

ABSTRACT

DECONSTRUCTING SIGNALING THEORY: THE ROLE OF ORGANIZATIONAL, REFERENT OTHER, AND SELF-REFERENTIAL INFERENCES IN RECRUITMENT

By Katie E. Wright

Understanding recruitment is crucial for organizations to generate a qualified applicant pool from which they can select employees. Past research on recruitment has looked at applicant willingness to apply for a position and attraction to the company itself. More recently this research has explored the effects of signaling theory to explain these applicant reactions. To date, this research has focused primarily on the signals organizational policies might send to applicants about other aspects of the organization (e.g, profitability, diversity). The results of this research have been mixed, making it unclear as to whether policies act as signals for applicants. However, less emphasis has been placed on what organizational policies might signal to the individual about how they themselves will be treated, or affected if involved with the organization (i.e., self referential inferences). It can be argued that organizational policies will be more important for self-referential inferences than for organizational inferences. This study examined three types of signals that may be sent to applicants' and the effects of each on applicant's attraction to a company. Specifically I was interested in learning what kinds of signals firm reputation sends to applicants about a) other aspects of the organization; b) how other employees will be treated; and c) how the applicant will be treated within the company, or affected by the company. To accomplish this research I conducted an experiment using undergraduate psychology students and business students of the university.

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by

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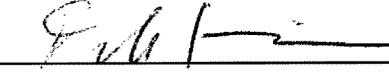
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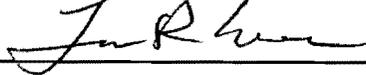
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INTRODUCTION

Obtaining the best applicant pool possible using effective recruitment practices is critical for most organizations. To advance the understanding of recruitment efforts and applicant attraction, numerous studies have attempted to identify information that would enhance recruiting efforts. Past literature has focused on identifying the influence of various organizational policies and practices on applicant recruitment. For example, companies have modified their pay, benefits and working conditions to see what attracts or deters applicants from applying. To understand the processes by which policies and practices influence applicant attraction, researchers have focused on the role of signaling in recruitment. Signaling theory posits that applicants form perceptions about employers based on incomplete information they encounter during the job search process, such as recruitment ads, and recruiters (Rynes & Miller, 1983). While it is seemingly logical to conclude that applicants would make inferences from known information during the job search, the findings with regard to signaling have been somewhat inconsistent. There are at least two possible reasons for this inconsistency: a) by presenting applicants with only positive stimuli or with no stimulus at all, and giving no representation of negative stimulus, past research has not measured the full range of signaling; b) by focusing almost entirely on the signals that are sent about other organizational characteristics or about how other employees will be treated within the organization, past research has missed the most important types of signals; those that indicate how applicants themselves will be affected by the organization. This latter point is particularly important given that

applicants tend to interpret characteristics of the job, organization, and the recruiter in light of their own needs and values to determine fit (Chapman et al., 2005). Inferences that are drawn at the individual level, or self-referential inferences, may actually be more important to an applicant than organizational level inferences. These self-referential inferences indicate to the applicant how they will personally be treated within the company, and what they will get out of working in the organization.

This present research expands our knowledge of recruitment by addressing both of these deficiencies in the prior research. More specifically, this study first took into consideration the presence of both positive and negative information about an organization. Second, it explored a new dimension to the signaling construct- one that is believed to be of greater importance to applicants as it measures directly how the applicants believe they will be treated within the organization.

To examine signaling theory more closely, the current research explored the influence of firm reputation on applicants' attraction and the inferences applicants make. Firm reputation was chosen as the signal because it is a concept commonly known or found when applying to jobs. It is also a broad concept, unlike statements of equal employment, employment at-will, diversity policies or other similar policies. The hope is that statements of firm reputation will allow applicants more ambiguity than specific statements, and therefore allow applicants to make more inferences. Past research also suggests that job seekers decisions to pursue jobs with organizations are based largely on their overall perceptions of organizational reputation (Turban & Cable, 2003; Gatewood,

Gowan & Lautenschlager, 1993; Highhouse et al., 1999), so we can be relatively assured that this information is salient to job seekers.

Previous Literature

Recruitment

Recruitment in organizations serves three primary functions: generating an applicant pool, ensuring demographic representation, and attracting more qualified applicants (Thomas & Wise, 1999). **Recruitment** is defined by Chapman et al. (2005) as a process that encompasses all organizational practices and decisions that affect either the number, or types, of individuals that are willing to apply for, or to accept, a given vacancy. According to a recent study of 33,000 employers from 23 countries, 40% stated they were having difficulties finding desired talent within the recruiting and hiring process (Ployhart, 2006). Spence (1974) also stated that the amount of time and effort it takes to learn an individual's productive capabilities means that hiring is a time-consuming and invested decision. Thus it is important to improve our understanding of recruitment.

Research in recruitment has focused on who and where to target, the best sources to use, how recruiters can affect applicants, and more recently applicant intentions to apply. For example Barber and Roehling (1993) investigated the process of deciding whether or not to apply for a job. They used verbal reports from participants as they evaluated job postings to decide if they wanted to interview. Findings from this research showed the participants responded more favorably to the amount of information supplied

in the job posting, and that applicants made inferences about unobserved characteristics and probability of hire from the job postings. Rynes, Bretz and Gerhart (1991) stated similar findings, adding in that job seekers decisions were consistent with signaling theory, in that subjects interpreted a variety of recruitment experiences as symbolic to organizational characteristics.

Organizational Fit and Signaling Theory

When finding organizations to apply to, applicants will be looking for those that best fit their needs. This concept of organizational fit is commonly tied to signaling theory. Behling (1969) suggests that applicants seek a fit with an organization or with the job being filled; adding that this can also be stated as person-organization fit [P-O] or person-job fit [P-J] fit. Cable and Judge (1994) have defined it as the capability for applicants to be attracted to, selected, and retained in an organization where the work environment best matches their own personal characteristics. This concept of organizational fit has been combined with signaling theory to help explain its effect.

Signaling theory argues that applicants form perceptions about employers based on incomplete information they encounter during the job search process, such as recruitment ads, and recruiters (Rynes & Miller, 1983). Turban and Cable (2003) point out that because applicants do not have a significant amount of information about an organization during the beginning of their job search; it is hard for them to pinpoint which jobs to apply for and which jobs to stay away from. Thus, they are left with only the information available to them which can include information such as the firm's reputation. In the area of recruitment, signaling theory is able to concentrate on the

beginning portion of the application process; what perceptions the applicant forms from the limited amount of information they are initially provided with in the job search process.

Signaling theory was first conceptualized in an article by Spence (1974) who described signaling as the amount of time or the number of times something has stayed in the market. For example something that is in the market repeatedly will have a better opportunity for the reader to invest, while something in the market only once or infrequently will have a lower probability of investment. This research specifically looks at markets with high amounts of signals. It tries to create a model for signaling using an understanding of equilibrium. Spence's (1974) conclusion is that when decisions need to be made without complete data or information, individuals make inferences about missing information. Applying Spence's signaling theory to the job marketing; Spence would say that the decision to apply would be based on the inferences made from the information provided. Since job applicants are generally given a limited amount of information about an organization before they apply, they must look to signals to fill the missing information. Although older, Spence (1974) is still the foundation of most published signaling research and research on signaling in job markets (Turban & Greening, 1996; Turban & Cable, 2003).

