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The Situational Interview as a Measure of Intelligence

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The Situational Interview
as a Measure of Intelligence

A Thesis
Presented to the
Department of Psychology
and the Faculty of the Graduate College
University of Nebraska

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
University of Nebraska at Omaha

by
Deborah F. Goodman

May, 1994

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THESIS ACCEPTANCE

Accepted for the faculty of the Graduate College, University of Nebraska, in partial fulfillment of the requirements for the degree Master of Arts, University of Nebraska at Omaha.

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Abstract

The employment interview has traditionally been regarded as having low reliability and validity for predicting job performance. This assumption has been challenged recently by research findings which indicate improved reliability and validity for structured interview formats (Arvey & Campion, 1982). The situational interview in particular is associated with strong predictive accuracy; this fact has sparked debate regarding the source of this enhanced validity. This study tested Hunter and Hirsh's (1987) notion that situational interview validity is derived from its measurement of cognitive ability. In addition, their theory that the situational interview operates as an orally administered intelligence test for new employees and as a job knowledge test as well for job incumbents was assessed. Subjects were 113 graduate and undergraduate students at a large Midwestern university who took part in a simulated Graduate Teaching Assistant selection procedure. Results indicate that situational interview performance contains a cognitive component as predicted, but that other structured interview formats contain this component as well. Job experience was found to moderate the relationship between intelligence and situational interview performance as predicted, but only some of the time. Job knowledge was not supported as a mechanism by which this moderation might

occur. The results of this investigation suggest that situational interview validity may be due to factors beyond the measurement of cognitive aptitude, and that intelligence and job knowledge may be measured for different types of interviewees only under certain conditions.

Introduction

The interview is an extremely popular tool for personnel selection in organizations (Arvey & Campion, 1982; Robertson, Gratton, & Rout 1990; Weekley & Gier, 1987; Wright, Lichtenfels, & Pursell, 1989). In 1958, 99% of 852 firms surveyed reported that they interview before hiring (Ulrich & Trumbo, 1965). Latham, Saari, Pursell and Campion (1980) claim that "the interview is used as a selection device by virtually every company in the United States" (p. 422).

The interview's popularity in organizational selection has been described as tenacious rather than deserved because research findings indicate low validity and reliability for the interview as a predictor of performance (Wiesner & Cronshaw, 1988). For example, Hunter and Hunter (1984) reported a corrected mean validity coefficient of .14 for the interview in predicting supervisory ratings, with coefficients ranging from -.25 to +.47. They compared this estimate of validity to the equally unimpressive values of .16 and .23 obtained by Dunnette (1972) and Reilly and Chao (1982), respectively, and conclude that the interview is an extremely poor predictor of performance. Wagner (1949) found the median validity across 22 studies to be .27, with coefficients ranging from .09 to .94. Robertson and Kandola (1982) obtained a median validity coefficient of .28 across

53 studies, with a coefficient range of $-.19$ to $.86$. These median values estimate the validity to be only slightly higher than the $.14$ estimate by Hunter and Hunter (1984).

One reason for the inconsistency of validity estimates across studies is that the coefficients pertain to different types of interviews. Specifically, the interviews under investigation vary in terms of structure - the degree to which questions are job-related, are asked of all job applicants, and whether prescaled and prescored responses anchors are provided (Campion, Pursell & Brown, 1988). Structure can pertain to the interviewer as well, such as whether interviewers receive training to use the structured format and whether interviews are conducted separately or in a panel arrangement (Hoffcutt & Woehr, 1992). These and other components of interview structure are thought to have a profound effect on the reliability and validity of the interview (Arvey & Campion, 1982; Baker & Spier, 1990; Campion et al., 1988; Hoffcutt & Woehr, 1992; Latham & Saari, 1984; Wiesner & Cronshaw, 1988). As such, the employment interview should be thought of as an assortment of several types of interview that differ structurally and psychometrically. In the following section, structured and unstructured interviews are described and evidence concerning reliability and validity of each type of interview is reviewed.

Evidence for Unstructured and Structured Interviews

In this section, research concerning the psychometric qualities of unstructured and structured employment interviews is presented. The review of the literature is not intended to be exhaustive, but rather is designed to convey a general picture of the stability and criterion-related validity for each type of interview. Most of the correlation coefficients cited in this review have been corrected for attenuation by the particular experimenter. Uncorrected correlation coefficients, unless otherwise indicated, follow each of the corrected coefficients in parentheses (r_{uncorr}).

The Unstructured Interview

The unstructured interview is freeform in nature, without predetermined questions or response anchors. The interviewer asks the applicant whatever comes to mind, dwells on any topic for however long she wants, and evaluates the applicant with a global, subjective judgment (Wiesner & Cronshaw, 1988). The unstructured interview is characterized as having low validity for predicting performance and low reliability across raters (Arvey & Campion, 1982; Latham & Saari, 1984; Ulrich & Trumbo, 1965).

