

MODELING JOB APPLICANT DECISION PROCESSES: INTEGRATING APPLICANT  
REACTIONS TO SELECTION PROCEDURES INTO THE CRITICAL CONTACT  
FRAMEWORK OF RECRUITING

by

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A thesis

presented to the University of Waterloo

in fulfilment of the thesis requirement for the degree of

Doctor of Philosophy

in Psychology

Waterloo, Ontario, Canada, 2000

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## ABSTRACT

### Modeling Job Applicant Decision Processes: Integrating Applicant Reactions to Selection Procedures into the Critical Contact Framework of Recruiting

Until recently, researchers and practitioners of Industrial and Organizational psychology have focused on improving the predictive validity of selection procedures with little attention paid to applicants' reactions to these procedures. This thesis presents two longitudinal field studies involving a total of 984 applicants to 617 organizations in multiple industries, examining the selection process from the applicant's point of view. Specifically, structural equation modeling was used to investigate three potential applicant reaction mechanisms discussed in the literature including: a) a signal model, (b) a procedural justice model, and (c) a meta-perceptions expectancy model. Study 1 also examined how applicants reacted to technology use (videoconference interviews) in the selection process. Both studies measured applicant attraction to organizations at three time points: immediately preceding the selection interview, immediately following the selection interview, and approximately three weeks later when they made their job choice. The results suggested that although pre-interview attraction was very important, applicants' job choice was influenced by the selection process. However, contrary to much of the applicant reactions literature, these reactions were best described in terms of signal and expectancy mechanisms rather than by perceptions of procedural justice. Furthermore, Study 1 revealed that applicants responded negatively to the use of videoconference technology in selection interviews with videoconference-based interviewers being perceived as less friendly and the procedures perceived as less fair than for face-to-face interviews.

Study 2 refined the model by including applicant intentions as a mediator. Moreover, Study 2 involved a sufficiently large sample to permit testing several important moderators of the model including: (a) number of job choices available, (b) pre-interview knowledge of the organization, (c) applicant gender, and (d) applicant experience. Consistent with critical contact and signal theories, applicants with little pre-interview knowledge of the organization were more influenced by the selection procedures than those with considerable pre-interview knowledge. Applicants with more choices were also more influenced by the procedures. Furthermore, applicant reactions and job choice mechanisms worked somewhat differently for male and female applicants. Lastly, more experienced applicants used information from the interview to a greater extent when making a job choice compared to less experienced applicants.

## ACKNOWLEDGMENTS

I have been extremely fortunate to have had the opportunity to work with many talented and wonderful individuals while working on this thesis. I am very grateful to my advisor, Pat Rowe, for sharing her wisdom, encouragement, and perspective over five years and two degrees. I also owe a tremendous debt of gratitude to Jane Webster for the important role she has played in shaping me both as a researcher and as an instructor (not to mention her tireless dedication to teaching me proper apostrophe usage). I would also like to thank Ramona Bobocel for her encouragement and exemplary instruction. My friends and colleagues, David Zweig, Alice Tjiu, Camilla Holmvall, Leanne Son Hing and Liane Davies have also played an important role in my life and in my work. Their helpful criticism, sharp insight, constant support, good humour, and willing assistance have substantially improved this thesis and my quality of life. I would also like to acknowledge Bruce Lumsden and his staff at the Cooperative Education department for helping me gain access to the best data source I can imagine. Finally, I would like to thank the hundreds of organizations and applicants who willingly participated in these studies and generously shared their thoughts with me.

## DEDICATION

For all my family who have supported me throughout this long journey. For Louise, who insisted I follow my dream when all the odds seemed stacked against us (if that isn't true love, I don't know what is). For Christopher, Catherine, & Courtney, who selflessly shared their dad with competing demands, and for helping me keep everything in perspective. And for Gordon and Rhoda, who cheered me on, in spite of the fact that they must have questioned my sanity when I announced I was quitting my job and going back to school. Thank you for all of your support.

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## CHAPTER 1

### A REVIEW OF LITERATURES RELATED TO RECRUITING, APPLICANT REACTIONS AND JOB CHOICE

The employment interview continues to be the most popular selection device used by employers (Rowe, Williams & Day, 1994). In addition to serving as a selection tool, the interview provides a means for employers to present information about their working environment, promotion opportunities, benefits and other information used by applicants to assess the attractiveness of a job offer. It also presents a sample of behaviour (the interviewer's) that may give the applicant an indication of what the organizational culture or climate might be in the interviewer's company and therefore permits the applicant to determine his/her fit with the interviewer's organization (Cable & Judge, 1996, Rynes, Bretz, & Gerhart, 1991). In other words, the employment interview can serve a recruiting function as well as a screening function (Rynes, 1989). Macan and Dipboye (1988,1990) for instance, found that interviewers spent more time with better qualified applicants and chose easier questions for applicants who were judged to be stronger, based on written credentials. Recruiters have also been found to spend more time promoting their organizations to stronger applicants during the employment interview and spend less time questioning these stronger applicants (Anderson, 1960; Sydiaha, 1961). These studies suggest that interviewers consider how to adjust their interviews to increase the attractiveness of their organization. This is especially apparent during campus interviews where competition for the top graduates requires organizations to commit considerable resources to place recruiters on site for the screening/recruiting process. Unfortunately, many questions remain about how applicants view specific interview attributes and what processes underlie these reactions (Barber, 1998).

This thesis aims to contribute to the applicant reactions, recruiting and job choice literatures by offering theoretical advances, methodological improvements and practical implications.

### Theoretical Advances

In general, this dissertation responds to calls for a more theory-based approach to investigating the effects of recruiting on job choice (Rynes, 1991; Barber, 1998). More specifically, this thesis aims to extend previous theories of applicant reactions (particularly organizational justice, signal and expectancy approaches) by integrating them within a broader theoretical framework of recruiting and job choice processes. With few exceptions, applicant reaction mechanisms have been studied independently of each other and independently of other important recruiting and job choice mechanisms. While this approach is often necessary to isolate and identify effects, the underlying assumption in this approach is that these mechanisms are working independently and have little or no influence on each other. This thesis aims to extend our knowledge of these mechanisms by examining them simultaneously in the same sample of applicants thereby facilitating a direct comparison of the effects of these mechanisms on job choice.

A second theoretical contribution this dissertation aims to make is to provide a better understanding of how recruiter effects (also described as critical contact) operate on applicant decision processes. Although there has been some debate on the extent to which job attributes or recruiters influence applicant attraction to organizations and job choice, most researchers now agree that both of these factors play a role (Barber, 1998). Despite empirical evidence suggesting that recruiters make a difference in applicant job choices, little is known about how this is accomplished. Three plausible mechanisms include: (a) providing signals about what it



is like to work in the organization (Rynes, Bretz & Gerhart, 1991); (b) enhancing the attractiveness of the organization by demonstrating fair selection processes (Gilliland, 1993) and (c) influencing applicants' expectations of receiving a job offer (Vroom, 1964), thereby facilitating a bolstering effect (Janis & Mann, 1977). This thesis aims to improve our understanding of the applicant cognitive mechanisms that determine how recruiter effects influence applicant decisions.

The third theoretical contribution this thesis aims to make is to extend our knowledge of individual differences in applicant job choice processes. Most of the literature has looked for universal job choice processes without regard for some potentially important individual differences. For example, do men and women make job choices in the same manner? Do experienced job seekers react the same as inexperienced ones? How does an applicant with multiple choices weigh information and make decisions? These are questions of interest to both recruiting practitioners and researchers and yet little work has been done to answer them.

#### Methodological Improvements

In addition to making a theoretical contribution, this dissertation has a goal of improving on the methodologies typically employed in the recruiting, job choice and applicant reactions literatures. Specifically, the studies in this dissertation respond to calls for improving the methodology used to examine these processes by improving the external validity of the findings through the use of real job applicants for real positions interacting with real interviewers (Buckley & Weitzel, 1989); employing a longitudinal design to permit more causal inferences and observe time-dependent processes (Barber, 1998; Rynes, 1993; Bauer, Maertz, Dolen & Campion, 1998); capturing both applicant intentions and actual job choice behaviours (Harris & Fink, 1987); including reactions to more than one organization (Bauer et

al., 1998); and employing statistical techniques (structural equation modeling) that permit the comparison of theoretical models and account for the imperfect measurement of the constructs. Although some researchers have incorporated some of these methodological improvements in their work, few, if any, have done all of them in the same study.

#### Applicant Reactions to the Use of Technology in Selection Interviews

In addition to extending theoretical knowledge of recruiting processes and improving the methodology used to study these processes, this dissertation has a third (but no less important) goal of answering an applied question related to technology use in personnel selection. Shortages of highly skilled workers in areas such as computer science and engineering, have created a huge demand for international recruiting (Laabs, 1998). However, the costs of recruiting nationally or internationally rather than locally are prohibitive. The average cost of interviewing domestic candidates face-to-face has been estimated to be \$1700 (US) per candidate (Cummings, 1993). This cost includes transportation, hotels, meals and other expenses associated with placing a recruiter on campus. International recruiting requires even larger investments by organizations. These costs are contrasted with an expenditure of \$50 to \$250 for a half-hour interview by videoconference (Cummings, 1993). These potential savings have led some large organizations, such as Procter & Gamble, to invest in videoconference technologies for campus recruiting in the United States. However, despite the growing and widespread use of these systems, little is known about their effectiveness for recruiting applicants. Accordingly, this dissertation includes the practical empirical question of determining whether applicants react to the use of videoconference technology for selection interviews, and, if they do, whether these effects are due to reduced recruiter effectiveness or due to signals about the type of organization that uses this technology.

## Recruiting and Job Choice

Several definitions of recruiting have emerged from the recruiting literature. Rynes (1991) defined recruitment as “encompass(ing) 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” (p.429). Breugh (1992) provides a similar definition “Employee recruitment involves those organizational activities that (1) influence the number and/or types of applicants who apply for a position and/or (2) affect whether a job offer is accepted” (p.4). Barber (1998) argued that both of these definitions confuse the recruitment process with recruitment outcomes. She reasoned that their definitions of recruiting were too broad and would include unintentional organizational issues such as public relations problems that could impact applicant attraction, or drug testing which in turn could result in negative applicant reactions. Accordingly, Barber (1998) proposed a narrower definition of recruiting which only included purposeful actions taken by the organization: “Recruitment includes those practices and activities carried on by the organization with the primary purpose of identifying and attracting potential employees” (p. 5). Barber’s definition of recruiting would necessarily exclude unintended applicant reactions to selection procedures such as cognitive ability tests, personality tests, and so on. However, in the case of the selection interview there is considerable evidence to suggest that interviewers can have either a selection focus, recruiting focus, or a combined recruiting and selection focus in their interviews ( Rynes, 1991, Barber, Hollenbeck, Tower and Phillips, 1994). In the case of the employment interview, Barber’s (1998) definition of recruiting may be overly restrictive as the attraction and selection function is inextricably intertwined for many interviews. In addition, it is clear that many interviewers do *intend* to persuade candidates to work for their company which results in selection

interviews having a mixture of intended and possibly unintended effects on applicant attraction.

Some recent work in applicant recruiting has departed from Barber's narrower definition. For example, one research stream has begun to examine the role of organizational branding in recruiting (Cable, 1999). Traditionally, branding has been a concept applied to advertising and consumer loyalty. Researchers and practitioners have recognized that the image of the organization might be leveraged to improve the recruiting function of organizations (Cable, 1999; Highhouse, Zickar, Thorsteinson, Stierwalt & Slaughter, 1999). Accordingly, advertising, charity and other activities designed to enhance the brand of the organization or even its specific products and services could have a significant impact on applicant attraction (Highhouse et al. 1999). Furthermore, this branding may be intentionally directed toward enhancing organizational image for the purposes of recruiting (Cable, 1999).

### Theories of Recruiting

Although the recruiting literature has a rich empirical tradition, largely developed since Rynes' (1991) chapter in the *I/O handbook*, it has been noted that the theoretical underpinnings of this empirical work has been largely weak or absent (Barber, 1998; Rynes, 1991). Much of the theoretical work that has been done in the recruiting literature focuses on applicant decision processes. This is understandable given the important role decisions play in the recruiting process. Most recruiting outcomes involve some decision by the applicant— the decision to apply for a position, the decision to interview with an organization, the decision to accept an offer from the organization etc. The debates in the recruiting literature have typically centered on the decision strategies employed by applicants or on the relative importance of various sources and types of information on applicant decisions.

### Compensatory Versus Noncompensatory Decision Processes

One of the central theoretical issues in the recruiting literature concerns the process by which applicants make job choices. Much of this debate has hinged on the extent to which applicants engage in compensatory or noncompensatory decision making. Applicants employing a compensatory strategy are said to weigh the information regarding the job alternatives and choose the one that has the best combination of attributes. Proponents of compensatory decision strategies suggest that unfavourable evaluations of some attributes can be compensated for by favourable evaluations of others. In contrast, applicants employing a noncompensatory strategy of decision making are said to focus on one or two variables (such as pay or location) to screen potential jobs, rejecting those that do not meet a minimum level of acceptability regardless of the merits of other aspects of the position. Proponents of noncompensatory decision making point out that decision makers have limited cognitive capacity to process the complexities of many decision situations (referred to as *bounded rationality* by Simon, 1955). Instead, they suggest that many decisions are made intuitively, in processes such as screening alternatives based on their compatibility with the decision maker's values and interests (Mitchell & Beach, 1990).

Empirical support for these approaches in the recruiting literature have been mixed. Several studies have found that a noncompensatory strategy is used as a screening strategy. Rynes, Schwab and Heneman (1983) examined pay level and determined that pay represented a variable that was treated as a noncompensatory factor in many applicants' screening processes. Similarly, Barber and Roehling (1993), found evidence from verbal protocols of job seekers that applicants may use noncompensatory strategies (location in particular) when choosing which companies to submit resumes to in order to obtain interviews. Other research

examples support the compensatory view of applicants screening potential jobs on some attributes (e.g., Saks, Leck & Saunders, 1995; Williams & Bauer, 1994). There may be individual differences in decision making strategies with regard to compensatory versus noncompensatory approaches. For example in a small sample of job applicants Rynes and Lawler (1983) found that 40% of applicants used noncompensatory strategies related to location and job type. Unfortunately, we know little about what individual differences are associated with different selection strategies.

It is reasonable to believe that job applicants in early stages of screening would necessarily employ a form of noncompensatory decision strategy. Depending on the extremes to which a researcher is willing to go to show noncompensatory strategies it is obvious that they ought to succeed. For example, in the samples used in the studies included in this dissertation, the applicants theoretically could choose among 2,500 employers when determining to whom to send resumes. Few would argue that they would look at each of these in detail and weigh numerous variables before choosing where to direct their limited resources to explore opportunities. Using variables of importance to the applicant such as location, pay, job type and/or minimum qualifications to screen organizations would seem a necessary process to narrow the field to a reasonable number. However, consistent with the image theory of decision making (see Mitchell & Beach, 1991) once the number of alternatives is reduced to a manageable number, it seems reasonable that applicants engage in a compensatory strategy to assess the jobs remaining subsequent to the initial screen. Furthermore, many of the studies demonstrating noncompensatory decision making in the job choice context manipulated applicant perceptions of pay, location or other variables in laboratory settings. It is possible that very unusual levels of any variable (either high or low) could result in a noncompensatory

strategy being employed by the applicant. It is possible that differences in pay, for example, may be somewhat more restricted in a real sample where market forces and established norms may limit variability in some variables.

### Job Attributes Versus Recruiter Effects

Unlike the compensatory versus noncompensatory decision process debate, the argument surrounding the relative effects of the recruiter and recruitment processes versus job attributes has concentrated on the *type* of information that applicants use in making decisions. Much of the theory-based work in recruiting stems from the work of Behling, Labovitz and Gainer (1968) and Tom (1971) that described two sources of information that applicants use in decision making. These sources include vacancy characteristics and recruiter effects. Each of these sources will be described in turn.

#### Objective factor theory.

This theory contends that applicants make their job choices based on their evaluations of the job attributes or vacancy characteristics of the position being evaluated. In the literature, these attributes have often included the location, pay, benefits, opportunities for advancement, prestige of the organization, development opportunities, work environment, and type of work associated with the position.

#### Critical contact theory.

This theory suggests that applicants often or usually do not have sufficient information about job attributes to make meaningful comparisons among jobs and therefore are more influenced by the recruiter than by job attributes (Behling et al., 1968; Harris & Fink, 1987). Proponents of this theory suggest that the information from the recruiter comes from both the recruiters' behaviour (e.g., friendly, aggressive, competent) and from characteristics of the

recruiter (e.g., age, gender, title). Ultimately this information is used to determine the attractiveness of a given position. Three cognitive mechanisms by which this information is processed by applicants will be discussed later in more detail.

#### Subjective Factors Theory.

This third theory proposed by Behling et al. (1968) relates to the relative importance of the information obtained from either objective factors or recruiters. Borrowing from a variety of literatures emphasizing the fulfillment of needs (e.g., MacClelland, Alderfer, Maslow etc.), and the subjective valences of facets (Locke, 1984), the subjective factors theory posits that there are individual differences in applicant preferences for recruiting-related variables. Specifically, individual needs and values, determined by personality and experiences, serve as motivators to accept job positions that have the potential to satisfy these needs. Examining the valences and instrumentalities attached to these variables (be they recruiter based or vacancy characteristics) is therefore thought to predict the attractiveness of a given position for a given applicant.

Within the context of personnel selection, the subjective factors theory has been most influential on the stream of research known as person-organizational (P-O) fit (e.g., Cable & Judge, 1996, 1997; Judge & Bretz, 1992). Cable and Judge (1996, 1997), credit Schneider's attraction-selection-attrition theory (Schneider, 1987), and particularly the 'attraction' aspect, as being the main framework for P-O fit. The underlying assumption of P-O fit is that applicants and organizations are interested in improving the congruence of values held by each. Applicants are motivated to find an organization with values that are similar to their own. The subjective factors theories then encompass both objective factors and critical



contacts as sources of information about organizational values and attributes that may be used by applicants to determine their fit with the organization.

### Empirical Findings Relevant to the Objective Factors, Critical Contact, and Subjective Factors

#### Theories

In this next section, I will briefly review some of the empirical findings relevant to the information source theories above. They are divided into two sections: those that provide information regarding job attribute influences and those that examine critical contact variables.

#### Objective Factors

A considerable amount of empirical research has been conducted examining the influence of objective factors (vacancy characteristics) on applicant decisions. One stream of this research has looked extensively at applicants' ordinal ranking of job attributes. A 30 year longitudinal study involving over 50,000 participants was conducted by Jurgenson (1978). Jurgenson's work involved having subjects rank the importance of 10 job attributes for their own job choices and to rank these same attributes for how people in general make job choices. Jurgenson (1978) consistently found that subjects rated the type of work as being most important for the self and that pay was most important for *others*. Interestingly, Jurgenson found that subjects ranked pay a distant fifth for the self, behind type of work, security, advancement and the company. This finding was largely replicated in a more recent investigation by Turban, Eyring and Campion (1993). Other studies have used policy capturing methodologies to examine the relative influence of specific job attributes on applicant job choices. For example, Rynes and Lawler (1983) found pay to be important.

### Critical Contact Findings

Several studies have investigated whether recruiter demographic characteristics have an influence on applicant attraction to organizations. Often, the literature offers mixed results for the influence of recruiter characteristics on recruiter or job attractiveness. Furthermore, even the significant findings typically show modest effect sizes.

Gender. Results have been inconsistent across studies investigating recruiter sex effects on applicant impressions of the recruiter and attraction to the organization. Taylor and Bergmann (1987) found that male applicants were not affected by the gender of the recruiter while female applicants reported a higher probability of accepting offers made by male recruiters. A more direct examination of the similar-to-me effect by Maurer, Howe, and Lee (1992), replicated this dissimilar-to-me result for female applicants. Finally, Liden and Parsons (1986) revealed that although applicants may view female recruiters as more personable and informative than male recruiters, they were still less likely to report favourable reactions to the job. It is not clear why these effects occur. Barber (1998) suggested that recruiter demographics might constitute a signal about the job or organization. Why female applicants view female recruiters less positively or what signals might be provided by a female recruiter is open to speculation. One possible explanation is the perception of the job being “sold” by the female recruiter. Other research, which will be reviewed in more detail later, has shown that applicants generally react negatively when the interviewer appears to be selling the job to them (Barber et al., 1994). One can speculate that perhaps female applicants view a female recruiter as an attempt to sell them on the position whereas a male recruiter is expected as the norm. Another possible explanation involves the potential for perceived differences in power associated with interviewer gender. Male interviewers might be viewed as more powerful

agents of the organization and this in turn might signal what the organization thinks about the applicant, the prestige of the job opening, or the attractiveness of the organization. These are testable empirical questions that remain to be answered. Lastly, not all studies have found an effect of recruiter gender on applicant impressions of the recruiter or organization. Kacmar and Hochwarter (1995), videotaped 32 real job interviews for a single organization and analyzed the patterns of questions and responses for each statement in the interview. They found no differences in the communication patterns based on gender, and found no differences in ratings of recruiters based on gender. However, given the small sample size it is possible that the lack of findings for gender were due to insufficient power to detect them.

Age. Studies examining the effects of recruiter age have revealed a bias in favour of younger recruiters (Rogers & Sincoff, 1978; Taylor & Bergmann, 1987). Rynes (1991) suggested that these results might be explained by a “similar-to-me” effect because applicants have been uniformly young in the recruiting literature, or by a general bias against older employees. However, Maurer et al. (1992) failed to find evidence of a similar-to-me effect for recruiter age.

Position. Recruiters are typically either professional human resource personnel or largely untrained representatives of the hiring organization (such as a hiring manager or job incumbent.) The evidence is mixed on whether the recruiter’s position or title affects their effectiveness as a recruiter. Several early studies suggested that job incumbents and hiring managers were more effective recruiters than HR personnel (e.g., Fisher, Ilgen & Hoyer, 1979; Rogers & Sincoff, 1978; Taylor & Bergmann, 1987). However, Rogers and Sincoff (1978) found that job title interacted significantly with age and presentation interaction. The explanations offered included the perception that incumbents were more trustworthy, and

better liked than professional recruiters. Subsequent attempts to replicate these earlier studies were not always successful (e.g., Harris & Fink, 1987).

### Recruiter Behaviours

There has been an extensive debate in the recruiting literature regarding the extent to which recruiter behaviours versus job attributes play a role in applicant impressions of organizations and their job choice decisions. Early studies in interviewer and recruiter behaviours suggest that interviewers actively adjust their interviews to present their organization more favourably to strong applicants (Macan & Dipboye, 1988, 1990; Sydiaha, 1961). Other evidence suggests that there is good reason for interviewers to purposefully alter their behaviour to attract candidates. Several studies have linked interviewer behaviours with applicant job choice, applicant acceptance intentions, and applicant impressions of the company the interviewer represents (e.g., Harn & Thornton, 1985; Harris & Fink, 1987; Herriot & Rothwell, 1981; Liden & Parsons, 1986; Schmitt & Coyle, 1976; Taylor & Bergmann, 1987, Stevens, 1997, Turban & Dougherty, 1992) although some studies that have included applicant evaluations of job attributes have questioned the influence that interviewers can have on applicant job choices (e.g., Powell, 1984; Rynes and Miller, 1983).

Rynes and Miller (1983) reported the results of two studies they conducted to demonstrate the effects of interviewer warmth on applicant attraction to organizations. In their experiments, they showed tapes of recruiters, in which they manipulated the warmth of the recruiter, to students and measured the students' perceptions of the organization, their expectations of being made an offer, perceptions of the job and likelihood of being made an offer. Interestingly, they found that warmth had a significant effect on applicant expectations of receiving a job offer and on their willingness to pursue a second job interview with the

company. However, when they added job characteristics to their design, they found that the effects of interviewer warmth disappeared. Powell (1984) also found no relationship between recruiter warmth and applicant attraction when he controlled for the effects of job attributes. However, as Barber (1998) noted, Powell later reversed his conclusions using the same sample after controlling for pre-interview impressions of the organization (Powell, 1991).

Several subsequent studies have demonstrated links between recruiter warmth and attraction to the organization. Taylor and Bergmann (1987) carried out a very ambitious longitudinal study of over 900 applicants to a single organization. They attempted to estimate the impact of recruiting processes versus job attributes on applicant attraction and job choice. One of their conclusions was that recruiter empathy had a positive effect on applicant attraction to organizations. It appears that when controlling for pre-interview attractiveness of job attributes, recruiter friendliness can have an influence on applicant attraction to organizations.

In addition to warmth and friendliness, there is some evidence to suggest that applicants also value competent, informative interviewers (Harris & Fink, 1987). Again, this research supports the critical contact theory of job choice.

Harris and Fink (1987) reported that recruiter behaviour might be differentially attributed to the job or the organization. They discovered that recruiter aggressiveness was negatively associated with attraction for the job while perceived interviewer competence and informativeness were positively associated with regard for the organization.

Rynes (1989) emphasized the dual nature of the employment interview as having a selection focus, a recruiting focus, or some balance between the two goals. Two studies have found, somewhat counter intuitively, that interviewers who engage in recruiting behaviours are

actually less successful at attracting candidates (Barber et al.1994). One explanation they provide is that applicants may be suspicious of jobs that have to be 'sold' to them.

### Subjective Factors P-O Fit

Using a policy capturing methodology, Judge and Bretz (1992) manipulated organizational work values in 128 job descriptions which were evaluated by 67 business graduate students in order to determine the effects of the congruence of the applicants' values (e.g., fairness; honesty; achievement; concern for others and generalist work) on their ratings of the attractiveness of the organization. They found significant but weak interactions of person and organization values on simulated job choice decisions with the largest interaction being fairness values.

It is important to note that the fields of applicant reactions and recruiting overlap but remain distinct. For example, the recruiting literature has a wider scope than applicant reactions. Applicant reactions, for instance, are limited to those applicant behaviours that occur once the applicant has applied for the position. Recruiting includes initial applicant attraction such as advertising the position, and promotional materials which may occur weeks or even months before the candidate applies for the position. Next, the literature related to applicant reactions is reviewed.

### Applicant Reaction Research

As noted previously, selection research and practice has been biased toward improving selection validity with far less attention paid to how the practices associated with these modifications can influence applicant attraction and job choice. Although applicant reactions have been of interest to researchers for some time, much of this early work looked at these results indirectly with the bulk of applicant reactions research being generated in the past five

years (Barber, 1998). A literature known as applicant reactions has slowly been developing to guide researchers and practitioners in assessing the utility of selection procedures versus possible applicant reactions to those procedures.

### Consequences of Applicant Reactions

Why should anyone care about applicant reactions to selection procedures? Applicant reactions are attitudinal in nature but have been shown to have behavioural consequences. A number of possible and observed behavioural ramifications have been discussed in the literature including: potential premature withdrawal from selection, negative public relations (Gilliland, 1994), refusing to accept job offers (Smither et al., 1993), and potential loss of customers (Rynes & Barber, 1990).

Applicant reactions and premature withdrawal. Premature withdrawal from selection procedures has been identified as one of the major potential consequences of negative applicant reactions (Smither, et al., 1993). This outcome is particularly problematic in multiple hurdle selection procedures where voluntary attrition is more likely. A negative reaction to early stages of selection would likely be more significant as the candidate builds expectations and a relationship with the organization over time. Early negative experiences are likely to result in the candidate seeking negative confirming information in later stages in the selection procedure, while it is possible that late-stage negative experiences may be downplayed in light of the positive early experiences. Regardless of the timing of the negative reaction, the withdrawal of candidates from the selection procedures may have serious and detrimental effects on selection decisions as candidates are selected from a smaller pool.

One of the obvious objections of practitioners and researchers alike to the early attrition argument may be that it is inevitable that some applicants will experience negative feelings as

a result of substandard performance and that this cannot be avoided. Furthermore, it could be argued that the self-selection of candidates during the selection process may ultimately be healthy for the selection system. Those candidates experiencing the most negative reactions are assumed to be those who are not performing well. Losing these underperforming applicants to voluntary attrition might be quite functional for the selection system. A counter to this argument is that attrition is most likely to occur among the top candidates as these candidates are likely to have competing offers or other employment alternatives. If this is indeed the case, negative applicant reactions could have a crippling effect on the selection system as the upper end of the distribution is disproportionately affected.

Applicant reactions and public relations. Gilliland (1994) suggested that one of the possible consequences of negative reactions to selection procedures is negative public relations. We often overlook the possibility that individual reactions may be transmitted to others which in turn affects their opinion of the organization. For example, Rynes et al. (1991) related the story of an MBA student who applied to a large consulting firm and experienced a strong negative reaction to their selection procedures. They went on to describe how this candidate returned to his school and related his experiences to his many colleagues, discouraging them from applying to this company. If you multiply this experience across candidates from several business schools (presuming that there is something truly negative about the firms' practices), it is easy to see how their applicant pool could shrink dramatically. Furthermore, these negative stories are likely to persist in future years resulting in negative consequences for the organization, even after they may have changed their procedures.

Applicant reactions and effects on consumers. A final consequence of negative reactions is the potential effect on consumers. This argument follows from the fact that



applicants are often customers of the organization and their negative reactions to a selection procedure might cause them to avoid purchasing products or services associated with that organization (Rynes & Barber, 1990). This is likely to be more of an issue for a very large organization that screens thousands of employees per year than smaller organizations. This problem also has the potential to be amplified by negative public relations, in much the same way that potential applicants are deterred from applying.

Although the study of applicant reactions has only recently taken on an identity that is distinct from recruiting itself, many of the approaches to understanding applicant reactions necessarily require an understanding of the decision processes of job applicants. This results in considerable theoretical overlap between recruiting, decision making, and applicant reactions literatures. In fact, one of the goals of this thesis is to examine whether we have gained from separating applicant reactions from the context of recruiting and job choice or we have lost by examining these reactions outside the framework of recruiting. One way to interpret applicant reactions is within the framework of the critical contact theory. Applicants react to the behaviours and characteristics of the interviewer, test administrator, and so on. In the next section I will review three models that have been applied to applicant reactions and job choice-- a signal model, a justice model, and a meta-perception expectancy model. The central thesis of this dissertation will be to examine empirically how well these models explain actual applicant attraction to organizations and subsequent job choice and to determine more precisely the mechanisms for critical contact influences on applicant job choices.

### Signal Model

Signal theory posits that in the absence of complete information, decision makers use the information available to them to make inferences about the missing information (Einhorn

& Hogarth, 1985; Highhouse & Hause, 1995; Spence, 1973, 1974). Signal theory was initially used to describe how consumers make choices about product purchases but Spence (1973) suggested that signaling theory might also be applicable in the context of the job market. In the context of recruiting, job applicants often have only superficial information about the characteristics of the job and the organization, and judge the attractiveness of the organization based on vague impressions of the organization described as organizational image (Tom, 1971), which is highly correlated with familiarity with the organization and/or its products and services (Gatewood, Gowan & Lautenschlager, 1993; Turban & Greening, 1997). Consequently, job applicants are motivated to search for information cues to provide more detailed pictures of the jobs and organizations they are considering. According to Rynes (1991), applicants attend to signals from interviewer behaviour and may make inferences regarding the desirability of the organization and/or their own likelihood of receiving a job offer. Categorizing both of these processes, that is, cues about the organization and cues about the likelihood of receiving a job offer, under the same name, signaling, has the potential to create some confusion and to overlook effects that may be generated by two very different processes. Accordingly, for the purposes of this thesis, signaling is defined as inferences that applicants make about the *organization* based on the behaviours of the interviewer while applicants' inferences about their own performance will be discussed later under the heading of meta-perceptions.

Signaling theory was introduced into the recruiting and applicant reactions literatures by Rynes, Bretz and Gerhart (1991). They reasoned that applicants often make decisions about the suitability of organizations based on very limited information. For example, it is common for applicants to make decisions that will substantially affect their future employment, career,

geographical location, and standard of living on the basis of a short interview and a job description. In other words, the only written information that the applicant has to make judgements about the organization is a short job description which may or may not contain detailed information about the organizational climate, culture, working conditions etc. According to Rynes et al. (1991), this creates a situation where the applicant must actively seek information from other sources to better understand the type of work environment they might have. The interviewer is a salient agent of the organization (Rynes et al., 1991) and applicants are therefore likely to attend to interviewer behaviours for cues about working conditions, climate, and so forth. This concept is quite similar to the “critical contact” construct suggested by Behling, Labovitz and Gainer (1968). These researchers submitted that job applicants attend to objective information about the organization (e.g., pay, location), or subjective information (e.g., fit with the organization’s values). Behling et al. (1968) further proposed that in the absence of clear information about how to distinguish between organizations, applicants will rely on information from recruiters (i.e., critical contact) to form an opinion and make their job choice. However, regardless of whether we emphasize signal theory or the critical contact perspective, we know surprisingly little about what cues applicants look for or how they are interpreted.

One source of cues that has been investigated only indirectly is interviewer friendliness. If applicants perceive the interviewer to be friendly, signal theory would suggest that they would extrapolate this information to make inferences about the organization as a whole. That is, a friendly interviewer would suggest to applicants that the organization represented by the interviewer is likely to be a friendly place to work. Although this conclusion is typically viewed as an information processing error there may be some merit to the

applicant's conclusion. Many organizations require that the hiring manager conduct the selection interview rather than a representative from human resources. Given the fact that workplace satisfaction can be greatly influenced by how well one interacts with their supervisor (Klimoski & Hayes, 1980), the applicant's inferences based on the hiring manager's behaviour might be an accurate assessment of how friendly and pleasant the work environment will be.