Turban and Cable (2003) used both signaling theory and social identity theory to explain why applicants should be interested in organizational reputation. The two theories offer different perspectives. Social identity theory suggests that a person's identity and self-esteem are partly determined by their membership in social organizations, such as

places that they work for (Lievens, Van Hoye, & Anseel, 2007). Ashforth (1989) suggested that people try to classify themselves and others into certain social categories (such as the organization that they work for), to order their social environment as well as identify where they fit into their social environment. Social identity theory states that organizational members develop a sense of who they are from their organizational membership (Lievens, Van Hoye, & Anseel, 2007), and this concept has been used in recruitment to explain an applicant's organizational fit and identification with an organization. While Turban and Cable (2003) were able to use both theories, use of these theories in future research will depend on whether one is aiming to look at how the applicant makes perceptions about the organization during the application process (signaling theory), or if they intend to find the applicant's organizational fit once in the environment (Social identity theory). It is because of this difference that this study will look at signaling theory, and not Social identity theory.

Applicant Attraction

Applicant attraction is a construct that is intended to measure the degree to which an applicant finds a particular job opportunity desirable. A company's prospective applicants are dependent upon their ability to attract individuals to the job opportunities that they offer. When attraction is higher, an organization is more likely to receive a bigger applicant pool and increase the amount of applicants to select from. **Attraction** encompasses such dimensions as the general attractiveness of, and interest in, an organization and the potential employer, applicant preferences regarding employers, and probability of application (Cober et al., 2004).

Applicant Attraction and Firm Reputation

Barber (1998) stated that when deciding where to apply applicants are generally not “blank slates,” but that they already have some impression about the organization before they are exposed to recruitment efforts. In most cases these impressions are known as organizational image (firm reputation), and have been shown to affect the organization’s ability to attract applicants (Frombrun & Shanley, 1990).

With regard to applicant attraction, Chapman et al. (2005) conducted a meta-analysis in the area of applicant attraction, to clarify processes that might be involved in job choice. Chapman et al. (2005) looked at four recruitment outcomes variables. These variables included *job pursuit* (applicant’s intentions to pursue a job), *acceptance intention* (likelihood that an applicant would accept a job offer), *job choice* (likelihood that an applicant would accept a real job offer), and *job-organization attraction* (applicant’s overall evaluation of the attractiveness of the job/ or organization). Overall results showed that applicant attraction can be predicted by job – organization characteristics, recruiter behaviors, perceptions of the recruiting process, perceived fit, and hiring expectancies. While this research was able to recognize that applicants are attracted to job-organizational characteristics such as firm reputation, Chapman et al. (2005) did not look at theories which could predict attraction such as signaling theory.

Firm Reputation

Frombrun and Shanley (1990) identify **Firm Reputation** as a public’s affective evaluation of a firm’s name relative to other firms. This reputation can be very valuable because it can provide information to constituents about investors and potential

applicants (Fombrun, 1996; Fombrun & Shanley, 1990). It also affects applicant pools through initial attraction to a company (Gatewood, Gowan & Lautenschlager, 1993; Rynes, 1991). Rynes (1991) argued that firm reputation is the objective of recruitment, and should be the foundation of future research in the area.

Rynes (1991) added that understanding what attracts applicants to a firm should be a priority because if top applicants withdraw from the applicant pool the overall utility of the selection system is diminished.

Gatewood, Gowan and Lautenschlager (1993) looked at corporate image and recruitment image among groups of students. The intent of the research was to enhance information about variables that influence initial decisions to apply. Measures used to explore firm reputation included reputation ratings from periodical listings such as Fortune 500. Ratings were found for all organizations listed in the 1990 Fortune survey. Findings, from this research were consistent with Rynes' (1991) conclusions; that image is highly related to potential job applicants' intentions to pursue further contact with a firm. Further analyses show that image is a function of the amount of information an applicant is given on the organization. Overall corporate image was positively related to potential applicants' interaction with the organization, which includes exposure to advertisements, use of products or services, and studying the organization in class.

Later research includes Turban, Forret and Hendrickson (1998). This research looked at applicant attraction to firms both before and after recruitment interviews. Hypotheses included replicated hypotheses from Rynes (1991) stating that organizational attributes will have a positive effect on applicant attraction to the firm, as well as new

hypotheses to test their model of organizational reputation. Findings, consistent with Rynes (1991), showed that organizational attributes do have an effect on applicant attraction. However, they also found a negative relationship between organization reputation and applicant attraction. With further investigation, it was shown that in testing this hypothesis analyses were run using surveys that were answered by applicants after they had been interviewed by the company, and did not include surveys answered before they had entered the company. When results are used only after applicants have been introduced to a company, an error may also result. This possibility for error is due to recruiter impact which can happen when an applicant enters a company, and includes things such as negative behaviors by a recruiter, which could then affect applicants' opinion of firm's reputation. For example past research has found that recruiters who are perceived as unfriendly during the interview process may signal an unfriendly work environment (Goltz & Giannantonio, 1995).

The present study attempted to further the findings of past research recruitment, as well as replicate what has been shown in the past. Many studies have been conducted to replicate these findings and have come to the same conclusion (Gatewood, Gowan, & Lautenschlager, 1993; Turban, Forret & Henderickson, 1998). Furthermore, research conducted by Lawler, Kuleck, Rhode, and Sorenson (1975) found that firm attractiveness ratings when obtained months before interviews were related to later job choices. Through this research they found that when students were presented with two or more job offers, 80% of them accepted the job with the higher firm rating. It is because of this that it was proposed:

Hypothesis 1: Positive information about firm reputation will result in higher levels of applicant attraction than negative information about firm reputation.

Signaling Theory

The interest of the current study was to look at the signaling effects that occur when applicants are presented with information about a firm's reputation. Rynes, Bretz and Gerhart (1991) looked at how job pursuit intentions may be bound to pre-interview criteria rather than post interview criteria. To measure how job choices were made, participants were interviewed twice over a period of four months. Interviews were set up by presenting applicants with a variety of recruitment experiences that might typically be expected in a hiring process, such as time delays. Findings from this research revealed that timing or delays within the hiring process were seen to have the most impact on applicants' job decisions. These timing delays created inferences that something was wrong with the organization. Consistent with signaling theory, Rynes, Bretz and Gerhart (1991) found that recruitment experiences have a stronger signaling value when little is known about the organization prior to the job search. Applicants also interpreted the variety of recruitment experiences as symbolic to other organizational characteristics.

In the area of applicant attraction, signaling theory has been used as a way to explain why applicants may be drawn toward, or pushed away from, an organization. Within several recruitment studies, signaling has been seen as a way to predict applicant attraction, and help to understand applicant job pursuit intentions. When looking at signaling theory, three distinct constructs appear with two constructs receiving attention in the research. The first construct to receive attention examines signals about what the

company or the organization as a whole might be like or organizational inferences. For example, Behrend, Baker and Thompson (2009) used signaling theory as a way to see the effects of pro-environmental recruitment messages on job applicants. Behrend et al. (2009) believed that when organizations used pro-environmental messages for recruitment, applicant's perceptions of the organization would increase or become more positive; which would then increase job pursuit intentions. To measure this effect, Behrend et al. (2009) presented applicants with WebPages containing either a pro-environment statement or not providing a statement at all. Findings from this research showed that organizations that use pro-environmental messages in recruitment receive an increase in applicants that want to apply, and have a more positive perception of the organizations reputation. However, contrary to their hypotheses, they found that the message's effect on job pursuit intentions were not contingent upon the participant's own environmental stance. Left unanswered is the impact of negative information about the company's environmental reputation; i.e., whether applicants are repelled from those companies that do not state environmental information.

Another example of organizational inferences is in the study conducted by Lievens and Highhouse (2003). This study looked at difference in attraction when comparing trait inferences (innovativeness or prestige) against job and organizational inferences (pay, bonuses, and benefits). Lievens and Highhouse (2003) also looked at the difference in respondent groups considering both the view of senior college students and employees of a bank. Analyses found at least partial support for all hypotheses; stating main findings that, in considering both respondent groups' trait inferences about the

organization, accounted for more variance over job and organizational attributes. This shows support that information about reputation or prestige has a greater impact on applicant attraction than information about pay, bonuses, or benefits.