The low validity has been attributed to personal biases on the part of the interviewer, such as prejudices and stereotypes that they might hold (Baker & Spier, 1990). It

has also been suggested that interviewers weight negative information more heavily than positive information, and tend to make decisions early in the interview process (Mayfield, 1964).

Ulrich and Trumbo (1965) state that interrater reliability information for all interview types is not reported often, but when it is the reliability is low. They state that this is especially true of those interviews with an unstructured format. Wiesner and Cronshaw (1988) also note the low interrater reliability for the unstructured interview, and discuss how this source of error restricts the interview's validity. They advocate increasing the structure in the interview format in order to increase interrater reliability and potentially its validity.

The Structured Interview

As mentioned previously, the structured interview is not one type of interview, but is instead an assortment of interview techniques. These techniques vary quantitatively as a function of degree of standardization and qualitatively as a function of the types of questions asked. The literature is filled with examples of interviews that are described as "structured" but that differ dramatically in terms of their development, content, and protocol. It is thus difficult to integrate the universe of structured interview descriptions into a single, all-inclusive

statement. However, it is possible to identify and describe the most significant dimensions of structure.

Structured interviews typically contain a series of job-related questions that are based on a job analysis and that have predetermined, pre-scored answers. Either most or all of the questions can be asked in all interviews for a particular job. Applicant responses can be scored throughout the interview with scale anchors that have been previously established, or can be scored at the end of the session by dimension or globally. Multiple ratings for a candidate can be combined mechanically or subjectively into a composite score. Lastly, interviewers can be trained or untrained in the interview's administration and scoring features (Campion et al., 1988; Wiesner & Cronshaw, 1988). In general, greater standardization and objectivity across these dimensions indicates a greater degree of structure in the interview.

The structured interview varies qualitatively as well, with regard to the types of questions that are asked. Candidates can be presented with job knowledge questions, inquiries regarding their willingness to perform certain tasks, situational scenarios that pose on-the-job problems to solve (see next section), or questions addressing the candidate's background and past work experience (Wright,

Lichtenfels, & Pursell, 1989). A given structured interview can either have a homogenous or a mixed question format.

Clearly, the structured interview can be a vastly different instrument from study to study. Therefore, the research presented in this section attempts to address interview reliability and criterion-related validity in connection with the respective interview's structural characteristics.

Wiesner and Cronshaw (1988) conducted a meta-analysis of 150 interview studies to compare the validity of structured versus unstructured interviews for predicting all types of job performance. Structured interviews were collapsed across the levels of standardization and question types described above. The authors obtained validity coefficients of .20 ($r_{\text{uncorr}}=.11$) for unstructured interviews, .63 ($r_{\text{uncorr}}=.35$) for structured interviews and .47 ($r_{\text{uncorr}}=.26$) for interviews overall.

Ghiselli (1966) interviewed several hundred highly screened candidates for a stock broker position over the course of 17 years. The interview contained background, past experience, motivational, attitudinal and self-assessment questions. Interviewers asked any questions they wanted and assigned global performance ratings. The correlation between interview ratings and candidates' survival in the organization for three years was found to be

.51 ($r_{\text{uncorr}}=.35$). These results are impressive, but are tempered by the fact that the candidates were all highly qualified as a result of passing previous selection hurdles.

Campion et al. (1988) developed a highly structured interview for hiring entry-level paper mill employees. The interview contained job knowledge, worker abilities, background, willingness, and situational questions (see next section). The job performance criterion was measured with highly structured behavioral observation scales (Latham & Wexley, 1977). The authors report a validity coefficient of .56 ($r_{\text{uncorr}}=.34$) and an interrater reliability coefficient of .88. These validity and reliability coefficients are high, potentially due to a high degree of standardization in the interview development, procedures, rater training and criterion measurement.

Motowidlo, Carter, Dunnette, Tippins, Werner, Burnett and Vaughan (1992) studied several structured interviews composed exclusively of past experience questions for the purpose of selecting telemarketers and telecommunications managers. The authors obtained interrater reliability coefficients ranging from .50 to .63 and internal consistency estimates from .79 to .85. The correlation coefficients between overall interview score and overall job performance ranged from .23 to .32. Each interview was standardized to a high degree, with all questions based on

job analysis data, a fixed question format in each interview, prescored response anchors, and interviewer training.

Hoffman (1993) conducted a series of studies in which structured interviews containing past behavior questions alone or in combination with situational questions were employed to screen candidates for several different sales and supervisory job titles. Interviewers chose their questions from an available pool of job-related items, responses were prescored, and all interviewers were trained. The combination of past experience and situational questions correlated .30 with sales presentation skills; past experience questions alone correlated .30 with supervisor performance and .16 with managerial performance. The mixed results may be due to moderate interrater reliability ($r=.68$ to $.72$).