Regardless of the accuracy of applicant judgements about signals provided by the interviewer, there is some evidence to suggest that applicants attend to these signals and use them in their appraisal of organizational attractiveness (Harris & Fink, 1987). The most widely investigated potential source of signals (albeit indirectly) is interviewer friendliness (sometimes called warmth or empathy). As reported earlier, several studies have shown empirical support for interviewer friendliness leading to more favourable impressions of organizations, intentions to accept an offer and acceptance of a job offer. The impact of liking the interviewer on job attractiveness has been demonstrated in the field (Campion, 1980; Keenan, 1978) and in controlled laboratory settings (Rynes & Miller, 1983; Young & Henneman, 1986). Although this evidence is consistent with signal theory, as will be discussed next, there are competing alternate explanations for the underlying mechanism.

#### Procedural Justice Model

A second potential mechanism to describe how critical contacts influence applicant job choice involves applicant perceptions of justice. Recently there has been considerable interest in examining how organizational justice influences applicants and existing employees (e.g., Gilliland & Steiner, 1999). Organizational justice has been described as "people's perceptions of fairness in organizations" (Cropanzano & Greenberg, 1997). It has been suggested that

people perceive three related but distinct sources of justice: distributive justice, procedural justice, and interactional justice. Distributive justice has been described as individuals' perceptions of the fairness of the outcomes they receive (Adams, 1965; Leventhal, 1976). In the context of a selection procedure, distributive justice would refer to the applicant's reaction to a selection decision. Several studies have used distributive justice to examine applicant reactions to selection procedures. Consistent with the general literature on organizational justice (e.g., Ambrose, Harland & Kulik, 1991; Cropanzano & Greenberg, 1997), these studies have confirmed that applicants view selection procedures as being more fair when they are hired as a result of their use and as being unfair if they are not hired (Bauer et al., 1998; Chan, Schmitt, Jennings, Clause & Delbridge, 1998; Gilliland, 1994; Horvath, Ryan & Stierwalt, 1999; Kluger & Rothstein, 1993; Macan, Avedon, Paese, & Smith, 1994; Smither et al., 1993; Tyler & Dawes, 1993). These findings replicate other findings in the justice literature which demonstrate a rather robust self-serving bias in assessing distributive justice (Ambrose et al., 1991; Brockner & Wiesenfeld, 1996). While interesting from a theoretical perspective, understanding perceptions of distributive justice in the applicant reactions context has somewhat limited applications. For example, we are unlikely to observe significant variance in distributive justice perceptions among applicants who have all been given job offers. Most will think the outcome was fair if it resulted in an offer of employment for them. Furthermore, the applicant reaction consequences that are most likely to result in decreased efficiency of a selection system are premature withdrawal of desirable applicants from the selection system and refusals of job offers. Neither of these consequences are likely to be affected by distributive justice perceptions as these are likely to occur either prior to an offer being made (in the case of premature withdrawal), or with uniformly positive distributive justice (after a

favourable decision has been made by the organization). While one might argue that the justice perceptions of those rejected by the selection procedure might influence the likelihood of re-applying for the next competition, or affect the likelihood of the rejected applicant encouraging a friend to apply (Smither, Reilly, Millsap, Pearlman & Stoffey, 1993), most employers tend to be concerned with attracting applicants, keeping them in the selection pool, and persuading them to accept an offer (Barber, 1998; Kraiger, Kramer & Loya, 1999). Accordingly, it might be more interesting and practical to examine justice perceptions prior to a hiring decision being made, as these perceptions might influence the applicants' desire to remain in the applicant pool and even increase the likelihood that they will accept an offer if one materializes.

In the absence of a decision being communicated to the applicant, the most salient information available to the applicant on which to make a justice judgement is the fairness of the selection procedures themselves. Individual's judgements of the fairness of allocation procedures has been described as *procedural justice* in the literature and has quickly become a popular topic of justice research in organizations in general (e.g., Folger & Greenberg, 1985; Greenberg & Tyler, 1987) and personnel selection in particular (e.g., Arvey & Sackett, 1993).

Gilliland (1993) provides ten procedural justice rules that are applied to the selection context. These rules include: job relatedness of the selection procedure, opportunity to perform, reconsideration opportunity, consistency, feedback, selection information, honesty, interpersonal effectiveness, two-way communication and propriety of questions. Although Gilliland describes each of these items as a measurement of procedural justice, some of them appear to measure a third form of justice.

Interactional justice (Bies & Moag, 1986; Tyler & Bies, 1990) refers to "...the perceptions of the quality of interpersonal treatment people receive when procedures are implemented" (Colquitt, Conlon, Wesson, Porter & NG, 2000, p. 6). For example, an employee may receive a promotion based on merit (equity) and perceive this as being distributively fair, but if the occasion was overlooked by her supervisor she might perceive that the interactional justice was unfair. Interactional justice then deals with factors such as respect for the individual and the appropriateness of interpersonal interactions.

The bulk of the research conducted on applicant reactions, and particularly theory-based approaches, has concentrated on the concept of organizational justice and specifically procedural justice (Bauer et al., 1998; Gilliland, 1993, 1994, 1995; Greenberg, 1990; Ryan, Greguras & Ployhart, 1996). These authors suggest that applicants are conscious of the fairness of selection procedures and that they may make judgements about the attractiveness of organizations based on their perceptions of how fair selection practices are conducted. In other words, the fairness of the selection procedures leads applicants to view the organization more favourably.

There is some empirical support for justice effects on applicant reactions but effect sizes are small (e.g. Gilliland, 1994; Macan, et al., 1994; Ryan et al., 1996). In fact, Ployhart and Maynard (1999) note that justice effects are rarely found in the field and only seem to make a difference in laboratory studies where strong manipulations of justice are possible. This suggests that perhaps there is insufficient variance in justice perceptions to influence applicant reactions in the field, or that other factors interact with, or supercede, justice effects. An alternative explanation may be that the measures of justice are poor. For example, it is not uncommon for researchers to use single-items to measure justice constructs. Unfortunately,

most field studies have been conducted in such a way that the applicants' perceptions of the selection procedures are potentially restricted. For example, most field studies examine a single organization and often, a single test or selection procedure in that organization. This limits the variance in justice perceptions to *perceived* differences in identical procedures rather than perceived differences based on different practices. Most laboratory studies also tend to limit applicant reactions by studying a single procedure in a single (simulated) company. It is possible then that justice effects are suppressed by the methodologies and research designs chosen to look for them. Multiple organizations and multiple selection procedures may provide a better opportunity to detect justice effects on applicant reactions and job choice.

Bauer et al., (1998) conducted an impressive longitudinal study of 144 applicants for entry-level accounting positions in a single organization. They found that early in the selection process procedural justice effects predicted applicant evaluations of the organization. However, once applicants received notice of either passing or failing the selection test used to screen employees, a self-serving bias based on favourable outcome was the best predictor of attitudes toward the organization and the testing procedures (Bauer et al., 1998). In effect, those that passed the test viewed the company and the selection procedures more favourably while those that failed the test had more negative opinions of both the process and the organization. Chan et al. (1998) found a similar self-serving bias effect for police officer applicant perceptions of the fairness of written and video-based tests. Horvath et al. (1999) provide one possible solution that could mitigate the self-serving bias effects found in judgements of procedural fairness in selection systems. Specifically, they examined the role of explanations or causal accounts (see Bies, Shapiro, & Cummings, 1998; Bobocel & Farrell, 1996) for selection procedures prior to the selection decision being made. While Horvath et al.



(1999) found that pre-decision causal accounts could mitigate self-serving bias effects, they caution that applicant self-efficacy moderates this relationship with equity perceptions being more favourable with accounts for high self-efficacy applicants but less favourable with accounts for low self-efficacy applicants.

### Meta-perception Expectancy Model

Expectancy theory (Vroom, 1964) provides an excellent framework for studying how applicant reactions can influence organizational attractiveness and job choice. Not surprisingly, this popular theory has generated a considerable amount of research examining the role of expectancies in organizational attractiveness and job choice (see Wanous, Keon & Latack, 1983, for a detailed review). Wanous et al. (1983) concluded that expectancies did play a role in applicant attraction to organization (i.e., willingness to apply) and job choice. Barber (1998) reports that these conclusions have been criticized for portraying the decision maker as an overly rational being– in contrast with those who espouse the less rational, more affective approaches to decision making (e.g., image theory).

A question that has not been fully addressed in the literature is *where do expectancies come from?* (Barber & Roehling, 1993). According to Barber and Roehling (1993), job postings (advertisements) are not typically used by potential applicants when deciding where to apply. Expectancies then, might be generated later in the selection process– during interviews for example. Earlier, it was noted that Rynes' discussion of signals from the interviewer included both information about the organization (e.g., friendliness of the work environment) as well as information about the applicant's performance in the interview (Rynes, 1991). Rynes (1991) argued that applicants are motivated to seek out information about how well they are performing in the interview. In order to accomplish this goal they

have two sources of information on which to judge their performance: observations of their own behaviour, and inferences from the interviewers' behaviour. Observations of their own behaviour are consequential only in light of their perceived influence on the interviewer's judgements. Accordingly, the culmination of personal observations and observations of the interviewer's behaviours should ultimately be a perception of how the interviewer is responding to the applicant's performance in the interview.

A considerable amount of research has been generated on the concept of meta-perceptions over the past century by sociologists, social psychologists, and clinical psychologists. Cooley (1902, as cited in Kenny, 1994) proposed the concept of "the looking glass self" where individuals form their impressions of themselves based on their perceptions of how others view them. According to Cooley, others' perceptions of us are viewed as a mirror which we check constantly to tell us more about ourselves. Other early sociologists such as Mead (1925, 1934) described this process of self-identification as *symbolic interactionism*, a process where our views of ourselves are composed of the opinions that we believe others have of us (Schrauger & Schoenman, 1979). Although symbolic interactionists use the term "reflected appraisal" rather than "meta-perception" the concept is essentially the same.

The work of social psychologists such as Kenny have also explored how meta-perceptions affect our views of ourselves. In social psychology, meta-perception is an important component in research related to self-presentation theories as well as theories related to the accuracy of our perceptions. Self-presentation theories suggest that we are motivated to project a favourable image of ourselves to others (Baumeister, 1982; DePaulo, 1992; Schlenker, 1980; 1985). One of the ways we test to see whether we are in fact projecting the

image we want is to employ meta-perceptions. If our meta-perceptions are incongruent with our desired self-image, we are motivated to adjust our behaviour in order to align our meta-perceptions with our desired self-image. The work of I/O psychologists on impression management is closely related to this way of thinking about ourselves (see Gilmore, Stevens, Harrell-Cook & Ferris, 1999, for a review).

In contrast to the beliefs of social interactionists however, the social psychological perspective has also concerned itself with the concept of *meta-accuracy*. Meta-accuracy considers the *accuracy* of our meta-perceptions. Kenny and others suggest that we may hold strong opinions about how others perceive us and yet be utterly inaccurate about the substance of those opinions. Indeed there is ample empirical evidence to suggest that we frequently misjudge how others perceive us (Kenny, 1994). That is not to say that we are always inaccurate. Several studies have shown that we can be at least partially accurate and that we can often take cues from the nonverbal behaviours of others in order to make accurate meta-perceptions. For the purposes of the current study however, the accuracy of meta-perceptions is less important than how the meta-perceptions are formed and how they affect our subsequent behaviours.

Another debate surrounding the issue of self- and meta-perceptions has been the ordering of information to which we attend. While symbolic interactionists suggest that we attend to the behaviour of others and the resulting meta-perceptions are used to form and alter our self-image, others argue that we are primarily focused on our *own* behaviour and that our meta-perceptions are the result of our self-appraisal projected onto others (Kenny, 1994). Kenny argued that the evidence from the social psychological literature suggests that, contrary to the symbolic interactionist perspective, individuals attend to their own performance and

construct their meta-perceptions from these self-appraisals rather than attending to the behaviour of others to construct meta-perceptions (Kenny, 1994). However, unlike the experiments conducted by Kenny and his colleagues, the personnel selection context is a situation which is considerably different from typical interpersonal perception experiments conducted with undergraduates in laboratory studies. Applicants are highly motivated to manage their impressions and might be more vigilant to cues from the interviewer regarding their own performance in order to adjust their impression tactics to suit their needs. The consequences of the impression management tactics are also considerably higher in a selection context than in a casual encounter with a stranger in a controlled laboratory experiment. Kenny (1994) suggested that there may be some circumstances where the meta-perceptions are based on the behaviours of others rather than on self-appraisals. These circumstances include: (a) when people are outcome-dependent on their interaction partners; (b) when the dimensions being assessed by the interaction partner are important; and (c) in transitions to new or unfamiliar situations such as a new job, going to college etc. (Kenny, 1994). Clearly, the situations outlined by Kenny as potentially reversing the order of the genesis of meta-perceptions are typical of the selection context and therefore it is more likely that applicants will be attending to cues from the interviewer more closely than is usual in a casual context. Furthermore, it is possible that the manner with which the interview is conducted (i.e., the communication medium) may have a significant impact on applicant's actual performance in the interview. For example, it is plausible that the interview medium could limit the effectiveness of impression management tactics used by the applicant or make the applicant more nervous (Webster, 1997). If the applicant's performance in the interview is impeded by the communication medium used, and applicants are attending to their own behaviours in the

interview, then the interview medium could still have a negative impact on applicant's meta-perceptions of their performance. In other words, the interview medium has the potential to generate negative meta-perceptions regardless of whether the meta-perceptions originate from observing the interviewer's behaviours (symbolic interactionism) or from the applicant observing their own behaviours (self-appraisal).

A question that has not been fully explored in applicant reactions research is how these potential meta-perceptions are processed and used by applicants in the job choice context. A possible mechanism is that positive meta-perceptions of applicant performance in the interview will generate expectations of receiving a job offer (Alderfer & McCord, 1970; Rynes & Miller, 1983).

The role of experience in meta-perceptions and expectancies. Schmitt and Coyle (1976) mailed surveys to examine the reactions of 237 undergraduates to placement interviews and found evidence that interviewer friendliness correlated with interviewees' perceptions of their own performance in the interview ( $r = .25, p < .05$ ), and perceptions of the likelihood of receiving an offer immediately after the interview, although the results of the latter were marginal ( $r = .35, p = .095$ ). An unpublished master's thesis (Ramsay, 1981) followed Schmitt and Coyle's (1976) methodology with 125 student job applicants in a pre-post interview study. Ramsay (1981) found that less experienced applicants' perceptions of interviewer empathy led to greater expectancies of receiving a job offer although this effect diminished for more experienced job seekers.

Dissonance reduction. One way that expectancies might influence applicant reactions is through the process of dissonance reduction (Festinger, 1957). Typically in the job choice literature, dissonance reduction has been applied to the way in which applicants respond to

receiving a job offer or a rejection. It is reasoned that once applicants receive news of whether they are being offered a position, and not offered others, they will re-evaluate the attractiveness of each position in order to reduce cognitive dissonance. That is, applicants receiving an offer will tend to evaluate the attractiveness of the job more favourably, while those who are rejected are motivated to reduce dissonance by evaluating the job less favourably. However, according to Festinger's original arguments, dissonance necessarily occurs only *after* social commitment to a decision has been made. This would necessarily preclude dissonance reduction as a mechanism for expectancy to influence job choice. However, other theorists in the decision making literature counter that decision makers may engage in a cognitive decision making strategy described as *defensive avoidance* and specifically, *bolstering*, prior to socially committing to a decision (Janis & Mann, 1977).

Janis and Mann (1977) suggested that decision makers may ease the burden of decision making by "spreading the alternatives" and effectively bolstering favoured options and focusing on the negative aspects of other options. They further argue (based on their empirical studies) that bolstering is most likely to occur when decision makers are making consequential decisions, are facing a deadline, and feel they are unlikely to get more information (Janis & Mann, 1977, p. 88). How then does all of this apply to the potential role of meta-perceptions and expectancies on job choice? Imagine an applicant having recently completed job interviews with Company A and Company B. The interviewer from Company A was very friendly and attentive to our applicant. This friendly behaviour might lead our applicant to believe that she performed well in the interview (meta-perception) and as a result is likely to believe that she will receive a job offer (an expectancy). Meanwhile, the interviewer from Company B is decidedly cool and aloof during the interview with our applicant. In this case the

aloof behaviour might be interpreted by the applicant as a sign that she is not performing very well in the interview (meta-perception) and consequently believes that the company is not interested in hiring her (expectancy). Although there has been no decision communicated to her (outcome) and she has not made a formal decision (social commitment), it is consistent with defensive avoidance strategies that the candidate would spread these alternatives by bolstering the attractiveness of the position she expects to be offered (Company A) and downplaying the desirability of the position for which they expect to be rejected (Company B).

In support of the idea that perceived performance influences applicant perceptions of the selection process, Chan et al. (1998) demonstrated that actual performance on a written comprehension test used to select police officers predicted applicants' perceived performance on the test ( $\beta = .33$ ) which subsequently affected the applicants' impression of the relevance of the test ( $\beta = .36$ ), and the fairness of the test ( $\beta = .15$ ).

#### The Juggernaut of Organizational Image

In addition to including the applicant reaction mechanisms described earlier, a fuller understanding of applicant job choice requires examining these mechanisms in the context of other important variables. A very strong finding in the recruiting literature has been the effect of organizational image on applicant attraction and job choice (see Gatewood, et al., 1993, for a review). There are two potential reasons why pre-interview impressions are so strongly related to post-interview impressions. The first, and most direct, is that applicants have strong opinions about organizations prior to the selection interview and therefore these opinions are not susceptible to the influence of recruiters. This view is consistent with the objective factors theory and P-O fit but is irreconcilable with the critical contact perspective which would argue that the organization's image (at least in the mind of the applicant) is affected by the recruiting

process. There is some persuasive evidence that applicants do form strong opinions prior to interviews. Interestingly, these strong opinions have been found to be highly correlated with name recognition or knowledge of the organization (Gatewood, et al., 1993; Turban & Greening, 1997). Put most simply, when it comes to applicant's pre-interview impressions of organizations, "to know you is to love you." However, Gatewood et al. (1993) suggest that the pre-interview image can be affected by recruiting information presented in brochures. Most studies showing the important role of pre-interview impression (essentially image) on applicant job choice intentions suggest that once the image is determined, it is only somewhat malleable (e.g., Macan et al. 1994; Sheridan, Richards, & Slocum, 1975).

Stevens (1997) provides a possible explanation for why critical contact with the recruiter may have only small effects. She found evidence that is consistent with applicants engaging in confirmatory information processing during their employment interviews. In effect, pre-interview impressions affect the interpretation of the information obtained from the recruiter. This finding underscores the challenge that recruiters for organizations with poor images have to face.

#### Hypotheses for Study 1

Based upon the preceding review of the literature, the following hypotheses are proposed:

##### Signal Model Hypotheses

In the signal model, the interviewer's behaviour provides the applicant with information about the working conditions in the organization; namely, a friendly interviewer provides the applicant with a cue or signal that the organization is a friendly place to work. It is assumed for the purposes of this thesis that applicants will view a friendly workplace as



being a positive feature of the work environment. Accordingly, signal theory would predict that interviewer friendliness would have a direct and significant relationship with the attractiveness of the organization and subsequent job choice (see Figure 1). Thus:

***H1a: Interviewer friendliness will be significantly related to post-interview attractiveness of the organization.***

***H1b: Interviewer friendliness will be significantly related to job choice.***

### Justice Model Hypotheses

In the justice model, interviewer friendliness should have no relationship with either post-interview impression or job choice. According to this model, the critical contact with the interviewer should influence these outcome variables as a result of the perceived fairness of the procedures. Therefore, the justice model predicts no relationship between interviewer friendliness, post-interview attraction and job choice (see Figure 2). Previous research has shown a positive relationship between perceived fairness and organizational attractiveness (e.g., Gilliland, 1994; 1995). Accordingly:

***H2a: Perceived fairness will be positively related to post-interview attraction to the organization.***

***H2b: Perceived fairness will be positively related to applicant job choice.***

### Meta-perception Expectancy Model Hypotheses

The meta-perception model, with a symbolic interactionism approach, dictates that unlike the signal model, applicants use interviewer friendliness as an indication of how willing they are to hire the applicant or how well the applicant is performing in the interview. In both cases, the applicant should view a friendly interviewer as a piece of information about their likelihood of receiving a job offer from the organization. This is supported by the work of several researchers who have found that applicant perceptions of the likelihood of a job offer

being made by the employer are positively correlated to applicant likelihood of accepting a job offer ( $r = .34$ ) (e.g., Powell & Goulet 1996; Harris & Fink, 1987). Accordingly, we would expect to find the relationship between interviewer friendliness, applicant attraction and job choice to be mediated by perceived expectations of receiving a job offer (see Figure 3). Thus:

***H3a: Perceived interviewer friendliness will be positively related to applicant expectations of receiving a job offer.***

***H3b: Applicant expectations of receiving a job offer will be positively related to post-interview attractiveness of the organization.***

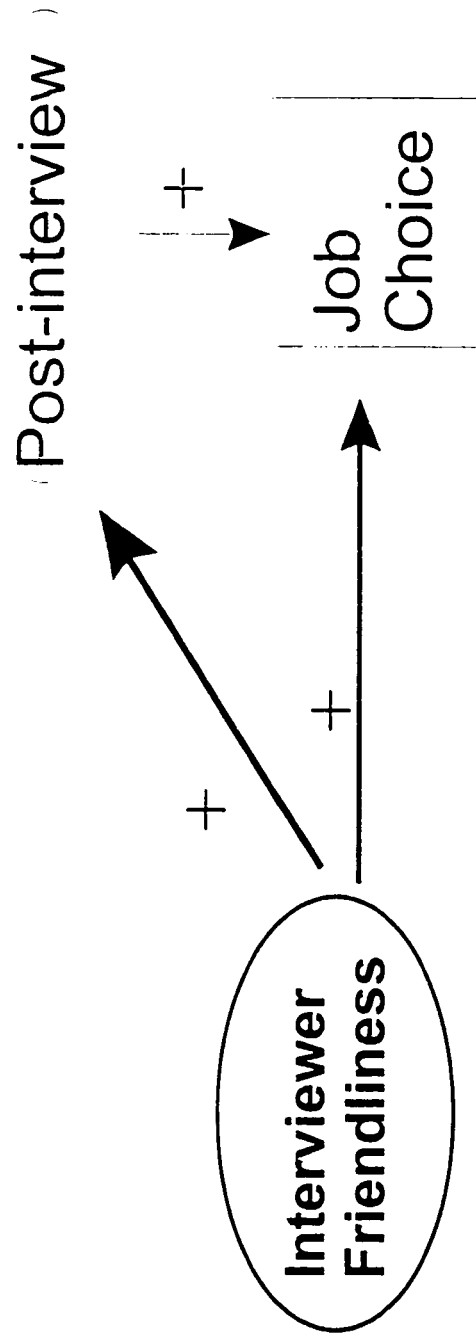
***H3c: Applicant expectations of receiving a job offer will be positively related to job choice.***

#### Hypotheses Comparing Models of Applicant Reactions and Job Choice

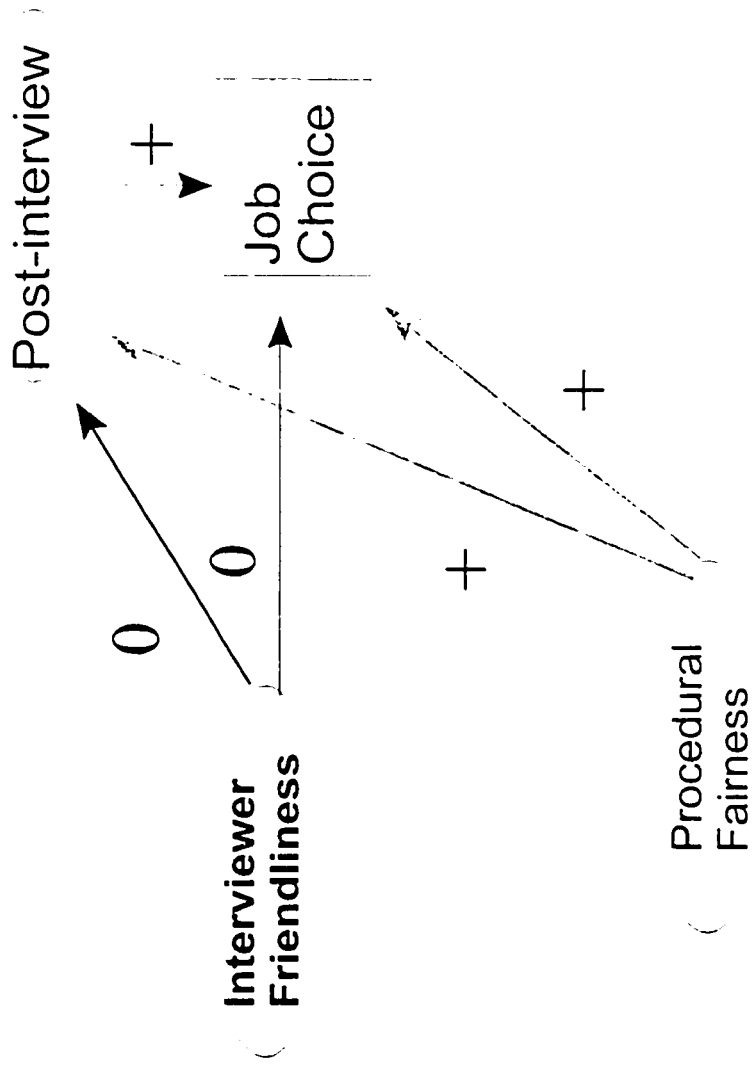
Hypotheses H1a to H3b were based on the literatures supporting each of the three models of applicant reactions and job choice. However, as was discussed earlier, the primary goal of this study was to compare these models to determine which one is the most appropriate.

The full model versus the individual models. Each of the individual models of applicant reaction mechanisms is nested within the full model, thereby facilitating comparison of the fit of the various models. Given the fact that direct comparisons among these models have not been previously attempted, any predictions of which model will prove to fit the data best is necessarily somewhat speculative. Accordingly, I pose the following research question:

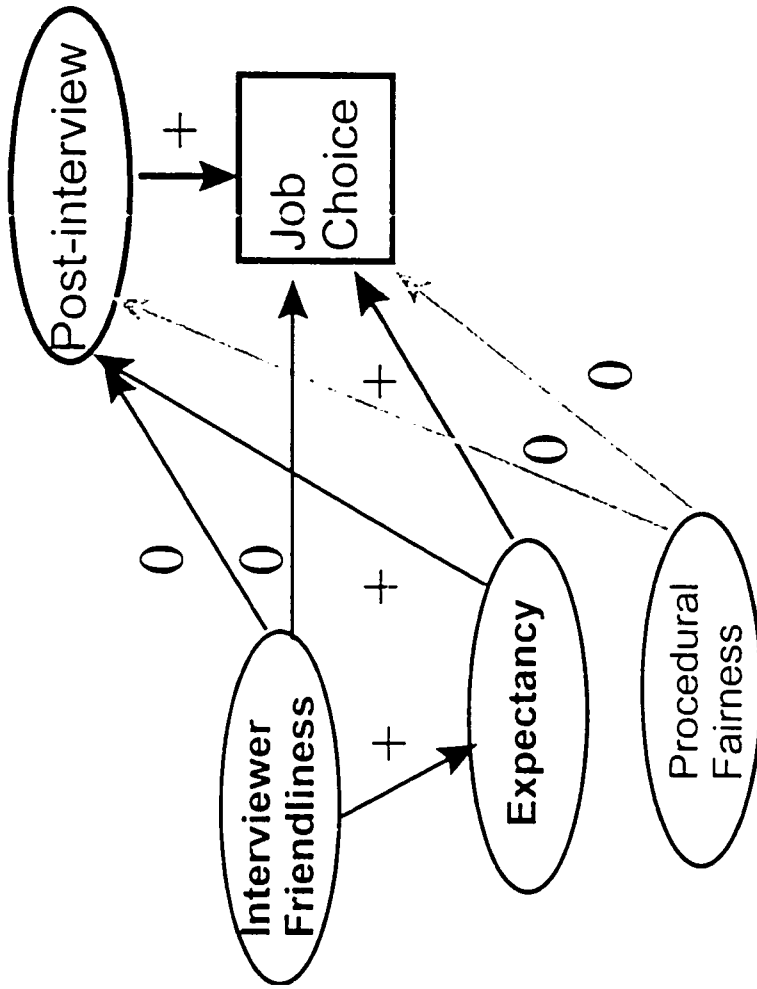
***R1: Which, if any, applicant reaction mechanism will provide the best description of the applicant reaction and job choice process?***



**Figure 1. Signal Model**



**Figure 2. Procedural Justice Model**



**Figure 3.** Meta-perception/expectancy model.

### Hypotheses for Control Variables

One of the unique approaches in the present studies is to treat applicant reactions as a critical contact process within the overall job choice framework. As a result, several variables have been included as controls to aid in the understanding of the process of job choice and to clarify the effects due to the three models of applicant reactions. The goal of the control variables employed in the study was not to revisit the debate over the relative influences of job attributes and interview processes on job choice, but to create a level playing field where this variance is accounted for in each of the tested models. The fact that the present study was conducted in the field increased the necessity to control for several variables known to influence job choice. As was reviewed earlier, there has been a considerable amount of research aimed at determining how various job attributes influence job choice. Those variables included as control variables will be briefly reviewed and predicted relationships described. Hypotheses will be provided only for those relationships that have not been previously investigated in the applicant reactions literature.

Pre- and post-interview attraction. One robust finding in the literature is the fact that pre-interview attraction is a strong predictor of post-interview attraction, intent to pursue employment (Ralston & Brady, 1994) and job choice (e.g., Collins & Stevens, 1999). Similarly, post-interview attraction has been linked to job choice. Accordingly, the relationship of pre- to post-interview attraction to job choice was included in the full model (see Figure 4).

Pay and location. In addition, we know that the perceived favourability of the pay offered for the position and the location of the position are important determinants of applicant attraction to the organization (Osborn, 1990; Rynes et al., 1983, Rynes & Lawler, 1983). These variables were also included as controls in the full model (see Figure 4).

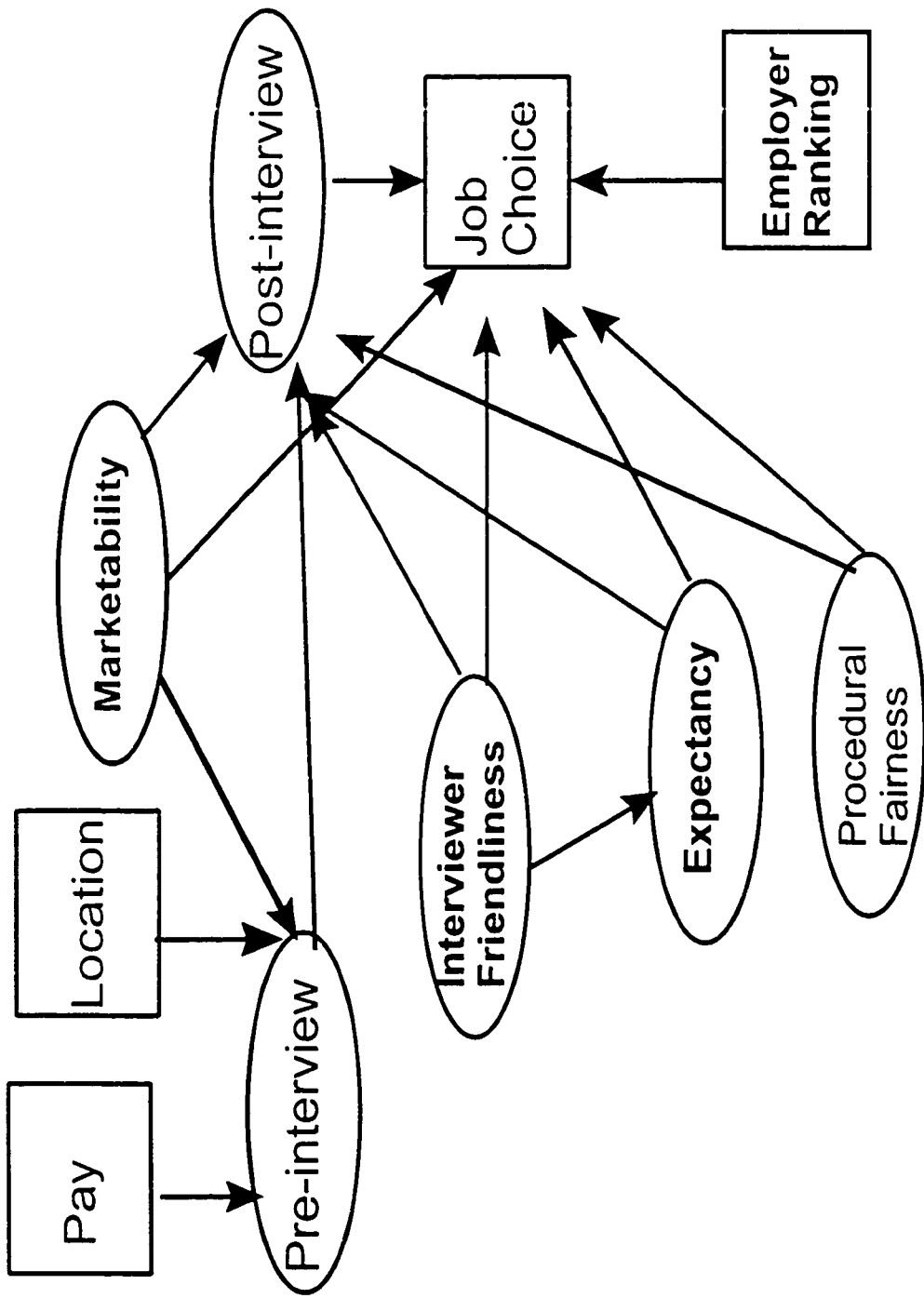


Figure 4. Full model with control variables (excluding medium influences)

Marketability. Although several researchers have called for the inclusion of marketability in applicant reactions research (e.g., Barber, 1998; Bauer et al., 1998) few researchers have tested individual perceptions of marketability on applicant reactions (see Cable & Judge, 1996, for an exception). Bauer et al. (1998) suggested that candidates with higher perceived levels of marketability are likely to be more sensitive to procedural justice than applicants with lower perceived marketability. Bauer et al. (1998) used a very crude measure of marketability to describe their sample (unemployment rates in the areas where applicants originated) and recommended the use of individual perceptions of applicant marketability. Cable and Judge (1996) used a single item measure called *perceived job opportunities* as a control variable and found that it was negatively correlated with job choice intentions ( $r = -.13, p < .05$ ) and job choice ( $r = -.37$ ). Given the variability in applicant impressions of how marketable they are on the job market, and this single empirical finding, it is predicted that a negative relationship will exist between the perceived marketability and pre-interview attraction, post-interview attraction, and job choice. Thus:

***H4: A negative relationship will be found for perceived marketability and (i) pre-interview attraction, (ii) post-interview attraction, and (iii) job choice.***

#### The Use of Technology in Personnel Selection

As was discussed earlier, one of the goals of this thesis was to examine applicant reactions to technology use in the employment interview. Recent innovations in communication technologies, such as videoconferencing, have provided a means for employers to interview distant applicants inexpensively, while simultaneously expanding their applicant pools to smaller and more distant locations. Is there a price to pay for this convenience? There is little research available to address that question. The few existing studies focus on attitudes



toward using videoconference technology (Kroeck & Magnusen, 1997; Skinkle & Macleod, 1995; Webster, 1997) or focus on determining the effects of the interview medium on interviewer impressions of applicants (Chapman & Rowe, 1997; Straus & Miles, 1997).