The second construct that is commonly addressed in research is how the company will treat others, or its co-workers, or referent other signals. Rynes and Miller (1983) used this construct from signaling theory to explain if recruiter behaviors such as how informative recruiters were, would lead to perceptions of how the company treats others. To measure this affect, Rynes and Miller (1983) presented applicants with one of two videotaped mock interviews. Participants were either shown situations in which the recruiter knew a lot of information about the organization, or which stated information about the attractiveness of the job. However, while their first study found this to be true, after repeating the study those results could not be replicated. Again, like the study conducted by Behrend et al. (2009), Rynes and Miller (1983) do provide applicants with negative information about the organization, and they measured it in such a way that results were inconsistent.

While this is just a glance, the majority of studies within signaling theory center around these two constructs. A more salient question for applicants may be “how I will be affected if I were to work here”. This construct, or self-referential inferences, suggests that when applicants are considering jobs, they are more interested in signals relating to how they will personally be treated within an organization, more so than signals about what the organization is like as a whole, or how they treat potential co-workers. In other words, when applying for jobs applicants are more concerned about what they will get

out of the situation, they are with broad organizational characteristics. To my knowledge, the signals directed to the individual, or self-referential signals have only been reported once; Jones, Willness and Macneil (2009) looked at signaling at the individual level by manipulating online recruitment web pages, by stating their participation in corporate social responsibility (CSR), and seeing how the applicant felt that they would fit in that given organization. Jones, Willness and Macneil (2009) believed that companies stating their engagement in CSR would signal more positively to applicants about how they would be affected if they were to work there. To conduct this research at this new level, applicants were asked to review designated web pages, and then respond to a set of items including questions regarding perceived organizational support.

Results provided support stating that when the organization announced engagement in CSR, applicants viewed this as a positive signal about how they would be treated if they worked in the organization.

While there has only been one reported case of the construct of self-referential signaling, it was shown to be significant and encouraged future research of this inference type. Arguments used in justifying the use of organizational signals state that the selection procedures that an organization uses can affect the organization's overall ability to attract applicants. While reasons used in past research to justify the construct of how they treat employees' state that applicants may take recruiter behaviors such as attentiveness or how informative they are about the organization as signals of the quality of interpersonal relationships, or the nature of supervision that they may encounter when working in the organization (Rynes & Miller, 1983).

The current research assessed the significance of signals of all three proposed constructs. Based on this past research it was anticipated that:

Hypothesis 2: There are three distinct categories or types of signaling: those related to the organization (organizational inferences), those related to how the company treats others (referent other inferences), and those related to individual (self-referential inferences).

In using the signal of manipulated firm reputation, and in consideration of the three signaling constructs, and how they have been justified in previous research it was proposed that:

Hypothesis 3: Applicants make (positive or negative) inferences about organizational characteristics based on information about firm reputation (positive or negative).

Hypothesis 4: Applicants make (positive or negative) inferences about how the company treats others, or co-worker characteristics based on information about firm reputation (positive or negative).

Hypothesis 5: Applicants make (positive or negative) inferences about how they will be affected if they were to work for the company, or self-referential characteristics based on information about firm reputation (positive or negative).

While positive firm reputation should result in positive signaling regardless of the type of signals one is looking at, it is expected that the effect on self-referential signaling will be strongest. Past research suggests that people are more attuned to information related to themselves, than to others. According to De Dreu and Nauta (2009), people are

born with an innate tendency to be more concerned with their self-interests than others. This idea goes back to Freud's use of ego, or individualism, where an individual's motive is based on itself rather than others (altruism) (Paulsen & Thilly, 1990). Sui et al. (2009) looked at this concept from the view of self-referential stimuli. Through this research participants were presented with both self-referential stimuli and other stimuli. Measurements were then taken to see to which stimuli participants were more attuned to. What they found was that, in early stages, participants are initially more concerned with establish self-referential cues, and that this is a more reflexive attention in early stages. This attention was also found to shift in later stages to friend or other-referential stimuli. It is from this literature that it was hypothesized that:

Hypothesis 6: Firm reputation will have a stronger effect (positive or negative) on individual signals than on either organization or co-worker signals.

METHOD

Sample

Participants were 251 undergraduate students at the University of Wisconsin Oshkosh. Of those, 9 surveys were dropped for large sections of incomplete data, leaving 242 in our sample. Undergraduate students were those enrolled in business or psychology courses. Those enrolled in psychology courses were recruited through the Psychology Participation Pool using Sona Systems, while business students were those in select business courses. Average age of participants was 22 years, with 60.7 % of them being female, and 39.3% being male. Of those 88.8% indicated an ethnicity of Caucasian/White (non-minority) and 9.9% indicated being a minority, the remaining 1.3% did not identify any ethnicity. Sixty-three percent of participants indicated having a major in the business, 7% of participants were education majors, 7% of participants were undeclared in major, and the remaining 25% were from various other majors. The average grade point average (GPA) was 3.05 out of 4.0.

Materials

Participants were provided with two things. First they were assigned randomly to one of three company profiles. Profiles consisted of approximately one paragraph stating instructions, and depicting the companies' profile. Next the students received a survey packet. Survey packets consisted of questions regarding applicant opinions based on information provided in the company profile, and demographic questions in which students were expected to circle the answer best representing their response, or consisting

of blanks for students to fill in their own response. Surveys took around 20 - 25 minutes to complete.

Firm Reputation

Firm reputation was manipulated through the creation of company profiles. Three profiles were created and administered to participants at random. Below Table 1 displays all three profiles in how they manipulated firm reputation.

Table 1

Company Profile Manipulation of Firm Reputation at All Levels

Favorable (High)	Moderate	Unfavorable (Low)
In a survey of alumni conducted in 2009, this company was ranked in the top 25th percentile of companies they'd like to work for. This company has appeared on one or more published lists (e.g., <u>Business Week</u> , <u>Working Women</u>) as one of "the best places to work	In a survey of alumni conducted in 2009, this company was ranked around the median of companies they'd like to work for. This company has never appeared on either a "best" or "worst" companies to work for list	In a survey of alumni conducted in 2009, this company was ranked in the bottom 25th percentile of companies they'd like to work for. This company has appeared on one or more published lists (e.g., <u>Business Week</u> , <u>Working Women</u>) as one of "the worst places to work

Measures

Applicant Attraction

Applicant attraction is defined as an applicant's interest in applying for an employment position, and has been measured using a variety of Likert scales in the past. This study used a measure suggested by Rau and Hyland, 2002. The items in this measure were adjusted from past measurements by Cable and Judge, 1994; Honeycutt and Rosen, 1997; Schwoerer and Rosen, 1989. The measure includes the following items; "I would be interested in pursuing employment opportunities with this company," "I would sign up for a campus interview with this company," "I would contact this

company directly for an interview,” “I would be interested in learning how I can apply for a job within this company,” “This seems like a company that I would personally like to work for”.

Subjects rated responses on a 5-point Likert scale ranging from 1 strongly disagree to 5 strongly agree. Cronbach’s alpha for this scale was .94, indicating a high reliability.

Organization Signals

Signals directed at the organizational level were assessed using inference questions created by Rau and Hyland (2002). This measure was intended to capture the degree to which applicants make inferences about the organization as a whole, and consisted of 10 questions on a 7-point Likert scale (1- strongly disagree; 7- strongly agree) (see Table 2). Cronbach’s alpha for this scale in the current sample was .86.

Self-Referential Signals

Self-referential signals were adapted using a measure of Perceived Organizational Support (Eisenberger et al, 1986). 10 items, rated on a 7-point Likert scale (1- strongly disagree; 7- strongly agree), were used to create the self- referential signals. Cronbach’s alpha for these items in the current survey was .94. For a full list of items refer to Table 2.