Johnson (1990) analyzed the effects of different degrees of structure on interview reliability and validity for predicting success in medical school. Highly structured interviews asked the same set of situational questions for each candidate and rated their responses with prescored anchors. Semi-structured interviews asked anything job-relevant and globally rated job dimensions. Unstructured interviews asked anything that came to mind and also globally rated job dimensions. The intraclass reliability

coefficients were found to be .61, .27 and .09 for the highly structured, semi-structured and unstructured interviews, respectively. The validity coefficients for predicting medical school success were found to be .51, .46 and .10, respectively. These research findings, as described, suggest that increased interview standardization is accompanied by increased reliability and criterion-related validity for predicting job performance. The structured interview, as a whole, appears to be superior to the unstructured interview as a selection tool for a variety of jobs across a variety of settings. These psychometric differences cannot be completely attributed to differences in standardization, however, because structured interviews differ from unstructured interviews qualitatively as well. Different types of questions are asked within each type of interview; this fact confounds interpreting the differences in predictive power as resulting from differences in standardization.

The next section describes the qualitative differences among structured interviews in more detail, with a focus on a particular type of structured interview question - the situational question. The situational version of the structured interview has been found to have impressive reliability and accuracy in predicting job performance. In this literature review, evidence is presented that contrasts

the situational interview with other types of question contents in order to illustrate the psychometric differences between different types of structured interview questions.

The Situational Interview

The situational interview format is a particular type of structured interview that exclusively poses hypothetical, job-related questions to the applicant (Latham et al., 1980). While a structured interview may contain questions addressing past behavior, future actions, attitudes, intentions or willingness, the situational interview only pursues what interviewees think they would do in specified hypothetical problem situations (Weekley & Gier, 1987; Wright et al., 1989).

The situational interview represents a qualitative difference between this and other forms of structured interview. The research findings presented in this section specifically highlight the overall validity for situational questions alone and the incremental validity of situational questions beyond other types of interview questions. In addition, the validity of situational questions for predicting different types of criteria is presented. Again, uncorrected correlation coefficients are noted in parentheses, e.g. (r_{uncorr}).

Latham et al. (1980) studied the concurrent validity of the situational interview for predicting foreman and hourly

employee performance. For these job incumbents, the situational interview resulted in correlation coefficients of .30 for foremen, and .46 for hourly employees (uncorrected).

Weekley and Gier (1987) based the development of their situational interview on these findings, i.e. that hypothetical, future-oriented questions have higher validity than questions that sample a person's past behavior. They measured the predictive validity of a situational interview for hiring experienced jewelry salespersons. Interview scores correlated .47 ($r_{\text{uncorr}}=.45$) with sales productivity data gathered nine months later.

Robertson et al. (1990) measured the concurrent validity of the situational interview for promoting administrative staff. Supervisory performance ratings gathered one and a half years later correlated .38 ($r_{\text{uncorr}}=.28$) with interview scores.

In general, the situational interview validity coefficients reported thus far were obtained in studies that used experienced or incumbent employees. A study by Latham et al. (1980) is the exception. In this study, inexperienced entry-level paper mill employees participated. The validity of their interview scores with performance ratings one year later was .33 for women and .39 for blacks (uncorrected).

Schuler and Funke (1989) developed a highly structured interview for screening bank clerk candidates that contained willingness, vocational choice, biographical and situational questions. The questions were tested together and separately for reliability and validity. The scale internal consistencies ranged from .32 to .68 (situational $r=.68$), and interrater reliability ranged from .32 to .90 (situational $r=.71$). The situational question scale was found to correlate .47 with performance, as compared to the overall interview correlation coefficient of .53 with performance.

Latham and Saari (1984) measured the concurrent validity of a situational interview for incumbent clerical performance that consisted of 20 situational and 5 past experience questions. The authors found correlations of .39 with supervisor ratings and .42 with peer ratings of performance (uncorrected). When the authors compared the relative contribution of situational questions and past experience questions for predicting performance, they found that only the situational questions accounted for a significant portion of performance variance. Artificially increasing the number of past experience questions to match the number of situational questions did not improve the lack of effect.

Campion, Campion and Hudson (1993) conducted a similar investigation in which they compared the relative contribution of situational questions and past experience questions for explaining pulp mill job performance. They found a higher validity coefficient for past experience questions than for situational questions (.51 vs .39), however, the difference was not significant. These authors also measured the incremental contribution of the total interview beyond a battery of cognitive ability tests for predicting the pulp mill job performance, and vice versa. They found that both the interview and the battery add predictive power beyond the other. Unfortunately, the authors did not measure the incremental validity of each type of interview question, alone.

In summary, the data suggest that some types of questions in the structured interview are better predictors of performance than other types of questions. Situational question formats and subsets thereof were found to have strong validity for predicting various types of job performance of varying complexity. The situational interview, in many cases, was found to have greater criterion-related validity than other types of interview questions such as past experience and willingness items. Furthermore, the situational interview showed incremental validity beyond other types of questions and other types of

screening instruments. It thus appears that qualitative differences as well as quantitative differences in interview structure could be influential factors in determining interview reliability and validity.

