consultants, as it is a confidential way of “passively” searching for jobs (Finlay and Coverdill 2002; Khurana 2002). Piskorski (2014) argues that this is one of the major benefits provided by social media platforms such as LinkedIn: it allows job seekers to make themselves available to the market (become “passive” job seekers) without making it explicit that they might be looking for jobs (“active” job seekers). Indeed, an on-line company – poachable.com – is based on this model (Silverman 2014).

We study the effects of various circumstances of unemployment, namely the length of the current unemployment spell, and whether the candidate was fired, laid off, or quit his previous employment. These factors account for the full extent of the information we provided concerning the quality of the candidate under consideration. In addition to varying the search status of the potential candidate, we randomly vary the strength of the relationship – friend vs. stranger – between the potential referrer and candidate. We compare the results across two job settings to study whether labor market tightness influences the likelihood of referring. Finally, we also collect open-ended responses from our respondents.
concerning what they felt were the most important considerations in making their referral decisions. This qualitative evidence (reported in Appendix B) supports our theoretical conclusions drawn from the empirical findings based on the main referral experiment.

Before entering the main study, all participants received an online questionnaire with a cover page stating,

"Organizations use a variety of means to recruit new hires. Referring by current employees is one recruitment method used by many organizations. We are interested in learning more about how individuals make decisions to refer people to their companies. Next are two short descriptions of hypothetical situations with questions about how you would behave in those situations. These are followed by a few short questions about your own employment experience."

Respondents then complete a survey in which subjects say how they would behave in a given hypothetical scenario involving the use of referrals. All hypothetical situations concern a potential job candidate named Ben.

A description of the potential referral’s current employment and job opportunity search status follows in the online survey vignette. As listed in Table 1 below, in our survey design we interact two dimensions of unemployment conditions experienced by the potential job candidate. We first define three conditions which vary the length of the unemployment spell. We also define three conditions for different causes of separation from the past employer. The interaction generates 9 unemployment conditions. To these, we add two additional employed conditions -- active and passive job searching behavior-- for a total of 11 employment conditions. Thus our experiment employs a between subject design with 44 conditions: 11 (unemployment and employment conditions) x 2 (labor market conditions: slack vs. tight) x 2 (friend/stranger status).

Table 1: The 44 varying conditions comprising the Experimental Vignette Study

<table>
<thead>
<tr>
<th>EMPLOYMENT STATUS (11 conditions):</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNEMPLOYED</td>
</tr>
<tr>
<td>(Length of Unemployment Spell):</td>
</tr>
<tr>
<td>[no additional information provided]</td>
</tr>
<tr>
<td>Less than 6 months</td>
</tr>
<tr>
<td>More than a year ago</td>
</tr>
<tr>
<td>(Cause for Separation):</td>
</tr>
<tr>
<td>Laid off</td>
</tr>
<tr>
<td>Fired</td>
</tr>
<tr>
<td>Quit</td>
</tr>
<tr>
<td>EMPLOYED, ACTIVELY Searching for Job Opportunity</td>
</tr>
<tr>
<td>EMPLOYED, PASSIVE, NOT-Searching for Job Opportunity</td>
</tr>
<tr>
<td>LABOR MARKET (2 conditions):</td>
</tr>
<tr>
<td>Entry-Level Programmers (Slack Labor Market)</td>
</tr>
<tr>
<td>Software Engineers (Tight Labor Market)</td>
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<tr>
<td>STRENGTH OF SOCIAL TIE (2 conditions):</td>
</tr>
<tr>
<td>Friend</td>
</tr>
<tr>
<td>Stranger</td>
</tr>
</tbody>
</table>
Combining the possible manipulations of the above, our respondents see the final additional information, "Based on his discussion board posts, it appears Ben [was/is] employed as a [Software Engineer/Entry-Level Programmer] before his firm ['let him go' / 'eliminated' his position / before he voluntarily quit] [less than 6 months ago / more than a year ago / (no additional information was provided)]."

All subjects are randomly assigned into either a “Friend” or “Stranger” relationship status with the potential referral. For the friend condition, respondents were told “A friend of yours, Ben, [was/is] a [Software Engineer/Entry-Level Programmer] ...” (Verb tense depends on whether or not the employment condition is unemployed vs. employed.) For the stranger condition, respondents “become aware of Ben who also participates on some of the same discussion boards as you.”

Across all 44 versions of the questionnaire (described further below), the phrase “Ben’s credentials and experience might make him a good fit for the job at your firm” is included. This additional information does not vary across condition so that any difference we observe in the likelihood of referring candidates is not due to “objective” credentials, but is instead due to other factors. The fact that we have randomly assigned subjects to these 44 conditions means that all omitted factors which might be associated with the responses to the two referral variables are controlled within the limits of sampling error. We include an attention check to ensure respondents understood the key conditions of Ben’s (un)employment status.3

The survey concludes by asking survey respondents a few questions about what considerations were important in making the decision whether or not to refer Ben to the job at the firm as well as the respondent’s demographics, professional background and their experience with referring.

**Dependent Variables**

Following the text describing the hypothetical vignette, participants are asked about two key outcome variables in which we ask them to play the role of potential referrers. Considering a potential job candidate to refer, participants are asked to rate on a 1 to 9 scale “How likely are you to do the following:” 1) “Contact Ben and encourage him to apply for the job as your referral”, and 2) “Contact Ben and encourage him to apply for the job, but NOT using your name.” The ordering of these two response questions is randomized so as to eliminate order effects from the responses. The “Refer with Name” item measures the likelihood of referring when the referrer associates their name with the candidate. This is the key dependent variable of interest in this study. The “Refer Without Name” item captures the likelihood of referring the candidate when the person can protect their reputation. We use the difference between these measures (“Refer Without Name” – “Refer With Name”) to measure distancing from the candidate during referring. The difference will be positive to the degree that the referrer is protecting his or her reputation by avoiding being associated with a potential candidate, and negative to the extent that the referrer is disregarding any such concerns.