Referent Other Signals

Signals directed at co-worker support or referent other signals included 9 items related to co-worker attitudes and actions. These items were rated on a 7-point Likert scale (1- strongly disagree; 7- strongly agree), (Cronbach’s $\alpha = .94$). Please refer to Table 2 for a full list of items.

Table 2

Signaling Items for Organizational, Self - Referential and Referent Other

Type of Signal	Item
Organizational: This company...	values diversity is aggressive is innovative is competitive supports risk-taking provides challenging work provides equal opportunity for all values cultural differences expects a lot from its employees provides opportunities for advancement
Self Referential: This company would ...	be willing to extend itself in order to help me perform my job to the best of my ability care about my opinions care about my general satisfaction at work forgive an honest mistake on my part be willing to help me when I need a special favor value my well-being understand a long absence due to my illness strongly consider my goals and values value my contribution to its well-being understand if I were unable to finish a task on time
Referent other: This company would...	be supportive of co-worker goals and values help co-workers if they had a problem be complementary of co-worker accomplishment at work care about co-worker opinions really care about their co-worker's well-being care about co-worker general satisfaction at work be willing to offer assistance to help co-workers perform their job to the best of their ability fail to notice, even if co-workers did their best job possible show very little concern for co-workers

Covariates

The following demographic information was collected: age, marital status, gender, race, degrees earned, type of degree working towards, major (in college of business or non COB), GPA, expected graduation date, current work status, and if they are currently looking for employment. Covariates were selected based on past literature within applicant attraction which found differences in job preferences and attraction due to age (Cable & Judge, 1994) gender (Lievens & Highhouse, 2003; Chapman et al., 2005;

Ng & Burke, 2005; Cable & Judge, 1994), and race (Ng & Burke, 2005; Cable & Judge, 1994). The covariate of college of business (COB) was also added because there was a drastic difference in major totals, this study controlled for any affect that this might account for. In regard to Hypotheses 3-6, covariates of COB and gender were used. COB was used because of the distribution of our sample, and gender was used due to past literature which stated it as having an impact on signaling effects (Turban & Cable, 2003). Other covariates of age and race were not used for these analyses because preliminary analyses did not reveal an association between them and the dependent variables, and no past research pointed to significance in them as well.

Procedure

All participants in the study were first presented with a summary of the research project. Participants were informed that the general intent of the research was to study applicant attraction. Participants were also informed about; procedure, duration, risk in participation, and that all participation was voluntary. Upon understanding, participants were randomly assigned to one of three company profiles and presented with a survey packet. Participants were given a sufficient amount of time to complete the survey (20-25 minutes), and provided with credit towards their class after its completion. Students recorded their identification numbers on a separate list to be used in assigning course credit.

Students who signed up for the research through the psychology participant pool were provided with select time slots from which to choose. These sessions were held in a class room that had been checked out for the use of this research. A limited number of

students were allowed to sign up for each session to ensure no disruption during survey completion. Students participating in the research through business courses were provided with the opportunity to participate during a selected class time.

Analysis

Preliminary analyses were conducted to identify potential confounding variables by examining correlations between dependent variables and demographic variables (see Table 3). Crosstabs were then run to ensure that random assignment to the three company profiles was distributed evenly among the demographic variables (Appendix D).

To test for Hypothesis 1, the dependent variable of applicant attraction was created by averaging the five questions of applicant attraction. Hierarchical multiple regression (HMR) was then conducted. In the first step, the covariates or control variables were added. In the second step dummy variables for the high (coded as 1 if the subject saw the high reputation manipulation and zero otherwise) and moderate (coded 1 if the subject saw the high reputation manipulation and zero otherwise) conditions were added to assess the effects of the experimental manipulation. Significant coefficients on these dummy variables would indicate subjects had higher attraction when they saw either the moderate or high reputation conditions as compared to the low condition. A second regression was then run with moderate as the omitted category to assess if the difference between attraction in the high and moderate conditions was significant as well.

To test Hypothesis 2, an exploratory factor analysis was conducted. Exploratory factor analysis is a variable reduction technique that identifies dimensions or constructs that underlie measures (Hinkin, 1998). This was intended to show that there are three

distinct constructs for which inferences are drawn (Hypothesis 2). For this analysis principal component extractions were made using an orthogonal rotation varimax. Orthogonal rotations were chosen over oblique rotation because it does not allow the factors to be correlated, and keeps them as unrelated to each other as possible (Floyd & Widaman, 1995). Following exploratory factor analysis, a form of confirmatory factor analysis called multitrait-method analysis was conducted to double check that dimensions indicated by the exploratory factor analysis were correct. The advantage of running the confirmatory factor analysis in addition to the initial exploratory analysis is that it looks at the goodness of fit within items to the data where the exploratory factor analysis does not. Confirmatory factor analysis uses maximum likelihood estimation (Floyd & Widaman, 1995). Upon completion of both factor analyses, reliability analyses were run to check for Cronbach's alpha, and indices were then created from the categories specified.

To test Hypothesis 3-5, these indices served as dependent variables in a set of hierarchical multiple regressions (HMR) to examine the effects of the conditions on each type of inference. Control variables were added in the first step, and dummy variables for the high and moderate conditions were added in the second step to assess the effects of the experimental manipulation. A second regression was run for each dependent variable using moderate as the omitted category to assess if the difference in inferences between moderate and high was significant as well.

Finally, as there is no test for Hypothesis 6 that will directly assess whether the variables explain one dependent variable better than another, I first examined the

difference between total variance explained by the equations testing Hypothesis 3-5 to determine whether a practically significant difference existed. Next I conducted another HMR to see if variance accounted for by the high and moderate conditions was still significant on self-referential/ referent other inferences even after controlling for organizational inferences and covariates. This analysis was done by first accounting for covariates, next accounting for organizational signals, and finally adding in dummy variables. A significant change in R² would indicate that, even after controlling for covariates and the effects of organizational inferences, firm reputation had a significant influence on self referential / referent other inferences. Finally, I examined whether the high condition was more likely to be associated with positive self-referent inferences or organizational inferences. To do this, I conducted a third analysis by stacking the mean organizational and mean self-referential / referent other variables and regressing them on gender, and major in business, a dummy variable for high firm reputation condition, a dummy variable coded 1 if the dependent variable was a self-referential / referent other inference (and zero if it was an organizational inference), and the interaction between the high condition and this dummy variable. The regression equation is stated as:

$$\text{INFERENCES} = B_0 + B_1 \text{ GENDER} + B_2 \text{ BUS} + B_3 \text{ HIGH} + B_4 \text{ SRRO} + B_5 \text{ HIGH}$$

* SRRO

Where HIGH = dummy coded 1 if high condition and 0 if not

SRRO= dummy coded 1 if the dependent variable was a self-referential/
referent other inference.

In this equation, the positive and significant interaction term means that individuals who saw the high condition had significantly higher ratings on the self-referential / referent other inferences than they did on the organizational inferences even after controlling for covariates.

RESULTS

Results from preliminary analyses included correlation analysis as well as crosstabs. Correlation showed that all descriptive variables fell within the expected range (Table 3), while crosstabs showed that all three firm reputations were evenly distributed amongst descriptive (Appendix D).