Videoconference (VC) interviews have distinct characteristics that differentiate them from face-to-face (FTF) interviews. Although there are some differences among technologies, most VC interviews restrict the participants' ability to observe nonverbal behaviour (Chapman & Rowe, 1997; Skinkle & MacLeod, 1995; Webster, 1997). For example, participants are typically displayed from the mid-chest up, thereby eliminating the possibility of observing some nonverbal behaviours such as hand gestures. Determining eye contact is also difficult due to both insufficient image resolution and camera angles. Physical contact such as handshaking is impossible. In addition, for many videoconference systems, a single channel of audio information precludes both parties from speaking at the same time. These restrictions have been found to induce changes in the surface structure of conversations, including: increasing turn taking, lengthening floor holding, and reducing the number of interruptions (Sellen, 1995). Videoconference-based group conversations require conversants to alter their conversational styles to suit the limitations of the technology (Sellen, 1995). Chapman and Rowe (1997) reported that 75% of interviewers indicated a change in their interviewing scripts (see Tullar, 1989), or their typical interviewing patterns as a result of conducting their interviews in a videoconference medium. Video compression may also result in delays whereby the picture and the sound become unsynchronized, further inhibiting the accurate transmission of nonverbal behaviours.

These technologically-imposed changes in behaviours, and the restrictions placed on the applicant's ability to view certain behaviours, can potentially influence the critical contact

dynamics between applicants and interviewers and thereby inhibit the recruiting function of the interview. As was noted earlier, researchers know that recruiter behaviours can have an impact on applicant impressions of job attractiveness and job choice intentions (Liden & Parsons, 1986, Rynes & Miller, 1983, Schmitt & Coyle, 1976, Taylor & Bergmann, 1987, Turban & Dougherty, 1992). Specifically, variables such as recruiter affect, warmth, and pleasantness have been found to influence applicant impressions of the organization. Because affect, warmth and pleasantness are largely communicated through nonverbal behaviours, such as smiling and eye contact (e.g., Gosselin, Kirouac & Dore, 1995), and because videoconference technology has been shown to interfere with the perception of nonverbal behaviours (including these above-the-waist nonverbals), the communication medium has the potential to reduce the effectiveness of recruiters by affecting the critical contact interaction.

There is some empirical evidence to suggest that in addition to influencing applicant perceptions of interviewer friendliness, a potentially important variable to consider in recruiting and selection research is how the recruiting/selection process affects applicants' impressions of themselves. Positive feelings about their experiences in job interviews are likely to be associated with positive feelings toward the interviewer, the technology used to conduct the interview and ultimately, the organization responsible for initiating the interview.

Based on our previous findings (Chapman & Rowe, 1998) interview medium is predicted to affect post-interview applicant attraction to the organization and job choice. In order to expand our understanding of interview media effects on applicant attraction and job choice, the present study will examine three potential mechanisms by which interview medium could influence applicant attraction to the organization and job choice. Additionally, it is proposed that perceptions of interviewer friendliness and perceived fairness of the procedures

will mediate these relationships. For example, Chapman and Rowe (1997) reported that some applicants (and interviewers) found it more difficult to assess how friendly the other party was due to the use of an intervening technology and, in the case of applicants, rated the friendliness of the interviewer lower in a videoconference than face-to-face. Similarly, the work of Tullar (1989) highlights the fact that applicants and interviewers possess strong pre-conceptions or scripts for how a selection interview ought to proceed. Deviating from these scripts is one of the consequences of using communication technology in the selection interview (Chapman & Rowe, 1997) and could be perceived as being unfair. Furthermore, Chapman and Rowe (1998) reported that applicants believed they performed worse in videoconference interviews than in face-to-face interviews which may also lead to perceptions of injustice. Thus:

*H5a: Face-to-face interviews will be viewed more positively than videoconference interviews by applicants including perceptions of i) post-interview attraction to the organization and ii) job choice.*

*H5b: The relationships between interview medium and the outcome variables will be mediated by i) perceived interviewer friendliness and ii) perceived fairness of the selection procedures.*

#### Methodological Issues in Applicant Reactions and Recruiting Research

The methodologies employed in much of the research on applicant reactions, recruiting and job choice have room for improvement. Buckley and Weitzel (1989) have discussed the serious matter of the external validity of research on employment interviews. Indeed, these criticisms apply not only to selection interviews but to our approach to studying personnel selection and recruitment as a whole. Our goals of tight experimental control in research have often superceded our equally important goal of finding results that generalize to real life selection situations. While some social psychological phenomena may be replicated or simulated in a lab environment, Buckley and Weitzel and others suggest that attempting to

simulate the complexity of applicant and interviewer decisions in a laboratory setting is problematic at best. While many social phenomena investigated in a laboratory setting may have little consequence for an individual, finding an appropriate job that satisfies one's needs has enormous importance in people's lives. This presents a significant challenge for researchers to simulate the perceived consequences of accepting one job over another. For example, it is easy to imagine that a student pretending to be a job seeker might choose a job for socially desirable reasons when they do not actually have to work in those conditions, at that pay level, with those co-workers, in that city, etc. It is also possible that simulated employment interviews might create situations where the applicant places more emphasis on the recruiter than they would in real life. A real applicant might look beyond the recruiter's behaviour and rely more heavily on company reputation, location, pay and other important variables. Real applicants might view their encounters with the interviewer as an isolated incident that will be quickly forgotten once they go to work for that organization. Expecting applicants to behave and react as if they were looking at long-range consequences of their decisions while participating in a lab experiment may be overly optimistic. Furthermore, Breugh (1992) pointed out that research designs in recruiting often overlook the role of uncertainty in the job choice process, making the conclusions based on these studies subject to criticism. That is not to say that laboratory experimentation has not helped move our theory and understanding of applicant decisions forward. However, an over reliance on these methodologies could undermine our confidence that findings will translate to the real world.

The most desired solution to this problem is to conduct field experiments with random assignment to our independent variables of interest. With few exceptions (Chapman & Rowe, 1998; Barber et al., 1994) this solution has not been possible. A major hurdle is the necessity

for employers to allow researchers to systematically change their current selection and recruiting systems for the purpose of scientific inquiry. Given the overarching goal of the employer to attract and hire the best applicants, their reluctance to relinquish control of the content and structure of their interviews is understandable. That is not to say that employers are not interested in this line of research. Indeed they are very interested in the results but do not want to compromise their current systems to obtain them. Another problem is that researchers would need to take extreme care to ensure that the systematic manipulations simulated what occurs naturally in the field. Lastly, there are ethical considerations the researcher must grapple with when manipulating the real selection processes of applicants. Extreme care must be taken to avoid negative consequences for either applicants or employers.

Several researchers have tried to overcome the external validity issue and the problems of gaining employers' cooperation by creating short-term jobs themselves and having applicants apply for them. This is a much improved methodology over the simulated selection methodology but addresses employer compliance better than external validity. For instance, is it reasonable to assume that applicants will react the same way to selection procedures for short-term positions (many are one or two days) in jobs that are unlikely to lead to future employment, as they would to long-term positions or those likely to lead to a full time job with an organization? Another issue associated with this methodology is that an applicant's impression of what is a reasonable selection procedure may be influenced by the job-type for which they are applying. Imagine the student applying for a job lasting two days being subjected to a battery of tests assessing personality and cognitive ability, followed by intensive structured interviews. One can easily imagine that they might view this scrutiny as being unduly excessive for a two-day job but as being reasonable, perhaps even desirable for a long-

term management position. To create a realistic environment it is necessary for researchers to create a selection environment that is realistic for the scope and length of employment. This would normally limit this approach to studying selection procedures typically associated with short-term, hourly, low-paid positions. A further problem is created when one's applicant base is composed of students who ultimately aspire to higher-paid, long-term, highly-skilled positions. Perhaps typical applicants applying for temporary employment would react differently than student populations. Next, I will discuss the strengths and limitations of several methodological approaches employed in job choice research.

#### Direct Estimation Approaches

Much of the early work in job choice research, and particularly with respect to the study of vacancy characteristics (e.g., Jurgenson, 1978) used direct estimation designs to evaluate how applicants make job choices. Direct estimation typically involves having a sample of the population (often not even job applicants) rate the importance of a number of characteristics for reaching decisions about positions. This methodology has been widely criticized for a number of reasons. Barber (1998, p. 98) enumerated three of these reasons including: (a) many direct estimate studies do not explicitly link the importance of job attributes to job choice, (b) direct estimation methodologies are too abstract in that they ask subjects to rank importance of attributes in a vacuum when we have evidence that applicants weigh the attractiveness of a given attribute for a given position relative to the favourability of other attributes for the same position (referred to as tradeoffs by Rottenberg, 1956); and (c) applicants may not have direct knowledge of their actual decision making processes (Nisbett & Wilson, 1977).

### The Policy Capturing Approach

In order to avoid the rather obvious deficiencies with direct estimation, several researchers have used policy capturing to examine the influences of vacancy characteristics or subjective factors on job choice. The policy capturing methodology involves creating scenarios which systematically manipulate the levels of attributes of interest to the researcher and presenting each of these scenarios to the target population. Subjects are then typically asked how attractive the position is, whether they would apply for this position or which job would they choose. Using a dummy coding procedure, researchers can then estimate the relative influence of each of the attributes on the dependent variable using linear regression techniques.

While this approach is superior to the direct estimation approach, it too has limitations. On a practical level, it becomes onerous for applicants to read the many scenarios that are required when manipulating even small numbers of variables. For example, Cable and Judge (1996) had business students read 128 job descriptions containing subtle manipulations in order to examine the role of person-organizational fit on job choice. Fatigue and inattention are likely to create problems using this methodology, particularly when more than four or five attributes are being manipulated. This methodology also shares the problem of direct estimation of forcing the researcher to choose which attributes are manipulated which may not reflect the actual attributes used by applicants.

### Verbal Protocols: Qualitative Approaches

An alternate approach to examining recruiting effects is to gather qualitative data from applicants by conducting semi-structured interviews or recording their narrative processes during the selection procedures. These procedures are designed to reduce the role of the

researcher in pre-determining the attributes and/or critical contact dimensions that influence applicant perceptions and job choices. Rynes et al. (1991) conducted interviews with applicants to determine their job choice processes. Written responses to open ended questions can also be investigated in this manner. Ployhart, McFarland and Ryan (1999) analyzed applicant reactions to graduate school application procedures using this method and found, for example, that very few applicants mention justice concerns when they were not prompted to consider them. This finding emphasizes the potential for this methodology as it reveals how experimenter demands might influence how applicants appear to make decisions. While this approach provides rich information that is useful for identifying factors important in the job search process, it also suffers from the assumption that applicants have access to their decision making processes— a similar problem found in the direct estimation method.

A verbal protocol analysis is another qualitative methodology that has been used in the recruiting literature. This method requires the applicant to describe their ongoing thought processes as they examine several alternatives. Responses are coded by counting the frequency of references to various vacancy characteristics or expectancies contained in the narrative (Barber & Roehling, 1993). Because it is an ongoing narrative, proponents of this method suggest that applicants are not required to have an understanding of their cognitive processes— the narrative simply makes those processes more accessible to the researcher (Ericsson & Simon, 1980; 1984). Although this methodology might be useful in situations where the applicant is reading material and commenting on it verbally, it is obvious that it is not applicable to job interviews as it would be impossible for applicants to report on their ongoing conversation with the interviewer without distracting the interviewer or changing the interaction significantly.



### Correlational Studies

A large number of studies investigating recruiting and job choice have used correlational analyses. These studies typically involve giving surveys to applicants (or students in large classes) at a single time and correlating the subjects' ratings of various attributes with their intentions of accepting an offer if one were provided. The potential for common method variance effects and the inability of the researcher to make causal inferences are the major drawbacks for this type of study.

### Longitudinal Field Studies

An improved version of the correlational approach mentioned previously is the longitudinal field study. This typically involves collecting data from real applicants in a field setting at two or more points in time. Due to the temporal precedence of predictors and outcome variables, this methodology permits causal inferences to be made and offers several advantages over randomized experimental approaches. First, using real applicants aids in establishing the external validity of the results. It also permits the examination of larger numbers of variables that are known to influence job choice than are practical in an experimental approach (provided an adequate sample size is available). Studies that have used longitudinal field methodologies have provided some of the most interesting findings. For example, it is now widely known that it is important to measure pre-selection impressions of the organization (e.g., organizational image) as this permits a better understanding of how vacancy characteristics (i.e., job attributes) and critical contact affect job choice.

### Structural Equation Modeling (SEM)

With few exceptions (Chan et al., 1998) recruiting researchers have employed either linear regression or correlations, and often have not corrected for the unreliability of the

measures. The assumption that the constructs are being measured without error makes uncorrected correlational studies particularly vulnerable to criticism when comparing the relative effects of vacancy characteristics or recruiter effects. For example, a smaller observed relationship between recruiter warmth and job choice than job attributes and job choice could be due either to a true difference in effects or to recruiter warmth being measured with more error. In contrast, structural equation models disattenuate the relationships between the constructs, thereby permitting a fair comparison of the relative importance of different constructs. Structural equation modeling techniques are also designed to test the appropriateness of competing models to reproduce the observed covariances in the data. This makes this statistical analysis useful when examining competing approaches to job choice processes.

#### Method Conclusions

Based on the methodological concerns listed above and the goals of the present research, the following experimental design criteria were adhered to: (a) the sample had to consist of real applicants applying for meaningful positions in real organizations; (b) data had to be collected at three points in time— immediately preceding the interview to isolate the effects of the recruiter interactions on subsequent impressions of the company, immediately following the interview, and later when the actual job choice decision was made; (c) whenever possible constructs should be measured with multiple items and (d) structural equation models were to be used to conduct the analyses to permit comparisons among the tested models. This design was judged to be the best compromise for investigating how real applicants make selection decisions and react to selection procedures while acknowledging the absence of random assignment. In order to reduce the opportunity for third variable explanations of the

results, data were collected on the major variables that previous research has shown are associated with job choice in order to include them in the model. In the following chapters, two studies are described which were designed, in part, to address some of these methodological issues.

## CHAPTER 2

### A STUDY COMPARING THREE MODELS OF APPLICANT REACTIONS TO THE USE OF TECHNOLOGY IN THE SELECTION PROCESS

The primary goal for this study is to examine various models describing the process by which applicants react to selection procedures and how these reactions affect attraction to the organization and job choice. In addition, a secondary goal of this study is to examine these models in relation to an applied problem – the use of videoconference technology to conduct employment interviews. Previous research by Chapman and Rowe (1998) found that applicants reacted negatively to the use of videoconference technology in the selection interview context. This study proposes to examine whether this effect was generated through a direct influence on perceptions of vacancy characteristics, or one of three potential mechanisms of critical contact.

#### Method

In order to examine the hypotheses and research question in the current study and to respond to the calls for methodological improvements described in detail earlier, a longitudinal field study was conducted that sought to meet the design criteria outlined in the previous chapter.

#### Participants

The participants in Study 1 consisted of 402 applicants for four-month, full-time paid positions as part of their cooperative education programme at the University of Waterloo. Although these positions are of limited duration, surveys of applicants and employers show that students use these internships as a means to gain access to permanent full-time

employment. Employers also view these internships as an opportunity to identify and recruit permanent full-time employees. The applicants were recruited from a pool of approximately 3000 students seeking employment for that semester. A total of 502 cases were included in this study. The majority of applicants were male (63%), young (mean age = 20.71 years, S.D. = 1.85), and in programmes that are currently highly attractive to employers (Engineering 48.1%, Computer Science 24.8%, Science 19.6%, Business 3.9%, and Arts 3.1%). No race statistics were available, but the university population is diverse with the largest group being white and a significant number of Asian and other ethnic backgrounds. Students in the co-op program must be legally eligible for employment in Canada and were therefore landed immigrants or citizens who normally have completed at least part of their high school education in Canada.

A total of 60 interviews were conducted by videoconference, 100 were conducted by telephone, while 341 were conducted in a traditional face-to-face format. Interviews varied somewhat in length but most were approximately 30 minutes in duration. A subsequent study with a similar sample of interviewers in the same setting revealed that the average interview length was 32 minutes long.

### Procedure

A longitudinal design was employed to address the question of causality and to control for applicant pre-interview impressions. Figure 5 details the measures that were administered and the time that they were administered. Data were collected at three times: immediately preceding the employment interview, immediately following the employment interview, and three weeks following the applicants' final interview. Applicants were approached by the author or a trained research assistant while they were waiting to be interviewed at the campus center and asked if they would participate by completing a short pre-interview questionnaire

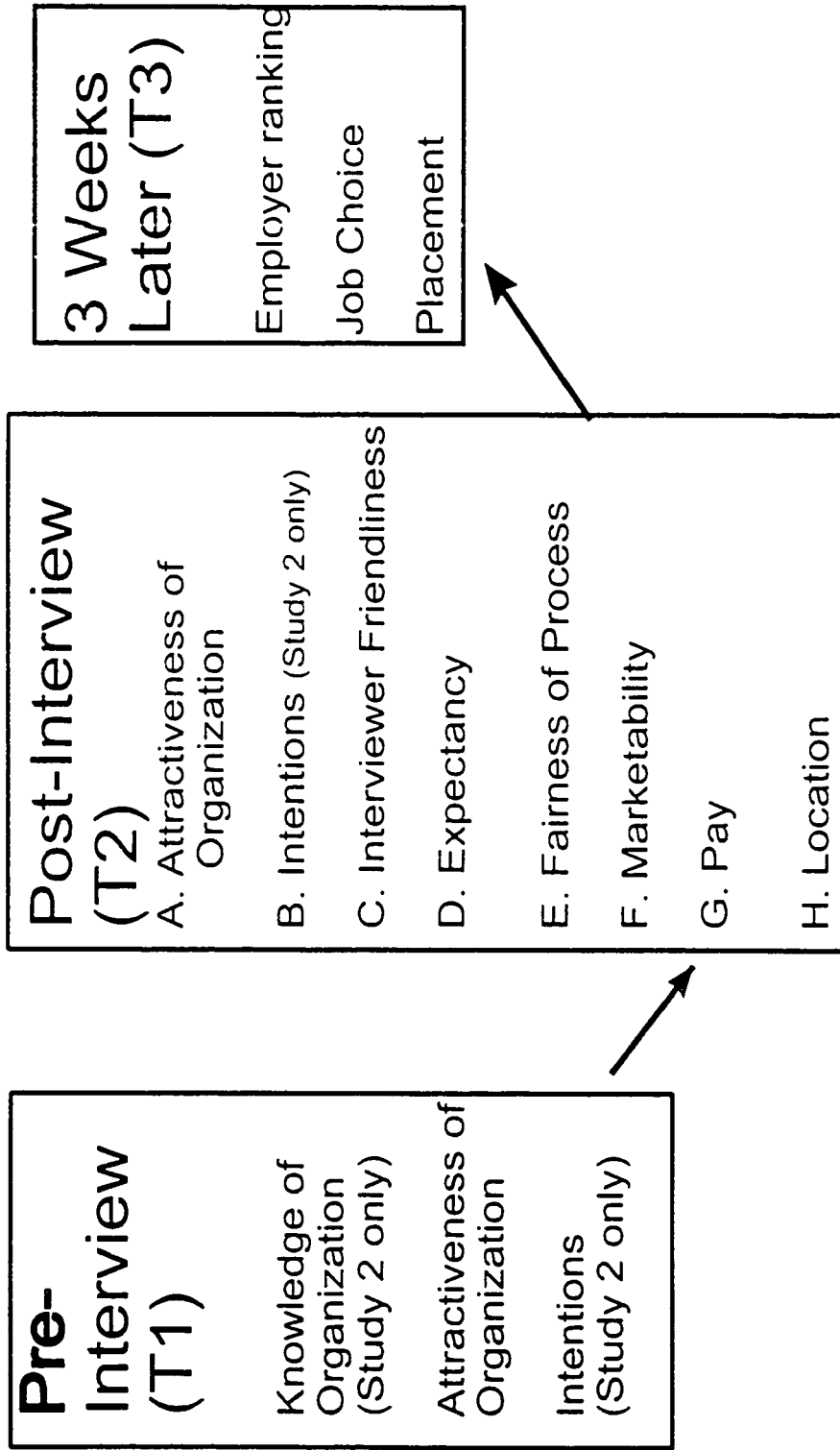
and return immediately following their interview for a post-interview questionnaire. Most applicants approached volunteered to participate although an exact statistic is not available. Those who refused indicated that their interview was “just about to start” and did not feel they would have time to complete the questionnaire before they were called. Immediately following the interview, applicants returned to the central waiting room (affectionately described as “the pit” by students) and completed the second questionnaire. Measures of job choice were obtained from secondary data provided by the Department of Co-operative Education. The measures completed by the applicants at each data collection point are detailed below.

#### Pre-interview Measures

Immediately preceding the employment interview, applicants were approached by the researcher or a research assistant and asked to participate in the study.

#### Pre-interview Attractiveness

Applicants who agreed to participate completed the pre-interview attraction scale (see Appendix A) consisting of six items developed by Chapman and Rowe (1998) based on previous studies. The applicants responded to the items on a 7-point Likert scale anchored by “poor” (1) and “excellent” (7). Sample items include: “Overall impression of the company,” “Impression of the prestige associated with this position,” and “Attractiveness of the employment position (independent of the overall company impression).” The pre-interview attraction scale demonstrated good internal consistency (Cronbach’s alpha = .82). A total of 301 applicants completed useable pre-interview questionnaires (201 of whom were interviewed either face-to-face or by videoconference and therefore retained in the study).



**Figure 5.** Timing of measures for Study 1 and Study 2.

### Post-interview Measures

After completing the pre-interview survey, applicants were asked to seek out the researcher or one of his research assistants immediately following the selection interview. Many students were unable to complete the second survey due to the need to return to classes, forgetting about the study, or being unable to quickly find the researcher or a research assistant following the interview. The building had three exits making it easy for applicants to slip by without seeing the researcher. A total of 241 (79.5%) applicants also completed the survey at Time 2, although only the 149 applicants who were interviewed either face-to-face or in a videoconference medium were used in the analyses. The remaining applicants participated in telephone interviews and were not included in this study. The post-interview questionnaire consisted of the following scales:

#### Post-Interview Attractiveness Scale

This scale consisted of the same items contained in the pre-interview attractiveness scale. The internal consistency of the post-interview attractiveness scale was very high, with Cronbach's alpha reaching .90.

#### Interviewer Friendliness

Four items designed to measure interviewer friendliness were adopted from Schmitt and Coyle (1976) (see Appendix A). An exploratory factor analysis found this scale to be unidimensional. The interviewer friendliness scale was judged to be reliable (Cronbach's alpha = .80). Sample questions include: "The interviewer was friendly," and "The interviewer was pleasant."



### Expectancy

Four items based on Vroom (1964) were designed to measure applicants expectations of obtaining a favourable outcome from their selection interview (see Appendix A). This scale was also found to be unidimensional and demonstrated excellent reliability (Cronbach's alpha = .88). Sample items include: "I expect to get a job offer as a result of my performance in the interview," and "I feel positive about the outcome of this interview." Note that the full expectancy model proposed by Vroom (1964) included valences, instrumentalities and expectancies. Previous researchers in job choice influences have concentrated on the expectancies portion of the model (see Wanous et al., 1983). Accordingly, this measure taps only into the expectancies construct.

### Fairness

Applicant perceptions of the fairness of the selection process was assessed with a four-item scale based on Leventhal's (1980) rules for procedural justice and included items measuring general perceptions of fairness of the selection interview. This scale was found to have acceptable internal reliability (.75) and a factor analysis confirmed that it was unidimensional. Sample items include: "The interview gave me the opportunity to present my best side," "I trust the interviewer/employer to hire the best candidate," and "The hiring decision the employer makes based on these interviews will be fair."

### Pay

A single item was used to measure applicant perceptions of the favourability of the pay for the position. In order to account for the different positions that applicants were considering, the item was worded to ascertain how applicants felt about the pay level relative

to what they believed they could earn with their education and experience. The item was: "The pay for this position is good compared to what I can expect with my background."

#### Location

The perceived favourability of the location of the position was also measured with a single item to reduce the overall length of the survey. The item was worded "I like the location where this position is being offered."

#### Perceived Marketability

Five items were designed to capture the applicants' perceptions of the marketability of their education background. The scale demonstrated good psychometric properties (Cronbach's alpha = .85) and an exploratory factor analysis showed it to be unidimensional. Sample items include: "There are a lot of employment possibilities for people with my education and background." and "Few people with my educational background get good jobs." (reverse coded).

#### Time 3: Three Weeks Later

Secondary data were gathered from the Department of Co-operative Education for the following variables:

#### Employer Ranking

Employers were required to rank applicants after meeting with all of them. The matching system employed by the Department of Co-operative Education permits employers to rank only a single applicant '1' for each job available, however, employers can rank any number of applicants '2', or '3' and so on, or they can simply reject the candidate. These were coded in the following manner: a ranking of '1' was coded '1' and represents a clear offer to the applicant; a ranking of '2' was coded '2' and represents a firm offer to the applicant if the

employer was turned down by the # 1 ranked applicant; employer rankings of 3 or higher were coded '3' representing a weak offer, and rejection of the candidate was coded '4'. These codings were subsequently reflected (i.e., reverse coded) for the analyses making a higher number indicative of greater interest in hiring the candidate.

#### Job Choice: Student Rank

After completing their interviews, generally one to three weeks after the measured interview, applicants receive a list of the employers from the Department of Co-operative Education with the employer rankings of them detailed. They then are required to rank the employers in the same manner that employers ranked them. The applicants are aware that an algorithm minimizing the sum of employer and applicant rankings is used to determine job choice. Accordingly, if an employer ranks an applicant #1 and the applicant ranks the employer #1, they are guaranteed to get that position. However if the employer ranks the applicant 2 or higher, the applicant has to decide whether to rank this employer #1 or use the #1 ranking elsewhere. They may also have to decide if they like this position equally well as the other positions they are considering and rank the remainder # 2 or #3 etc. Like the employers, they can rank any number of employers '2'. Accordingly, the student rankings were coded in the following manner, paralleling the employer rankings: a ranking of '1' was coded '1' representing a definite acceptance, a ranking of '2' was coded '2' representing a firm acceptance, a ranking of '3' or higher was coded '3' indicating a weak interest, and rejecting the employer was coded '4.' These codings were reflected in the same manner as the employer rankings so that higher scores represent a greater desire to be employed by that organization.

### Analytical Strategy

Given the goal of testing three competing mechanisms of applicant reactions and job choice, a Structural Equation Models (SEM) approach was judged to be the appropriate analysis. This analysis would provide information regarding the relative fit of each of the three models, while examining the significance of the individual parameter estimates would provide a test of the individual hypotheses. The complexity of the models and the nature of the longitudinal data posed several challenges for the use of SEM. Specifically, the analyses necessitated addressing the issues of interactions in SEM, missing data in a longitudinal design, and analysis of complex models. Each of these issues and the decisions made to address them is detailed in Appendix B.

### Results and Discussion

Descriptive statistics and correlations among the variables used in study I are provided in Table 1.

#### Results of the Individual Parameter Hypotheses by Model

In this section, the predictions from each of the models are tested using the parameter estimates from the full model analyses described earlier (including control variables), as well as the results from the individual model analyses where each model was tested independently (again, incorporating the control variables).

#### Signal Model

Partial support was found for the hypotheses generated by the signal model. H1a was confirmed with interviewer friendliness being significantly and positively related to post-interview attractiveness of the organization ( $\beta = .20, p < .05$ ) (See Figure 6). However, contrary to H1b, no evidence was found for a direct influence of interviewer friendliness on

applicant job choice at T3. It appears then, that signals are examples of a recruiter effect that affects the applicants perceptions of the valence of the job attributes rather than having a direct influence on applicant job choices.

#### Justice Model

The SEM analysis of the full model provided no support for the justice model. No evidence was found for an effect of fairness perceptions on either post-interview attraction (H2a) or subsequent job choice (H2b) (see Figure 6). When the justice model was tested independently, however, the path from fairness to post-interview attraction was significant ( $\beta = .20, p < .05$ ). The relationship between fairness and job choice was fully mediated by post-interview attractiveness.

#### Meta-perception Expectancy Model

The SEM analysis of the full model provided partial support for the meta-perception expectancy model. The meta-perception portion of the model (H3a) whereby interviewer friendliness was predicted to generate expectations of receiving a job offer, was supported with higher perceptions of friendliness associated with higher expectations of a positive outcome ( $\beta = .26, p < .05$ ). H3b was not supported with no significant relationship observed between expectancies and post-interview attraction (see Figure 6). In addition, H3c was supported with a marginally significant relationship between employer ranking at T3 and applicant expectancy at T2 ( $\beta = .18, p = .07$ ). The results were similar when the expectancy model was tested independently.

Table 1: Descriptive statistics and zero-order correlations among the variables in Study 1.

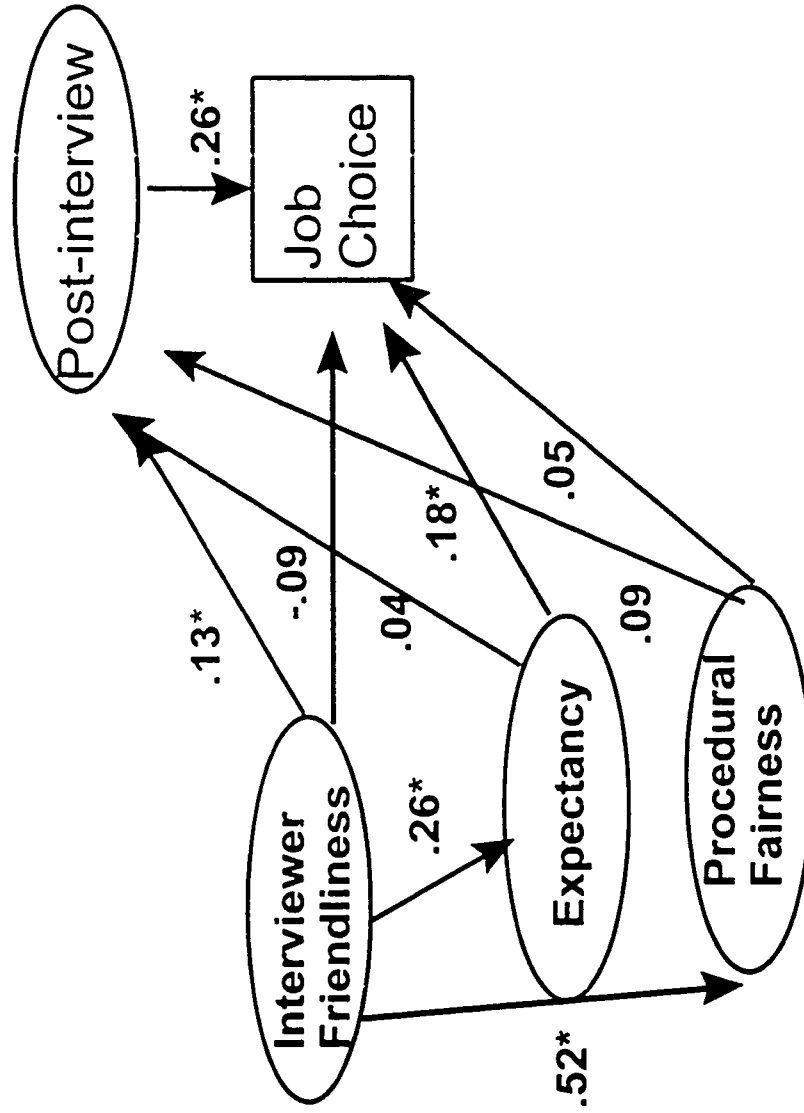
Variable	N	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Attractiveness T1	201	4.95	.86	(.82)										
2. Friendliness	153	5.76	.79	-.05	(.80)									
3. Expectancy	153	4.24	1.10	.02	.23**	(.88)								
4. Procedural Fairness	153	5.39	.89	-.08	.51**	.27**	(.75)							
5. Marketability	153	5.53	1.00	.24**	-.03	.17*	.08	(.85)						
6. Pay	148	4.24	1.43	.23**	.22**	-.09	.12	-.05	-----					
7. Location	151	5.06	1.75	.30**	.04	-.02	-.17*	.05	.06	-----				
8. Attractiveness T2	153	5.30	.99	.56**	.26**	.15	.21**	.18*	.26**	.18*	(.90)			
9. Employer's ranking	95	2.58	1.14	.16	-.05	-.25*	-.15	-.20	-.04	.09	-.01	-----		
10. Job Choice	95	2.05	1.12	-.03	.07	.26*	.17	.03	.15	.06	.22	-.51**	-----	
11. Interview Medium <sup>a</sup>	401	-----	---	.17*	-.25**	-.17*	-.39**	.08	.06	.09	-.24**	-.11	.04	-----

Notes:

a. Interview medium coded face-to-face = 0 and videoconference = 1.