The following section touches upon some competing theories for how interview structure enhances reliability and validity. Speculation regarding interview standardization is presented first, followed by theory addressing qualitative interview differences in the form of situational questions.

Explanations for Superiority of Structured Interviews Standardization

Several hypotheses have emerged with regard to why increased standardization in the interview is accompanied by increased validity and reliability in predicting job performance. Schmitt (1976) proposed that increased structure in the interview format forces interviewers to pay closer attention to what interviewees are saying. The freeform nature of unstructured interactions, in contrast, may result in information overload for the interviewer and a subsequent lack of attention on relevant information.

Latham and Saari (1984) and Wiesner and Cronshaw (1988) similarly suggest that focusing only on critical job requirements potentially decreases the amount of irrelevant information that is discussed. They speculate that

increased attention on only the relevant aspects of a candidate increases the accuracy of hiring decisions by increasing their relevance to actual job performance.

Baker and Spier (1990) and Campion et al. (1988) recommend basing ratings on prescored anchors and training interviewers to decrease halo and bias errors. These authors are, in essence, suggesting increased standardization in the form of incremental, objectively derived response anchors in order to control for raters' tendency to generalize ratings across multiple global categories. Enhanced reliability and validity may be a result of this reduction in rating errors.

Latham et al. (1980) point out that questions derived from a job analysis give the questions high content validity and face validity. Increased face validity increases interviewee cooperation which, in turn, enhances the accuracy of interviewer perceptions of the candidate which is then reflected in the interviewers' ratings.

Wright et al. (1989) propose that interviewer ratings made according to pre-established response anchors for each question relate to overt behavioral intentions. This similarity between predictor and criterion, in behaviorally-based terms, is theorized to be the contributing factor to enhanced validity.

All of these theories are unified in their emphasis on "noise" reduction in the data. The structured interview,

regardless of question type, is essentially characterized by these theorists as being more content valid and less susceptible to contamination by irrelevant information. The critical benefit derived from standardization appears to be a reduction in random error in the interviewer's ratings, leading to a proportionate increase in relevant material.

For the purpose of this project, any or all of these theories may be correct since the nuances of this phenomenon are not the main focus of this investigation. The purpose of presenting these data and theories is to illustrate how interview validity must certainly be predicated upon interview standardization to some degree. Interview validity, as conceptualized by these researchers, appears to be dependent upon the degree of interview standardization to the extent that the validity of any instrument is dependent upon its reliability. As such, the interviews used in this investigation are all highly standardized to control for differences in reliability (see methods section).

Situational Questions

In contrast to theory addressing interview standardization, there has been little theory addressing the mechanisms underlying qualitative interview distinctions. Most of this limited speculation concerns a single type of

structured interview - the situational interview - and the forces driving its enhanced reliability and validity.

Latham et al. (1980) theorize that the situational interview prompts candidates to express their "intentions." It is this explicit, overt commitment to a certain course of action that is theorized to induce an applicant to perform that behavior on the job.

In contrast, Hunter and Hirsh (1987) suggest that the situational interview as compared with other forms of structured interviews may measure different constructs. They state that when the structured interview is situational in nature, "in this case, the interview is a verbally administered intelligence test using items tailored to the job" (p.330). The Hunter and Hunter (1984) meta-analysis revealed intelligence to be the most accurate predictor of job performance ($r=.53$) in relation to other classes of predictors. In essence, Hunter and Hirsh (1987) have applied this finding of a robust cognitive ability factor to explain the situational interview's enhanced validity.

Campion et al. (1988) concur with Hunter and Hirsh (1984). These authors note that the reported validity estimate for their structured interview ($r=.56$) exceeds the Hunter and Hunter (1984) mean validity of .53 for cognitive aptitude measures. Campion et al. (1988) suggest that a

cognitive component in their interview may be responsible for this strong showing.

The literature and research findings reviewed in previous sections are conceptually compatible with Hunter and Hirsh (1984). The correlation coefficients of .33 and .39 reported by Latham et al. (1980) for entry-level pulp mill worker performance are similar to the .37 validity of cognitive tests for predicting elementary industrial performance (Hunter, 1989). As reported earlier, Campion et al. (1993) obtained a nearly identical correlation coefficient ($r=.39$) between the situational items in their interview and pulp mill performance. The magnitude of these coefficients converge and support the possibility of a cognitive component in the situational interview format.

Hunter and Hirsh (1987) make the additional suggestion that the situational interview may measure different constructs for different populations of interviewees. For incumbent interviewees, they propose that the situational interview functions as a cognitive ability test and a job knowledge or "verbal form of work sample" test as well (p.330). For example, an interviewee with no job experience or job knowledge would, out of necessity, rely on creative ingenuity to answer situational interview questions. In contrast, an incumbent could potentially utilize both ingenuity and relevant job knowledge in the formulation of

an answer. Thus, situational questions could be a measure of intelligence for all interviewees, but the incumbent's job knowledge is likely to play a role in interview performance as well.