Table 3

Descriptive Statistics and Intercorrelations Among Variables (n = 215)

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	21.57	4.26												
2. Gender	.61	.49	-.03											
3. Race	.10	.30	.04	-.04										
4. COB	.69	.46	.25**	-.15*	-.06									
5. Marital Status	1.07	.27	.41**	.15*	.13*	.07								
6. GPA	3.05	.45	.06	.04	-.21**	.19**	.20							
7. Current work	.45	.79	.21**	.04	-.10	.15*	.05	.17*						
8. Looking for job	.58	.49	.06	-.08	-.02	.27**	.04	.15*	-.01					
9. High	.33	.47	.09	.01	.04	.07	.05	-.00	.04	-.03				
10. Mod	.33	.47	-.07	.06	-.03	-.00	-.02	-.00	-.03	.03	-.49**			
11. Low	.34	.47	-.02	-.07	-.01	-.07	-.02	.02	-.00	.00	-.50**	-.50**		
12. Org	4.10	.92	-.01	-.09	.10	-.07	-.03	.13	.01	-.04	.33**	-.13*	-.20**	
13. SRRO	4.06	1.02	-.09	.09	.01	-.06	-.01	-.09	-.03	-.05	.48**	.16*	-.64**	.42*

Note: *p<.05 **p<.01

The results for Hypothesis 1 showed no significant effects of the covariates in Step 1. Step 2 showed a significant coefficient for both the high ($b = 1.43$, $p < .05$), and moderate conditions ($b = 1.13$, $p < .05$). The difference between high and moderate was also positive and significant ($b = .31$, $p < .05$) indicating that there were differences in applicant attraction between all three conditions. Applicant attraction is higher as firm reputation improves.

Results showed that 37% of the variance was explained by independent variables, $F(6,210) = 20.80$, $p < .05$. Thus Hypothesis 1 is supported (Table 4).

Table 4

Regression Table of Attraction for High and Low Firm Reputation (n = 217)

Independent Variable	Step 1		Step 2	
	b(1)	$\beta(2)$	b(3)	$\beta(4)$
Age	.01 (.02)	.03	.00 (.01)	.01
Gender	-.06 (.15)	-.03	-.18 (.12)	.12
Race	.00 (.25)	.00	-.03 (.20)	.19
COB	.26 (.16)	.11	.15 (.13)	.13
High			.31 (.14)	.14*
Low			-1.13 (.14)	.14**
Constant	2.72 (.39)		3.23 (.32)	
R ²		.02		.37**
Adjusted R ²		-.00		.36**
Change in R ²				.36**

Notes: Standard errors are in parentheses. Race condition is coded as 0= non minority, 1= minority. Gender condition is coded 0= male, 1= female. COB condition is coded 0= non COB, 1= COB. High condition is coded 0= all other conditions, 1= high condition. Low condition is coded 0= all other conditions, 1= low condition. * $p < .05$ ** $p < .01$

Results for Hypothesis 2 showed that the 29 inference items yielded a 4 factor structure. These 4 factors were found to have eigenvalues > 1.0 . Further examination of eigenvalues and the scree plot indicated retention of 3 factors. To ensure these results, further analysis consisting of a confirmatory factor analysis was conducted. In the analysis, factor 4 was poorly defined, accounting for only four percent of the variance and consisted of only two items, both of which were the only two items having reverse coding. “This company would fail to notice, even if co-workers did their best job possible,” and “This company would show very little concern for co-workers.” Being that these were the only two reverse coded items in the data set it is believed that there was response bias; meaning that participants did not read closely enough to see that these items were to be answered in reverse.

For the three factors identified, reliability of subscales using a Cronbach's alpha coefficient was then calculated. Cronbach's Alpha is a test for reliability, specifically internal consistency. Alpha coefficients of $>.7$ are considered sufficient for scale reliability, and those closer to 1.0 are highly reliable (Hinkin, 1998; Nunnally & Bernstein, 1994). Cronbach's alpha for all signaling questions included in the three factors was .96 showing high reliability. The three factor solution proved to be more satisfying in its interpretability. The three factors accounted for 63.81% of the total variance among items. Self-referential / referent other resulted in 47.41 % of the variance, organizational with 11.38 % of the variance, and 5.01% of the variance was from diversity items. In order to fully interpret the patterns of questions in each factor, a minimum absolute value of .40 for a factor pattern coefficient was selected, with a minimum absolute value of .30 for cross loading (Ford et al., 1986; Floyd & Widaman, 1995). Twenty seven of the questions formed the three factors; one of the questions did not load on any of the three selected factors. Factor loadings for all items are available in Table 5.

Table 5
Summary of Exploratory Factor Analysis Results for Signaling Likelihood Estimation (N = 242)

Item	Factor Loadings			
	SRRO	Organization	Diversity	Reverse code
1) This company would be willing to extend itself in order to help me perform my job to the best of my ability	.84	.20	.14	.04
2) This company would care about my opinions	.82	.17	.19	.11
3) This company would care about my general satisfaction at work	.81	.16	.16	.23
4) This company would be complementary of co-worker accomplishment at work	.80	.24	.08	.29
5) This company would care about co-worker opinions	.79	.04	.09	.24
6) This company would really care about their co-worker's well-being	.78	.14	.20	.31*
7) This company would forgive an honest mistake on my part	.78	.02	.18	-.09
8) This company would be willing to help me when I need a special favor	.78	.07	.11	-.06
9) This company would really care about my well-being	.78	.16	.20	.15
10) This company would care about co-worker general satisfaction at work	.77	.10	.10	.29
11) This company would be willing to offer assistance to help co-workers perform their job to the best of their ability	.77	.21	.14	.28
12) This company would help co-workers if they has a problem	.76	.18	.15	.29
13) This company would be supportive of co-worker goals and values	.76	.24	.20	.23
14) This company would understand a long absence due to my illness	.73	-.02	.23	-.14
15) This company would strongly consider my goals and values	.72	.26	.17	.24
16) This company would value my contribution to its well-being	.71	.31*	.14	.23
17) This company would understand if I were unable to finish a task on time	.65	-.10	.34*	-.31*
18) This company expects a lot from its employees	.01	.84	.03	-.02
19) This company is aggressive	-.03	.76	.00	-.08
20) This company provides challenging work	.12	.74	.10	-.04
21) This company supports risk-taking	.13	.73	.18	.10
22) This company is competitive	.35	.72	.14	.26
23) This company is innovative	.22	.69	.17	.11
24) This company provides opportunities for advancement	.39*	.55	.30*	.11
25) This company values diversity	.18	.18	.79	.18
26) This company values cultural differences	.28	.29	.77	.04
27) This company provides equal opportunities for all	.37*	.17	.71	.07
28) This company would fail to notice, even if co-workers did their best job possible	.19	.01	.10	.79
29) This company would show very little concern for co-workers	.48*	.07	.15	.65
Eigenvalues	13.75	3.3	1.46	1.26
% of Variance	47.41	11.38	5.01	4.34

Note: Bolded numbers indicate significance of loadings, * indicates cross loading

Looking closer at items in each factor, factor 1 contained all questions regarding referent other and self-referential inferences, while factor 2 contained most questions regarding organizational inferences with the exception of three. The final three questions represented the area of diversity. These results suggest partial support for Hypothesis 2. Results showed that organizational inferences were distinct from self-referential and referent other inferences. However, self-referential and referent other inferences were not distinct from each other. Consequently, further testing of hypotheses will compare organizational inferences with combined self-referential and referent other inferences. As a note, even though self-referential and referent other inferences did not separate like expected, Appendix B contains the results for analyses run as if they did separate.

The test for Hypothesis 3 showed no significant effects of the covariates in Step 1. Step 2 showed a significant coefficient for the high condition ($b = .77, p < .05$), but did not show significance for the moderate condition ($b = .18, p = .21$). The difference between the high and the moderate conditions was also statistically significant ($b = .59, p < .05$). Results showed that 14% of the variance was explained by independent variables, $F(4,215) = 8.46, p < .05$. These results show participants make inferences about organizational characteristics based on information about firm reputation and that these inferences tend to be positive when firm reputation is positive. Thus Hypothesis 3 is supported (Table 6).