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).



**Figure 6.** Results from analysis of the full model.<sup>a</sup>

<sup>a</sup>Influences of interview medium and control variables included but not shown.

### Results for the Control Variables

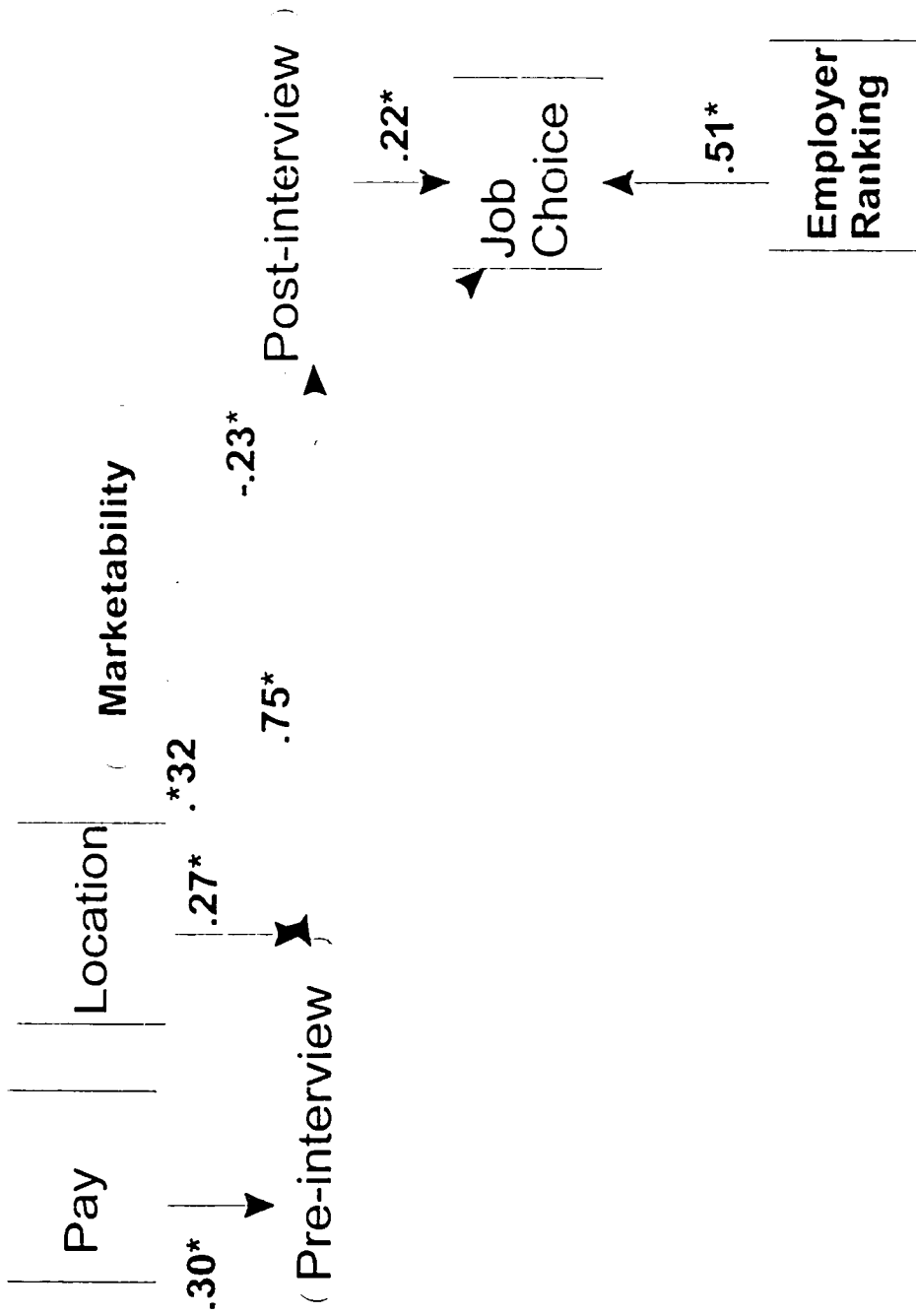
#### Pre- and Post-interview Attraction and Job Choice:

With a few interesting exceptions, the control variables worked largely as expected. As is detailed in Figure 7, a strong relationship was observed between pre-interview attraction and post-interview attraction ( $\beta = .75, p < .05$ ), and a much smaller relationship found between post-interview impression and job choice. Interestingly, the relationship between pre-interview attraction and job choice was fully mediated by post-interview attraction.

#### Pay and Location

Surprisingly, applicant perceptions of the favourability of pay and location of the positions was not significantly related to post-interview attraction or job choice in the full model. Instead, these variables were positively related to pre-interview attraction ( $\beta = .30$  and  $.27$  respectively). Therefore, the ultimate influence of pay and location on job choice were modest and fully mediated by pre-interview attraction. The standardized total effects of pay on post-interview attraction and job choice were calculated to be  $.20$  and  $.04$  respectively. Total effects of location on post-interview attraction and choice were calculated to be  $.22$  and  $.05$  respectively.





**Figure 7. Full model controls only.<sup>a</sup>**

<sup>a</sup> Other variables estimated but not shown.

### Marketability

Partial support was found for H5 predicting negative relationships between perceived marketability and three outcome variables: pre-interview attraction, post-interview attraction and job choice. Marketability was significantly related to pre-interview attraction but in the opposite direction predicted ( $\beta = .31, p < .05$ ). More marketable applicants were more positive about the attractiveness of the position prior to the interview. No relationship was found between perceived marketability and post-interview attraction. However, as predicted, marketability was observed to have a significant negative influence on job choice ( $\beta = -.23, p < .05$ ). The positive relationship between marketability and pre-interview attraction may have been due to the fact that more marketable candidates applied only to the most attractive organizations while those who perceived themselves as less marketable applied to a wider range of organizations.

### Employer Ranking

The most important variable in determining applicant job choice was how favourably the applicant was ranked by the employer during the ranking process. A strong positive relationship was found for employer ranking and job choice ( $\beta = .51, p < .05$ ). In order to illustrate the effects of this control variable on the model, a post hoc analysis was conducted with the employer ranking removed. The most significant change was the doubling of the effect of applicant expectancies on job choice ( $\beta = .38, p < .05$ ). This suggests that the expectancies variable is sharing variance with employer ranking in predicting job choice. This is consistent with applicant expectancies being at least somewhat accurate in predicting employer rankings.

### Results of the Model Comparisons

The  $\chi^2$  statistics for the saturated model, the full model, and each of the three applicant reactions models are provided in Table 2. Also detailed in Table 2 are the degrees of freedom for each model (based on the number of parameters estimated by each of the models), the difference in fit between models of comparison (delta  $\chi^2$ ) and the significance tests for the delta  $\chi^2$  given the differences in the number of parameters estimated by the comparison modes (delta df). In addition, the following fit indices are provided to assist in assessing overall model fit and model comparisons: Bentler and Bonnet's (1990) normed fit index (NFI), Bentler's (1990) comparative fit index (CFI), Steiger's (1990) root mean square error of approximation (RMSEA), and the Akaike information criterion (AIC). The NFI and CFI have a range from 0 to 1 with a fit over .90 generally being accepted as a good model. The RMSEA is influenced by the average size of the fitted residuals per degree of freedom and is interpreted as being a good fit if the value is less than .05 and an acceptable fit if the value is below .08 (Browne & Cudeck, 1993). The AIC is used to compare the goodness of fit of models with lower numbers indicating a better fit. However, there is no absolute value of AIC that is considered appropriate and it is best interpreted in relation to other plausible models. The p values of the  $\chi^2$  for each model are reported but were not used for interpretation as they are considered to be overly sensitive to sample size (Hair, Anderson, Tatham & Black, 1995 ; Joreskog & Sorbom, 1988). Note that the delta chi square and delta df for the full model is in comparison to the saturated model and the remaining deltas for the other models are compared to the full model.

### The Full Model

As predicted in H6, and illustrated in Table 2, the full model fit the data equally well as the saturated model and was therefore retained as a more parsimonious model.

### Individual Reaction Models

As detailed in Table 2, each of the applicant reactions models alone provided a better description of the relationships among the variables than the full model and each demonstrated a good fit for the data based on the fit indices. Each of the models is nested within the full model and consists of the same number of parameters being estimated. Accordingly, among the independent models, the model with the lowest  $\chi^2$  and most favourable goodness of fit indices can be viewed as the best fitting model among the independent models. This strategy resulted in the signal model being regarded as the “best fitting” model from among the models tested independently. The signal model fit significantly better than the full model and had the smallest  $\Delta \chi^2$  relative to the other independent models suggesting that it is the best fitting model among the independent models. The NFI, CFI and RMSEA were equal across the models suggesting each was a reasonable fit. Comparing the AIC also showed the signal model had the lowest overall AIC which is indicative of the best fit.

**Table 2: Model comparisons of full, signal, fairness, expectancy, and integrated (best fitting) models for study 1**

<u>Fit measure</u>	<u>Full</u>	<u>Signal</u>	<u>Fairness</u>	<u>Expectancy</u>	<u>Integrated</u>
$\chi^2$	190.40	195.15	196.79	198.83	192.26
p $\chi^2$	.004	.003	.003	.002	.005
df	141	145	145	145	145
$\chi^2/df$	1.35	1.35	1.36	1.37	1.33
NFI	.98	.98	.98	.98	.98
CFI	.99	.99	.99	.99	.99
RMSEA	.03	.03	.03	.03	.03
AIC	326.40	323.15	324.79	326.83	320.26
$\Delta \chi^2$		4.75	6.40	8.43	1.86
df $\Delta \chi^2$		4	4	4	4
p $\Delta \chi^2$		.31	.17	.08	.76

#### Post Hoc Determination of the Best Fitting Model

After examining the results of the full model and the individual models of applicant reactions and job choice, the nonsignificant parameters from the full model were constrained to zero in order to identify the best model to explain applicant reactions and job choice in the sample. This process provided the integrated model shown in Figure 8 which contains paths predicted by both the signal and expectancy models. The fit statistics for the best fitting model are also provided in Table 2, and the integrated model was found to fit significantly better than the full model or any of the individual models tested. Accordingly, although the signal model fit best among the independently tested models, the overall best fitting model was the integrated model containing paths from both the signal and expectancy mechanisms.

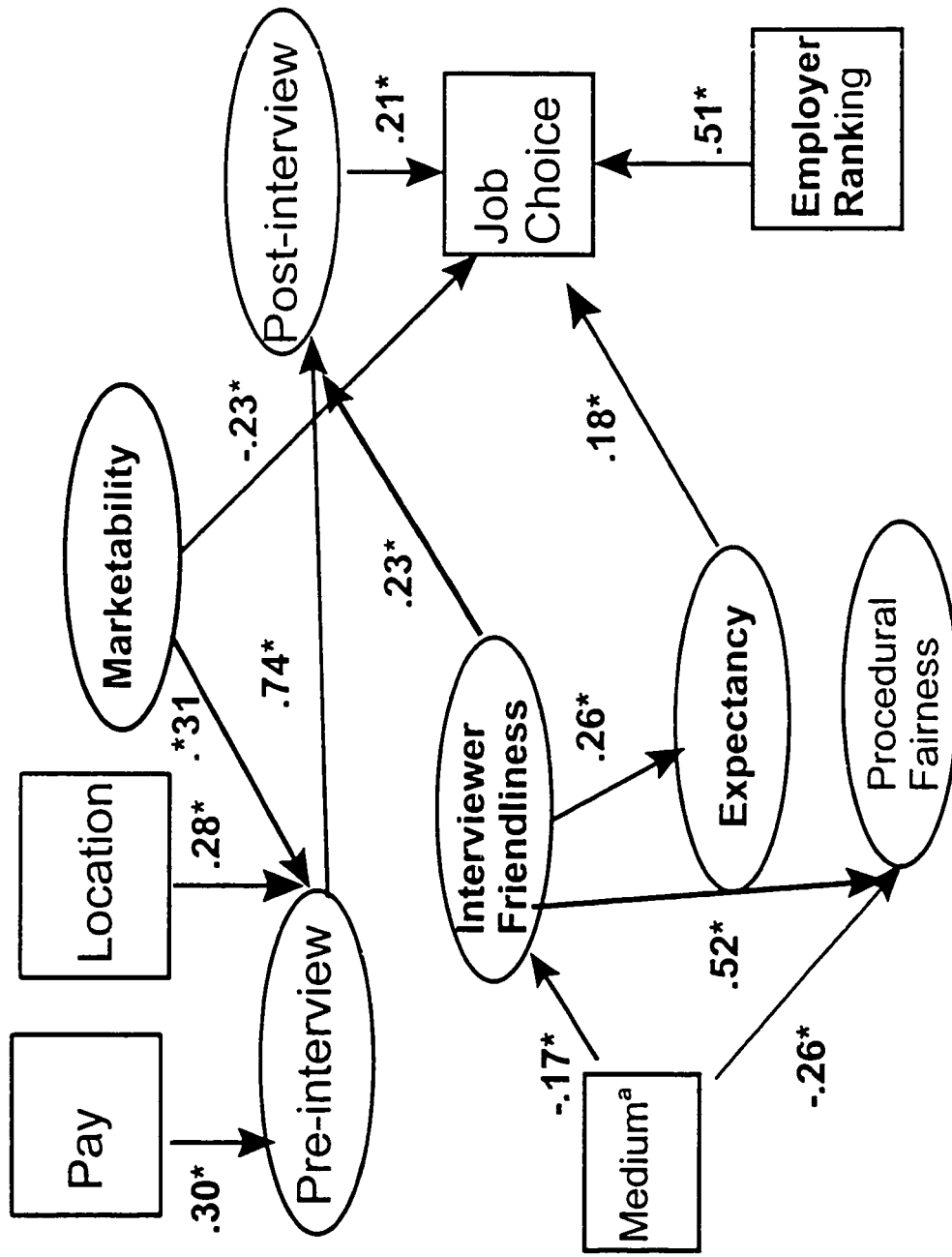


Figure 8. Best fitting integrated model.

a Coded Face-to-face '0', videoconference '1'

### Discussion of Results: Mechanisms of Applicant Reactions and Job Choice

The primary goal of Study 1 was to compare three models of applicant reactions to determine which, if any, was superior in describing how applicants react to their selection procedures. The results suggest that each of the three models was superior to the full model and all provided reasonably good fit statistics. In fact, two of the three models—signal and meta-perception—were related to some extent to either immediate reactions following the interview or to subsequent job choice, three weeks following the interview. A direct comparison among the equivalent individual models revealed that the signal model provided the best fit to the data. Interestingly, when the best fitting model was determined by constraining parameters that failed to reach significance, it was clear that there were different elements influencing immediate, post-interview reactions, and the more distal job choice. Specifically, the applicants' impressions of the organization immediately following the interview were influenced directly by both the interviewer's friendliness in the interview, and by pre-interview attraction. However, three weeks following the interview, job choice was influenced by meta-perceptions of expecting a job offer at T2, the applicants' perceived marketability, the post-interview attractiveness to the organization, and most importantly, whether the employer stated a direct interest in hiring the applicant.

Given the fact that none of the three proposed models described the applicant reaction process better than a model including both signal and meta-perception, and given the fact that elements of all three of these models appear to be important at various stages of the applicants' decision process, it seems appropriate to consider outlining a possible integrated model of applicant reactions to selection procedures. Underlying the current discussion are the findings from Study 1 which suggest that different variables are important in predicting post-interview

attractiveness and subsequent job choice. Namely, it appears that immediate post-interview attraction may be driven more by passion or “hot” cognitive processes while job choice may be driven by more calculating or “cold” cognitive processes (Janis & Mann, 1977).

### Immediate Applicant Reactions and Post-interview Organizational Attractiveness

Perhaps one of the most surprising findings from study 1 was the variables that did not affect post-interview attraction. One might expect based on previous research that the pay, location and the availability of jobs in the market would all influence the organization’s attractiveness at T2. Instead, we see that the strongest predictor of post-interview attractiveness was pre-interview attractiveness, confirming that organizational image has a substantial influence on organizational attraction and is somewhat resistant to change (e.g. Collins & Stevens, 1999, Macan & Dipboye, 1990). Interestingly, the other significant influence on immediate post- interview attractiveness, namely interviewer friendliness, could be described as a variable that is consistent with an affective reaction to the selection process. Alternatively, Loewenstein and Schkade (1999) suggested that decision makers who are in a “hot” cognitive state make poor predictions of how they will behave in a “cold” cognitive state. This could be a potential explanation of how different processes appear to affect immediate reactions and subsequent job choice.

### Job Choice

The data from study 1 suggest that attempts to study effects of applicant reactions on job choice independent of other factors that have been found to influence applicant job choice may be problematic. A more revealing picture of the influence of applicant reactions can be obtained by framing the applicant reactions research within the larger context of decision making. That is, the data suggest that an applicant’s reaction to a selection procedure can be



considered as having one or more components, which are weighed with other important components such as the marketability of the applicant, the image of the organizations, and the organization's interest in the applicant, in determining actual job choice. This is consistent with a compensatory decision making approach described earlier in Chapter 1. It is possible that, as was suggested earlier, applicants employ different decision making strategies at different stages in their pursuit of employment. For example, we know that pay and location are important screening variables but the current study showed that they appeared to have only a minor role in determining final job choice. This finding (or lack of one) can be reconciled with other studies showing pay and location as important noncompensatory factors in job choice by acknowledging that those applicants who engage in a noncompensatory screening based on these variables had likely screened the available positions based in part on pay and location, and only applied to those that met their acceptable criteria. Accordingly, a study designed to follow applicants from a pre-application stage (such as those that found the strong pay and location effects) might find very substantial influences of pay and location on ultimate job choice, mediated by decision to apply. Once the applicants have applied for acceptable positions it appears they have narrowed the field sufficiently to begin to evaluate positions in a more compensatory fashion.

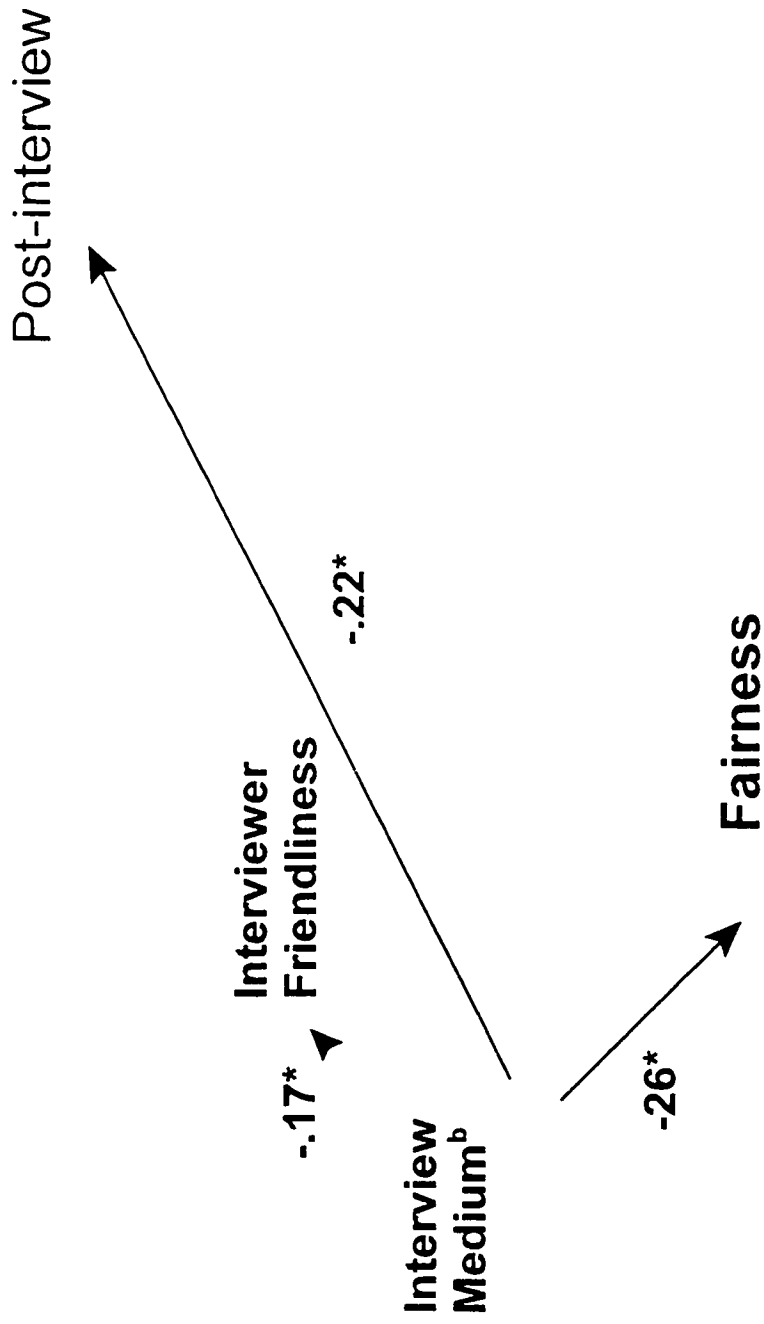
#### Temporal Nature of Applicant Reactions

A longitudinal design proved to be an excellent approach to studying applicant reactions. In addition to the advantages of controlling for pre-interview attraction to organizations (i.e., organizational image) the results of this study highlight the fact that very different conclusions might have been made regarding the applicant reaction processes had the study been conducted cross-sectionally. For example, had the study concluded with post-

interview attraction, the data would have suggested that the signal model was the only important mechanism in determining applicant attraction and that applicant perceived marketability was not important. Interpretation errors could also have been made had job choice been the only outcome variable. Had this been true, the conclusions would have been the opposite of the post-interview attraction results– that the metaperception and expectancy mechanism was the most important mechanism and that signals from interviewer friendliness were not important. Comparing the applicant reaction mechanisms simultaneously also proved to be a prudent approach as vastly different results would have been obtained if each mechanism had been tested on its own. In fact, each of the individual models would have provided a convincing fit on their own, including the fairness model which proved to be inconsequential in either post-interview attraction or job choice when included with other variables in the wider context of decision making.

#### Applicant Reactions to Interview Medium

Standardized parameter estimates from the full model were used to test hypotheses H5a and H5b. In support of H5a (i) post-interview attraction was influenced by the interview medium with applicants reporting a higher level of attraction to organizations that conducted face-to-face interviews ( $\beta = -.22, p < .05$ ). This relationship mediated the influence of interview medium on job choice predicted at H5a (ii). Partial support was found for H5b(i) and H5b(ii). These analyses revealed significant main effects for interview medium on interviewer friendliness and perceived fairness with FTF interviews resulting in higher perceived interviewer friendliness and perceived fairness of the selection procedure (See Figure 9).



**Figure 9. Interview medium effects.<sup>a</sup>**

<sup>a</sup> Other parameters estimated but not shown

<sup>b</sup> Coded Face-to-face = 0, videoconference = 1

However, the main effect of interview medium on post interview attractiveness remained significant despite including interviewer friendliness and perceived fairness in the model.

These results suggest that videoconference-based interviews are received less favourably by applicants than traditional face-to-face interviews. Moreover, using this technology has both direct effects on perceived vacancy characteristics and indirect effects on perceptions of vacancy characteristics through critical contact processes, specifically interviewer friendliness. Additionally, using this technology negatively affected applicant perceptions of the fairness of the selection procedure. Interestingly, in a post-hoc analysis, it became apparent that prior to the interview, applicants were somewhat more attracted to, or neutral towards, organizations employing videoconference technology (see Figure 10). This suggests that prior to the interview, applicants might view organizations as being more prestigious (possibly, more innovative and technologically advanced) for using the technology but upon using the technology a negative experience may have ultimately detracted from applicant attraction. It is possible that the technology itself failed to meet expectations or that interviewers were unfamiliar with conducting interviews with the technology and made less favourable impressions. These questions are open to further empirical investigation.

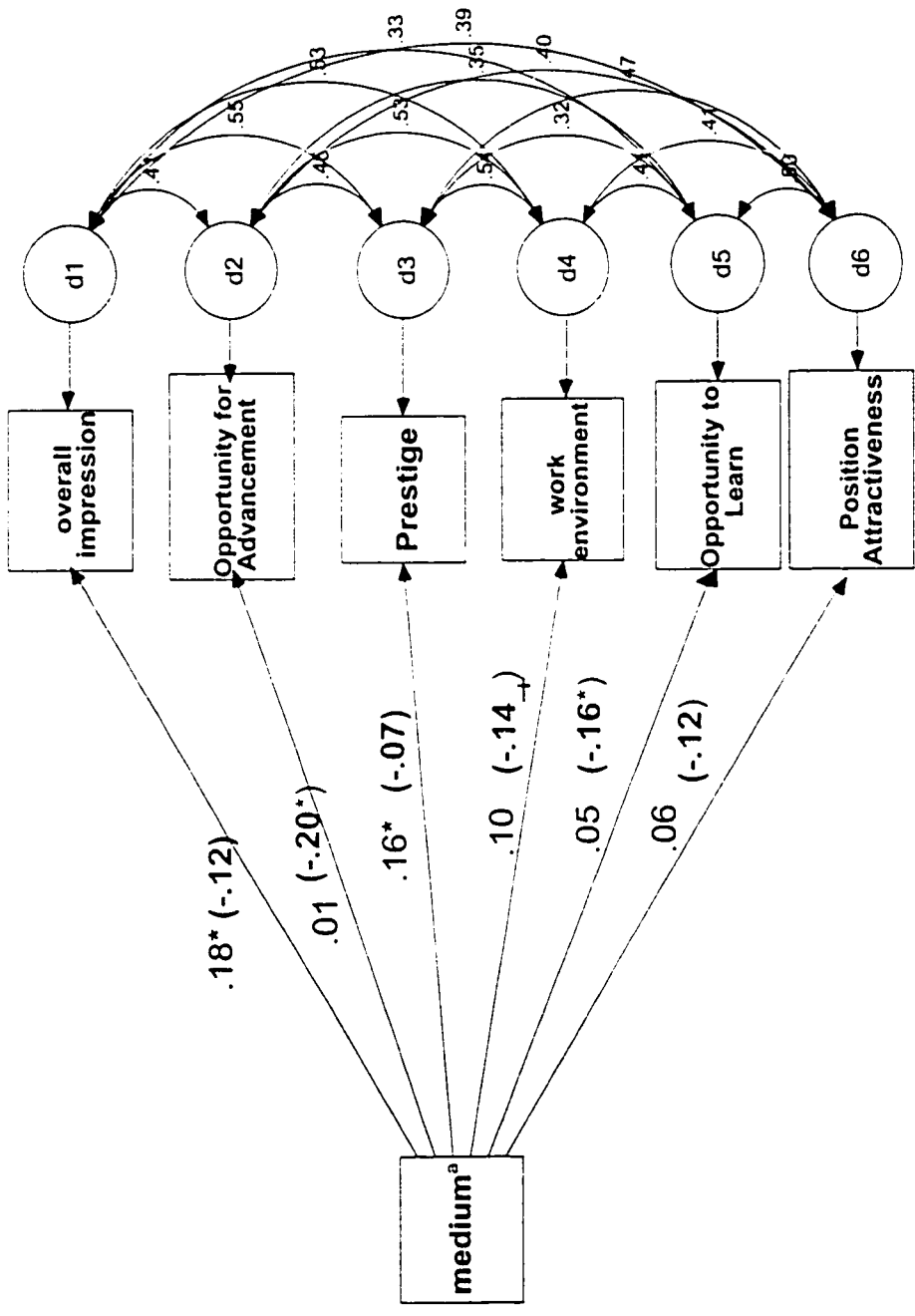


Figure 10. Influence of interview medium on organizational attractiveness, pre- and (post-interview).

a Coded Face-to-face '0', videoconference '1'

## Limitations

### Making Fair Comparisons

As Barber (1998) points out, there are several challenges associated with the design of studies that test models of job choice against each other. One must be careful to design a fair test of each model so that the researcher is not comparing, for example, a weak recruiter effect construct with a comprehensive list of job attributes. For this reason, Barber (1998) has criticized previous attempts (e.g., Harris & Fink, 1987; Powell, 1984, 1991; Taylor & Bergmann, 1987) to compare recruiter versus job attribute influences on job choice. For this study, there were several steps taken to decrease the likelihood of making unfair comparisons among the models. Each model had a similar number of parameters to be tested and so were equally complex. Furthermore, using an SEM approach eliminates any potential for unfair comparisons due to differences in the reliability of the predictors. Finally, the same set of control variables were used for each of the three models, allowing for a comparison among them that is not unduly influenced by differential application of control variables.

### Measurement of Fairness

Although the fairness measure developed for this study demonstrated acceptable psychometric properties and the items were generated based on justice theory, the study might have been improved by using an established measure of procedural justice and/or using a broader measure of procedural justice. This would have permitted a more direct comparison of the results of the present study with the existing literature.

### Job Choice

Another concern with the present research is the dependent variable of job choice. The idiosyncrasies of the job matching process for these students is such that it might be

questionable to claim that their final indication of job preference is indeed job choice.

Researchers in decision making distinguish between judgement, or weighing the benefits of various alternatives, versus choice which involves eliminating some options while endorsing others. The variable of job choice in the current study has elements of both judgement and choice. For example, the ranking of "1" is limited to a single organization making it consistent with choice, however, the other rankings were not exclusive and so had elements of being a preference rather than choice. Improvements to this measure would include a measure of actual applicant placement with the organization.

#### Data Loss

Employing a longitudinal study resulted in substantial data loss from T1 to T2. Although the use of full information maximum likelihood estimation techniques permitted the use of structural equation modeling (see Appendix B), less missing data would have been desirable. Furthermore, the fact that there were missing data reduced the usable sample size to a number which did not permit the examination of potential moderators of the models.

## CHAPTER 3

### A STUDY EXAMINING THREE MECHANISMS OF RECRUITER INFLUENCE ON JOB CHOICES AND POTENTIAL MODERATORS OF THESE MECHANISMS

Study 1 highlighted the complexity of job choice and the need to examine multiple mechanisms simultaneously and longitudinally in order to better understand how applicant reactions to selection procedures influence organizational attractiveness and applicant job choice. This second study was conducted to address some of the limitations in Study 1 and to expand the examination of applicant reaction and job choice phenomena. Specifically, there were four main goals associated with this second study including: (a) re-framing the concept of applicant reactions as a critical contact outcome within the framework of a job choice model suggested from Study 1; (b) improving the model from Study 1 by including measures of applicant intentions in the model; (c) examining potential moderators of recruiter influences on applicant reactions and job choices; and (d) improving the methodology employed in Study 1 by using a better measure of procedural justice, including a measure of actual job choice behaviour, and trying to reduce the amount of missing data by obtaining a larger sample with fewer missing data points.

#### Re-framing the Model

In Chapter 1 the concept of critical contact was introduced, explaining Behling et al.'s (1968) predictions of applicant decision making processes. Namely, applicants are likely to be influenced by critical contact with the recruiter (including recruiter characteristics and behaviours) when they have little knowledge of the organization. Each of the applicant reaction mechanisms described in Study 1 involve the applicant reacting to the behaviour of the recruiter (or at least perceived behaviour of the recruiter). Accordingly, it may be



beneficial to re-frame the question of applicant reactions to acknowledge that they occur due to critical contact and may therefore be informed by critical contact theory. Hence, the signal, expectancy, and procedural justice mechanisms investigated in Study 1 may all be viewed outcomes of mechanisms of recruiter influence in addition to being mechanisms of applicant reactions.