Hunter and Hirsh (1987) do not explicitly describe how the situational interview captures and replicates an intelligence test, *per se*. They merely suggest that validity of the situational form of the structured interview may be due to its measurement of the same highly valid factors that an intelligence test measures. Several other researchers have subsequently agreed that interview structure in the form of situational questions might be operating as a cognitive ability or IQ test (Campion et al., 1988; Robertson et al., 1990; Wright et al., 1989).

In general, there has been little construct-oriented investigation or theory of other structured or unstructured interviews other than those theories briefly touched upon previously. An exception is Schuler and Funke (1989), in which self-presentation, biographical, vocational choice and situational questions were correlated with social skills and cognitive ability criteria. Of the four question types, self-presentation items were found to be the best predictor for social skills and situational items were found to be the best predictor for cognitive abilities.

Schuler and Funke (1989), like other interview investigators, urge increased theory and research into the constructs measured by different types of interviews. At present, there appears to be a gradual convergence of opinion that a cognitive component in the situational interview may exist. As such, this line of reasoning would seem to represent movement toward construct-oriented research of the employment interview.

Following from the data and theory outlined thus far, the purpose of this project is (a) to investigate whether different types of structured interviews (job knowledge/willingness questions versus situational questions) measure intelligence to different degrees, and (b) to examine whether the situational interview measures different constructs for different populations of interviewees. The assumption underlying these research questions is that intelligence is a valid surrogate for job performance, i.e. the two are interchangeable or at least very similar.

The following two sections will support this assumption by describing the relationship between intelligence and job performance and by examining the similarities between cognitive ability testing and situational interview testing.

Intelligence and Job Performance

The classical theory outlined in Hunter (1989) relates cognitive ability to performance in terms of the learning process. In order for someone to perform well on the job, she must be able to learn the job tasks, as well as be able to respond to the special conditions of a given situation. Cognitive ability is defined by Hunter (1989) as encompassing the learning aptitude of an individual, plus the additional factors involved in innovative adaptation to the particular situation.

The classical theory is similar to Spearman's Two Factor model of intelligence (1927). The theory states that performance on a complex task is related to two factors of intelligence: one general factor that is common to all tasks (g), and one that is specific to the particular task (Spearman, 1927). In terms of the classical theory mentioned above, the g factor is similar to learning aptitude and the specific task factor is similar to innovative adaptation. Subsequent research on intelligence has provided evidence supporting a general factor (g) of cognitive aptitude, such as in the Burt (1949) and Vernon (1950) models.

In contrast, several prominent theorists have denied the existence of the general g factor and instead have proposed decentralized models. Cattell stated that the

general factor g may in fact be a combination of two groups of factors: (1) fluid abilities, which is the ability to deal with novel situations (e.g. innovative adaptation), and (2) crystallized abilities, which is knowledge acquired through experience (Cook, Whittaker, Thieme, Smith, & Salvendy, 1988). Thurstone proposed seven primary factors that determine performance on psychological tests, for example, verbal comprehension and fluency, memory, reasoning, and perceptual speed (Cook et al., 1988). Guilford proposed a model whereby cognitive abilities are a product of the individual's operation, content and product processing capacity, as well as the ability to retrieve stored information semantically or symbolically (Guilford, 1959).

Clearly, there is no definition of intelligence that is universally accepted. A survey conducted to explore the common conception of intelligence identified problem-solving, verbal ability and social skills as the most popular notion of the factors that determine intelligent behavior (Sternberg, Conway, Ketron & Bernstein, 1981). In an attempt to unify the most prominent theories of intelligence, Gustafsson (1984) administered 13 tests of ability to 1224 subjects and performed a LISREL IV analysis of the data to test the goodness-of-fit for various models. The results indicated that at the highest level, a factor

was present that is identical to Cattell's fluid intelligence factor. On the next highest level, crystallized intelligence, or verbal-conceptual comprehension and experiential knowledge, emerged as a second-order factor underlying performance on cognitive ability tests.

The previous discussion suggests that in general two components, fluid intelligence abilities and stored information gained through experience, are the most prominent and significant features of intelligence. Thus, to the extent that intelligence is a valid predictor of performance, it is the utilization of these two components of cognitive abilities that determines one's level of performance on a given task.

Intelligence and the Situational Interview

When one examines the situational interview content and procedure, it appears plausible that this selection device may be measuring these two components of intelligence. The following situational interview question for the position of sales associate is presented to illustrate this possibility:

A customer comes into the store to pick up a watch he had left for repair. The repair was supposed to have been completed a week ago, but the watch is not back yet from the repair shop. The customer becomes very angry. How would you handle this situation?