Table 6

Regression Table of Organizational Signaling for High and Low Firm Reputation (n = 220)

Independent Variable	Step 1		Step 2	
	b(1)	$\beta(2)$	b(3)	$\beta(4)$
Gender	-.16 (.13)	-.09	-.19 (.12)	-.10
COB	-.16 (.14)	-.08	-.22 (.13)	-.11
High			.59 (.15)	.30**
Low			-.18 (.14)	-.09
Constant	4.29 (.14)		4.22 (.16)	
R ²		.01		.14**
Adjusted R ²		.00		.12**
Change in R ²				.12**

Note: Standard errors are in parentheses. Gender condition is coded 0= male, 1= female. COB condition is coded 0= non COB, 1= COB. High condition is coded 0= all other conditions, 1= high condition. Low condition is coded 0= all other conditions, 1= low condition. *p<.05 **p<.01

To examine Hypothesis 4 and 5, because factor analysis separated co-worker and individual signals into one factor, the hypotheses were combined.

Step 1 found no significant effects of the covariates except business majors were less likely to draw self-referential/referent other inferences when provided with information about a firm's reputation than non business majors ($b = -.23, p < .05$). Step 2 showed a significant coefficient for both the high ($b = 1.59, p < .05$), and moderate conditions ($b = 1.09, p < .05$). The difference between high and moderate was also statistically significant ($b = .49, p < .05$). Results showed that 44% of the variance was explained by independent variables, $F(4, 215) = 42.97, p < .05$. These results show differences in self-referential/referent other inferences exist between all three conditions and the inferences are more positive when firm reputation is positive. Thus, when conceptualizing self-referential and referent other inferences as a single construct, there is support for Hypothesis 4 and 5 (Table 7).

Table 7

Regression Table of Self - Referential / Referent Other Signaling for High and Low Firm Reputation (n = 220)

Independent Variable	Step 1		Step 2	
	b(1)	$\beta(2)$	b(3)	$\beta(4)$
Gender	.20 (.14)	.09	.08 (.11)	.04
COB	-.11 (.15)	-.05	-.23 (.11)	-.11*
High			.49 (.13)	.23**
Low			-1.09 (.13)	-.51**
Constant	4.01 (.16)		4.38 (.14)	
R ²		.01		.44**
Adjusted R ²		.00		.43**
Change in R ²				.43**

Note: Standard errors are in parentheses. Gender condition is coded 0= male, 1= female. COB condition is coded 0= non COB, 1= COB. High condition is coded 0= all other conditions, 1= high condition. Low condition is coded 0= all other conditions, 1= low condition. *p<.05 **p<.01

In the first test for Hypothesis 6 the comparison of explained variance between the organizational inference equation ($R^2 = .14$, $p < .05$) and the self-referential / referent other equation ($R^2 = .44$) shows a difference of .30. Thus, it would appear that the variables do a better job of explaining self-referential / referent other inferences than organizational inferences and that this difference is practically significant.

However, since the two equations have different dependent variables, I cannot conclude that the difference in variance is statistically significant using standard R^2 comparisons. Thus, I tested the difference by including organizational inferences as an explanatory variable in a hierarchical regression model predicting self-referential / referent other inferences. The results showed a significant coefficient for both the high ($b = 1.34$, $p < .05$), and moderate conditions ($b = 1.03$, $p < .05$) even after controlling for the effects of organizational inferences. The difference between high and moderate conditions was also statistically significant ($b = .34$, $p < .05$). Results showed that 53% of

the variance was explained by the independent variables, $F(6, 210) = 40.00, p < .05$

(Table 8). These results support Hypothesis 6.

Table 8

Regression Table of Self - Referential/ Referent Other Withholding Organizational Inferences for High and Low Firm Reputation (n = 210)

Independent Variable	Step 1		Step 2		Step 3	
	b(1)	$\beta(2)$	b(3)	$\beta(4)$	b(5)	$\beta(6)$
Gender	.19 (.14)	.09	.27 (.13)	.13*	.14 (.10)	.07
COB	-.10 (.15)	-.05	-.02 (.13)	-.01	-.16 (.11)	-.07
Organizational			.56 (.07)	.07**	.35 (.06)	.31**
Low					-1.03 (.12)	-.48**
High					.31 (.13)	.14*
Constant	4.01 (.16)		1.64 (.32)		2.94 (.28)	
R ²		.01		.25**		.53**
Adjusted R ²		-.00		.23**		.52**
Change in R ²				.24**		.29**

Note: Standard errors are in parentheses. Gender condition is coded 0= male, 1= female. COB condition is coded 0= non COB, 1= COB. High condition is coded 0= all other conditions, 1= high condition. Low condition is coded 0= all other conditions, 1= low condition. * $p < .05$ ** $p < .01$

Finally, results from the third analysis also showed support for Hypothesis 6.

Overall participants who saw the high reputation condition responded higher to both organizational and self-referential / referent other inferences ($b = .67, p < .05$). In addition, there was a statistically significant interaction between the high condition and making individual inferences, showing that positive reputation has more of an effect on inferences about self-referential / referent other than it does on organizational inferences ($b = .39, p < .05$). As a side note, there was also evidence that in looking at those who did not receive a high firm reputation the reverse effect was suggested. Data suggests that when applicants were presented with firm reputations that were not high they responded

lower on inferences about self-referential / referent other than they did to the organizational inferences. This data is also consistent with Hypothesis 6.

Table 9

Regression Table of interaction of Self Referential/ Referent and Organizational Inferences for High Firm Reputation (n = 434)

Independent Variable	β	SE
Gender	-.00	.09
COB	-.20*	.09
High	.67**	.13
Individual	-.16	.10
Interaction	.39**	.18
Constant	4.00	.11
R ²	.19	
Adjusted R ²	.18	

Notes: *p<.05 **p<.01

DISCUSSION

This study used a manipulation of firm reputation within a company profile to examine the inferences applicants make about a company. Prior research looking at signaling theory and inferences has produced mixed results; this research argued that the weak results of prior research looking at signaling in applicant attraction is a function of researchers somewhat myopic focus on organizational inferences. Drawing from signaling theory as developed by Turban and Cable (2003) and work on innate self interest tendencies (e.g., De Dreu & Nauta, 2009), I hypothesized that there are three distinct types of signals that firm reputation sends to applicants, those relating to aspects of the organization (organizational inferences), those relating to how co-workers or how other employees will be treated within the company (referent other inferences), and those relating to how individuals or the applicant will be treated within the company (self-referential inferences). My results indicated support for two types of inferences: organizational and self-referential / referent other and that, as expected, self-referential / referent other inferences were stronger than organizational inferences.

For the first hypothesis past findings were replicated to see if our study would come to the same conclusion. This hypothesis suggested that when applicants were presented with positive information about firm reputation, applicant attraction would be higher than when applicants were presented with negative information about firm reputation. Results from analyses showed that these findings were consistent with past research on this topic. Participants that received a positive firm reputation had a higher attraction to the company than those participants that saw either a moderate or negative

firm reputation; participants in the moderate reputation condition expressed greater attraction than those in the poor reputation condition.

Hypothesis 2 suggested that there are three distinct types of signals inferred from company reputation. While the factor analysis was split into three distinct factors, self-referential and referent other inferences did not separate as anticipated. Final results showed self-referential and referent other inferences together in one factor, organizational inferences together in a second, and three organizational factors (all related to diversity) in a third. These findings suggest that participants drew distinctly different inferences when asked questions about the organization than when asked questions about how individuals (self-referential inferences) and co-workers (referent other inferences) would be treated in the company. However, participants were not able to differentiate between how co-workers would be treated in the company and how they themselves would be treated within the company. Thus, Hypothesis 2 was only partially supported.

It is possible that applicants really do not feel they would be treated differently from other co-workers, but rather that all employees would be treated the same within the company. Alternatively, it is also possible that given the measure used participants did not sufficiently distinguish between co-workers and individual inferences, and therefore inferences drawn were similar between the two categories.

With the findings from Hypothesis 2, the following hypotheses were conducted by combining the two factors (self-referential/referent other inferences).