**Hypotheses**

Before considering whether or not potential referrers avoid unemployed friends more or less than people previously unknown to them, it is important to establish whether unemployed job seekers in our setting suffer from negative signals under the lemons logic more generally. Therefore, our first set of hypotheses, H1a-H1d, specify the test of referrers’ general reaction to unemployment signals regardless

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3 Specifically, we ask respondents to recall Ben’s employment status with an option to choose among the following: ‘Ben was fired from his previous position’, ‘Ben quit his previous position’, ‘Ben was laid off from his previous position’, ‘Ben was actively employed in his current position’, or none of the above. Out of the 2,089 unique respondents, 334 answered this question incorrectly from the condition that they were assigned. Failure to respond accurately to our attention-based question was not correlated with any observables in our study. Our findings are robust when excluding respondents who gave incorrect responses to our attention-based question. In our main analyses, however, we do not exclude these noisy cases and as such our results are all the more conservative.
of the type of network connection. Then hypotheses 2 and 3 articulate our main predictions concerning the degree to which referrers protect their reputation with their employer by either “reluctantly referring” friends as a potential job candidate, or by distancing themselves from the job candidate through anonymous referring.

We start by assessing referrers’ strength of endorsement of equally qualified unemployed job seekers compared to employed job seekers (i.e., “active” job candidates), and employed people not actively seeking jobs (“passive” job candidates). From the signaling arguments laid out above, we expect that the better attached a referral candidate is to their current employment, the more attractive that candidate should be. Broadly then,

H1a. Subjects are less likely to refer unemployed candidates than employed candidates, all else equal.

An important scope condition in considering how negative unemployment spell signals are is the competitiveness of finding a job in the relevant labor market. Therefore, after proceeding from the initial cover page, subjects are randomly assigned into one of two labor market settings where they are asked to imagine themselves:

“...working at an IT firm. You frequently post on online discussion boards and in large internet forums discussing technical questions related to your work. Recently the Human Resources department at your firm has been sending emails encouraging employees to refer [Software Engineers /Entry-Level Programmers].”

This manipulation gauges the influence of relative labor market tightness (demand for new hires relative to available qualified candidates) on referral behavior. According to the Bureau of Labor Statistics, the employment of software developers (the closest occupation code in BLS to software engineer) is projected to grow 19 percent from 2014 to 2024 (BLS: Software Developers 2015). For computer programmers, the job outlook is projected to decline by 8 percent over the same time period (BLS: Computer Programmers 2015). By comparison, the projected job growth for all private sector occupations from 2014 to 2024 is 7 percent (BLS 2015). Given these labor market conditions, it should be relatively easier for minimally qualified software engineers to find a position than for programmers who are competing against many similarly skilled candidates for every given opportunity. To the degree that a lemons logic is being used, potential referrers should find unemployed software engineers to be particularly suspect. As discussed below, we include a follow up question checking the respondents’ understanding of these labor market conditions, and they exhibit a strong intuition about the ‘tightness’ of the two labor markets and its relevance in inferring employment quality. Thus, we hypothesize that:

H1b: Subjects are less likely to refer unemployed candidates in a tight labor market (software engineers) than candidates in a slack labor market (entry-level programmers), all else equal.

We include two additional scope conditions directly relating to the candidate’s unemployment experiences: the length of time spent unemployed, and the cause for separation from prior employment. For the length of current unemployment spell, we include spells of less than 6 months, more than a year, and no information provided. We expect that:

H1c: Subjects are more likely to refer unemployed candidates who have been unemployed for less time than candidates who have been unemployed for a greater length of time, all else equal.

For the dimension concerning the conditions of separation from previous employer, we vary whether or not the unemployed job searcher has likely been: laid off, fired, or voluntarily quit (we use indirect inference here to ensure the content of our vignettes are as realistic as possible). This dimension incorporates various reasons of prior separation from previous employers, namely whether they were
separated “for cause,” meaning the candidate is at least partly responsible for their separation (Gibbons and Katz 1991). We expect that:

\[ H1d: \text{Subjects are more likely to refer unemployed candidates whose cause for separation from their previous employer signals the least amount of candidate responsibility, all else equal.} \]

Our study is motivated to better understand how the strength of social ties between the potential referrer and job candidate influences the chances of referring the unemployed. As we argued above, under the “reputation protection” logic, potential referrers will be less likely to refer unemployed than employed job candidates, irrespective of whether the candidate is a friend or a stranger. However, if the “ethic of care” logic dominates, referrers will be concerned about helping a friend, including those bearing the negative signal of unemployment. In this case, unemployed candidates should experience greater referral likelihoods when connected to a friend than when they are connected to someone they do not know well. The implicit assumption in the belief that networking can help the unemployed is that the “ethic of care” dominates “reputation protection.” Consistent with this reasoning, we propose our main hypothesis:

\[ H2: \text{Subjects are more likely to refer friends who are unemployed than strangers who are unemployed, both across labor markets and within individual unemployment scope conditions.} \]

As discussed above, scholars have documented that people sometimes will refer unemployed candidates, but do so anonymously to protect their reputations. In the case of friends, however, the “reputation protection” logic may be dominated by the “ethic of care” logic. According to the former logic, unemployed candidates would be more likely to be referred anonymously than non-anonymously, especially for friends. But such distancing through anonymity should not be in evidence to the extent that referrers are following an “ethic of care” logic for their unemployed friends. Therefore, we hypothesize that:

\[ H3: \text{Non-anonymous referring will dominate anonymous referring when subjects are referring their unemployed friends, while the reverse will be the case when referring unemployed strangers. This will be true both across labor markets and within individual unemployment scope conditions.} \]