- 1.... Tell the customer it isn't back yet and ask him or her to check back with you later.

(continued)

2....

3.... Apologize, tell the customer that you will check into the problem and call him or her back later.

4....

5.... Put the customer at ease and call the repair shop while the customer waits.

(Weekley & Gier, 1987, p.485)

For a non-incumbent interviewee, this interview question covers material that is unfamiliar; the interviewee has no experience in the job and therefore does not have a knowledge base that she can immediately utilize. These answers that the non-incumbent gives would be constructed from superficial, general knowledge about sales. This general knowledge would represent the crystallized intelligence factor, or the second level of the unified model of intelligence.

Fluid intelligence, the first level and most prominent feature of the unified model, is represented by the non-incumbent's creative ingenuity in solving this problem from the unfamiliar perspective of sales associate. Fluid intelligence has been described as a measure of "the ability to dissemble relevant information in complex situations" (Linn & Kyllonen, 1981, p.269). In the context of this interview question, the interviewee must pick out important aspects of the complex situation, retrieve relevant knowledge from her general, crystallized knowledge base, reason through the problem, and inductively determine the

best solution. Given these circumstances, the non-incumbent could feasibly be utilizing fluid intelligence abilities primarily and experiential knowledge peripherally to adequately address the question of how to handle an angry customer.

It should be noted that a situational question must be sufficiently complex for fluid intelligence abilities to be necessary. A problem that is "too easy" will not require an interviewee to engage his reasoning or creative ingenuity abilities. Rather, the interviewee would only need to retrieve the optimal solution that is already contained in her crystallized knowledge base.

Like the non-incumbent, the incumbent interviewee also relies upon ingenuity to formulate logical and concise answers to complex situational questions. However, the incumbent possesses the additional resource of job experience. Job experience would theoretically indicate that the incumbent possesses information in his crystallized knowledge base that is derived from and oriented toward the problems and situations encountered in this type of job setting. In other words, job knowledge supplies "prepackaged" solutions to the complex questions posed in the situational interview, making extrapolation from general knowledge via fluid abilities unnecessary. As in the case where the non-incumbent is asked a question that is "too

easy," fluid abilities would be utilized less by the incumbent, therefore his performance is likely to be superior regardless of his fluid problem-solving abilities.

This Investigation

This project tested the theory that structured interviews function as orally administered intelligence tests, and that the situational interview performs this function to an even greater degree. This relative relationship was predicted because situational question-answering skills are theorized to be more closely associated with the "g" factor components of intelligence than the skills used to answer structured interview questions. Accordingly, the following hypotheses were proposed:

- H1a: Interviewee intelligence is positively related to situational interview performance.
- H1b: Interviewee intelligence is positively related to structured interview performance.

According to the model described previously, intelligence contains a primary component of fluid reasoning ability and a secondary component of crystallized general knowledge. Both of these components could be utilized when answering many types of interview questions that address objective job knowledge domains either directly or indirectly. Other types of interview questions, i.e. those that ask motivational or attitudinal questions, would be

theoretically less likely to utilize these components of cognitive ability, and thus have less of a relationship with intelligence. The interviews in this study each contained objective questions that draw upon objective material in different ways, so a relationship between interviewee intelligence and their performance in both interviews was predicted.

H1c: Intelligence is a better predictor of situational interview performance as compared with structured interview performance.

The differential relationship between intelligence and the two interview performances was predicted in Hypothesis 1c because, as previously stated, the skills used to answer situational questions are theoretically more closely associated with both fluid and crystallized cognitive ability components than are the skills used to answer other types of structured interview questions.

These three hypotheses were tested by measuring the relationships between subjects' intelligence test scores and their performance scores in a structured interview and in a situational interview. The relationships between intelligence test performance and performance in each interview was tested for significance (Hypothesis 1a and 1b) and compared (Hypothesis 1c).

The effect of job experience on correspondence between intelligence and performance in each interview was examined. Hunter and Hirsh (1987) suggest that the situational interview functions as an intelligence test for inexperienced interviewees, but as both an intelligence test and a job knowledge test for incumbent interviewees. Different constructs are suggested because an interviewee who has experience on the job could potentially draw upon learned solutions to resolve the problem scenarios put to him in the interview. In contrast, an inexperienced interviewee does not have the best answers readily on hand to produce when the problem situations are posed; her answers must be constructed with creative ingenuity and fluid aptitude. It was thus predicted that interviewee experience will differentially affect the degree to which intelligence and situational interview performances correlate.

H2a: The relationship between situational interview scores and intelligence test scores is moderated by interviewee job experience.

A parallel prediction was made for the effect of job experience on the structured interview relationship to intelligence. According to the model, the opportunity to acquire additional relevant crystallized knowledge could influence how well one answers the job knowledge questions

contained in the structured interview. It is therefore hypothesized that job experience has a similar effect on the intelligence-structured interview performance relationship.