Hypothesis 3 suggested that applicants would make inferences about the organization when presented with information about company reputation. Results for this hypothesis showed support; suggesting that participants were able to make inferences about the organization based on the firm reputation reported in the company profile. This hypothesis is consistent with information that has been presented in past literature, and confirms that use of this inference in future research should be continued.

To assess hypothesis 4 or 5, the combination of self-referential and referent other inferences was created. This combined hypothesis suggested that applicants would make inferences about how they and other co-workers would be treated based on information of firm reputation. Results showed support for hypothesis 4/5; suggesting that participants did make inferences about how employees would be treated at the company when presented with information about the firm's reputation.

This hypothesis points out two interesting conclusions. One is that there is a distinct difference between organizational signals and self-referential / referent other signals that can be made when presented with information about a firm's reputation. The second conclusion is that because of this finding we may be able to help to clarify why there have been so many discrepancies in results of past research (see Appendix C for a table depicting past literature in signaling theory). Depending on what questions applicants are presented with there could be distinct differences in the type of inferences that they make. Past researchers may have confused or mixed inference types together, and because of this their results may be skewed from other research in the area.

Hypothesis 6 suggested that firm reputation would have a stronger effect on self-referential inferences than on either organizational inferences or referent other inferences. Results of the first analysis showed evidence for support of this hypothesis, suggesting that participants are more likely to make self-referential / referent other inferences at a variance of 44% than organizational inferences with a variance of 14%, and this difference is of practical significance at a .30 difference in variance between inference types. The second analysis conducted also supported Hypothesis 6 in that firm reputation had a positive influence on self-referent / referent-other inferences, even after controlling for organizational inferences and covariates. This would suggest that the positive effects of firm reputation on self-referential / referent-other inferences are independent of the effects on organizational inferences. The third analysis was also consistent with Hypothesis 6, showing that positive reputation has more of an effect on self-referential inferences than on organizational inferences, and that when not shown positive firm reputation information, applicants responded lower to self-referential / referent other inferences than to organizational inferences. This hypothesis points to the conclusion that both types of signals are important to applicants, and makes a difference in how they answer questions about the organization. Self-referential inferences are more sensitive to firm reputation than organizational inferences.

Conclusions and Future Research

This research has several implications for research and theory on signaling in applicant attraction. First, the study shows that there are distinct differences between,

self-referential / referent other and organizational inferences. Second, self-referential/referent other inferences appear to be more sensitive to organizational reputation. Thus, while research should continue to explore the effects of organizational inferences in applicant signaling, it should also take into account self-referential/referent other signals. This research shows evidence that these signals may have more of an effect on applicants than organizational signals, and that the inferences that applicants make about how the company will treat its employees will have a larger impact on their attraction to the organization than do inferences about the organization as a whole.

This study did not find a distinction between self-referential and referent other inferences. Future research may wish to examine the constructs to ensure that they are indistinguishable.

Another intriguing avenue for research in applicant attraction would be to examine the role of individual differences in determining both types of inferences that are made from various organizational policies. Personality traits such as materialism, locus of control, or extroversion may in general make some individuals more (or less) likely to make self-referential / referent other inferences than organizational inferences. For example, those who are highly extroverted tend to be very assertive, self-confident, and leader-like (Cascio & Aguinis, 2005). Extroverted individuals may see themselves as distinctly different than those that they work with, and perhaps further investigation would find that extroverts are more likely to make self-referential inferences, while those who are lower in extroversion may not see self-referential and referent other inferences as distinctly different. Similarly, there may be an interaction between policies and individual

differences such that subjects are more (or less) self-referential (or organizational) inferences from policies that are presented.

It would also be interesting to examine the role of contextual factors in determining the strength of self-referential / referent other signals relative to organizational signals. The present research found evidence that self-referential/ referent other signals have a stronger effect on applicants than organizational inferences. However, this effect might be explained by the present state of the economy which may make self-referential inferences more salient to subjects than they would be in a booming economy.

As with all research, this study has some limitations. I was able to include only one type of company profiles in a fairly artificial setting. It displayed a company that focused on business. The profile for this research specifically stated the company as a “Provider of a wide range of financial services and business benefits.” Future research may try different types of company profiles depicting different department types or jobs. Past research by Anderson, Sparto and Flynn (2008) also showed that in surveying employees from different departments different personality types were present. Future research may consider looking not if only individual differences such as personality might play a role in inferences made (as suggested above), but if conducting this between departments or majors may also lead to possible differences.

Similarly, future research may also look at differences between being recruited by different levels of the company. Research could look into the possibility of inference differences when one is interviewed by an owner, versus a manager, and even look into

being interviewed by those who would be peers. Perhaps there is a difference in the perception of the organization when one is recruited by lower level employees than when one is recruited by higher level.

Along the same lines, future research might look into signaling firm reputation through different mediums. While this research used a company profile, further research should see if different types of recruitment ads produce the same effects. For example newspaper ads, website pages, or brochures could be used to test if the effects seen in this study are replicated.

A final limitation of this research is the use of undergraduate students only. Future research may wish to continue this research using graduate students or more experienced workers as well. Past research has found significant differences when respondent groups of undergraduates and graduate students were taken into consideration (Turban & Cable, 2003; Cable & Judge, 1994). Given the fact that graduate students tend to have more experience in searching for jobs, and have a specific field of interest that they are aiming to find a job in, results may vary greatly from that which is seen in less experienced or decided undergraduates. Undergraduates also tend to have less experience in what to expect from an organization as a whole, and therefore it might result in undergraduates valuing an organization more based on tangibles such as money and benefits, while graduates may value intangibles such as job fit more. If recruiters are looking to fill a position with a candidate with a lot of experience, further research as to what signals result in higher attraction rates by the selected group may come in handy.

Overall, this research points to an important missing variable in the research on recruitment. By finding a distinct difference between organizational inferences and inferences of self-referential/referent other, I have provided a possible explanation for weak results of past research looking at inferences made in the recruitment process. Not only does firm reputation matter in attraction to the organization, but it signals perceptions about the organization as a whole, and it also creates inferences about how those who work there will be treated. Future researchers should do more to understand the difference between the two inference types. From a practical standpoint, practitioners in the area of recruitment should be made aware of the different types of inferences that can be made by applicants, and understand the types of signals that they may be sending to applicants through recruitment processes. More research is needed to guide practitioners in designing organizational and recruitment policies that send the signals they intend.

APPENDIX A
Full Survey Questions

Recruitment Survey

The following survey will ask you to respond to a series of questions after being presented with a company profile. There are no right or wrong answers. Please answer all items as honestly as possible, and not how you think you are expected to answer. Most of the questions ask you to indicate whether you agree or disagree with a statement. For each of those questions, circle the number on the scale that best represents whether you agree or disagree with the statement. Please give these questions your full attention, if you do not have an opinion about a particular statement, circle the middle number (neither agree nor disagree).

Other questions ask you to either fill in a blank or check your answer. If you don't know the answer to these questions write "I don't know".

The first part of the questionnaire is directly related to the company profile. The second part asks a few demographic items. Finally, the survey ends with a few questions about your own values, preferences, and beliefs.

Please turn the page and begin the survey.

Please use the following scale to respond to items below: ATTRACTION

QUESTIONS (From Rau, B. L., & Hyland, M.M. (2002). Role Conflict and Flexible Work Arrangements: The Effects on Applicant Attraction. *Personnel Psychology*, 55).

	Strongly Disagree	Generally Disagree	Neither Agree nor Disagree	Generally Agree	Strongly Agree
1. I would be interested in pursuing employment opportunities with this company	1	2	3	4	5
2. This seems like the kind of company I personally would like to work for	1	2	3	4	5
3. I would sign up for a campus interview with this company	1	2	3	4	5
4. I would contact this company directly for an interview	1	2	3	4	5
5. I would be interested in learning how I can apply for a job with this company	1	2	3	4	5

Please use the following scale to respond to items below:

INFERENCE QUESTIONS: (ORGANIZATION) (From Rau, B. L., & Hyland, M.M. (2002). Role Conflict and Flexible Work Arrangements: The Effects on Applicant Attraction. *Personnel Psychology*, 55).