### Including Applicant Intentions in the Model

One of the most commonly studied outcomes in applicant reactions and job choice research is applicant intentions of accepting a job offer (or second interview) if one is extended. This has largely been a variable of convenience as many of the studies in the literature do not include measures of actual job choices or are conducted in a laboratory setting with attitudinal measures as outcomes. However, there is considerable theoretical support for examining intentions as either a dependent variable, a predictor, or both. The theories of reasoned action (Fishbein & Ajzen, 1975) and the theory of planned behaviour (Ajzen, 1991) highlight the importance that intentions have in predicting future behaviour. Many studies have supported the role of intentions in predicting future behaviour. For example, a meta-analysis of the relationship between intentions of giving blood and actually donating blood reported a mean effect size of  $r = .439$  (Ferguson, 1996). The role of intentions for predicting future behaviour has also found some empirical support in the job choice literature (e.g., Harris & Fink, 1987) and the applicant reactions literature (e.g. Ployhart & Ryan, 1998). Furthermore, most of the justice reactions literature focuses on applicant intentions rather than justice effects on applicant judgements of organizational attributes. This distinction is particularly important when evaluating differences between signal, justice and expectancy models. For example, in study 1, the primary mediator between the reactions mechanisms and job choice was post-

interview attractiveness of the organization. The post-interview attractiveness scale consists of applicant evaluations of job and organizational attributes (e.g., the prestige associated with the organization). This operationalization may have biased the results in favour of the signal model as one might expect that the signals from the interviewer's behaviours would be used to evaluate those organizational and job attributes (Harris & Fink, 1987). The fact that neither fairness nor expectancy reactions models affected the post-interview evaluations of job and organizational attributes leaves open the question of how these mechanisms influence job choice. Given the previous literature on applicant reactions, it is plausible that intentions are directly affected by the fairness and expectancy models while signals are mediated by post-interview evaluations of job attributes. Past research has concentrated on recruiter effects (other than signals) as being independent of the effects of job attributes (see Harris & Fink 1987, for an exception). In this study (as was the case in study 1), the recruiter effects from signals are predicted to influence applicant perceptions of the job and organizational attributes. That is, the recruiter's signaling effect on applicant job choice may be mediated by applicant evaluations of job attributes rather than directly on applicant intentions or job choice. The recruiter mechanisms of procedural justice and expectancy meanwhile are predicted to have direct influences on applicant intentions. Predictions for each of the three recruiting mechanism models and the full model are provided in Figures 11, 12, 13, and 14. Accordingly the following hypotheses and research question are provided,

***R1: Which of the three recruiter/applicant reaction mechanisms will best describe applicant job choice processes?***

***H1: Pre-interview evaluations of job attributes will predict pre-interview intentions.***

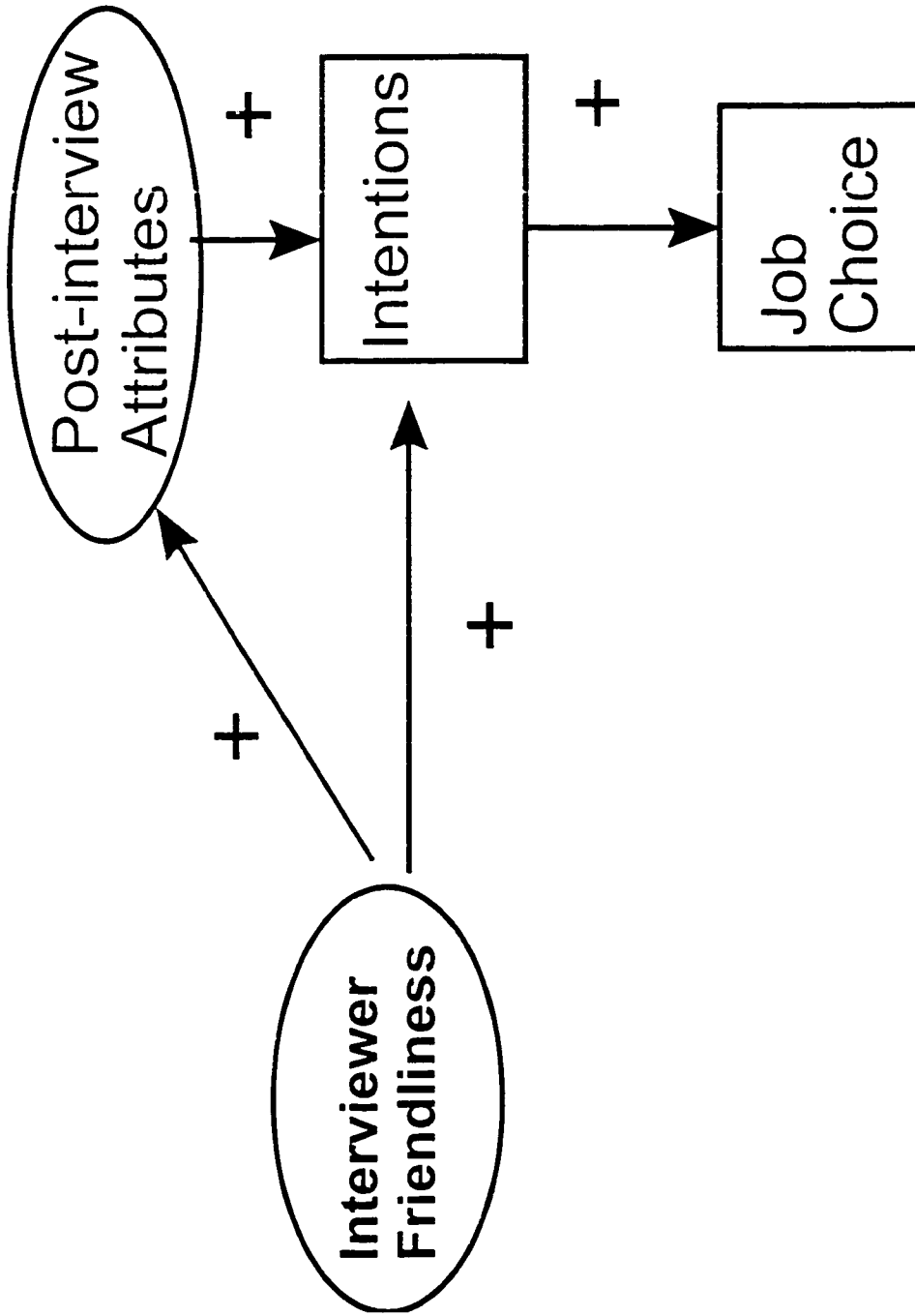
*H2: Pre-interview intentions and post-interview evaluations of job attributes will predict post-interview intentions.*

*H3: Applicants will use signals from interviewer friendliness to evaluate post-interview attractiveness of job/organizational attributes.*

*H4a: Applicant reactions to fairness and expectancy will not affect job choice through their effects on evaluations of job attributes but through post-interview intentions.*

*H4b(i): Applicants who perceive the selection procedures as being more procedurally fair will have higher post-interview intentions of accepting a job offer and H4b(ii) Applicants with higher expectancies of receiving a job offer will have higher post-interview intentions of accepting a job offer.*

*H5: Post-interview intentions will predict job choice.*



**Figure 11.** Signal model with intentions as a mediator.

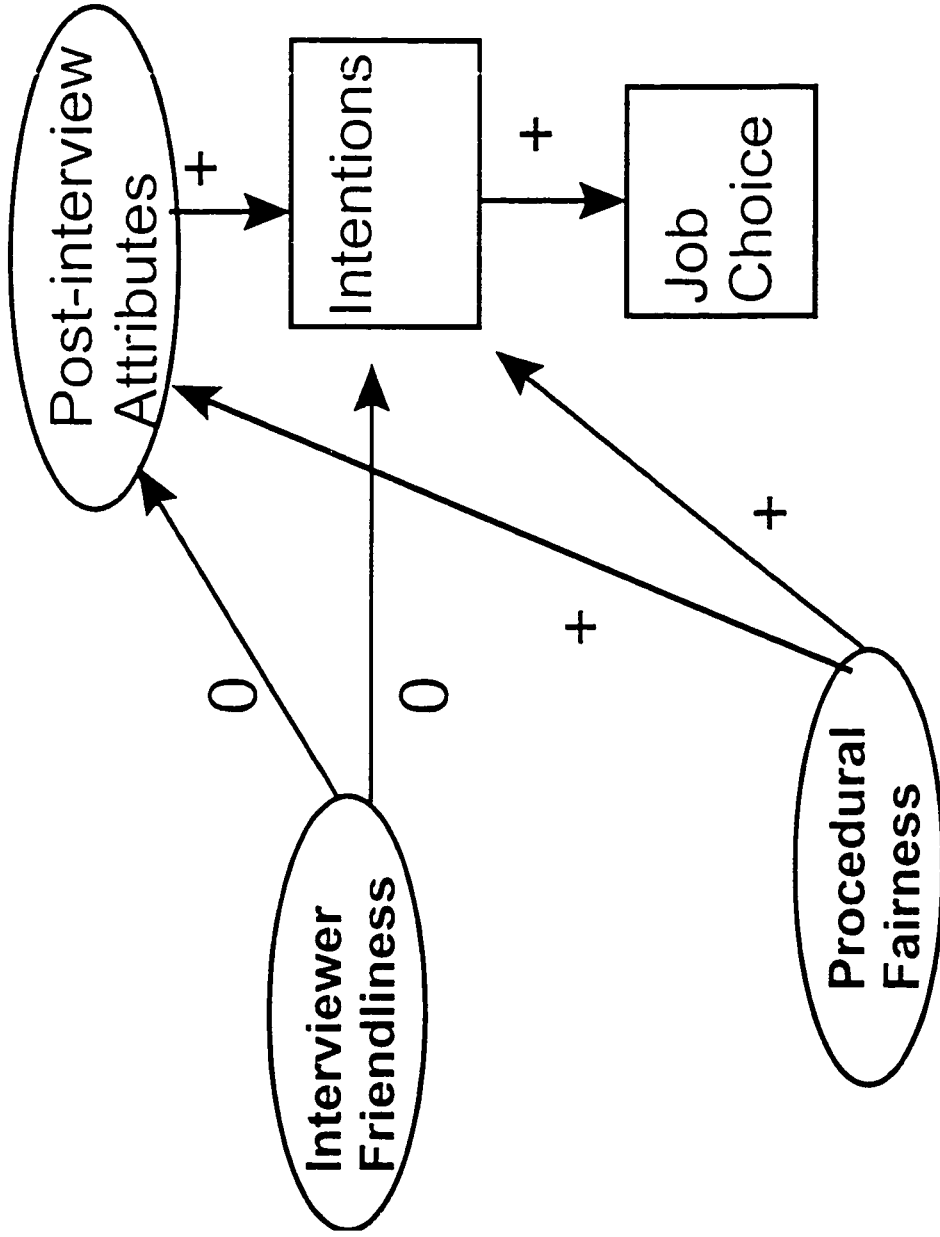


Figure 12. Procedural justice model with intentions as a mediator.

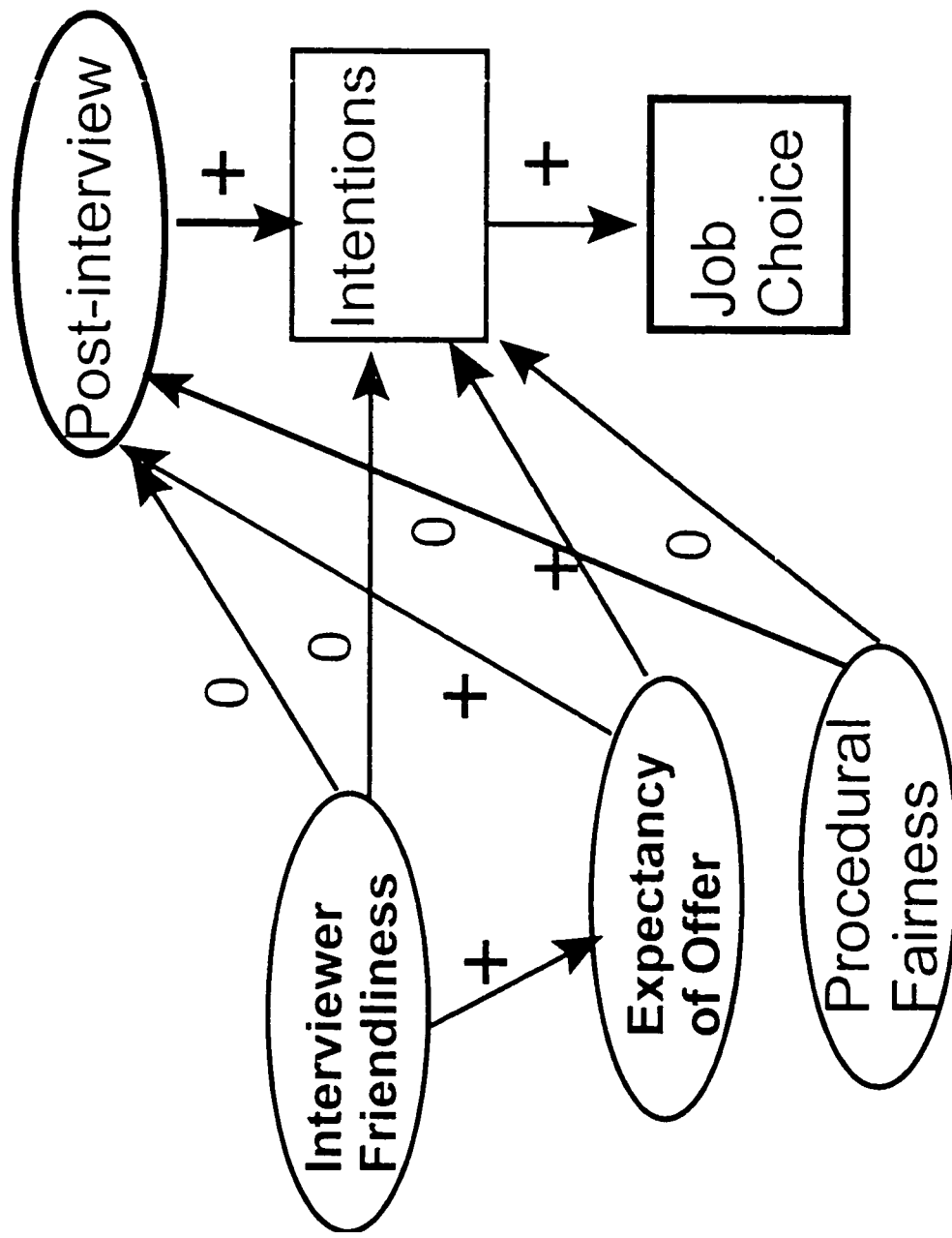


Figure 13. Meta-perception expectancy model with intentions as a mediator.

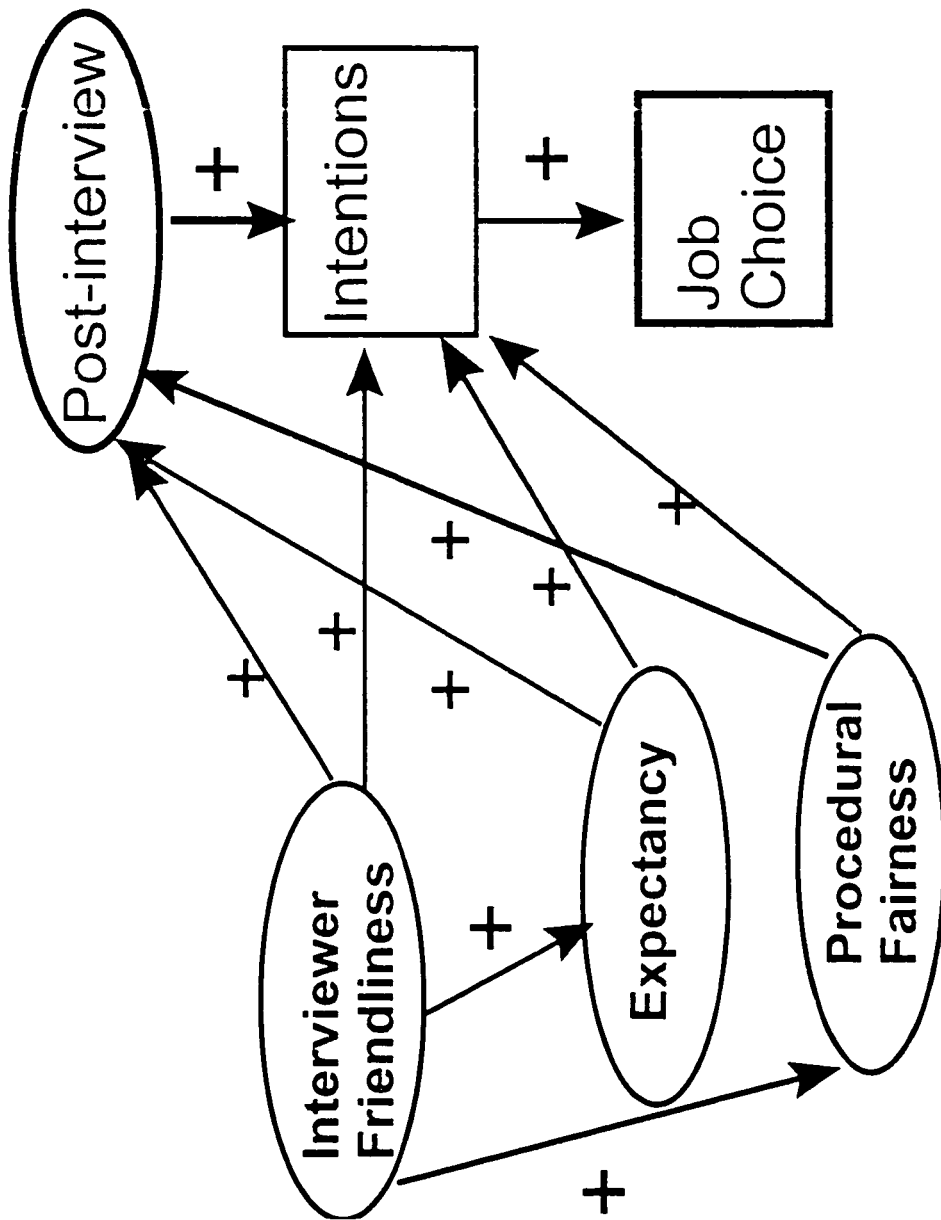


Figure 14. Full model with intentions.

## Moderators of Applicant Reaction and Job Choice Processes

The size of the sample in study 1 did not permit subgroup analyses to identify moderators of the attraction, reaction and job choice across potentially important subgroup variables. Yet, there are compelling reasons why one might expect individual differences in the processes surrounding applicant attraction, reactions to selection procedure and job choice. In the present study, four potential moderators are investigated. These moderators include: (a) applicants with multiple job choices versus little choice; (b) males' versus females' attraction processes; (c) naive versus experienced applicants', and (d) applicants who have considerable previous knowledge of the organization versus those who have little previous knowledge.

### Applicants with Multiple Opportunities

All applicants are not created equal. Important differences such as experience level, cognitive ability, appropriateness of their educational background, academic success, and interpersonal skills are but a few of many variables that contribute to the relative attractiveness of applicants for a given position. It is also true that applicants are likely to apply for multiple positions in multiple organizations that are similar in scope and breadth (Blau, 1992). As a result, in any pool of applicants, one is likely to find very desirable candidates who are sought by many organizations and less desirable candidates who have far fewer options available to them. Blau (1992) for example, found that applicants commonly received multiple offers from which to choose. There is some empirical evidence to suggest that job choice processes differ when applicants are selecting from among several simultaneous job offers versus choosing whether to accept a single offer (Bazerman, Schroth, Shah, Diekmann, & Tenbrunsel, 1994; Glueck, 1973; Liden & Parsons, 1986). Bazerman et al. (1994) gave hypothetical job choice



scenarios to MBA students and demonstrated that applicants choosing from only a single option (sequential) sought out social comparisons from among their peers to evaluate the acceptability of the single offer, while simultaneous consideration led to more objective comparisons among the choices. Liden and Parsons, (1986) found that amusement park applicants who had multiple job offers were more influenced by process variables such as recruiter warmth. Finally, Rynes et al. (1991) found that applicants who participated in more onsite visits were more likely to mention recruitment as a reason for taking jobs with organizations that were not initially favoured. In the present study then, the applicant with multiple opportunities is expected to place more weight on process factors including both signals and applicant reactions than those with only a single opportunity, whereas those with only a single opportunity will be more affected by pre-interview attraction to the organization.

In addition to this preliminary empirical evidence there are several compelling theoretical reasons to believe that there may be different job choice processes for applicants with multiple opportunities versus those with few opportunities. Firstly, and perhaps most simply, the candidate with multiple opportunities has the luxury of weighing the relative merits of the competing offers and choosing the best option. However, those with only a single opportunity have only two choices: (a) accept the position offered regardless of the attractiveness of the position or (b) reject the offer and hope that new opportunities will materialize that are better than the one being offered. According to image theory, the candidate with multiple offers would do an initial screening of offers based on general judgements of the fit of the person with the organization (Cable & Judge, 1996) followed by closer analysis of the remaining choices to maximize their outcomes. The candidate who only receives interest from a single organization is forced to re-visit the initial image appraisal of

this organization. If the initial appraisal is positive, the candidate is less likely to search the remaining information to make a choice and simply accepts the lone offer. If the initial appraisal was negative and the organization is the only one making the candidate an offer, the candidate must reappraise the organization and compare it to potential future alternatives. One might expect to find that candidates with high self-efficacy or perceived marketability (despite the negative feedback from the current job search) are more likely to reject the current offer as they are more likely to perceive superior future alternatives. In addition, in the larger sample there are many candidates who will be rejected by the prospective employer and it is natural in this environment for the candidate to reciprocate and reject the employer.

Accordingly, one might expect the applicant reaction processes identified in study 1 to be strengthened in the multiple opportunity subgroup and weakened in the single opportunity subgroup. Finally, when the sample from Study 2 is narrowed to include only applicants who have multiple offers, it is expected that the process model identified in study 1 will be replicated with the signal and expectancy models of applicant reaction and job choice fitting better than the justice model. Therefore,

***H6a: Applicants with more choices will be (i) less influenced by employer ranking and (ii) more influenced by process variables when making job choices.***

***H6b: Regardless of the number of choices available to the applicant, Signal and Expectancy models will play a greater role in job choice than procedural justice.***

#### Gender Effects on Applicant Reactions and Job Choice Processes

For a variety of reasons, including employment equity and increasing the effectiveness of recruiting/selection practices, organizations may be interested in targeting applicants based on their gender. There has been some research directed at identifying gender differences in job attribute attractiveness (see Wiersma, 1990, for a review) suggesting that issues such as work-

family conflict make some job attributes related to parental support more attractive to women than men. However, we know little about how gender influences applicant reaction processes. There are several reasons why gender might influence the cognitive processes underlying applicant reactions and job choice processes. Gender has been identified as an important distinguishing characteristic of self-concept (Jackson, Hodge, & Ingram, 1994; Yount, 1986) and career orientation (Pulkinen, Ohranen, & Tolvanen, 1999). One's self-concept is an important determinant of person-organizational fit and P-O fit, in turn, has been found to predict applicant attraction to organizations (Cable & Judge, 1996, 1997). Self-concept is also central to image theory such that gender differences in self-concept might change the criteria used to screen suitable positions. With respect to applicant reactions, it has been suggested that due to historical systematic discrimination in the workplace, females might place a higher value on procedural fairness than males. This would result in female applicants demonstrating a different cognitive process than males with procedural justice perceptions playing a more prominent role. This is consistent with the findings of Sweeney and McFarlin (1997) who found that employee gender moderated the relationship between procedural and distributive justice perceptions of pay level and organizational commitment and intent to stay in the organization for public employees. Specifically, Sweeney and McFarlin (1997) found that female employees emphasized procedural fairness when determining organizational commitment and intent to stay, while male employees were more focused on their perceived fairness of the outcomes. Lee and Farh (1999) failed to replicate this result in a sample of employees in private industry and suggest that differences in the sample, measurement of fairness, and changes in society may have accounted for their inability to replicate the findings of Sweeney and McFarlin (1997). Accordingly, there is scant and mixed evidence regarding

the role of gender on perceptions of procedural fairness, and that evidence has concentrated on issues of pay, job satisfaction and organizational commitment. Furthermore, there is a dearth of empirical evidence on gender differences in applicant reactions to selection procedures.

Accordingly, I pose an exploratory empirical research question:

*R2: What, if any, gender differences exist in the applicant reaction/job choice process?*

#### Naive Versus Experienced Job Searchers

A third potential moderator of interest is the extent to which applicants have prior experiences in job seeking. Experienced job seekers may be less inclined to rely on critical contact and be more resistant to the persuasive influences of interviewers. For example, experienced applicants have encountered friendly interviewers who subsequently did not offer them a job. This could reduce or eliminate the meta-perception expectancy link established in study 1 through extinction (Ramsay, 1981). Furthermore, Rynes et al. (1991) found a negative relationship between work experience and recruiting effects. This suggests that both work experiences and experiences gained in the process of finding work (Ramsay, 1981) might mitigate the influences of recruiter effects (e.g., friendliness) on applicant decisions. Thus:

*H7: Expectancies will play a weaker role in job choice for more experienced applicants.*

#### Companies Known Versus Unknown to the Applicant

In their motivation to secure employment, applicants are more likely to be successful if they apply to several organizations rather than restricting their search to a few companies that are well known to them. This results in circumstances where applicants apply to organizations that they do not recognize and know little about. Both the critical contact perspective (Behling

et al., 1968) and signal model (Rynes et al., 1991) emphasize that in the absence of information about the job vacancy, applicants will look to the recruiter or interviewer for information about the attractiveness of the organization and position. Taylor and Bergmann (1987) suggested that recruiter effects are most likely to be seen when applicants know little about the organization but are likely to disappear when the company is well known to the applicant.

Thus:

***H8: Applicants with considerable pre-interview knowledge of the organization will be less influenced by recruiter effects (signal, justice, and expectancies) than applicants with little pre-interview knowledge of the organization.***

#### Method

The method used in Study 1 was largely used in the design of Study 2 with some notable exceptions. First, only the data from face-to-face interviews were used in the analyses. In addition, there were changes to the way that procedural justice was measured in this study. Lastly, a more fine-grained analysis of the data was possible due to a substantial increase in sample size.

#### Participants

Data were collected from 590 applicants for four-month term positions at 215 organizations. The applicants were largely young ( $M = 20.57$  years,  $SD = 1.88$ ). There were somewhat more males ( $N = 327$ ) than females ( $N = 263$ ). Most applicants were either in engineering programs or computer science programs (see Table 3).

**Table 3: Intended majors of Study 2 participants**

Intended Major	N
Engineering	187
Math/Computer Science	103
Science	77
Arts	47
Health Studies	52
Business	19

#### Procedure

The procedure was similar to Study 1. Participants were approached immediately before their interviews and asked to complete the pre-interview survey ( $N = 588$ ). The applicants were encouraged to return to complete the second survey after the interview with the employer. Improved data-collection procedures resulted in a significant increase in the proportion of applicants completing the survey at time 2 ( $N = 489$ ) when compared to study 1. Specifically, research assistants and the author wore less formal clothing to improve the chances of applicants identifying them among the suit-clad job seekers in the waiting area. We also emphasized to the applicants that we needed both pre-and post-interview surveys to obtain the most usable information. These changes and placing ourselves more strategically in the room to observe exit points helped reduce the amount of missing data.

Immediately preceding the employment interview, applicants were approached by the researcher or a research assistant and asked to participate in the study. Applicants were informed that the researcher was interested in studying employment interviews and told that

the study involved completing two surveys. Although exact response rates are not available, most of the applicants approached agreed to participate. Feedback from the research assistants indicated that those who chose not to participate generally did so because they believed they would not have time to complete the survey before their interview started.

After completing the pre-interview survey, applicants were asked to seek out the researcher or one of his research assistants immediately following the selection interview. Those students who were unable to complete the second survey often had to return to classes, forgot about the study, or were unable to quickly find the researcher or a research assistant in the crowd following the interview. The building had three exits making it easy for applicants to slip by without seeing the researcher. A total of 489 applicants (83%) completed the survey at Time 2.

Job choice data were collected from the same secondary source (the Department of Cooperative Education) at time 3 and coded the same as Study 1. Finally, a behavioural outcome of job placement was also collected at time 3 from the Department of Cooperative Education which indicated whether the applicant ultimately worked for this particular organization.

### Measures

#### Pre-interview

Pre-interview Evaluation of Attributes. Applicants who agreed to participate completed the same pre-interview evaluation scale used in Study 1 (see Appendix A) consisting of six items developed by Chapman and Rowe (1998) based on previous studies. The pre-interview evaluation scale demonstrated good internal consistency (Cronbach's Alpha = .82). A total of 588 applicants completed useable pre-interview questionnaires.

Pre-interview Intentions. A single item from Powell and Goulet (1996) was used to measure intentions. The item was worded “How likely are you to accept a job offer from this organization based on the information you have so far?” with responses ranging from ten percent to one hundred percent.

#### Post-interview

The post interview questionnaire consisted of the following scales:

Post interview evaluation of attributes. This scale consisted of the same items contained in the pre-interview impression scale. The internal consistency of the post-interview impression scale was very high, with Cronbach’s alpha reaching .90.

Post-interview Intentions. Post-interview intentions were measured with the same item used to measure pre-interview intentions.

Interviewer Friendliness. Two items designed to measure interviewer friendliness were adopted from Schmidt and Coyle (1976) (see Appendix A). To improve the purity of the measure as a friendliness measure independent of interviewer competence, only two of the four items used in Study 1 were retained (“the interviewer was friendly” and “the interviewer was pleasant”). Cronbach’s Alpha was an acceptable .89.

Expectancy. Three of the four items from Study 1, based on Vroom (1964), were used to measure applicant expectations of obtaining a favourable outcome from their selection interview (see Appendix A). The scale was also found to be unidimensional and demonstrated excellent psychometric properties (Cronbach’s Alpha = .85). Note that the full expectancy model proposed by Vroom (1964) included both valences and instrumentalities. Accordingly, this measure only taps into the instrumentalities portion of expectancy as valence is measured by pre- and post-interview attraction. Factor loadings for each of the indicators exceeded .40.



Fairness. In order to make the measurement of procedural justice consistent with much of the applicant reactions literature, six items from Gilliland's (1993) measure were adopted. These items were those identified by Bauer et al. (1998) as being relevant to the personnel selection context. Factor loadings for five of the six indicators exceeded .40, however, the explanation item had a much weaker loading. The inclusion or elimination of this item from the latent factor did not appreciably affect the models tested, accordingly, it was retained to maintain consistency with the existing literature.

Favourability of Pay. A single item was used to measure applicant perceptions of the favourability of the pay for the position. This was the same item used for Study 1. The item was: "The pay for this position is good compared to what I can expect with my background."

Favourability of Location. The perceived favourability of the location of the position was also measured with the same single item from Study 1 "I like the location where this position is being offered."

Perceived Marketability. Five items were used to capture the applicants' perceptions of the favourability of the job environment for their education background. These were the same marketability items used in the scale employed in Study 1. Factor loadings for each of the indicators exceeded .40. However, one item, "I expect to be able to pick from several job offers" had significant cross loadings with other factors and was removed to improve model fit. The four-item scale had an internal consistency of .80.

### Time 3 Measures

The measures for time 3 included:

Employer ranking. Employers were required to rank applicants after meeting with all of them. Employer rankings were coded in the same manner as Study 1.

Job choice. Job choice was operationalized by obtaining the student rankings of the employers with whom they interviewed during the search process. These rankings were coded in the same manner as Study 1.

Placement. A behavioural measure of job choice was obtained from a secondary source (the Department of Cooperative Education) indicating whether the applicant actually worked for that particular organization that semester. This variable was coded "1" for placed and "0" for not placed.

## Study 2: Results and Discussion

### Analyses

Descriptive statistics and zero-order correlations among the variables in study 2 are provided in Table 4. Structural equation modeling (AMOS 4) was used to assess the appropriateness of the models being tested for each hypothesis. The full model, signal model, justice model and meta-perception expectancy models from study 1 (without the interview media influences) were compared again with the new sample and with the added role of applicant intentions. For the questions assessing moderator effects, the significance of individual parameter estimates were compared across the subgroups of the population.

### General Tests of the Recruiting/Applicant Reaction Mechanisms

To address R1, the three competing models (Signal, Justice and Expectancy) were compared to determine which model best described the applicant reaction and job choice processes for applicants with multiple offers. Each model was tested independently first and then compared to a full model where all three mechanisms were working simultaneously. Each of the proposed recruiter mechanisms (Signal, Justice, and Meta-perception/expectancy) was tested independently by constraining the parameters of the competing mechanisms to zero.

Each of the independent mechanisms was nested within the full model to facilitate comparison. Figure 15 suggests that the signal model was working as predicted with interviewer friendliness being significantly related to the attractiveness of job attributes. Similarly, both the procedural justice model (Figure 16) and meta-perception/expectancy model (Figure 17) worked as expected when tested independently. However, when all three mechanisms were tested simultaneously in the full model (Figure 18), the influences of procedural justice changed direction and weakened.

Table 5 reveals that the full model was a better description of the data than any of the independent models working alone. The fit indices for each of the models were compared to confirm that the full model provided the best fit for the data. An integrated best-fitting model was obtained post hoc by constraining the nonsignificant parameters to zero. This integrated model looked very similar to the best fitting integrated model obtained in study 1 with the addition of the role of applicant intentions as will be discussed in more detail later. Both signals and expectancy played a significant role in post-interview attraction and job choice. However, unlike the results from study 1, signals were mediated by post-interview attractiveness of the job attributes while expectancy effects on job choice were mediated directly by post-interview intentions. These results are not fully consistent with Janis and Mann's (1977) defensive avoidance decision strategy. According to Janis and Mann (1977), we should find that expectancies at T2 generate a process to 'spread the alternatives,' such that the job attributes of organizations from whom the applicant expects to receive an offer, look markedly better than those from whom an offer appears less likely. These data find that this only occurred in the full sample when the meta-perception/expectancy mechanism was tested independently. When the other mechanisms were included in the model, the valence of job

attributes did not change appreciably based on expectancies, however, intentions continued to be significantly affected.