**Respondent Characteristics**

Subjects were recruited through Amazon’s Mechanical Turk (MTurk) to complete the survey online using Qualtrics in April 2015. While a convenient and readily available survey population, this population also has several desirable characteristics making it an appropriate response group: namely their reported experience in the information technology sector and their reported experience making actual job referral recommendations (described in more detail below). Operationally, MTurk matches online workers with Human Intelligence Tasks (HITs) assigned by requesters for monetary compensation. Because of the convenience in accessing reliable samples, MTurk is a popular site popular among social scientists for conducting survey experiments (Gaddis 2016; Horne et al. 2015). Although slightly more female, younger, and more educated than the U.S. population as a whole, evidence suggests MTurk provides data more reliable than undergraduate lab samples, and at least equal to other Internet samples in terms of data reliability (Behrend et al 2011; Buhrmester et al 2011; Paolacci et al 2010; Weinberg, Freese, and McElhattan 2014). Given that our experiment tests the response to situations where people are asked to weigh making a potential job referral, it is important to use a population likely to have experience making such decisions. Referring is common in the US labor market (Smith et al. 2014; see also Rubineau 2015), and the experience of our respondents is no exception. Overall, almost half of our respondents (46%) have direct experience with referral behavior in the labor market, with 36% having themselves been referred to a job opportunity, and 27% percent having referred someone else (including about 16% having done both).
This survey experiment was conducted in two survey rounds, five days apart, due to an insufficient response rate in the first round in April 2015 to meet full statistical power in interaction analyses across the 44 conditions. All main results are supported when analyzing only first round data (available upon request). (The entire study was conducted 4/17 - 4/21 (1st round) and 4/22-4/25 (2nd round), 2015). The survey takes about 5 minutes to complete. Both releases were of the exact same survey design but for the first release, we paid respondents $0.40 and for the second release we paid $0.60. Out of equity concerns, we did not prevent first-round respondents from participating in the second round but used double respondents' second responses only to validate within-user reliability. Across both rounds, 2,089 unique respondents completed the survey: 913 in round 1, and 1,176 in round 2. Of these 2,089, 224 subjects completed the survey in the second round in addition to the one submitted in round one. In the main analyses, we use only the first responses from these subjects. However, analyses of repeat respondents increase our confidence regarding consistency in baseline referral propensities, and that our findings are driven by the experimental manipulations, and not by any observable respondent fixed effects. (Results available on request). According to Buhrmester et al. (2011) and Mason and Watts (2009), the amount of payment offered to Mechanical Turk workers does not qualitatively change the quality of subjects and their attention and responses, although it does change the speed with which subjects are attracted to the study, and thus the time it takes to recruit the desired number of respondents. Consistent with this, we find no substantial difference in response quality between rounds, specifically in answering our attention check question correctly.

With random assignment of survey conditions using Qualtrics, each vignette condition received an average of 47 respondents, where the minimum number of respondents for a condition was 33 and highest was 64 respondents (randomization was done using Qualtrics’ randomization assignment across blocks. Such a seemingly wide range in the respondent distribution across randomized conditions is not uncommon using this method).

Respondents are relatively experienced with an average of 13 years of work experience. The mean age is 33, and 44 percent were female; 46% have less than 4-year college education, 43% have 4-year college education; 53% have less than $50k combined annual household income. The main effects measured in this study do not significantly change by any demographic characteristic; therefore we do not discuss these respondent demographic characteristics further. We use the Information Technology (IT) industry for our hypothetical vignettes, as many of the MTurkers who participated in our study have IT employment experience, and are indeed currently earning compensation for online work through their participation on MTurk. Over 13% of respondents report being currently employed in an IT position, not including those currently unemployed. Indeed, the IT industry is the second most frequently cited industry after “self-employed” (19%) and before retail (11%) and then education (8%), among 25 broad industry classifications self-reported by our Mechanical Turk respondents. In addition, respondents demonstrated an intuition about the ‘tightness’ of the two labor markets and its relevance in inferring employment quality. In answering the follow-up question to the main survey, “In general, how easy or difficult do you think it is for a qualified candidate to find a job in this position?,” the respondents assigned to the slacker labor market setting –those considering entry-level programmers—considered it more difficult to find a job than those in the tighter labor market, considering software engineers. Indeed, there is strong evidence that the labor market condition for the prospective candidate was an important consideration in deciding whether or not to refer. Respondents frequently cite Ben’s job title in their

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4 This is between-condition analysis, so these perspectives are not relative comparisons but absolute impressions of the tightness of the labor market. Respondents in the entry-level programmers condition reported 5.42 average difficulty versus 5.00 for software engineers on a 9 point Likert scale where 1 = ‘Very Easy’ and 9 = ‘Very Difficult’, where we tell respondents “‘Very Easy’ means there are many positions available for every given qualified candidate” and “‘Very Difficult’ means there are many qualified candidates for each position opening.” This .42 point difference is statistically significant: t(2087)=-4.37, p<0.001.
discussions concerning why they chose the level of referral likelihood, indicating this played a role in whether or not to refer Ben to a position with their hypothetical employer.

Finally, we asked all respondents to provide us with the considerations they deemed important in deciding whether to refer Ben to the job at their firm, for both anonymous and non-anonymous referring options. The answers to these open-ended questions lend qualitative support for our interpretation of our findings below. Results from this qualitative analysis are provided in Appendix B.

**Analysis and Results**

We begin by assessing whether referrers disfavor unemployed job seekers under various unemployment conditions. Empirically, to the degree to which such disfavor exists, we expect that the likelihood of referring candidates who are “Unemployed, Actively Searching” to be lower than the likelihood of referring candidates in the other two employment/search status conditions (i.e., Passive “Employed, Not Searching” candidates and Active “Employed, Actively Searching” candidates). As all of our hypotheses are unidirectional, e.g. that the unemployed are disfavored relative to other job candidates, we report our results using one-tail statistical tests. Our main results, however, are robust to stricter two-tailed statistical tests.

We find clear support for H1a: Unemployed candidates are significantly less likely to be referred than employed candidates controlling for all other factors (see column 1 of Table 2). Overall, the average score for all 2,089 respondents, is 6.11 on a 9 point Likert scale. In contrast to the average referral likelihood score of 6.51 for employed candidates (pooling both active and passive employed search conditions), unemployed candidates receive an average likelihood of referral score of 6.01.