Please use the following scale to respond to items below.

Begin each question with: This company...

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
6. values diversity	1	2	3	4	5	6	7
7. is aggressive	1	2	3	4	5	6	7
8. is innovative	1	2	3	4	5	6	7
9. is competitive	1	2	3	4	5	6	7
10. supports risk-taking	1	2	3	4	5	6	7
11. provides challenging work	1	2	3	4	5	6	7
12. provides equal opportunity for all	1	2	3	4	5	6	7
13. values cultural differences	1	2	3	4	5	6	7
14. expects a lot from its	1	2	3	4	5	6	7

employees

15. provides opportunities for advancement

1	2	3	4	5	6	7
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INFERENCE QUESTIONS: (EMPOLYEEES) (From Eisenberger, R., Huntington, R., Hutchison, S. & Sowa, D. (1986). Perceived Organizational Support. *Journal of Applied Psychology*, 3, 500-507).

Please use the following scale to respond to items below.

Begin each question with: This company would...

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
16. be supportive of co-worker goals and values	1	2	3	4	5	6	7
17. help co-workers if they had a problem	1	2	3	4	5	6	7
18. really care about their co-worker's well-being	1	2	3	4	5	6	7
19. be willing to offer assistance to help co-workers perform their job to the best of their ability	1	2	3	4	5	6	7
20. fail to notice, even if co-workers did their best job possible	1	2	3	4	5	6	7
21. show very little concern for co-workers	1	2	3	4	5	6	7
22. care about co-worker opinions	1	2	3	4	5	6	7
23. care about co-worker general satisfaction at work	1	2	3	4	5	6	7
24. be complementary of co-worker accomplishment at work	1	2	3	4	5	6	7

Please use the following scale to respond to items below.

Begin each question with: This company would...

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
25. value my contribution to its well-being	1	2	3	4	5	6	7
26. strongly consider my goals and values	1	2	3	4	5	6	7
27. understand a long absence due to my illness	1	2	3	4	5	6	7
28. really care about my well-being	1	2	3	4	5	6	7
29. be willing to extend itself in order to help me perform my job to the best of my ability	1	2	3	4	5	6	7
30. forgive an honest mistake on my part	1	2	3	4	5	6	7
31. be willing to help me when I need a special favor	1	2	3	4	5	6	7
32. care about my general satisfaction at work	1	2	3	4	5	6	7
33. care about my opinions	1	2	3	4	5	6	7
34. understand if I were unable to finish a task on time	1	2	3	4	5	6	7

Please use the following scale to respond to items below.

MANIPULATION CHECKS

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
35. This company is a prestigious company	1	2	3	4	5	6	7
36. This company is a reputable company	1	2	3	4	5	6	7
37. This is a high-status company	1	2	3	4	5	6	7
38. This company is financially successful	1	2	3	4	5	6	7

39. This company has a negative reputation	1	2	3	4	5	6	7
40. This is a low-status company	1	2	3	4	5	6	7

The following questions pertain to your interest in employment at this company. Please state whether you “would” or “would not”, and complete the statement.

I would/would not be interested in pursuing employment opportunities with this company because:

I would /would not like to work for this company because:

I would/ would not feel like a valued employee at this company:

The following questions assess how much you remember from the scenario. Please fill in the blanks. If you do not remember the answer to the question, please write “I don’t know”.

OPEN-ENDED “ATTENTION” CHECKS

What is this company’s primary industry?

Where is this company located?

Does this company state financial information?

OPEN-ENDED MANIPULATION CHECK

Was there a positive or negative firm reputation stated in the ad?

DEMOGRAPHIC QUESTIONS

While we do not ask you to identify yourself by name on this survey, we would like you to answer the following demographic questions.

Please provide the following information about yourself:

1. Your age: _____
2. Your current marital status:
Single_____ Married_____ Divorced_____ Other(Please Specify)_____
3. Your Gender: Female _____ Male _____
4. Your ethnicity/race: _____
5. The degree that you are currently working towards (e.g., BA, BS, MA, MS): _____
6. Your current Major: _____
7. Your expected graduation date: _____
8. Your cumulative undergraduate GPA (if applicable): _____
9. Your cumulative graduate GPA (if applicable): _____
10. Please list any college degrees which you hold and your major:

DEGREE(s) RECEIVED	MAJOR(s)	DATE
_____	_____	_____
_____	_____	_____
_____	_____	_____

11. Do you currently have a job related to your major?
No_____ Yes, part-time_____ Yes, temporary or internship_____ Yes, Full-time_____
12. Are you currently looking for a job related to your major? Yes_____ No_____

APPENDIX B

Regressions of Self-referential and Referent Other Forced Factor Indices

Table B-1

*Regression Table of Forced Referent Other Signaling for High and Low Firm Reputation
(n = 214)*

Independent Variable	Step 1		Step 2	
	b(1)	$\beta(2)$	b(3)	$\beta(4)$
Gender	.17 (.16)	.07	.05 (.12)	.02
COB	-.24 (.17)	-.10	-.37 (.13)	-.15**
High			.60 (.15)	.25**
Low			-1.10 (.15)	-.47**
Constant	4.26 (.18)		4.62 (.17)	
R ²		.02		.41**
Adjusted R ²		.01		.40**
Change in R ²				.40**

Note: Standard errors are in parentheses. *p<.05 **p<.01

Table B-2

*Regression Table of Forced Self - Referential Signaling for High and Low Firm Reputation
(n = 214)*

Independent Variable	Step 1		Step 2	
	b(1)	$\beta(2)$	b(3)	$\beta(4)$
Gender	.22 (.14)	.11	.12 (.11)	.06
COB	-.02 (.15)	-.01	-.13 (.12)	-.06
High			.43 (.13)	.20**
Low			-1.08 (.13)	-.51**
Constant	3.83 (.16)		4.21 (.15)	
R ²		.01		.42**
Adjusted R ²		.00		.41**
Change in R ²				.41**

Note: Standard errors are in parentheses. *p<.05 **p<.01

APPENDIX C

Table of Past Literature on Signaling

Table C-1

Table of Past Literature on Signaling

Author	Title	Type of signaling	Pos/mod/neg signals	Manipulation type
Rynes, Bretz and Gerhart (1991)	The importance of recruitment in job choice: A different way of looking	Org	Pos or Neg	Time delays
Behrend, Baker and Thompson (2009)	Effects of pro-environmental recruiting messages: The role of organizational reputation	Org	Pos or none	Environmental messages
Turban and Cable (2003)	Firm reputation and applicant pool characteristics	Org	Pos or none	Job posting from actual company, included firm reputation
Levins and Highhouse (2003)	The relation of instrumental and symbolic attributes to a company's attractiveness as an employer	Org	Pos or none	Trait inference and org inferences
Turban and Greening (1996)	Corporate social perform and org attractiveness to prospective emp	Org	All levels	Company profile stating corporate social performance & reputation
Rynes and Miller (1983)	Recruiter and job inferences on candidates for Employment	Co-worker (Referent other)	Pos or none	Amount of information the recruiter knew about the organization
Jones, Willness and Macneil (2009)	Corporate social responsibility, recruitment testing p-o fit, and signaling mechanisms	Individual (Self-referential)	Pos or None	Corporate social responsibility

APPENDIX D

Table of Crosstabs for Conditions and Variables

Table D-1

Crosstabs of Conditions and variables (n=242)

Variable	Condition		
	Dummy High	Dummy Moderate	Dummy Low
Race	9	7	8
Gender	49	52	46
COB	53	49	50
Total Surveys	82	80	80

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