H2b: The relationship between structured interview scores and intelligence test scores is moderated by interviewee job experience.

It is important to note that the effect of job experience on the relationships between intelligence and performance in each interview is likely to differ in the same manner as the relationships themselves differ. Specifically, intelligence is predicted to be more related to situational interview performance than to structured interview performance as a function of greater skill congruence in the former than in the latter. If the moderating effect of job experience is a function of reduced reliance upon fluid reasoning abilities as theorized, then the effect would theoretically be greater in the situational interview context than in the structured context. This predicted difference in moderating strength is approached as an exploratory analysis. A third set of hypotheses examined the role of job knowledge in predicting situational interview performance. Different levels of job experience would not be expected to influence the fluid component of intelligence directly, but instead is theorized to affect the crystallized component by adding highly relevant, job-

specific information. It was thus predicted that experience is positively related to job knowledge due to providing the individual with the opportunity to acquire job-related information.

H3a: Interviewee job knowledge is positively related to interviewee job experience.

The job-specific information or "job knowledge" derived from job experience is theorized to reduce reliance upon fluid intelligence in solving complex situational questions. Thus job knowledge is expected to attenuate the relationship between intelligence and situational interview performance, in the same way that job experience was predicted to attenuate this relationship. It was predicted that job knowledge moderates the intelligence-situational interview performance relationship, such that intelligence is a better predictor for those with a low level of job knowledge as compared to those with a high level of job knowledge.

H3b: The relationship between situational interview scores and intelligence test scores is moderated by interviewee job knowledge.

When combined, Hypotheses 3a and 3b describe the possible mediating influence of job knowledge within the job experience effect on the intelligence/situational interview performance relationship.

Summary of Hypotheses

- H1a: Interviewee intelligence is positively related to situational interview performance.
- H1b: Interviewee intelligence is positively related to structured interview performance.
- H1c: Intelligence is a better predictor of situational interview performance as compared with structured interview performance.
- H2a: The relationship between situational interview scores and intelligence test scores is moderated by interviewee job experience.
- H2b: The relationship between structured interview scores and intelligence test scores is moderated by interviewee job experience.
- H3a: Interviewee job knowledge is positively related to interviewee job experience.
- H3b: The relationship between situational interview scores and intelligence test scores is moderated by interviewee job knowledge.

Method

Subjects

The subject pool for this investigation consisted of 58 junior and senior undergraduates and 55 Graduate Teaching Assistants (GTAs) at a large midwestern university. Sixty-two freshman and sophomore students served as interviewers in the study. A power analysis was conducted in which 110 subjects, a medium effect size, and an alpha level of .05 resulted in a power level of .95.

All undergraduate subjects and interviewers were introductory psychology students volunteering in the study for extra credit. All were familiar with graduate teaching assistant (GTA) activities because all were enrolled in a psychology course taught by GTAs. All GTA subjects were employees of the University at the time of the study and each received \$10 for their participation.

Independent and Dependent Variables

Independent variables were interview type, intelligence test performance, and job experience. Dependent measures were situational interview and structured interview performance scores. A subscore within the structured interview, i.e. a job knowledge score, also served as independent variables for analysis of the situational interview performance. All subjects received all treatments

(two intelligence tests, both interviews and components therein, and demographic surveying materials).

Materials

The Wonderlic Personnel Test (WPT)

The Wonderlic Personnel Test (1983) was used to measure subjects' cognitive abilities. This particular measure of intelligence was employed because it measures the sum of verbal, quantitative and spatial aptitude subtests (Hunter, 1989), that is, both fluid and crystallized intelligence. The correlation between the Wonderlic test and the WAIS-R (Wechsler, 1974) is reported to be .92. The internal consistency ranges from .88 to .94. (Wonderlic, 1983).

Group Embedded Figures Test (GEFT)

While the WPT represents a measure of both fluid intelligence and general crystallized knowledge, the GEFT is theorized to measure only fluid intelligence abilities (McKenna, 1990). The validity of the GEFT for measuring this cognitive dimension has been estimated to be .63, and has an estimated internal consistency of .82 (Goodstein, 1978). All analyses associated with this measure were exploratory.

Situational Interview

A situational interview was developed according to the procedure outlined by Latham, et al. (1980). Twenty-five professors who supervise one or more GTAs participated in

the development of this interview. These GTA supervisors are henceforth referred to as "subject matter experts" (SMEs) due to their experience with this population.

In the initial stage, a critical incident job analysis (Flanagan, 1950) was conducted with ten SMEs. This job analysis technique involves interviewing SMEs about their subordinates' on-the-job behaviors that they have witnessed. SMEs were asked to provide examples of extremely positive and extremely negative incidents of GTA behavior. They were also asked to describe specific areas of knowledge, skills, and abilities that they consider to be essential for successful performance as a GTA, in general. The ten SMEs provided 24 examples of GTA behaviors that were either exemplary or appalling, and cited 31 areas of knowledge, skills and abilities that they considered to be critical for GTA success.