**Table 2: Difference in Referral Likelihood by Unemployed/ Employed Status and Job Title, Pooling Employed Conditions**

<table>
<thead>
<tr>
<th>(1) Overall</th>
<th>(2) Software Engineers</th>
<th>(3) Entry-Level Programmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed (pooling “Active” and “Passive” Seekers)</td>
<td>6.51 (2.22) n=400</td>
<td>6.59 (2.10) n=192</td>
</tr>
<tr>
<td>Unemployed (pooling Unemployment conditions)</td>
<td>6.01 (2.45) n=1689</td>
<td>5.97 (2.48) n=808</td>
</tr>
<tr>
<td>Difference</td>
<td>0.50*** (t-test=3.72, d.f.=2088)</td>
<td>0.61*** (t-test=3.17, d.f.=998)</td>
</tr>
</tbody>
</table>

Standard errors in parentheses; One-tail tests ***p<0.001, **p<0.01, *p<0.05

Further analysis shows that employed passive searchers are not as likely to receive referrals as are actively searching job seekers. Indeed, while employed active searchers enjoy the highest referral likelihood scores in our study, passive searchers are referred as infrequently as unemployed candidates. While t-tests demonstrate strong differences in referral likelihood between unemployed candidates (6.01, s.d.=2.45, n=1689) and actively searching employed candidates (6.94, s.d.= 2.05, n=192; 6.01 vs. 6.94, t(1879) = -5.04, p<0.001), there is no statistically reliable difference between referral likelihood for unemployed as compared to employed passive searchers (6.12, s.d.=2.30, n=208; 6.01 vs. 6.12, t(1895)= -0.58). Apparently, in the eyes of potential referrers, employed passive searchers do not elicit the same level of help finding a job as do those who are actively searching. This also suggests that the unemployment disadvantage vis-a-vis the pooled active and passive employed search conditions shown in Table 2 is a conservative estimate of the degree of disadvantage.
For expository purposes, most of our reported comparisons of referral likelihoods for the unemployed are against only employed active job seekers. However, as mentioned above, all of our main findings remain when pooling both active and passive searchers, strengthening our confidence in the findings concerning the disfavor toward unemployed candidates in the labor market.

**Labor Market Tightness**

Table 2 also reports the differences in referral likelihood between the two labor market conditions in our study (columns 2 and 3). While the coefficient for the tighter labor market, software engineers, is lower than that for entry-level programmers, the slacker labor market, the -0.07 point difference is not statistically significant ($t_{(1887)} = -0.61$). Only when investigating the various scope conditions concerning various unemployment experiences, below, do we find conditional support for H1b. Therefore, while there is evidence that respondents register the tightness of the respective labor markets, it does not seem an important determinant for referring.

**Unemployment Duration**

The lemons logic suggests that the length of time spent unemployed signals information about the quality of a job candidate. We therefore expect potential referrers to adjust their propensity to refer depending on how long a candidate has been out of work. However, contrary to H1c, we find that job seekers who have been unemployed for over a year are more likely to be referred than job candidates unemployed for less than six months. Those who have been unemployed for more than 12 months are more likely to receive referrals by about 0.3 points than those who have only been unemployed less than six months (Table 3).

**Table 3: Differences between in mean referral likelihoods for Unemployed Candidates: ‘Less than 6 months’ versus ‘More than 12 months’**

<table>
<thead>
<tr>
<th>Unemployed, Actively Searching</th>
<th>Overall</th>
<th>Software Engineer</th>
<th>Entry Level Programmer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 6 months</td>
<td>5.888</td>
<td>5.964</td>
<td>5.824</td>
</tr>
<tr>
<td>$(.104)$</td>
<td>$(.154)$</td>
<td></td>
<td>$(.142)$</td>
</tr>
<tr>
<td>$n=547$</td>
<td>$n=251$</td>
<td></td>
<td>$n=296$</td>
</tr>
<tr>
<td>More than 12 months</td>
<td>6.182</td>
<td>5.989</td>
<td>6.369</td>
</tr>
<tr>
<td>$(.103)$</td>
<td>$(.150)$</td>
<td></td>
<td>$(.141)$</td>
</tr>
<tr>
<td>$n=569$</td>
<td>$n=279$</td>
<td></td>
<td>$n=290$</td>
</tr>
<tr>
<td>Difference:</td>
<td>-0.294*</td>
<td>-0.025</td>
<td>-0.545**</td>
</tr>
<tr>
<td>$(t-test=-2.00; d.f.=114)$</td>
<td>$(t-test=-0.11; d.f.=528)$</td>
<td>$(t-test=-2.72; d.f.=584)$</td>
<td></td>
</tr>
</tbody>
</table>

Standard errors in parentheses; One-tail tests ***$p<0.001$, **$p<0.01$, *$p<0.05$.

This is in contrast to studies on employer stigmatization (Eriksson and Rooth 2014) which find evidence of stigma against the long-term unemployed. Table 4 presents the differences in likelihood of referrals for the unemployed versus the two employed conditions, including “Passive Searchers” over all three categories of unemployment length by both software engineer and entry-level programmer conditions. We find again that Passive “Employed, Not Actively Searching” candidates are not advantaged in referral likelihood relative to unemployed candidates no matter how long the referrer the candidate has been out of work. Referrers seem to be saying that they do not judge employed job searchers as needing their help.
Table 4: Influence of Information about Length of Unemployment Spell on Likelihood of Referring

<table>
<thead>
<tr>
<th>Unemployed</th>
<th>vs. Active Job Seekers</th>
<th>vs. Passive Job Seekers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unemployed No Info</td>
<td>Unemployed &lt; 6 months</td>
</tr>
<tr>
<td></td>
<td>Unemployed No Info</td>
<td>Unemployed &lt; 6 months</td>
</tr>
<tr>
<td>Software Engineer</td>
<td>-1.085*** (.288)</td>
<td>-1.088*** (.292)</td>
</tr>
<tr>
<td></td>
<td>n=903</td>
<td>n=905</td>
</tr>
<tr>
<td>Entry Level Programmer</td>
<td>-0.872** (.280)</td>
<td>-1.000*** (.279)</td>
</tr>
<tr>
<td></td>
<td>n=978</td>
<td>n=992</td>
</tr>
</tbody>
</table>

However, this pattern differs for the two labor markets. Breaking out the two labor market conditions shows that the positive difference between unemployed candidates out of work for more than a year in contrast to those out of work for less than 6 months comes mostly from the positive difference within entry-level programmers. Though directionally the same, this difference is not statistically significant for software engineers.