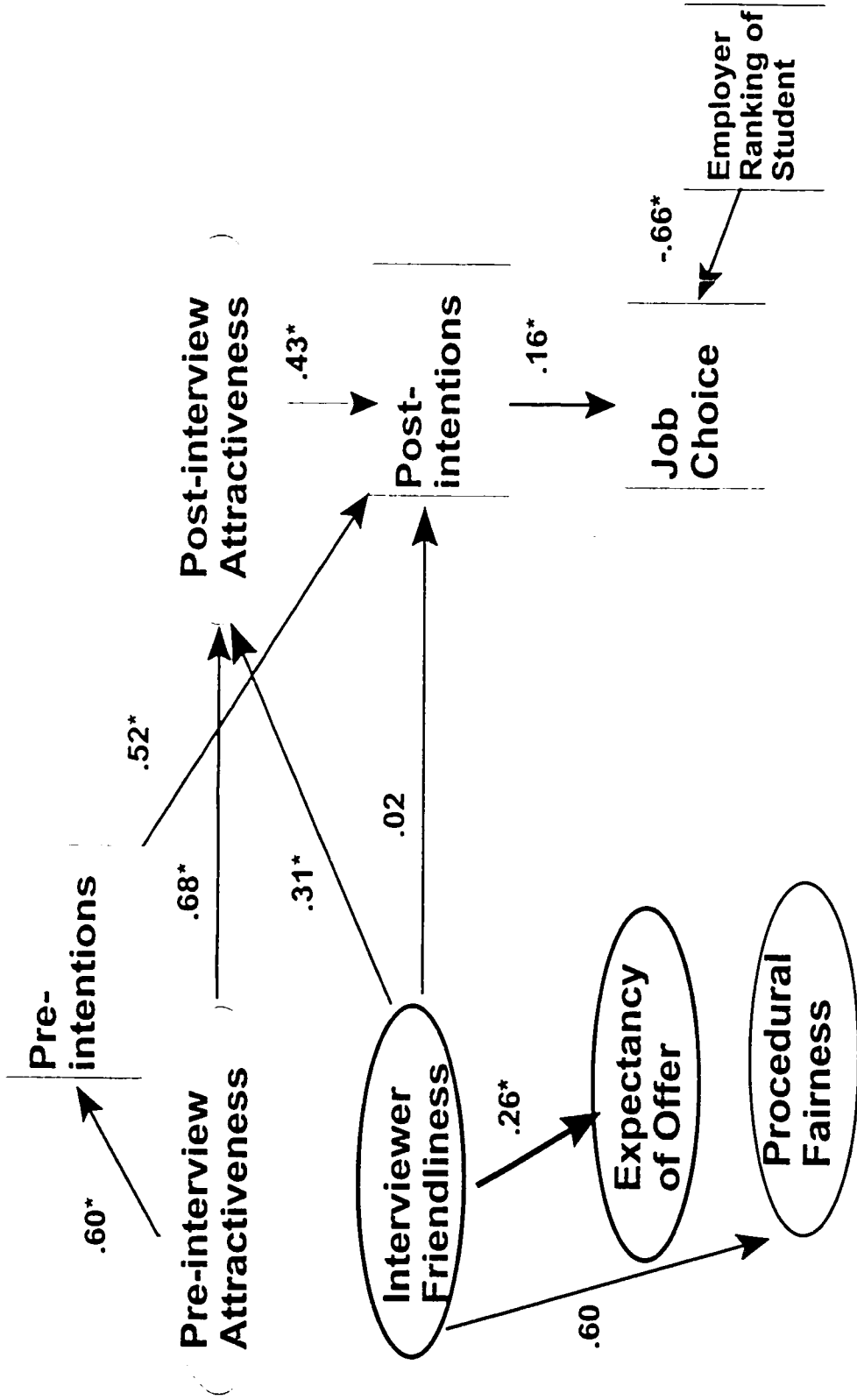
Despite the use of a better-accepted measure of procedural justice, applicant justice reactions continued to play no significant role in either post interview intentions or job choice when placed in the larger context of the job choice model. An explanation for why other researchers have found justice effects can be demonstrated in these data. For example, the justice model, when tested by itself, fit the data adequately. When the parameters from the competing models are constrained to zero, procedural justice has a significant relationship with post-interview evaluations of the organization ( $\beta = .28, p < .01$ ). The advantage of examining justice effects on job choice within the larger context of job attributes, and other applicant reactions mechanisms becomes obvious.

Table 4: Zero order correlations and descriptive statistics for Study 2

Variable	n	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Knowledge of Company	588	2.15	.82	-----												
2. Intentions T1	582	68.85	22.28	.26**	-----											
3. Attractiveness T1	588	5.04	.92	.41**	.58**	-----										
4. Attractiveness T2	489	5.45	.93	.26**	.44**	.66**	-----									
5. Friendliness	487	6.08	.69	.09*	.20**	.17**	.45**	-----								
6. Expectancy	488	4.39	1.09	.10*	.00	.07	.19**	.26**	-----							
7. Marketability	486	5.01	1.11	-.03	-.21**	.00	.01	-.02	.20**	-----						
8. Procedural Justice	488	5.87	.61	.15**	.16**	.14**	.37**	.58**	.25**	.10*	-----					
9. Pay	459	4.53	1.50	.09	.16**	.21**	.36**	.21**	.08	.05	.10*	-----				
10. Location	485	5.05	1.66	.07	.28**	.20**	.22**	.18**	.03	.05	.11*	.20**	-----			
11. Employer Ranking	496	2.67	1.17	-.03	-.10*	-.01	-.10	-.08	-.21**	-.02	-.08	.00	.00	-----		
12. Intentions T2	488	74.34	22.53	.15**	.73**	.41**	.64**	.35**	.14**	-.16**	.25**	.29**	.28**	-.14**	-----	
13. Job Choice T3	495	2.30	1.29	.05	.20**	.07	.15**	.11*	.16**	-.05	.05	.11*	.04	-.67**	.23**	-----
14. Placed	496	1.17	.41	.04	.10*	.03	.10	.05	.09	-.08	.02	.08	.00	-.44**	.17**	.50**

\*\* Correlation is significant at the 0.01 level 2-tailed.

\* Correlation is significant at the 0.05 level 2-tailed.



**Figure 15.** Signal model results.\*

a. Not all parameters estimated and items are shown to simplify the presentation

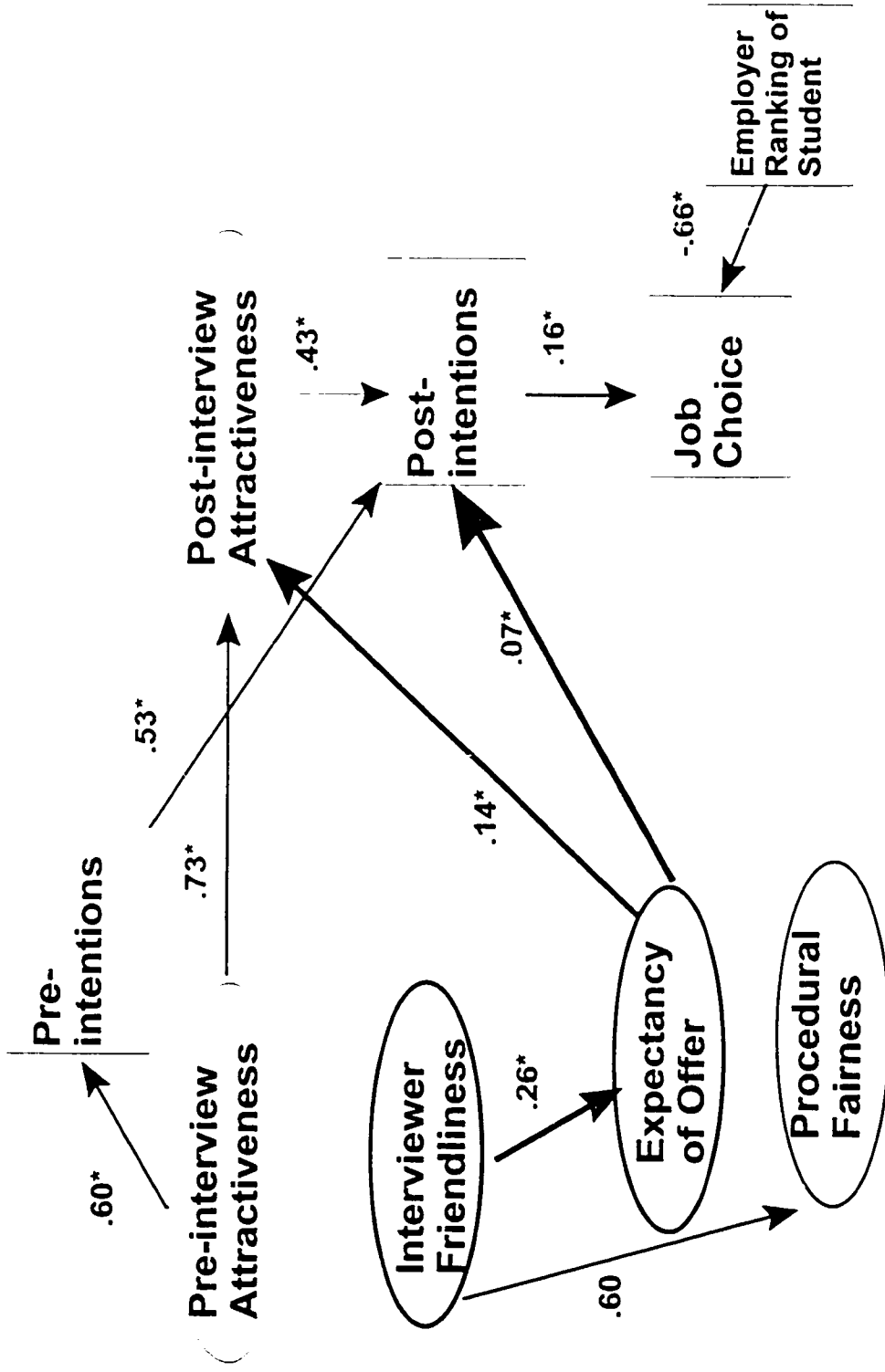


Figure 16. Meta-perception expectancy model results.<sup>a</sup>

a. Not all parameters estimated and items are shown to simplify the presentation

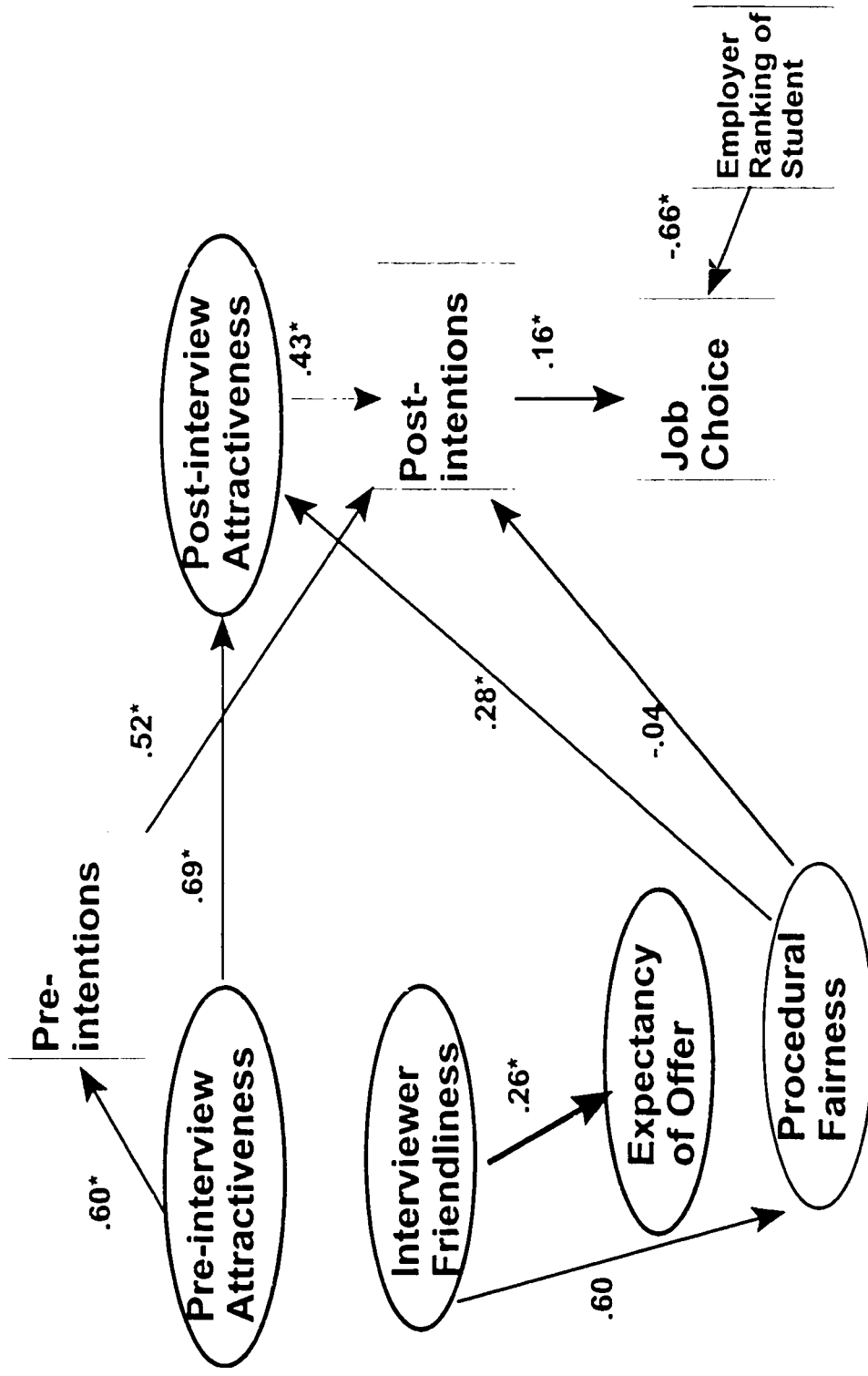


Figure 17. Procedural justice model results.\*

a. Not all parameters estimated and items are shown to simplify the presentation



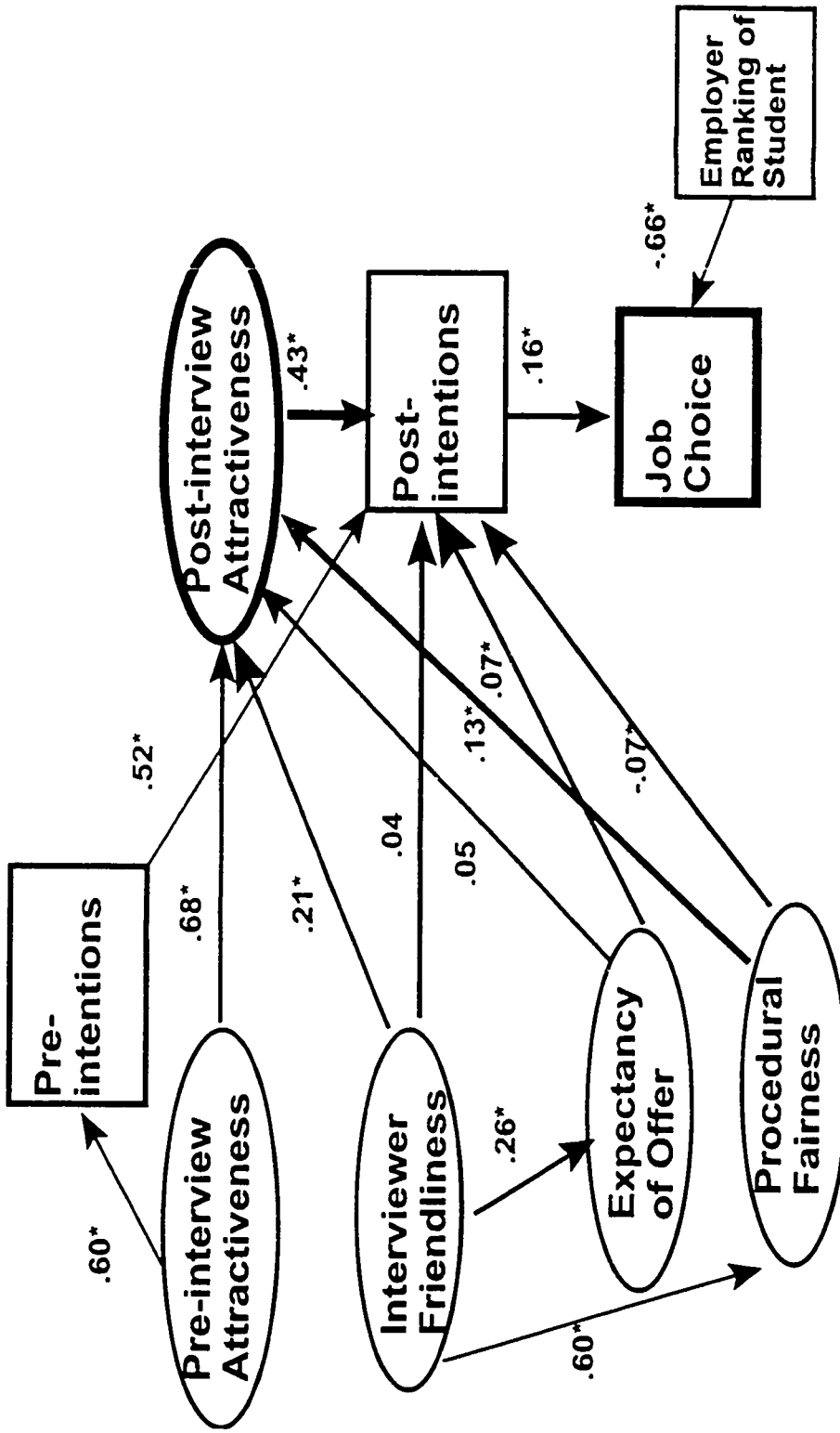


Figure 18. Full model results.<sup>a,b</sup>

a. Not all parameters estimated and items are shown to simplify the presentation

b. N = 590.

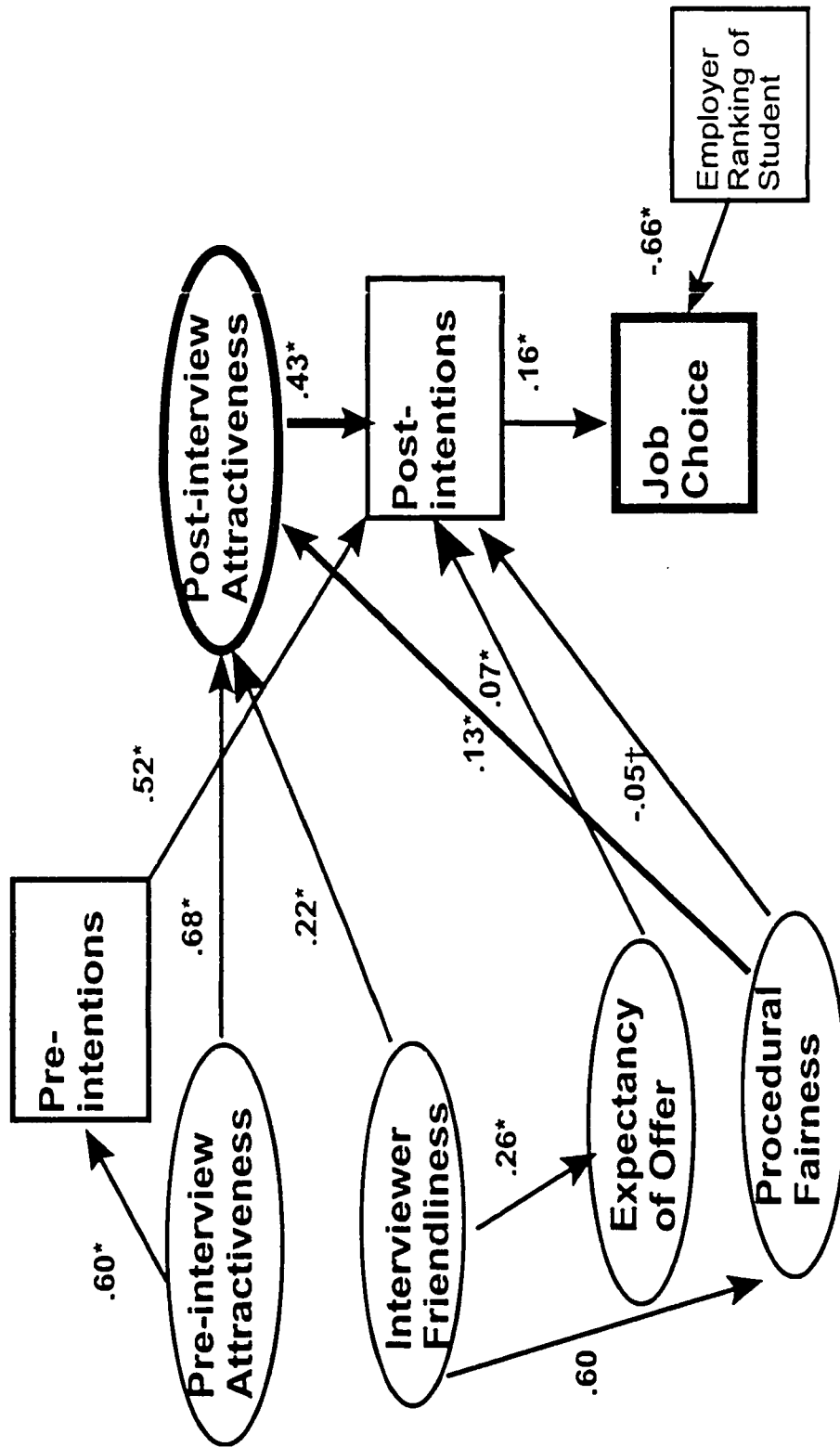


Figure 19. Integrated model results.<sup>a,b</sup>

a. Not all parameters estimated and items are shown to simplify the presentation

b. N = 590

**Table 5: Study 2 model comparisons of full, signal, fairness, expectancy, and integrated models (all subjects)**

Fit measure	Full	Signal	Fairness	Expectancy	Integrated
$\chi^2$	415.35	436.69	196.79	198.83	192.26
p $\chi^2$	<.05	<.05	<.05	<.05	<.05
df	210	214	214	214	213
$\chi^2/df$	1.99	2.04	2.09	2.28	2.00
NFI	.99	.99	.99	.99	.99
CFI	.99	.99	.99	.99	.99
RMSEA	.04	.04	.04	.05	.04
AIC	593.35	606.69	616.70	658.10	598.41
$\Delta \chi^2$		4.75	6.40	8.43	1.86
df $\Delta \chi^2$		4	4	4	3
p $\Delta \chi^2$		.00	.00	.00	.01

#### Results for Placement Versus Job Choice

Given the somewhat unusual nature of the job choice variable the model was run again using job placement instead of job choice. This variable was obtained from the secondary data and indicated whether the applicant was placed with the organization in question which constitutes a *bona fide* behavioural outcome. This variable was coded in the following manner: not placed = "0", and placed = "1". The results at Figure 20 are virtually identical to the job choice model with the exception of the strength of the relationship between the employer's ranking of the student and the dependent variables. Not surprisingly, the relationship was stronger for the behavioural "placed" dependent variable than the job choice dependent variable as the employer's ranking is used to determine the match for placement. The only other significant difference was that the squared multiple correlation for the placed

dependent variable was double that of the job choice dependent variable (.22 versus .11) due fully to the increased prediction of the employer's ranking.

Results from the integrated model with a placement outcome (see Figure 20) were used to test individual hypotheses. H1 was supported with pre-interview evaluations of job attributes leading to greater pre-interview intentions of accepting a job offer ( $\beta = .60, p < .01$ ). Figure 20 also reveals that H2 was supported with pre-interview intentions leading to post-interview intentions ( $\beta = .52, p < .01$ ), and post-interview attributes also contributing to post-interview intentions ( $\beta = .43, p < .01$ ). Furthermore, consistent with Study 1 and H3, signals from interviewer friendliness were positively related to post-interview evaluation of job attributes ( $\beta = .22, p < .01$ ), however, the direct effects of signals on applicant intentions of accepting a job offer were not significant. Accordingly, the effects of signals on job choice were mediated by post-interview attributes and applicant post-interview intentions. The data provide support for H4a. The influences of procedural fairness and expectancy on job choice were mediated by intentions. Expectancy of receiving a job offer was positively related to intentions of accepting an offer as predicted in H4b(i) ( $\beta = .13, p < .05$ ) but was not significantly related to post-interview evaluations of job attributes.

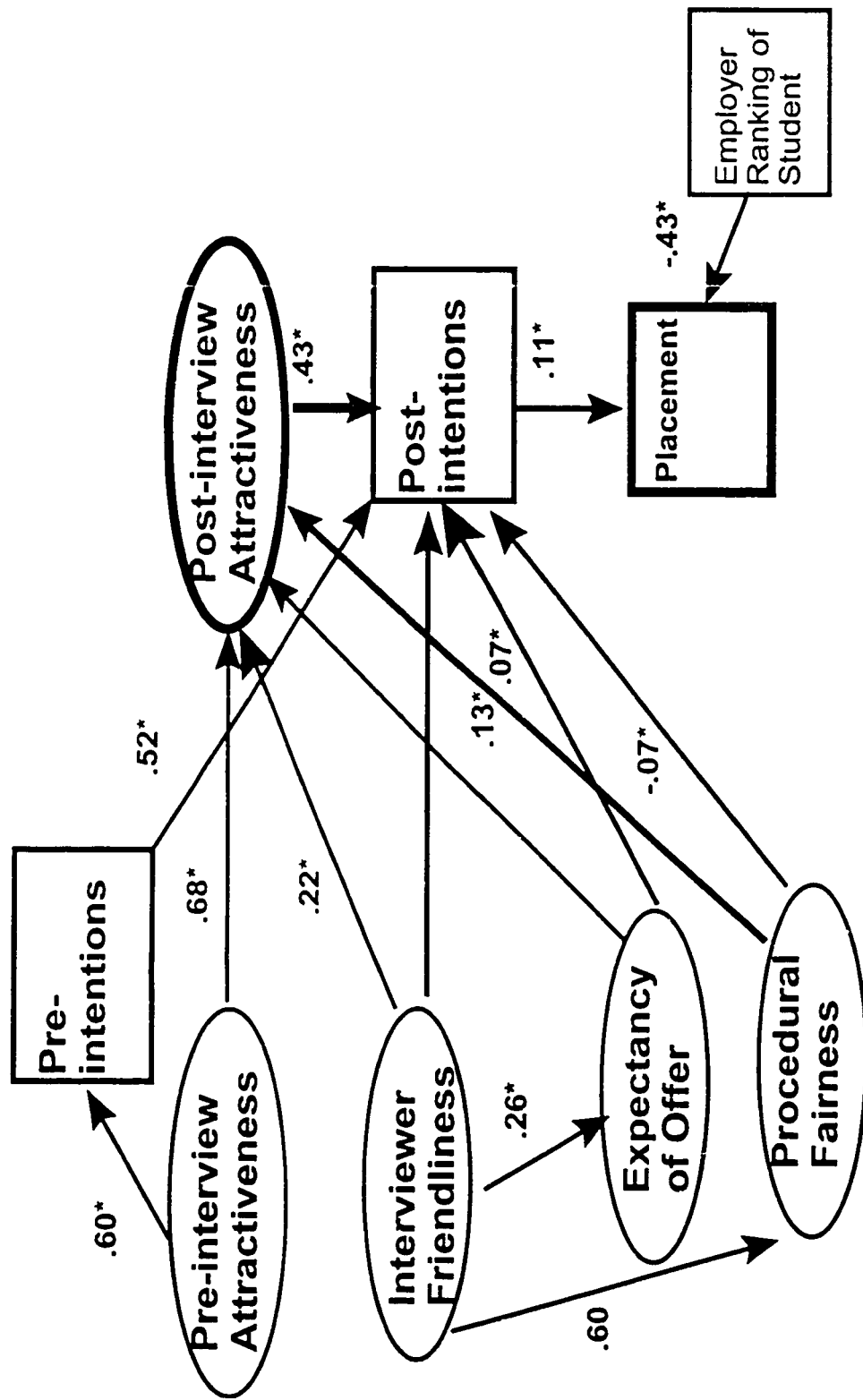


Figure 20. Integrated model with behavioural placement outcome.<sup>a,b</sup>

a. Not all parameters estimated and items are shown to simplify the presentation

b. N = 590

Likewise, procedural justice also influenced job choice through its influence on applicant intentions, however, contrary to H4b(ii) the relationship was negative ( $\beta = -.14, p < .05$ ). Consistent with H5, applicant post-interview intentions of accepting an offer were positively related to job choice ( $\beta = .32, p < .01$ ). Intentions also predicted the behavioural outcome of actual job placement ( $\beta = .26, p < .01$ ). Overall, the full model explained a considerable amount of the variability in post-interview evaluations of job attributes ( $r^2 = .78$ ), post-interview intentions ( $r^2 = .73$ ), and job choice ( $r^2 = .13$ ). Furthermore, when the behavioural outcome was used, the model also explained a significant amount of the variability in the outcome of actual job placement ( $r^2 = .23$ ).

In order to confirm that parameter estimates were not being biased by departures from multivariate normality, a bootstrapping procedure was conducted on a subsample of the population to estimate bias effects (Yung & Bentler, 1996). No differences were found in the parameter estimates as a result of the bootstrapping procedure which suggests that any potential departures from multivariate normality are not playing a significant role in biasing the parameters. Furthermore, because the bootstrapping procedure requires a complete data set, any differences that could be accounted for by using FIML could be detected. Again, there was no evidence that the use of FIML biased the parameter estimates. These analyses are provided in Appendix C.

#### Moderating Effects of Opportunity on Job Choice Processes.

Three analyses were conducted to examine the effects of opportunity on job choice processes. The first analysis used the entire sample ( $N = 590$ ), described earlier, to estimate the parameters for the four models. The second analysis eliminated those applicants who had been rejected by their prospective employer rated in the study (Coded "4" in the employer

ranked variable) leaving a sample size of 316 for the second analysis. The third analysis estimated the models using only those applicants who had been ranked by at least two organizations including the one evaluated in the present study ( $N = 256$ ). In other words, the third analysis examined the applicant reactions and job choice processes for applicants who had an offer (either firm or tentative) from the company they were evaluating, and at least one other offer to choose from. In order to simplify the reporting, only the full model for each of the analyses is provided in Figures 18, 21 and 22, for the full sample, the sample without rejections, and the sample with multiple choices respectively. Comparisons among the models for each of the subgroups are detailed in Tables 5, 6 and 7.

Interestingly, the best fitting model differed across the three subsamples. Specifically, the full model provided the best fit for the complete sample, while the signal model provided the best fit for the other two subgroups of applicants. As predicted in H1a, the role of the employer ranking was very substantial in the full model ( $\beta = -.66, p < .001$ ) but fell dramatically when the rejected applicants were removed ( $\beta = -.07, p < .10$ ) and when the sample included only those with multiple choices ( $\beta = -.16, p < .01$ ). In keeping with this hypothesis, applicant job choice became more difficult to predict as the rejected candidates were removed from the analyses. The squared multiple correlation for job choice also dropped from an impressive .46 for the full sample to a more modest .10 and .13 for the no reject, and no reject with multiple choices samples respectively.

Table 6: Study 2 Model comparisons for sample with at least one choice: N = 316

<u>Fit measure</u>	<u>Full</u>	<u>Signal</u>	<u>Fairness</u>	<u>Expectancy</u>	<u>Integrated</u>
$\chi^2$	283.07	298.96	341.07	305.16	285.00
p $\chi^2$	<.05	<.05	<.05	<.05	<.05
df	210	214	214	214	213
$\chi^2/df$	1.35	1.39	1.59	1.42	1.34
NFI	.99	.99	.98	.99	.99
CFI	.99	.99	.99	.99	.99
RMSEA	.03	.04	.04	.04	.03
AIC	461.07	468.96	511.07	475.16	457.00
$\Delta \chi^2$		15.88	57.99	22.09	1.92
df $\Delta \chi^2$		4	4	4	3
p $\Delta \chi^2$		.00	.00	.00	.59

Table 7: Study 2 Model comparisons among applicants with multiple choices, N = 256.

<u>Fit measure</u>	<u>Full</u>	<u>Signal</u>	<u>Fairness</u>	<u>Expectancy</u>	<u>Integrated</u>
$\chi^2$	242.77	259.98	304.51	267.92	245.17
p $\chi^2$	.06	<.05	<.05	<.05	.06
df	210	214	214	214	213
$\chi^2/df$	1.16	1.22	1.42	1.25	1.15
NFI	.99	.99	.98	.99	.99
CFI	.99	.99	.99	.99	.99
RMSEA	.03	.03	.04	.03	.02
AIC	420.77	429.98	474.51	437.92	417.17
$\Delta \chi^2$		17.21	61.74	25.15	2.40
df $\Delta \chi^2$		4	4	4	3
p $\Delta \chi^2$		.00	.00	.00	.49



Table 8: Study 2 Model comparison with applicants with multiple choices and no missing data (bootstrapped).