Thus, while the evidence does not support HIc (that seekers unemployed longer than a year are more disfavored than those out of work less than 6 months), we do find, in conditional support for H1b, that subjects are more likely to refer unemployed candidates who have been out of work longer in a slack labor market than those in a tight labor market. Indeed, for entry-level programmers, unemployed candidates who have been out of work longer than one year are treated nearly the same as Active “Employed, Actively Searching” candidates, the most favored group for referrals in our study (no statistically significant difference; analysis available upon request). This means that not only are entry-level programmers out of work for over a year not more disfavored than those out of work less than 6 months, it does not appear that they are disadvantaged by their unemployment much at all.

Responsibility for Unemployment

For our final assessment regarding baseline levels of referral disadvantage toward the unemployed, we next examine whether potential referrers pay attention to ways in which unemployed candidates became separated from their previous employers. In support of H1d, we find that unemployed candidates who were fired by their previous employer are much less likely to be referred than unemployed candidates who separated from their previous employers for other reasons. Pooling the two other causes for separation (“laid off” and “quit”), we find that given a candidate is unemployed, having been fired results in a 1.37 point reduction on our 9-point scale in referral likelihood relative to other reasons for separation (t(1687)=-11.24, p<0.001). This result remains strong in both labor markets (1.40 reduction for Software Engineers, t(806)=-7.79, p<0.001 and 1.34 for Entry-Level Programmers, t(879)=-8.12, p<0.001). See Figure 1.

In sum, our findings to this point provide support that potential referrers disfavor unemployed candidates compared with those who are employed (H1a). Consistent with H1d, subjects are less likely to refer unemployed candidates who have been fired compared to candidates who have separated for other reasons. We find conditional support for H1b, that potential referrers are less likely to refer unemployed candidates in a tight vs. a slack labor market. However, we find no evidence in support of H1c, that potential referrers are less likely to refer candidates who have been unemployed for longer spells.
Hypothesis 2 posits that potential referrers will refer unemployed candidates more when the candidate is a friend than when the candidate is a stranger. In support of H2, we find significant evidence that respondents favor their friends when making referral decisions relative to strangers (see Figure 2). Irrespective of employment status and the two labor market conditions, friends experience greater referral chances than do strangers (t(2087)=12.32, p<0.001). The difference in referring between being connected to a friend versus stranger for unemployed candidates is strong, though somewhat smaller within employed candidate conditions. Across both labor markets, respondents’ likelihood of referring an unemployed friend is 1.23 points higher than when the unemployed candidate is a stranger (t(1687)=10.71, p<0.001). Among unemployed job seekers, being connected to friends yields consistently significant increases in likelihood of referrals. (See Appendix for interactions with the above conditions varied in terms of unemployment scope).

Strength of Tie to Referral Candidate

This benefit from being a friend versus a stranger to the referrer is robust to 20 of all 22 employment/labor market conditions. The exceptions are both for Entry-Level Programmers by cause of separation. For respondents’ in the Entry-Level Programmer condition the likelihood of referring unemployed candidates who was fired from his previous position is points .51 points lower when the unemployed candidate is a friend versus being a stranger (t(301)= -1.81, p<0.035); and of referring unemployed candidates who quit his previous position is points 1.62 points lower when the unemployed candidate is a friend versus being a stranger (t(304)= -6.66, p<0.001). These results support the intuition motivating the direction of H2. When there is a reason to assume responsibility on the part of the job candidate for their unemployment status that reflects poorly on their attractiveness as a potential hire, referrers are more likely to eschew close connections.
Referral Distancing

Another way the unemployed may be disadvantaged by potential referrer behavior is for referrers to distance themselves from the referral, perhaps out of concern for their reputation in the eyes of the screener (Saloner 1985; Smith 2005). H3 posits that referrers will be more likely to refer non-anonymously than anonymously when referring unemployed friends than unemployed strangers. To test this, we first calculate the difference between the likelihood of anonymous and non-anonymous referring (“Refer Without Name” – “Refer With Name”) and examine the relationship between this variable and whether the candidate is unemployed versus employed (i.e. pooling the two “Employed” conditions). The difference will be larger (more positive) to the degree that the referrer is protecting his or her reputation by avoiding being associated with the unemployed candidate. The mean for all unemployed candidates is -1.15 (s.d.=4.05, n=1689) while the mean for employed candidates, actively job-seeking is even more negative, -2.55 (s.d.=3.77, n=192). (See Figure 3). The mean for the difference between the likelihood of anonymous and non-anonymous referring (“Refer Without Name” – “Refer With Name”) for Passive “Employed, Not Searching” is -2.02 (s.d.=3.57, n=208). Pooling both Employed Conditions (“Active-“ and “Passive-“ Job-seekers), the difference is -2.28 (s.d=3.67, n=400). All comparisons to the Unemployed (pooled across the 9 scope conditions) are statistically significant at the .001 level. Thus, overall subjects are more likely to refer non-anonymously than anonymously.
Yet subjects are more likely to refer candidates anonymously than non-anonymously when the candidate is unemployed versus employed, suggesting that referrers are distancing themselves from the unemployed. In fact, the only employment/search condition in which we find evidence of referrers more likely to refer anonymously than non-anonymously is for unemployed candidates who were fired from their previous employer (mean difference=0.20 s.d.=3.94, n=566). Thus, the greater the referrer disfavor due to cause for separation from previous employment, the greater is the likelihood of anonymous referring. However, we find no evidence that respondents are more likely to refer anonymously than non-anonymously when considering unemployed candidates who have been unemployed for a longer period of time or are in a tighter labor market.

One of our two main predictions, H3, specifically addresses whether respondents considering referring an unemployed candidate might be more willing to put concern for their unemployed friend over concern for their reputation with their employer by referring friends non-anonymously. Non-anonymous referring exceeds anonymous referring when the candidate is an unemployed friend rather than an unemployed stranger (mean difference -1.15, t(1687) = -8.67, p<0.001). Thus, we find strong support for our prediction in H3, that referrer distancing should be more likely for strangers than friends (see Figure 4). While this care for friends is visibly stronger in the employed conditions, this finding demonstrates

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6 Comparing “Unemployed, Fired” with pooled “Unemployed, Quit” and “Unemployed, Laid Off” is statistically significant (t(1687) = -10.04, p<0.001).
7 Means: “Unemployed, >12 months” = -1.33 (s.d. 4.12, n=569), “Unemployed, <6 months” = -1.05 (s.d.=3.95, n=547) [wrong direction, not statistically significant]; “Unemployed, Software Engineer” = -1.38 (s.d.=4.06, n=1,000), “Unemployed, Entry-Level Programmer” = -1.35 (s.d.=3.96, n=1,089).
8 In general (across search/(un)employment conditions), respondents in our study are less likely to refer anonymously over non-anonymously for friends relative to strangers (mean difference -1.37, t-test=-10.31, d.f.=2087, p<0.000).
that being connected to a friend can significantly help an unemployed candidate overcome the disadvantages of unemployment in networking, even when referring non-anonymously.

Figure 4. Referrer Reputation Protection by (Un)Employment Status and Tie Strength

Discussion

Our study shows that compared to employed job candidates, especially those actively searching for new positions, unemployed job seekers are disfavored by potential referrers. However, the level of disfavor is much weaker between friends. Respondents still appear to be using “lemons” logic when deciding to refer friends, but the effects are less strong than when referring strangers. It seems, therefore, that the dominant logic behind the results in our study is that networks can be used to help friends who are unemployed overcome their “lemons” problem in the job market. These findings have important implications on how social networks can most help qualified candidates overcome unemployment status disadvantage in the labor market, as well as the efficacy of referral programs in attracting the best candidates to a firm.

We find that there is indeed a benefit for unemployed job seekers from networking. Unemployed friends are referred more than employed, non-friend, job seekers. This difference is also much greater when the contrast is against employed, non-friend, passive searchers. While employed actively job seeking friends are still more favored than unemployed friends, there is no statistically significant difference between passive job seekers and the unemployed. Further, depending on the conditions of a

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9 Unemployed friends are referred more than employed, non-friend, job seekers by an increase of 0.80 in reported likelihood of referring (t(1037)=4.45, p<0.001). When contrasted against employed, non-friend, passive searchers, then unemployed friends are referred more by a 1.03 point increase (t(949)=4.46, p<0.001). The difference in contrast to only actively searching employed candidates is also positive by .51 points and statistically significant at the p<0.05 level (t(928)=2.01, p<0.05). Employed actively job seeking friends are more favored than unemployed friends by 0.99, (t(944)=4.33, p<0.001).
candidate’s unemployment status, a friend may be just as willing to help the unemployed through referrals as assisting actively-searching employed friends. In particular, when a friend has been unemployed a long time (over 12 months in this study) after having been previously “let go” (i.e. laid off), they experience a noticeable increase in their chances a friend will refer them to an available position with their firm. In fact, respondents are equally likely to refer these long-term unemployed friends as they are their actively searching employed friends.\(^\text{10}\)

Moreover, when examining a respondent’s propensity to personally vouch for their referral, we find that friends are still more likely to refer non-anonymously, at risk to their own reputation, when their friend is unemployed. Across the board, there is no evidence that the degree to which respondents disfavor unemployed candidates is stronger for friends than for strangers. The dominant logic revealed here is that networks can be used to help friends.

These findings imply that subjects do not fully adopt the perspective of hiring screeners when making referral decisions. While we do not ask respondents explicitly to choose which alter’s perspective to adopt in our vignette study, the qualitative evidence about the considerations that were most important in deciding whether or not to refer and whether or not to refer anonymously are particularly illuminating in this regard (qualitative analysis available upon request). Concern for personal and friendship relationships are some of the most frequently cited considerations in these decisions, while responsibility and job qualifications consistently rank lower. These primary considerations lead respondents to decide whether or not to refer a job candidate to a position based more on personal feelings and valuations of social responsibility rather than on inference regarding potential job qualifications and ‘fit’ per se.

In contrast, from the hiring manager’s perspective the most attractive candidates are those who are actively employed and seem to be a good fit in their current position, in other words “passive” candidates. This is one of the reasons that Human Resources professionals often employ executive search consultants, as it is the job of the headhunter to go out and find the “passive” candidates who are the least likely to be “lemons” (Finlay and Coverdill 2002; Khurana 2002). We do not find strong evidence that respondents disfavor the unemployed when we compare unemployed candidates to the passive “Employed, Not Searching” (“passive”) candidates. Therefore, whatever other benefits there might be to hiring via referrals (Fernandez et al. 2000), hiring managers need to be wary that the candidates their employees refer may not be the ones most favored by hiring agents, i.e., employed “passive” candidates\(^\text{11}\). (See Note xi for further discussion regarding the “passive” searcher results).

\(^{10}\) Respondents are equally likely to refer these long-term unemployed friends as they are their actively searching employed friends: likelihood of Referrals for Active Friends- Unemployed, Laid off, over 12 months friends= 0.02 (t(194)=-0.065).

\(^{11}\) Table 4 presents the differences in likelihood of referrals for the unemployed versus the two employed conditions over all three categories of unemployment length by software engineer or entry-level programmer positions. The way to interpret this table is to read the coefficient in each cell as the decrease in referral likelihood of considering an “Unemployed, Actively Searching” candidate as compared to each the other two search status conditions (i.e., Passive “Employed, Not Searching” candidates, and Active “Employed, Actively Searching” candidates) within the two labor market conditions and across the three categories of unemployment spell length. We include the condition of “no additional information” to contrast the effects of simply supplying any additional information about the length of unemployment spell is to a referrer’s likelihood of referring an unemployed job candidate. Simply eye-balling the differences reinforces the fact that we find no increased disadvantage toward unemployed job candidates who have been out of work for more than a year relative to those out of work only less than 6 months. Indeed, for entry-level programmers, unemployed candidates who have been out of work longer than one year are treated almost no differently than Active “Employed, Actively Searching” candidates. This means not only are these entry-level programmers not more disadvantaged than those out of work less than 6 months, it does not appear they are disadvantaged by their unemployment much at all. The 0.607 decrease in referral likelihood for unemployed entry-level
With respect to theory, it is important to note that referring is much more likely to occur when the candidate being considered is a friend rather than a stranger. Indeed, within each of the employment conditions, there is a large difference in likelihood of referring when the candidate being considered is a friend compared with when the person is a stranger. These results support Heimer’s (1992) insight that people are adept at resolving potential conflicts between actions motivated by universalistic and particularistic norms. These results also have important implications for understanding the nature of how labor market networks work. Whatever the structural benefits of job search through weak ties are for the flow of non-redundant information about job opening (Granovetter 1973), these results serve to remind us that strong ties might still be important to motivate people to actually connect people (Smith 2005; Marin 2007; Sharone 2014a, 2014b; Kim and Fernandez 2016). Indeed, in Granovetter’s (1974) original study, he found hints of this process. He noted that an important exception to the “strength of weak ties” pattern: in some cases, when job seekers were having trouble finding jobs, then those people were “rescued” by strong ties in their networks.