<u>Fit measure</u>	<u>Full</u>	<u>Signal</u>	<u>Fairness</u>	<u>Expectancy</u>	<u>Integrated</u>
$\chi^2$	227.23	244.94	252.42	255.10	229.53
p $\chi^2$	.20	.07	<.05	<.05	.20
df	210	214	214	214	213
$\chi^2/df$	1.08	1.15	1.18	1.19	1.08
GFI	.91	.90	.90	.90	.91
AGFI	.88	.87	.87	.87	.88
NFI	.88	.87	.87	.87	.88
CFI	.99	.98	.98	.98	.99
RMSEA	.02	.03	.03	.03	.02
AIC	359.23	368.94	376.42	379.09	357.53
$\Delta \chi^2$		17.71	25.20	27.86	2.3
df $\Delta \chi^2$		4	4	4	3
p $\Delta \chi^2$		.00	.00	.00	.32

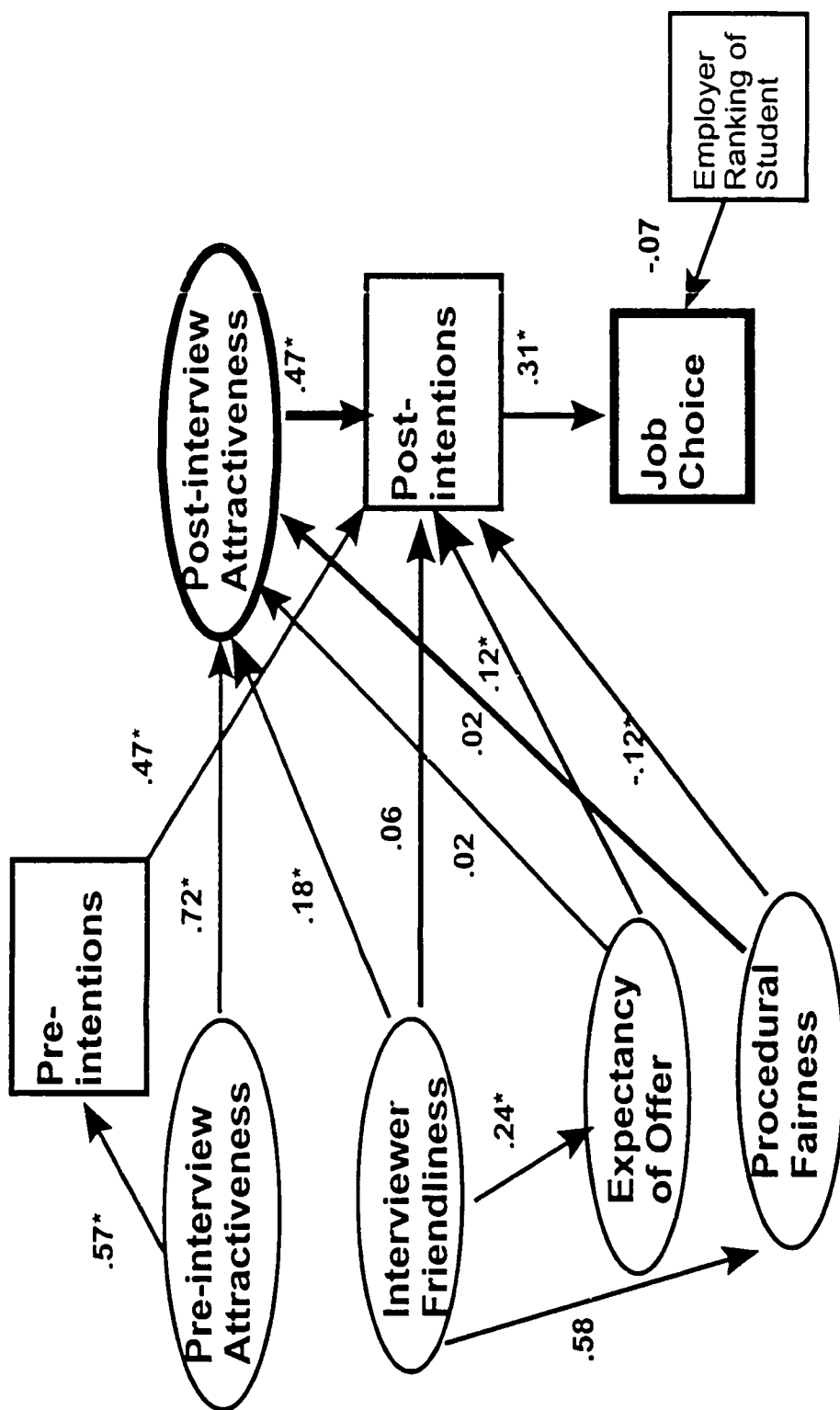


Figure 21. Full model for applicants with a job choice.<sup>a,b</sup>

a. Not all parameters estimated and items are shown to simplify the presentation

b. N = 316

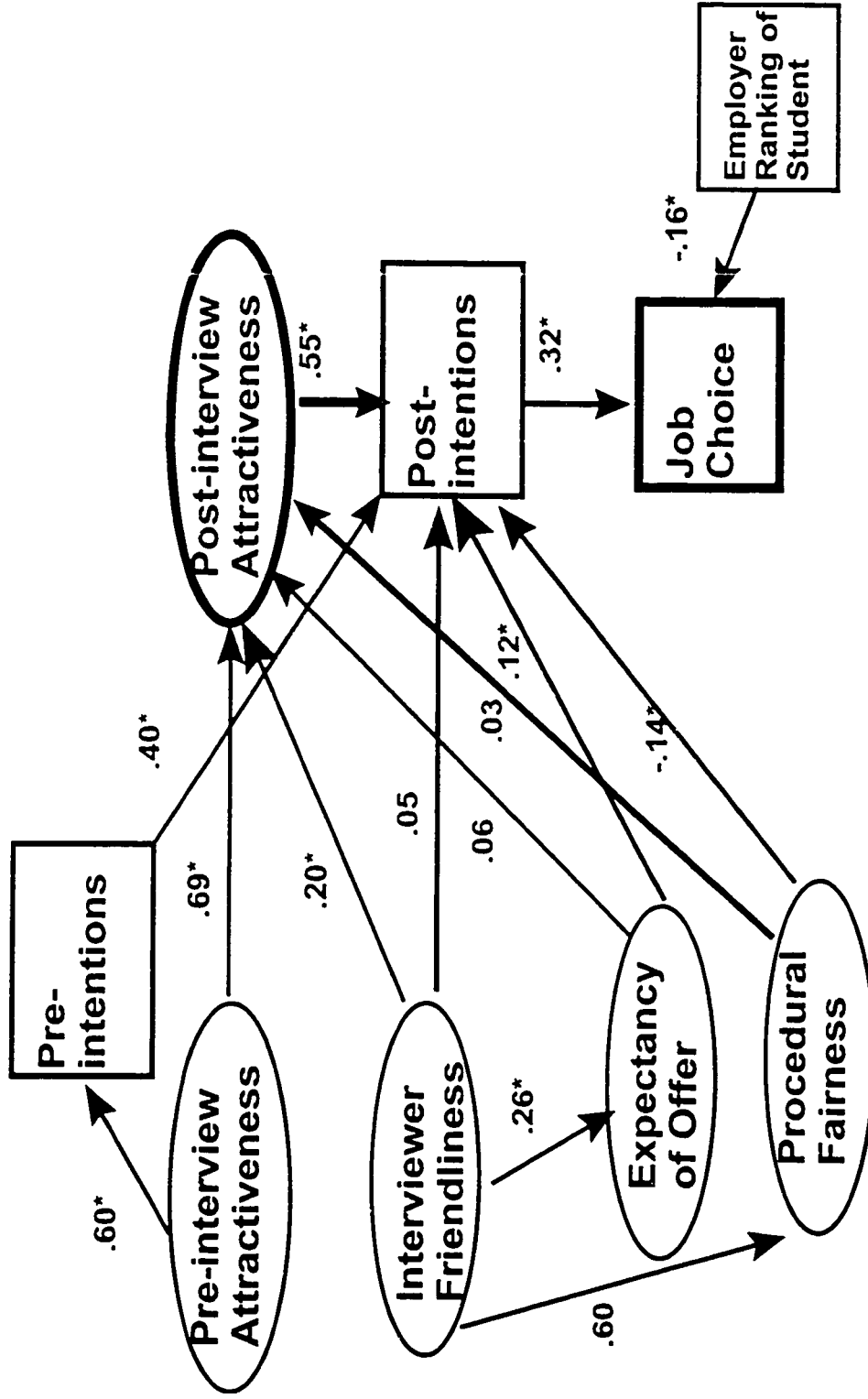


Figure 22. Full model for applicants with multiple offers.<sup>ab</sup>

a. Not all parameters estimated and items are shown to simplify the presentation

b. N = 256

Examining the strength of the relationship between post interview attraction and job choice across the three subsamples provides evidence of somewhat different decision criteria as more opportunities are considered. The strength of the relationship between post-interview intentions and job choice increases from .16 to .32 as the sample is narrowed to contain only those with multiple offers. Those applicants with few or no job choices simply choose to reject or accept the position in a reciprocal fashion with the employer. However, those applicants with multiple offers appeared to weigh the attractiveness of each offer more carefully before deciding whether to accept or reject a given offer.

#### Naive Versus Experienced Applicants

Figures 23 and 24 report the standardized path coefficients for the full model across the two sub-samples. The results suggest several differences in the job choice process for experienced versus naive applicants. Although both groups relied on signals, experienced applicants relied on signals more than naive applicants to assess the attractiveness of the organization ( $\beta = .35$  versus  $\beta = .13$ ). Experienced applicants also relied on meta-perceptions based on the friendliness of the interviewer to generate expectancies of receiving an offer to a greater extent than naive applicants ( $\beta = .21$  versus  $\beta = .11$ ). Naive applicants instead relied more heavily on their perceived marketability to generate expectancies ( $\beta = .41$  versus  $\beta = .13$  for experienced applicants). Naive applicants also used expectancies to evaluate the attractiveness of the organization in addition to directly influencing intentions while experienced applicants used their expectancies to influence intentions only. Furthermore, experienced applicant's intentions at T2 were more strongly related to their intentions at T1 ( $\beta = .48$ ) than for naive applicants ( $\beta = .18$ ). Lastly, perceptions of procedural justice had little

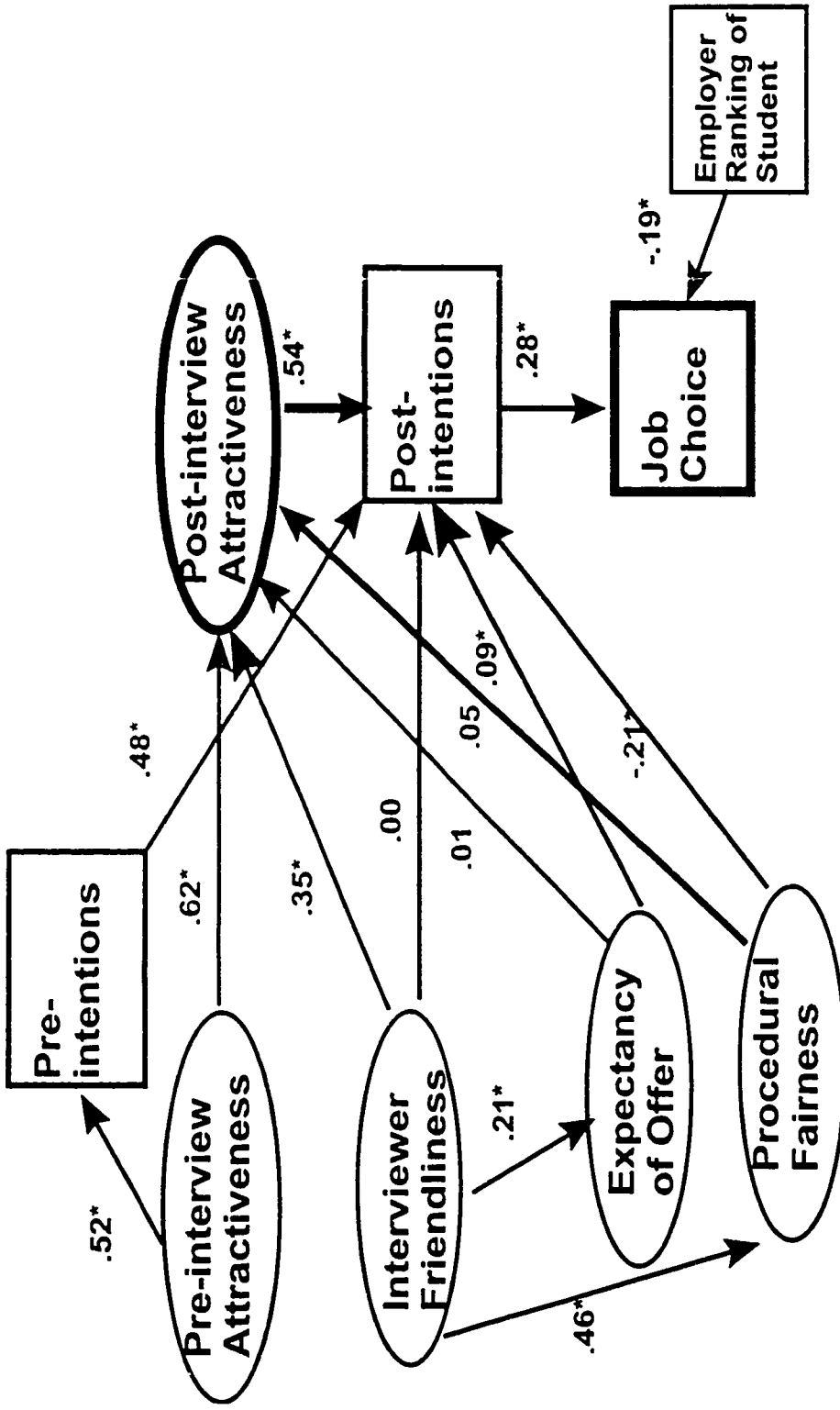


Figure 23. Full model for experienced applicants with multiple offers.<sup>a,b</sup>

a. Not all parameters estimated and items are shown to simplify the presentation

b. N = 123

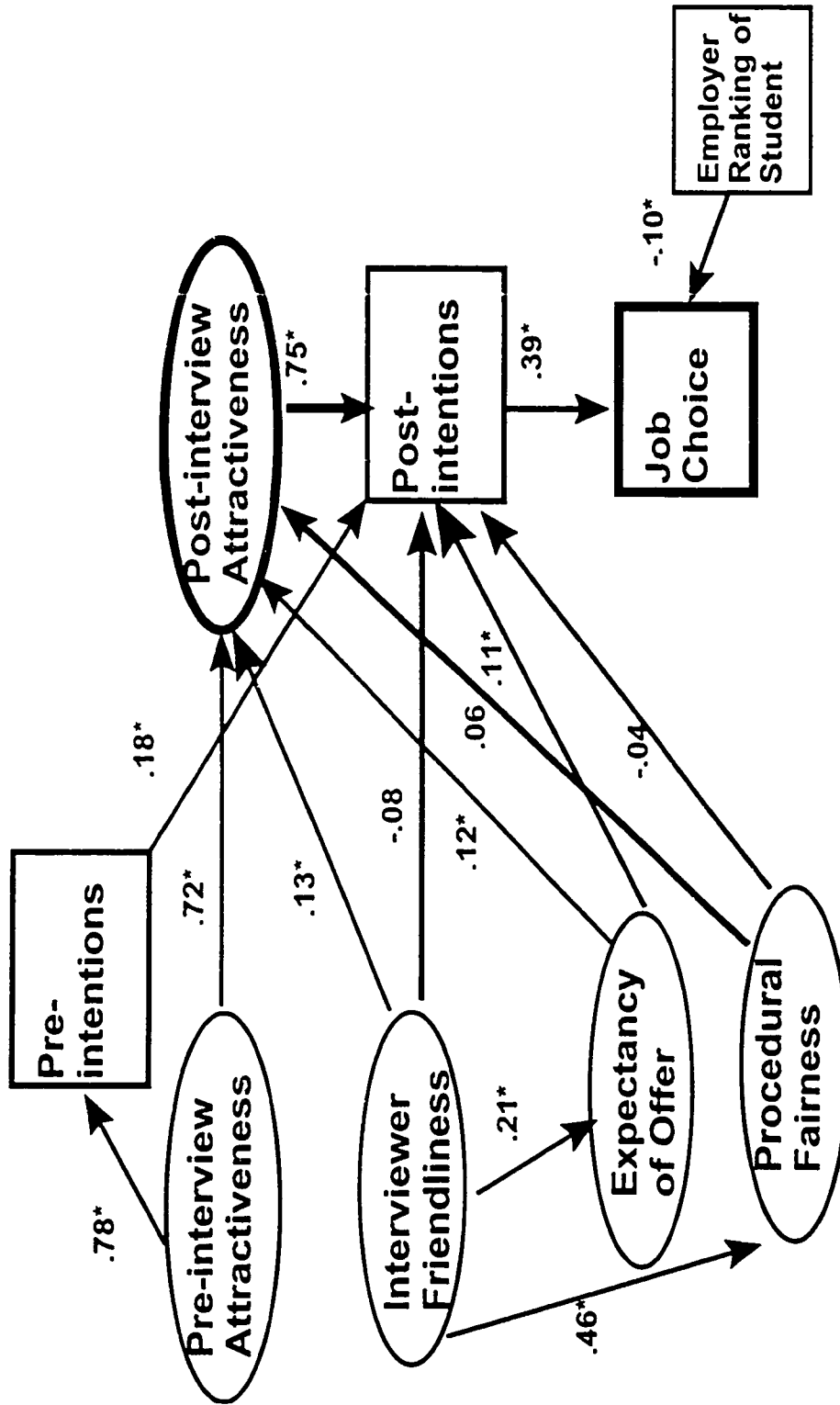


Figure 24. Full model for naive applicants with multiple offers.<sup>a,b</sup>

a. Not all parameters estimated and items are shown to simplify the presentation

b. N = 103

influence on naive applicants but had a significant negative influence on experienced applicants post-interview intentions ( $\beta = -.21$ ).

### The Moderating Effects of Gender on Applicant Attraction Models

Several interesting trends were identified in this sample addressing the research question R1, regarding the decision processes of males and females. Figure 25 displays the results for males while the results for females are shown in Figure 26. Males for example were more likely to make inferences about the attractiveness of the company based on interviewer friendliness ( $\beta = .26, p < .01$ ) than females ( $\beta = .13, p < .05$ ). However, males did not rely on expectancies to a great extent in forming their intentions of accepting a job offer ( $\beta = .06, ns$ ). Expectancies played a somewhat more important role for female intentions to accept a job offer than males ( $\beta = .10$ ) and for post-interview evaluations of job attributes ( $\beta = .09$ ). However, the major difference for male and female applicants lay in the relationship between applicant intentions and applicant behaviours. Male applicant's post-interview intentions were positively related to their placement in the organization ( $\beta = .19, p < .05$ ) while female applicant's intentions were not ( $\beta = .03, ns$ ). This is despite the fact that the models explained a considerable amount of the variability in female and male post-interview evaluations ( $r^2 = .80$ , and  $r^2 = .71$  respectively), and female and male post-interview intentions to accept an offer ( $r^2 = .81$ , and  $r^2 = .62$  respectively). Similar results were found for both job choice and actual placement. A post hoc analysis did not find a significant difference in the number of rankings given to males and females thereby eliminating the explanation that one gender having more offers to consider influenced the results. However, a post hoc analysis of the level of pre-interview knowledge found that females reported higher levels of pre-interview knowledge ( $M = 2.24, SD = .80$ ) than males ( $M = 2.07, SD = .82$ ),  $t(588) = -2.46, p < .05$ .

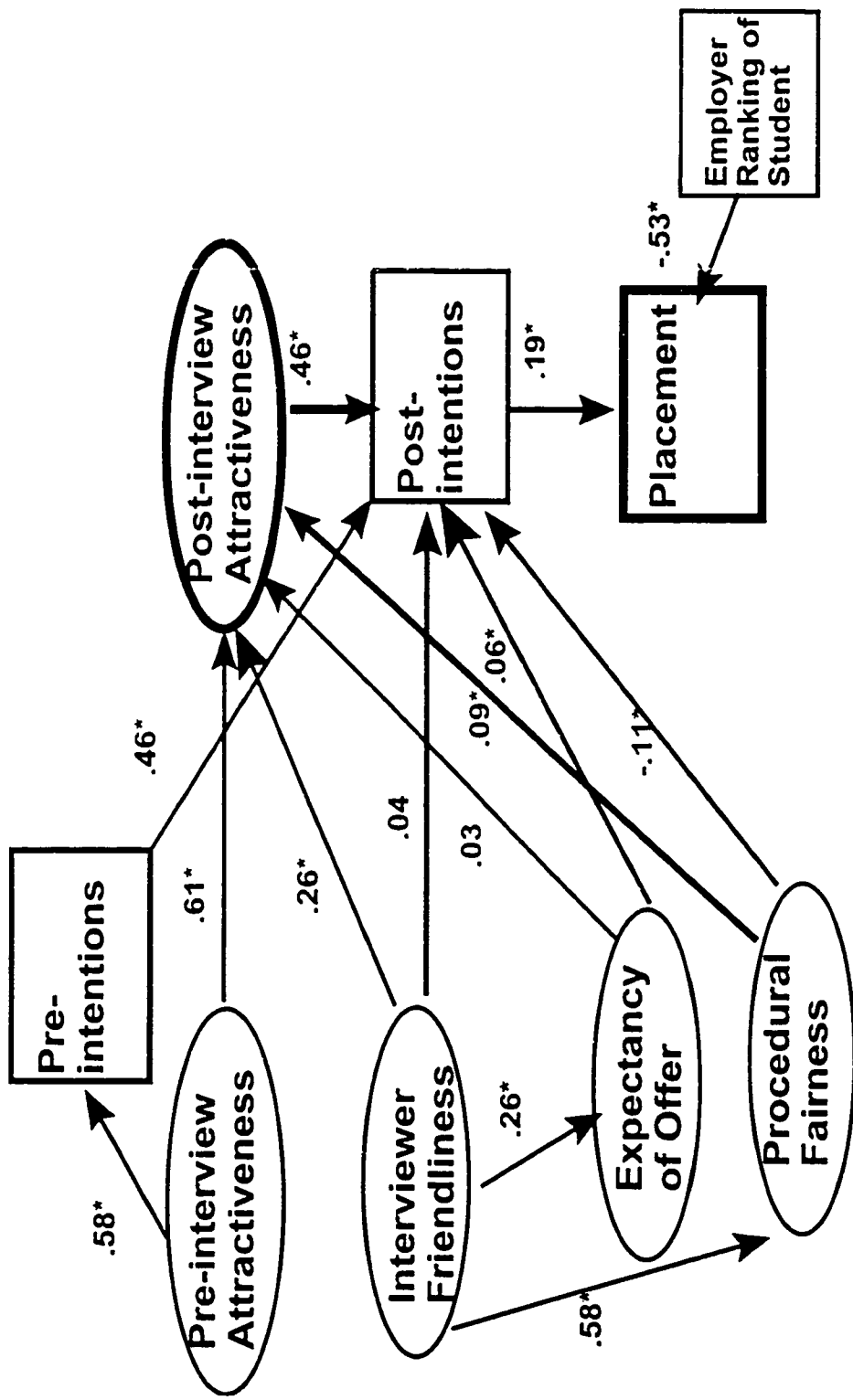


Figure 25. Full model for male applicants.<sup>a,b</sup>

a. Not all parameters estimated and items are shown to simplify the presentation

b. N = 326



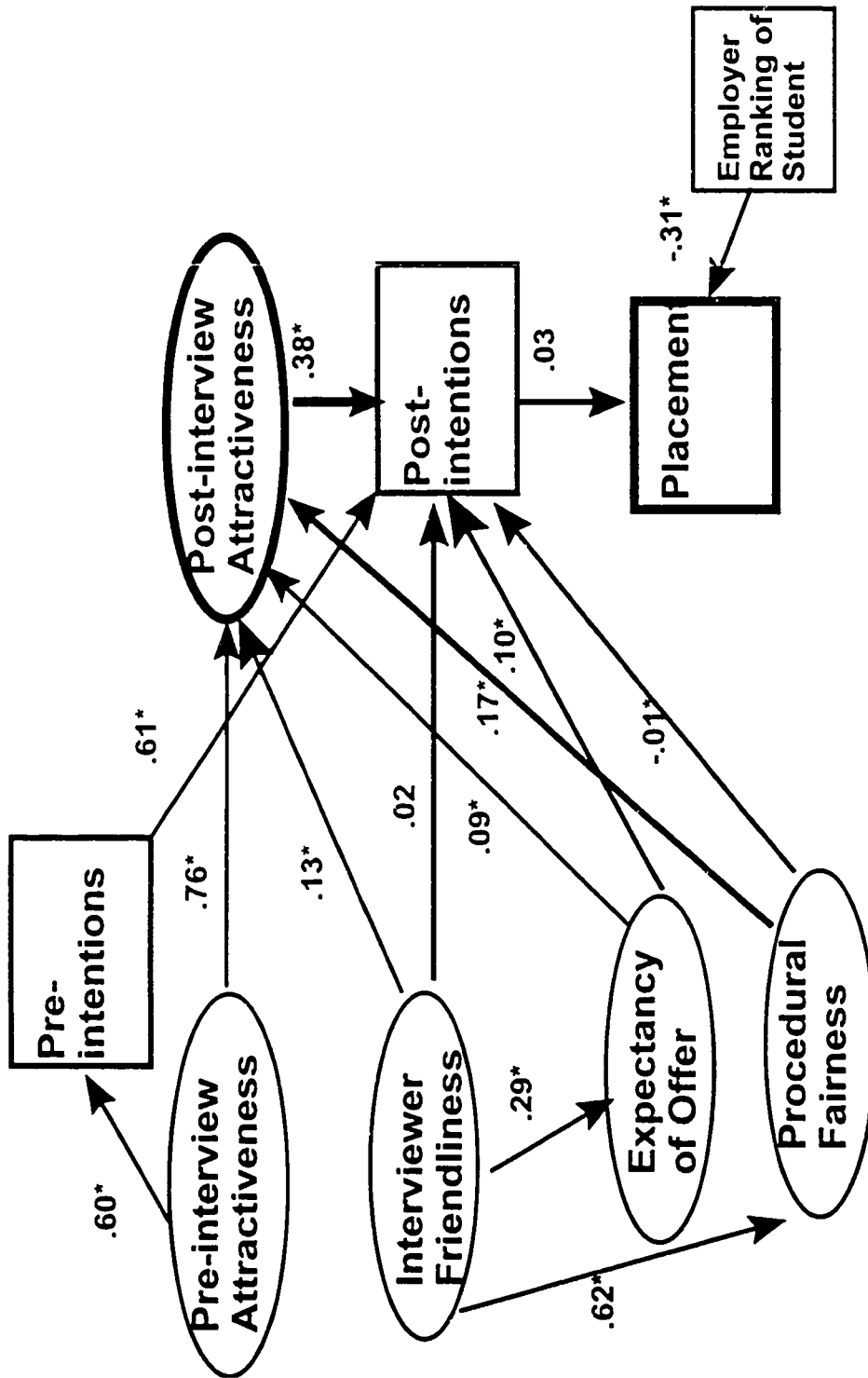


Figure 26. Full model for female applicants.<sup>a,b</sup>

a. Not all parameters estimated and items are shown to simplify the presentation

b. N = 263

### The Moderating Influences of Knowledge of the Organization

As predicted by the signal model and critical contact theory in general, and H8 in particular, applicants with little pre-interview knowledge of the organization were more influenced by recruiter mechanisms than those who had considerable knowledge of the organization. This was especially evident for signals where the relationship between interviewer friendliness and post-interview evaluations of job attributes was much stronger for those with little pre-interview knowledge of the organization ( $\beta = .44, p < .01$ ) (see Figure 27) when compared to those applicants with considerable pre-interview knowledge of the organization ( $\beta = .13, p < .05$ ) (see Figure 28). Applicant knowledge of the organization ultimately had little influence on the role of procedural fairness. However, applicants with considerable pre-interview knowledge of the organization used expectancies less in generating intentions ( $\beta = .01, \underline{ns}$ ) than those with little pre-interview knowledge ( $\beta = .09, p$ ).

To summarize the results, it was clear that the full model was the best fitting model but this model was moderated somewhat by applicants' number of choices, gender, experience and pre-interview knowledge of the organization.

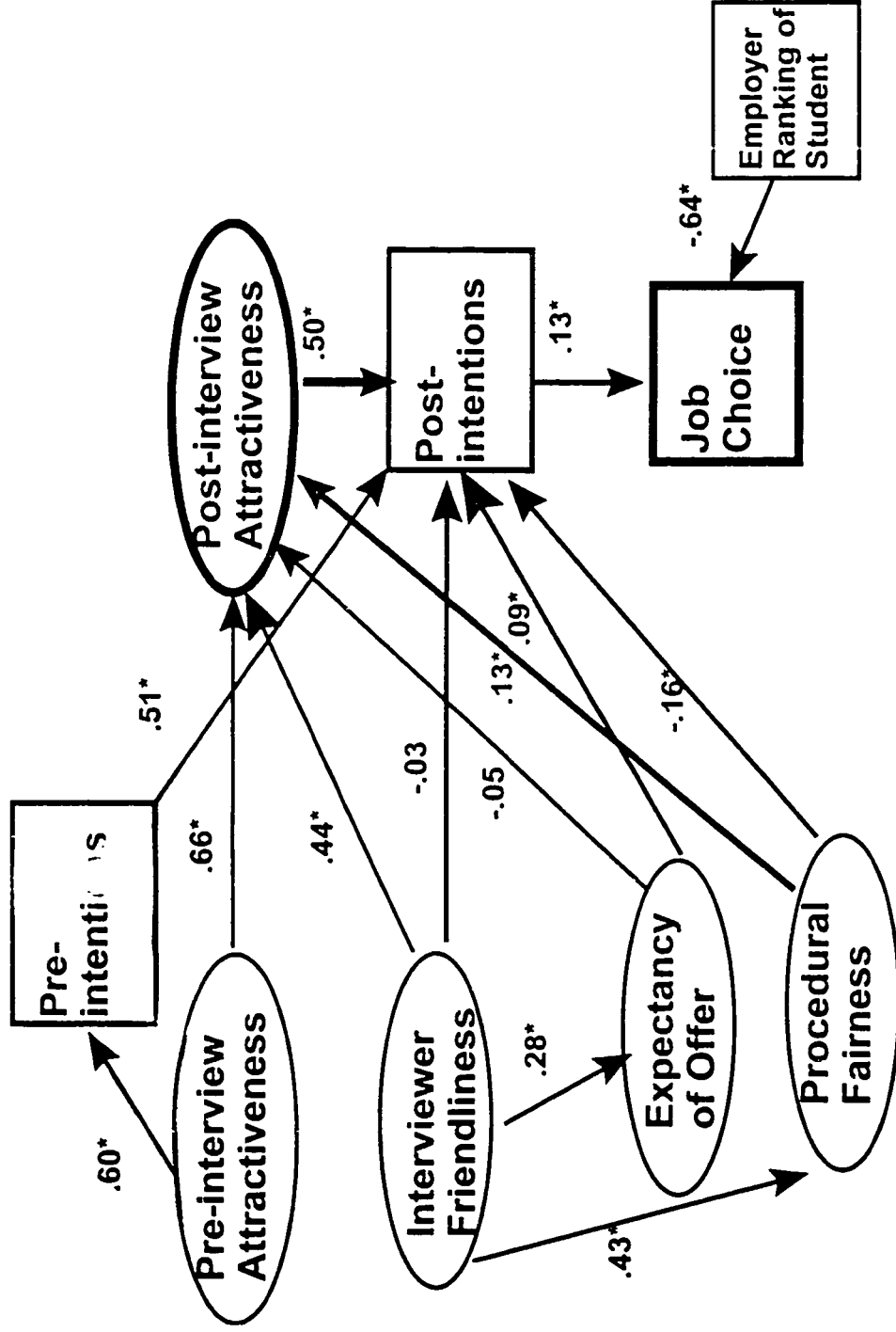


Figure 27. Full model for applicants with little pre-interview knowledge of the organization.<sup>a,b</sup>

a. Not all parameters estimated and items are shown to simplify the presentation

b. N = 159

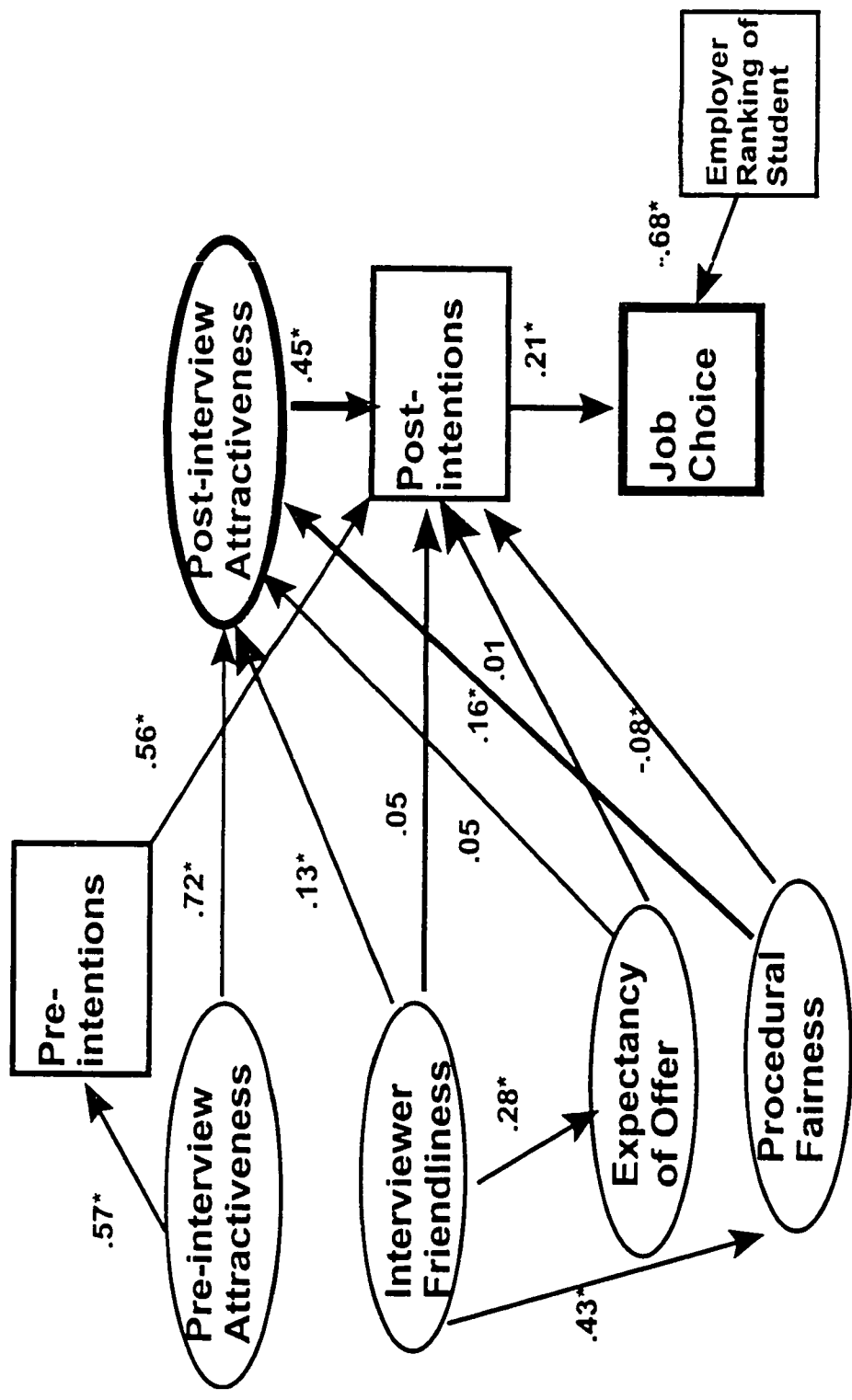


Figure 28. Full model for applicants with considerable pre-interview knowledge of the organization.<sup>ab</sup>

a. Not all parameters estimated and items are shown to simplify the presentation

b. N = 246

## CHAPTER 4

## GENERAL DISCUSSION

The goal of this dissertation was to compare three competing applicant decision making models in order to provide a more complete understanding of how applicants react to selection procedures and to examine the consequences of these reactions for job choice. The literature on recruiting, applicant reactions and job choice is divided with multiple approaches to explaining recruiting effects, applicant reactions and job choice. This dissertation aimed to tie together these literatures by examining a comprehensive model studying the effects of perceived recruiting behaviours and applicant reactions to these perceived behaviours on the job choice decisions that are perhaps the most important outcome for these literatures.