While the problem of whose perspective to adopt is a general one for all labor market intermediaries (Rubineau and Fernandez 2015; Finlay and Coverdill 2000, 2007; Fernandez-Mateo 2007), the findings in this case are likely revealing that potential referrers are exercising an “ethic of care” (Heimer 1992) when using their intermediary position to help friends obtain positions at their firm. Simply put: other things equal, they would like to help the firm by suggesting qualified candidates, and also help their friends at the same time. Rather than adopting the perspective of the screener, respondents seem to partially ignore the “lemons” problem when the unemployed candidate is a friend. This interpretation is supported by the qualitative evidence provided by respondents in our study. When considering an unemployed candidate, friends are more than twice as likely as strangers to report an “ethic of care” consideration as important for their referral decision. This effect is even stronger when considering whether or not to let Ben use their name when applying to the job. See Figure 5.

programmer job candidates out of work for more than one year compared to software engineers is statistically significant at a 10% level (Chow test: F(1, 1875)=2.88, Prob>F=0.09).

However, in contrast to studies on employer stigmatization (Eriksson and Rooth [2014]), we do find evidence of referrer stigma against the short term unemployed, job-seekers out of worker for less than six months. We also find that again that Passive “Employed, Not Actively Searching” candidates are not advantaged in referral likelihood relative to the unemployed candidates no matter how long the referrer knows the candidate has been out of work if the candidate is unemployed. Our interpretation for this is that potential referrers are still adopting and ‘ethic of care’ approach to such candidates and are reluctant to interfere with a potential referral who does not seem to need a referral and who may not appreciate the extended offer (Heimer 1992; Marin 2007, 2012, 2013).
Our design is especially illuminating here. In particular, comparing the competitiveness between the two labor markets in our study, it is easy to imagine an activation of an ethic of care to influence potential referrer's behavior when considering a candidate who seems to be suffering from cyclical downturn beyond his control, which would be more likely the case in the more slack labor market for entry-level programmers than for software engineers. The differences we find between the two labor markets follow expectations: referrers were more likely to refer unemployed candidates out of work for more than a year relative to those out of work for a shorter amount of time in the entry-level programming condition. In logical support for this finding, the greater the competition between qualified candidates for each available job opening, as in more slack labor markets, the more difficult to find work no matter how well qualified the candidate. Higher productivity workers may choose to apply to only high quality jobs and/or set high reservation wages, and this may lengthen their unemployment spells (Eriksson and Rooth 2014). If this is the case, employers may not consider the length of the unemployment spell informative, as long as the spell is not too long. Among potential referrers, however, we find no support for increased disfavor toward unemployed job seekers who have been unemployed longer than a year as compared to less than 6 months. Considering the fact that in both labor market cases there is a real cause for concerns about skill deterioration, this is an unexpected finding.

These results have both practical and theoretical implications. To the degree that this interpretation is accurate, it is good news from a policy perspective. At least for the kinds of populations that respondents are conceiving of in this experiment, these results suggest that the admonition often given to unemployed job seekers that they should "network" are not likely to be undone by concerns about lemons. While these results may not generalize to economically vulnerable, low-income populations such as those studied by Smith (2005), at least in this subject pool, we find little evidence of reluctant referring. Based on these results, networking can help the unemployed.

While our conclusions support our main hypotheses, it is of course possible that the manipulations did not work in the experiment, i.e., that people did not understand the role they were being asked to play in the vignette. We think this is unlikely for several reasons. First, as noted above, this is a population that is generally familiar with the use of employee referrals. Second, we included
manipulation checks to see whether subjects understood that they were being asked to adopt the role of referrer of potential job candidates for their IT firm. These responses are significantly correlated with the key referring variable (“Refer with name”) in ways that would be expected if respondents are indeed responding to HR’s request for help in recruiting: the correlation between “Refer with name” and “likelihood of posting” is 0.18 (p<0.001) and “circulate to friends” is 0.22 (p<0.001) (pooling both Software Engineers and Entry-Level Programmers together). Furthermore, note that if reservations concerning the external validity of our study remain, then doubts about whether networks can really help the unemployed by solving a lemons problem are made more acute. In other words, if it is easier to say you will refer a friend in a vignette survey than actually do so in real-life, potential referrers should be less likely to help if there were real risks to their reputation on the line. Such concerns further motivate additional investigations into the efficacy of networking for the unemployed.

On the other hand, if our tests serve as reasonable approximations of how friends are treated compared with strangers in the market for referrals, then our findings demonstrate that at best networking can serve as only a partial solution. Even in this hypothetical situation, friends base referral judgments on a “lemons” logic. This finding suggests that the labor market benefits of weak bridging ties emphasized in the “strength of weak ties” argument (Granovetter 1974) need to be balanced against an “ethic of care” logic (Heimer 1992) that is apparently activated for friends. Further tests of concerning the applicability to different populations and broader labor markets conditions remain for future research.

Specifically, after the introductory statement “…Recently, the Human Resources department at your firm has been sending emails encouraging employees to refer Software Engineers/Entry-Level Programmers”, we asked respondents to rate on a 1-9 scale how likely were they “…to post to the discussion boards the information about job openings for Software Engineers/Entry-Level Programmers at your firm” and “…to circulate the information about job openings for Software Engineers/Entry-Level Programmers at your firm to your friends”. These are meant to measure the degree to which subjects are willing to reach out to respond to HR’s request and advertise the need for Software Engineers/Entry-Level Programmers.

Separately, the correlation is slightly greater when subjects are considering software engineers than entry-level programmers (0.20 and 0.24 versus 0.16 and 0.21, respectively).
References


Kim, Minjae and Roberto M. Fernandez. 2016. “Strength matters: Tie strength as a causal driver of networks’ information benefits.” Social Science Research (Forthcoming).


APPENDIX

Figure A1: Likelihood of Referring by Length of Unemployment Spell and Tie Strength

<table>
<thead>
<tr>
<th></th>
<th>No info given</th>
<th>Less than 6 months</th>
<th>More than 1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length of Spell</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stranger</strong></td>
<td>n=294</td>
<td>n=271</td>
<td>n=282</td>
</tr>
<tr>
<td><strong>Friend</strong></td>
<td>n=279</td>
<td>n=276</td>
<td>n=287</td>
</tr>
</tbody>
</table>

Figure A2: Likelihood of Referring by Reason for Prior Employment Separation and Tie Strength

<table>
<thead>
<tr>
<th></th>
<th>&quot;voluntarily quit&quot;</th>
<th>position &quot;eliminated&quot; (Laid Off)</th>
<th>&quot;let him go&quot; (Fired)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reason for Separation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stranger</strong></td>
<td>n=280</td>
<td>n=280</td>
<td>n=287</td>
</tr>
<tr>
<td><strong>Friend</strong></td>
<td>n=283</td>
<td>n=280</td>
<td>n=279</td>
</tr>
</tbody>
</table>
APPENDIX B: Self-Reported Most Important Considerations in deciding to Whether to Refer & Why/Why Not Ask for Name Use

Table B1: 8 Response Categories for “In deciding whether to refer Ben to the job at your firm, what considerations are important for you?” [Not mutually exclusive; typos in responses left uncorrected]

<table>
<thead>
<tr>
<th>Freq. Rank</th>
<th>Category</th>
<th>Basic Description</th>
<th>Example</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ability</td>
<td>Can he do the job?</td>
<td>“That he is qualified for the job”</td>
<td>1,144</td>
</tr>
<tr>
<td>2.</td>
<td>Personal (Friend) Relationship</td>
<td>He’s my friend and/or whether I enjoy working with him</td>
<td>“I would think about how good a friend he is and what kind of person he is”</td>
<td>419</td>
</tr>
<tr>
<td>3.</td>
<td>Dedication</td>
<td>Do I get a bonus?</td>
<td>“Trustworthy, competent, punctual, knowledgeable”</td>
<td>350</td>
</tr>
<tr>
<td>4.</td>
<td>Reputation</td>
<td>Does he make me look good?</td>
<td>“How it would reflect on me.”; “not let me down?”</td>
<td>298</td>
</tr>
<tr>
<td>5.</td>
<td>Responsibility</td>
<td>The condition under which Ben left his last job</td>
<td>“finding out circumstances of ben leaving prev job”</td>
<td>263</td>
</tr>
<tr>
<td>6.</td>
<td>(“Ethic of”) Care</td>
<td>Ben has a need and I’m in a position to help.</td>
<td>“he was an entry level programmer who is in need of a job”</td>
<td>246</td>
</tr>
<tr>
<td>7.</td>
<td>Fit</td>
<td>Whether or not Ben would make a good fit</td>
<td>“if I think he will fit in well at the company”</td>
<td>229</td>
</tr>
<tr>
<td>8.</td>
<td>Benefit</td>
<td>Do I get a bonus?</td>
<td>“is there a referral fee I would get?”</td>
<td>113</td>
</tr>
</tbody>
</table>
Table B2: 9 Response Categories for “In deciding whether to refer Ben to the job at your firm, what considerations led you to advise Ben to use your name or not use your name in his application?” [Not mutually exclusive; typos in responses left uncorrected]

<table>
<thead>
<tr>
<th>Freq. Rank</th>
<th>Category</th>
<th>Basic Description</th>
<th>Example</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Reputation</td>
<td>It’s a risk to my reputation</td>
<td>“if he is not good, I don’t want my name attached to him”</td>
<td>602</td>
</tr>
<tr>
<td>2.</td>
<td>Personal (Friend) Relationship</td>
<td>As a friend: vouching</td>
<td>“I would advise him to because he’s my friend and I would vouch for him.”</td>
<td>400</td>
</tr>
<tr>
<td>3.</td>
<td>Ability</td>
<td>Can he do the job well enough?</td>
<td>“Good chance of being hired due to his expertise in the field”</td>
<td>323</td>
</tr>
<tr>
<td>4.</td>
<td>(“Ethic of”) Care</td>
<td>My ability to help may matter.</td>
<td>“He would have a larger chance of getting hired by using my name”</td>
<td>302</td>
</tr>
<tr>
<td>5.</td>
<td>Responsibility</td>
<td>The condition under which Ben left his last job</td>
<td>“left of his own volition.”</td>
<td>257</td>
</tr>
<tr>
<td>6.</td>
<td>Benefit</td>
<td>Do I get a bonus?</td>
<td>“I may get a bonus referral if he is hired”; “Whether I could get credit”</td>
<td>184</td>
</tr>
<tr>
<td>7.</td>
<td>Dedication</td>
<td>work ethic; will Ben stick with the job?</td>
<td>”reliable, hard worker, dependable”</td>
<td>68</td>
</tr>
<tr>
<td>8.</td>
<td>Fit</td>
<td>Whether or not Ben would make a good fit</td>
<td>“Not use my name because he doesn’t seem like a good fit.”</td>
<td>89</td>
</tr>
<tr>
<td>9.</td>
<td>Merit</td>
<td>Fairness, advantage, nepotism concerns</td>
<td>“I think we would both prefer for him to get this on his own merit”</td>
<td>46</td>
</tr>
</tbody>
</table>