One very interesting conclusion that can be drawn from these data is that the process by which recruiting and recruiter effects occur is more complex than previously imagined. For example, when examining recruiting versus job attribute effects on applicant intentions to accept job offers, previous researchers (with the exception of Harris & Fink, 1987) have examined these effects as separate influences on applicant intentions. The approach taken in these studies was that recruiting effects are likely to affect the valence of the job attributes themselves and that this is how recruiting behaviours and applicant reactions influence job choice. Although both studies confirmed that pre-interview impressions of organizations are the largest determinant of post-interview attraction and job choice, a significant amount of variance was explained by the influence of the recruiter. Recruiters influenced applicant job choices by influencing both intentions of applicants directly, and indirectly by influencing the valence of job attributes. Interestingly, different recruiter mechanisms influenced applicant job

choices with signals being used to evaluate the valence of job attributes and expectancy of receiving an offer directly influencing intentions to accept an offer.

What can we conclude regarding the signal mechanism from these studies? There is ample evidence in these data to support Rynes' predictions regarding applicant use of signals to evaluate the attractiveness of positions. Applicants used interviewer friendliness to evaluate the attractiveness of the organization which, in turn, influenced applicant intentions of accepting a job offer. The signal relationship between interviewer friendliness and organizational attraction was strongest for male applicants and for applicants who knew little of the organization prior to the interview. Consistent with the critical contact perspective and Rynes' signal model, applicants who reported less pre-interview knowledge of the organization were influenced more by signals than those who knew a considerable amount. It would be interesting to determine whether this was due to applicants being more attentive to interviewer behaviour or whether they weighed the attended behaviour higher (regardless of accuracy) for unknown organizations. Why males were influenced more than females by interviewer friendliness is not entirely clear. A post hoc analysis revealed that females reported a slightly higher pre-interview knowledge of the organization than their male counterparts and the results suggest that higher pre-interview knowledge reduces the influences of signals, so this might be a partial explanation. However, although the difference between male and female applicant pre-interview knowledge of the organization was significant, it was small, suggesting that other factors may be playing a role. Nevertheless, it would be interesting to determine whether the gender differences in pre-interview knowledge of the organization were due to better research of job opportunities by females, a tendency for gender to influence the selection of the

types of companies applicants apply to (i.e., females applying to more familiar organizations), a gender-based response set, or some other explanation.

Another interesting finding from this dissertation is the role of intentions versus job attributes in the job choice process. It is clear from study 2 that applicant intentions mediate the relationship between post-interview attractiveness of attributes and job choice. The amount of variance explained by the integrated model for applicant intentions was very high, leaving little room to find additional variables to explain intentions. However, study 2 demonstrated two moderators of the relationship between intentions and job choice/placement. Both gender and the number of offers received moderated this relationship. There may be more moderators that could be of interest. For example, intentions formed later in the selection process might be more reliable than those formed early in the selection process as the potentially contaminating effects of subsequent alternatives is reduced.

Applicant reactions have largely become synonymous with procedural justice in the applicant reactions literature. These studies suggest that procedural justice has perhaps received more attention than its ultimate effects on job choice warrant. Although study 2 showed that procedural justice influenced applicant attraction and intentions when it was examined independently of other potential recruiter effect mechanisms, these influences disappeared in the context of other mechanisms. Study 2 revealed that procedural justice remained influential in female applicant evaluations of organizations but these evaluations and the intentions resulting from them did not ultimately predict placement in organizations for females. Despite the failure of procedural justice to predict job choice in these studies, it is possible that other mechanisms could influence how procedural justice could influence job choice that could not be measured in these studies. The applicants in these studies were

required to remain in the applicant pool until all of their interviews were complete.

Accordingly, at least for female applicants, the intentions generated at T2 could be more influential in a system where applicants can immediately accept or reject job offers. Note that procedural fairness may lead to unfavourable reactions from applicants. We know for example that applicants who are given special treatment are likely to view the organization more favourably (Rynes et al., 1991). Special treatment, by definition, is irreconcilable with procedural fairness which connotes equal treatment of all applicants. It is possible that some of the negative relationships observed between applicant perceptions of procedural justice and intentions of accepting a job offer are due to the applicant feeling less special as a result of strict adherence to procedures. Another explanation is that several of the items in Gilliland's procedural justice measure include perceptions of being treated with respect and honesty. An interviewer providing realistic, balanced or even negative information about the organization might be taken as a sign of honesty and as being treated with respect. However, this balanced or negative information could also have the effect of dissuading top candidates from working in the organization. Examples from the realistic job preview literature suggest that being honest (realistic) can reduce the attractiveness of the organization, particularly for top candidates (see Premack & Wanous, 1985). Alternatively, the observed negative relationships may have been due to a suppression effect created by one of the other predictors. Lastly, there may be some concern that Gilliland's measure of procedural justice contains items that are, in fact, more consistent with interactional justice. Accordingly, the model was estimated again and the items that could be associated with interactional justice removed (see Appendix D). Despite using a purer measure of procedural justice, the results remained the same. This evidence, coupled with the same result for procedural justice obtained by my own measure of



procedural justice in Study 1, suggest that psychometrics may not be to blame for the absence of meaningful influences of procedural justice on applicant job choices.

The meta-perception/expectancy model proved to be an important mechanism for applicant job choice processes. In addition to providing signals about the organization, interviewer friendliness also led to applicant expectancies of receiving a job offer and this in turn influenced applicant job choices (Study 1), evaluations of organizations (for females only), and intentions to accept offers (Study 2). There is some evidence that meta-perceptions in the employment interview are based, at least in part, on the behaviour of the interviewer, providing some support for the symbolic interactionist perspective. The perceived friendliness of the interviewer influenced applicant meta-perceptions of their behaviour such that they associated a friendly interviewer with positive evaluations of their own performance. It is likely however that both self-appraisals and interviewer behaviours influence meta-perceptions. It is also evident that there was some underlying meta-accuracy in applicant meta-perceptions. Specifically, there was a significant relationship between applicant expectancies of receiving a job offer at T2 and employer ranking at T3 across both studies. The exact nature of this meta-perception is open to investigation. It may be as simple as interviewers orally telling applicants that they are interested in hiring them (although officially this is not permitted in this selection system). Alternatively, interviewer nonverbal behaviours or questioning strategies may have played a role in forming applicant expectancies of receiving a job offer. Finally, if the applicant is attending to their own behaviours in the interview, and both they and interviewers are accurately assessing applicant performance, then it may simply be a case of interrater agreement of the applicant's performance that is driving the relationship.

Another variable influencing applicant expectancies was their perceived marketability. Applicants clearly had preconceptions of how attractive a candidate they were (likely based on such things as GPA, class standing, social comparisons etc.). It is likely that these factors led to perceptions of perceived marketability which subsequently influenced applicant expectancies. Naive applicants were most likely to use their perceived marketability to generate expectancies. This may have been due to the fact that more experienced applicants have a more information about their attractiveness in the job market or a better understanding of the variability of their attractiveness across individual organizations. Overall however, it appears that the combination of perceived marketability and meta-perceptions of interviewer impressions generated the expectancies that influenced applicant intentions and job choice.

The lack of support for procedural justice influences on applicant job choices underscores one of the fundamental weaknesses in the applicant reactions literature – that applicant reactions themselves are rather poorly defined. For example, it is not clear whether applicant reactions can be positive. If an applicant feels the selection system provides positive signals about the work environment in the organization, one can imagine that a positive reaction has occurred. Clearly the applicants in these studies did react to the selection procedures. Note that fairness may be the opposite of signal and meta perceptions. Applicants who are given special treatment (i.e., procedurally unfair), are likely to view the organization more favourably (Rynes et al. 1991), and may not even view the special treatment as unfair (Ployhart & Ryan, 1998). The use of videoconference technology to conduct the interview in Study 1 had a significant negative effect on applicant attraction to the organization. However, it appears that applicants use the information from selection procedures as signals to evaluate the attractiveness of various job attributes and these in turn, along with applicant perceptions

of their marketability, are used to choose among potential job offers. Further conceptual work is needed if an understanding of applicant reactions is to progress.

#### Implications for Research and Practice

Another interesting finding across these studies was the weak influences of pay and location on applicant job choices. This is likely due in part to the fact that these applicants may have pre-screened organizations based on these variables and that the resulting restriction in range did not show the true influence of these variables on job choice. Unfortunately, we continue to know very little about how applicants narrow their opportunities to a manageable level (Barber, 1998). However, as was noted earlier, pay and location have both been shown to be used in a noncompensatory decision making strategy by applicants.

The practical implications of these studies include the emphasis that recruiters are important in the job selection process and that their interpersonal skills are perhaps the most effective means of influencing applicants. Furthermore, recruiters appear to have the greatest effect on applicants who are perhaps the most attractive – those who have received multiple job offers. Recruiters also had the greatest influence on male applicants suggesting that different recruiting strategies may need to be tailored to each gender. For example, it might be particularly harmful to an organization's recruiting efforts for women to employ selection and recruiting practices that produce negative expectancies. Special attention might also be paid to ensure that male applicants are interviewed by friendly interviewers as males appeared to be influenced more by recruiter affect. Moreover, a greater emphasis on recruiter selection for less known organizations is recommended as these organizations had the most to gain (or lose) from the behaviour of their interviewers.

These studies also highlight the importance of providing good news early. Applicants who have successfully passed some screening criteria should be informed as soon as possible to avoid the applicant engaging in defensive avoidance strategies such as bolstering. For example, a difficult cognitive abilities test used to discriminate among high achievers might seem very difficult for even attractive candidates. If applicants believe that they failed the test, they might begin the process of discounting the current organization immediately and consequently be more motivated to use their limited resources toward obtaining another position with higher expectancies of receiving an offer (Vroom, 1964).

A further practical implication relates to the perception of procedural fairness. In addition to the generally good practice of treating applicants fairly, fair selection procedures might keep applicants (particularly female applicants) interested until they receive an offer. Females who perceive the selection procedures to be unfair could drop out of the selection process before receiving an offer from the organization.

The final practical implication that I will discuss relates to the use of videoconference technology to conduct interviews. The results of study 1 suggest that using this technology has the potential to have detrimental effects on applicant impressions of organizations both by reducing the effectiveness of recruiters (i.e., making them appear less friendly and their procedures as being less fair) as well as sending negative signals about the organization itself. The nature of these signals is yet to be determined but it is possible that organizations employing this technology are viewed as treating the candidate as being less special or attractive compared to organizations that provide resources to have representatives on campus to meet the candidate. Interestingly, before using the technology, applicants were somewhat more attracted to organizations employing this technology which might be indicative of an

initial honeymoon effect with the technology that disappears once the technology is actually experienced.

## Appendix A: Questionnaire for Studies 1 and 2

### Pre-Interview Ratings(T1)

Your Name: \_\_\_\_\_ Date \_\_\_\_\_

Student #: \_\_\_\_\_ (required for matching purposes only)

Company and position applied for: \_\_\_\_\_

Coop Position # (if available): \_\_\_\_\_

Interview type: Co-op \_\_\_\_\_ Graduate \_\_\_\_\_

Interview medium: Telephone \_\_\_\_\_ Face-to-face \_\_\_\_\_ Videoconference \_\_\_\_\_

Number of previous formal employment interviews you have had: \_\_\_\_\_

Gender: Male \_\_\_\_\_ Female \_\_\_\_\_

Age: \_\_\_\_\_

Have you had any previous training in how to conduct yourself in an employment interview? Y\_\_N\_\_

*For each factor listed in the left-hand column, rate the company on the rating scale where 1 = "poor" and 7= "excellent", by placing an "X" in the appropriate box.*

Pre- Interview	Rating						
	Poor						Excellent
	1	2	3	4	5	6	7
1. Overall impression of the company							
2. Your knowledge of the company							
3. Impression of the prestige associated with this position							
4. Impression of future work environment							
5. Impression of opportunities for advancement or future full time employment							
6. Opportunity to learn							
7. Attractiveness of the employment position (independent of overall company impression)							

**8. How likely are you to accept a job offer from this organization based on the information you have so far? (circle one) (Study 2 only)**

10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

9. Based on how you feel right now, how likely is it that you will be offered this position or offered a follow-up interview with this organization? (Circle one)

10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

**Post Interview Ratings (T2)**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Student # \_\_\_\_\_

Company and position: \_\_\_\_\_

For each factor listed in the left-hand column, score the interviewer on the rating scale where 1 = "poor" and 7 = "excellent", by placing an "X" in the appropriate box.

Post Interview	Rating						
	Poor			Excellent			
	1	2	3	4	5	6	7
10. Overall impression of the company							
11. Your knowledge of the company							
12. Impression of the prestige associated with this position							
13. Impression of future work environment							
14. Impression of opportunities for advancement or future full time employment							
15. Opportunity to learn							
16. Attractiveness of the employment position (independent of the overall company impression)							

17. How likely are you to accept a job offer from this organization based on the information you have so far? (circle one) (Study 2 only)

10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

18. Based on how you feel right now, how likely are you to get offered a position or follow-up interview with this organization? (Circle one)

10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

19. How many interviewers were present during the interview? \_\_\_\_\_

20. What was the gender of the interviewer(s)? Male Female
21. To how many other companies are you currently applying? \_\_\_\_\_
22. How many interviews have you had in the following way: by telephone \_\_\_\_\_ in person \_\_\_\_\_  
videoconference \_\_\_\_\_
23. What is your current or intended major? \_\_\_\_\_
24. How many years of university study have you completed? \_\_\_\_\_

## Post Interview Survey (T2)

All items rated on a 1-7 scale ranging from 'strongly disagree' to 'strongly agree.'

25. The interviewer gave me a lot of information about the company
26. The interviewer spent more time promoting the company to me than asking questions about my background
27. The interviewer spent a lot of time convincing me to work with this organization
28. The interviewer was friendly
29. The interviewer was competent
30. The interviewer was pleasant
31. The interviewer asked me a lot of hypothetical or situational questions
32. The interviewer engaged in a lot of small talk
<b>Perceived interview difficulty</b>
33 I found the interview difficult
34. I had difficulty coming up with good answers to the interviewer's questions
35. I did not perform well in the interview
36. The interviewer's questions were easy to answer
37. I felt tired after the interview
38. I had to concentrate very hard during the interview
39. I sometimes missed what the interviewer was saying because I had to think about other things at the same time
40. The interviewer's questions were challenging
<b>Expectancy</b>
41. Getting this job is important to me



42. I am certain I will be offered a job with this organization
43. I expect to get a job offer as a result of my performance in the interview
44. I will probably not get hired for this job
45. I feel positive about the outcome of this interview
<b>Fairness (Study 1 only)</b>
46. The interview gave me the opportunity to present my best side
47. I trust the interviewer/employer to hire the best candidate
48. The interview procedures were the same for everyone
49. If the interviewer conducted some interviews in another medium (e.g., telephone, face-to-face, videoconference) all applicants would have an equal chance of getting the job
50. I think the interview medium (e.g., telephone, face-to-face, videoconference) was a fair way to conduct the interview
51. The hiring decision the employer makes based on these interviews will be fair
52. I believe I was at a disadvantage relative to other applicants
<b>Job Characteristics</b>
53. The pay for this position is good compared to what I can expect with my background
54. I like the location where this position is being offered
<b>Perceived Marketability</b>
55. There are a lot of employment possibilities for people with my education and background
56. Finding a good job that will use my skills is difficult these days
57. Few people with my educational background get good jobs
58. I am certain I will be able to get a job that is relevant to my background
59. I expect to be able to pick from several job offers
<b>Procedural Justice (Study 2 only)</b>
60. The interviewer explained how the selection procedures work and how decisions are made
61. The interviewer was honest in his/her communications with me
62. I was treated with respect during the interview
63. The interviewer gave me the opportunity to ask questions and offer input during our discussion
64. The interviewer's questions were appropriate

65. The interviewer's questions were relevant to the job .

## **Appendix B: Details and rationale for the analytical strategy used.**

Longitudinal study– missing data: The goal of testing the models longitudinally created another challenge for using SEM for the present study. Data were collected at three intervals creating an opportunity for a significant amount of missing data. This situation was further complicated by the need to match employers' rankings with applicants who completed the applicant questionnaires. As a result, although we had a total of 402 cases in Study 1, and despite measures taken to reduce the amount of missing data, we only obtained information from all three collection points and from both applicants and interviewers for 149 of these cases. This posed a significant problem with respect to the use of SEM. Although there were ample cases to use SEM (402), using listwise deletion of data would have resulted in a loss of a majority of the sample with only 149 cases remaining. This number was below the recommended threshold of two hundred cases for SEM (Kelloway, 1998). Accordingly, a SEM procedure employing a full information maximum likelihood (FIML) approach (Arbuckle, 1996), which uses all of the available data for use in the analyses, was followed.

In order to prove the superiority of using FIML over traditional listwise elimination of cases where missing data are MAR, Arbuckle (1996) conducted a Monte Carlo style study. Beginning with a full data set, Arbuckle (1996) estimated the covariance matrix among all of the variables in a data set. He then randomly deleted information from the data set to create several data sets with varying amounts of missing data (e.g., 10%, 30%). Next, using a bootstrapping technique, he used traditional listwise and pairwise approaches to estimate parameters on the missing data sets. These parameters could then be compared to the "true" parameters obtained from the full data set. Finally, he used the FIML approach to estimate the parameters using the same data sets. This permitted a direct comparison of the estimated

parameters provided by FIML, listwise and pairwise handling of missing data. His results demonstrated that the FIML approach was superior to either the listwise or pairwise handling of missing data for reproducing the relationships among the complete original data. A description of the mathematical underpinnings of FIML is detailed by Arbuckle (1996).

Arbuckle (1996) explains that the causes of missing data are an important factor in determining the appropriate statistical treatment of the missing data, including whether FIML is acceptable. It is widely acknowledged that the most damaging form of missing data are those that are missing due to systemic reasons such as research design, and selective attrition. An example might include a survey where respondents who are high self-monitors are less likely to respond to certain items than low self-monitors. Another potentially damaging situation is data missing due to systematic differences in survivors (those who fill out the questionnaire at time 2, time 3 etc.) and those that select themselves out of the process. For example, if women are less likely to withdraw from the study than men, the use of FIML would be compromised. According to statisticians, FIML is appropriate when the data are either missing at random (MAR) or missing completely at random (MCAR).

There are no anticipated systematic reasons why applicants completed the first questionnaire at T1 and did not complete the second questionnaire at T2. Most of the data were lost due to applicants having to get to class and not having time to complete T2, or not being able to find the researcher or a research assistant in the crowds after the interview. The absence of a restriction of range on variables such as expectancy suggest that applicants did not avoid completing the questionnaire at T2 due to embarrassment or negative affect from a poor interview experience. Accordingly the MAR assumptions are viewed as being to be met and FIML judged to be an appropriate procedure to analyze these data.

### Single item latent variables

Another obstacle to using SEM with the present study was the sheer complexity of the model. One of the challenges of using structural equation modeling is balancing the researcher's desire to examine large numbers of variables with the limitations afforded by SEM techniques when large numbers of variables are involved. Models become increasingly difficult to fit as the number of variables increases unless the researcher is inclined to estimate very large numbers of parameters (and has a sufficient sample size to enable this to be done confidently). For example, when one includes the full factor structure for each latent variable, the number of exogenous variables multiplies quickly when a complex model is estimated. The SEM technique assumes that there are no relationships between any of the items where the parameter is not explicitly estimated. This might be an unrealistic assumption in many studies where issues such as common method variance, response sets, and third variable issues are likely to create some significant relationships among items measuring different latent constructs. The result is a poor fitting model.

Several solutions have been used in the past to address issues of poor model fit. For example most modern SEM statistical packages include modification indices that permit the researcher to identify parameters that ought to be estimated in order to improve overall fit (Arbuckle, 1997). Given the goal of SEM is to test *a priori* models, this sort of technique is open to the criticism of capitalizing on chance and thereby limits the generalization of the findings.

Others have suggested reducing the number of parameters to be estimated by simplifying the factor structure of the model (Bagozzi & Edwards, 1998; Mathieu & Farr, 1991; Mathieu, Tannenbaum, & Salas, 1992; Landis, Beal & Tesluk, 1999). This process generally

involves reducing the number of exogenous variables (i.e. indicators) that measure the latent variables of interest. This may involve *partial aggregation*, when some of the items are averaged and in turn used as indicators of the latent construct, or *total aggregation*, when all of the indicators of an item are averaged into a single indicator of the latent variable. In the case of partial aggregation, researchers create testlets or composite indicators whereby the number of items is reduced by averaging two or three items into a single testlet indicator. For example, a scale consisting of 15 items can be simplified into a scale consisting of five testlets, each created by averaging three of the original 15 items. In this case the number of parameters estimated is cut by at least a third while information from the original items is aggregated in the testlets.

In the case of total aggregation the researcher creates single item latent variables (SILV) where the entire scale is averaged into a single indicator in order to minimize the number of parameters being estimated (Hayduk, 1987). While this might sound like path analysis, it is possible to gain the benefits of SEM using SILV's. Specifically, in addition to being able to test the fit of various models, it is also possible to account for the imperfect measurement of the latent construct using SILV's by fixing the error term of the exogenous scale variable in the following manner:  $\text{VarT} (1 - \alpha)$ , where  $\text{VarT}$  = the variance of the scale score, and  $\alpha$  is the estimated reliability of the scale (Hayduk, 1987). This, in effect, tells the SEM program the proportion of systematic variance that is measured by the scale thereby permitting a disattenuated estimate of the relationships among the latent variables.

The reader might worry that the resulting loss of information could undermine the goal of understanding the relationships among the latent variables as some item level variance is lost in this procedure. However, when the researcher is using an established scale or is less

interested in the factor structure than the relationships among the latent variables, partial or total aggregation may be warranted (Landis et al. 1999). In fact, particularly with small to moderate sample sizes, model fit can be significantly improved by using these techniques (Landis et al., 1999).

Naturally, there are some instances where employing SILV's is undesirable. For example, if there are no significant relationships among the original indicators for different latent variables, the researcher may underestimate the fit of the model using SILVs. Using this technique would also be inappropriate if a major goal of the analysis was to understand the factor structure of the latent variables as this information is lost in the aggregation process. In effect, this method provides a unit weighting to each of the scale items. This may prove to be advantageous as the generalizability of the results might be enhanced by using unit weightings versus risking sample-specific weightings of indicators for the latent variable.

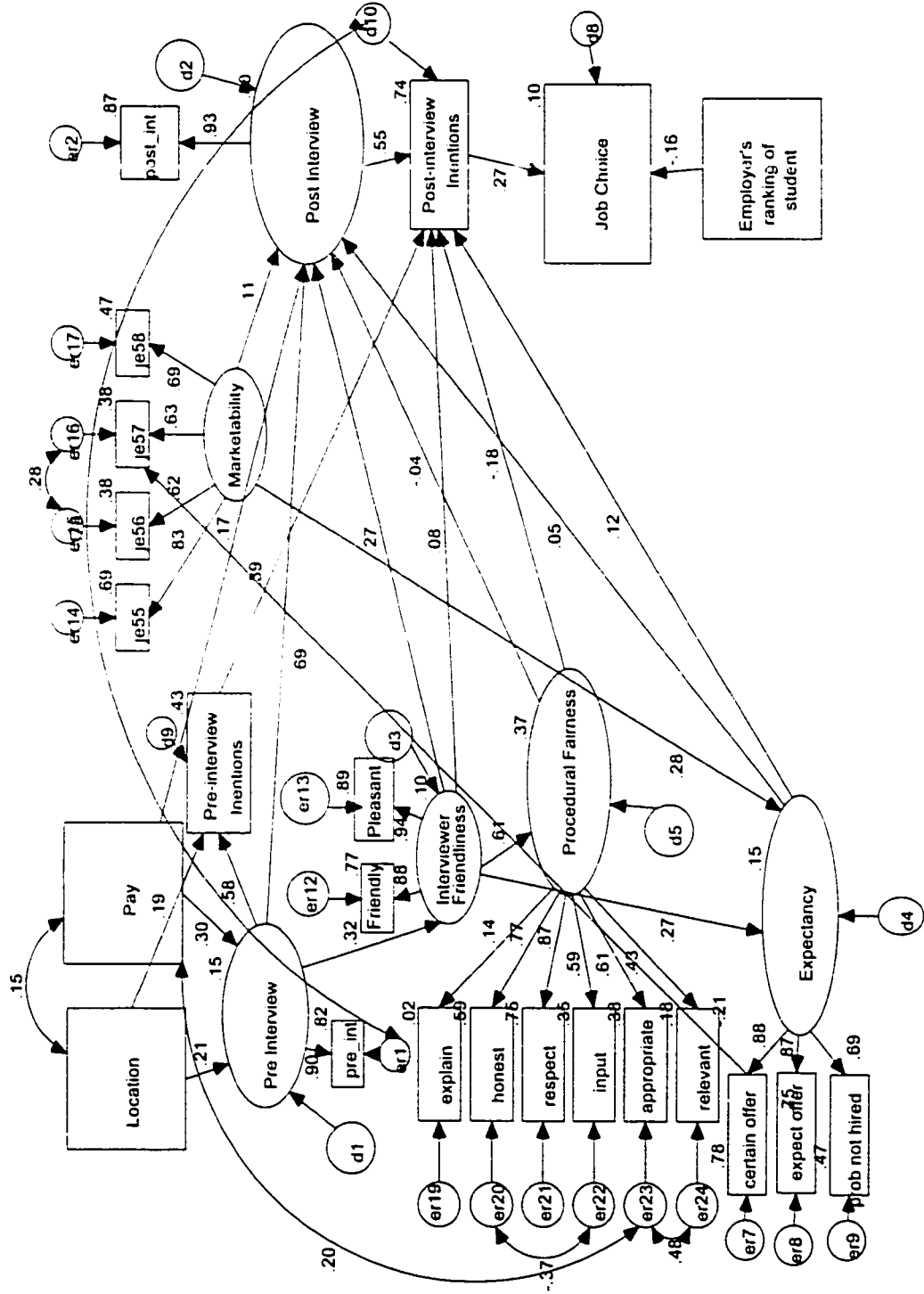
#### Criteria for using SILV's

Examining the factor structure in the tested models is most desirable when the measure is new while the factor structure of more established measures is less important. Accordingly, one of the criteria used was previous use of the measure. Another criterion was the potential for the indicators of a latent variable being significantly correlated with the indicators of other latent variables in the model. This would necessitate an unnecessarily complex model with many estimated paths to model correlated errors. This was anticipated for the pre- and post-interview measures of organizational attractiveness. These items were identical but administered at different times suggesting that their errors might be correlated by common method variance. Accordingly, the full factor structure was modeled for Expectancy, Marketability and Interviewer Friendliness constructs.

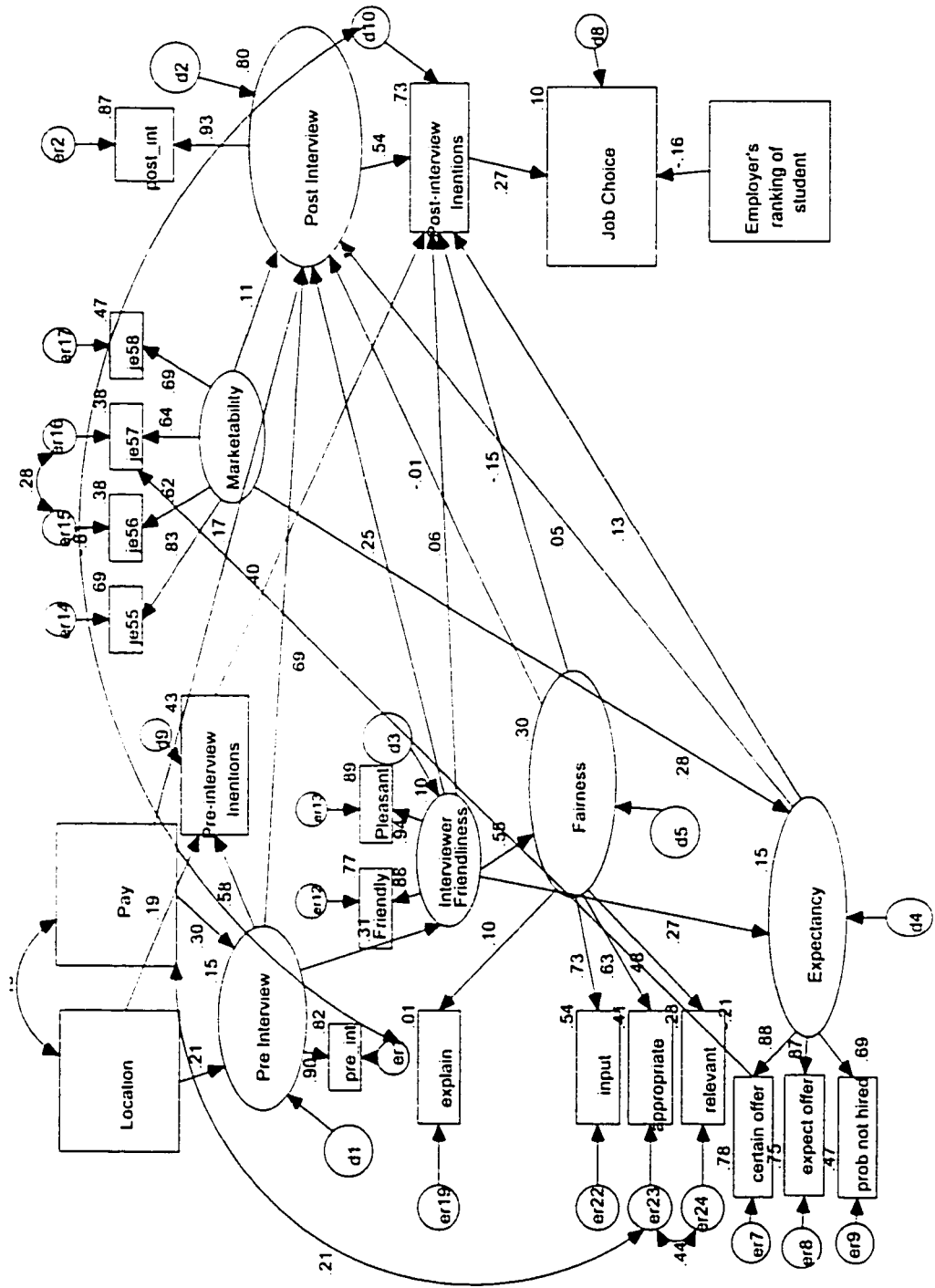
Arbuckle (1997) provides a procedure for conducting SEM using FIML which was followed for these analyses. This is done by generating a saturated model estimating the covariances among all of the exogenous variables and producing a function of log likelihood statistic. Because the model is saturated, it is necessarily the best fitting model one can produce given the exogenous variables included. It is also the most complex model that can be generated with these variables. The researcher's goal is to generate a model from these exogenous variables that is simpler than the saturated model, but fits the data equally well. This is the same goal that is pursued with more traditional SEM procedures such as LISREL and is the same approach that is used to test differences between any pair of nested models (Steiger, Shapiro & Browne, 1985). To test differences in the fit of models, the differences in  $\chi^2$  is tested using the change in the number of parameters estimated as the df, as is the case for LISREL (Steiger, Shapiro & Browne, 1985), or AMOS (Arbuckle, 1997).



Appendix C: Bootstrapping analyses



Appendix D: Re-analysis of the full model with a pure measure of procedural justice.



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