Eighteen scenario questions were drafted from the 24 critical incidents by this author. Two assistants reviewed and revised the items for greater clarity and quality. The eighteen scenarios were split into two sets of nine and were sent out to ten additional SMEs, such that five SMEs received one set of nine scenarios and five SMEs received the other set.

These SMEs were asked to review their respective set of nine items and generate "response anchors" for each

question. A response anchor is a potential answer to a situational question that represents a "poor," "moderate," or "excellent" response (see the jewelry salesperson example on p. 22). The SMEs were asked to provide the full range of responses, from poor to excellent, for each question that they believed a GTA candidate might realistically provide in an interview. The SMEs were also asked to critique the wording and clarity of the questions in order to reduce item ambiguity.

In the third stage, the five sets of responses for each of the eighteen scenarios were reviewed by a different group of five SMEs. These SMEs reviewed and selected nine of the eighteen scenarios as the more job relevant, unambiguous and challenging items of the lot. By consensus, they critiqued and combined the five sets of response anchors per question into a single response range for each question to reflect the most likely and representative answer for each point on the "poor" to "excellent" response continuum.

A week or so later, the same SMEs independently reviewed the nine sets of response anchors that they had agreed upon to certify their acceptance, and rank-ordered the questions in terms of difficulty (not too transparent or farfetched) and meaningfulness (the likelihood that response variability for the item will be due to the intended item contents rather than to some distracting or contaminating

effect). Three more items were eliminated as a result of these ratings, reducing the number of situational questions from nine to six (see Appendix for the complete situational interview).

The SMEs also linked each situational question to the areas of knowledge, skills and abilities that they considered to be relevant out of the 31 requisite GTA qualities identified in the job analysis. SMEs were asked to indicate all of the abilities that were essential for handling each situation, and to star the most central ability for each item. At least 60% of ratings converged on a single central dimension for each question, with other raters in each case indicating at least a general linkage. This exercise served to identify the primary requisite ability measured by each situational question as determined by independent ratings and agreement between multiple SMEs.

A preliminary estimate of the reliability of the situational interview across 40 subjects was calculated using Cronbach's alpha, and was found to be .45. The estimate of internal consistency for the entire sample (N=113) was found to be .51. The Kendall coefficient of concordance was calculated between 25 sets of ratings for a hypothetical candidate, and was found to be .76. These reliability results are discussed at length in the Results section.

Structured Interview

There are a multitude of operational definitions for the structured interview in the literature, some more structured than others (Hoffcutt & Woehr, 1992). As pointed out previously, the degree of structure present in the format has been often suggested as a moderator of interview validity (Campion et al., 1988; Harris, 1989; Pursell, Campion & Gaylord, 1980). At the same time, the situational interview has been cited as one of the more structured interview formats (Latham et al., 1980; Hoffcutt & Woehr, 1992).

It was the intention of this study to hold constant the degree of structure implicit in these interview formats, in order to control for the moderating effects of structure on interview validity. In other words, any difference observed regarding situational interview performance and structured interview performance correspondences with intelligence test performance were to be attributable to qualitative differences in interview format rather than to differences in the degree of interview structure.

Campion et al. (1988) present a method for the development of a highly structured interview which is comparable to the situational interview in terms of structure. The structured interview for this study is thus modelled after that of Campion et al. (1988). All questions

are based on a job analysis (the critical incident job analysis described previously), the same interview questions are asked of all candidates, and prescored response anchors accompany each question.

There are differences between the development and content of the structured interview content as compared with the situational interview. First, 12 items were developed for the instrument: six questions addressing GTA job knowledge, and six questions addressing one's "willingness" to perform certain job tasks (see Appendix for the complete structured interview). These question formats, in comparison to the situational format, are much more straight forward in terms of question length and scoring. Six situational questions versus twelve job knowledge and willingness questions were found to take roughly the same amount of time to administer, in pilot testing.

Second, the twelve questions were constructed in a post hoc fashion, after completion of the situational interview development. This sequential method was needed in order to match job knowledge and willingness question contents to the same job dimensions measured by situational questions. For example, SMEs identified situational question #2 to measure "humility." One job knowledge question and one willingness question were subsequently drafted to address this and the other five critical GTA qualities.

The post hoc question development was essential for meaningful interpretation of results. As with interview structure, it was critical to control for interview content so that any differences observed between each interview and its relationship to intelligence could be interpreted as being due to differences in question format rather than due to the degree of structure or the job dimensions covered. It could not be known which situational questions in particular would survive the critiquing process until the very end, thus the structured interview development could not take place until this time.

The same job analysis interviews used to derive situational questions provided different but comparable subject matter for which to derive job knowledge and willingness questions. Five SMEs (from the first group of 10 SMEs utilized in this study) were asked to match the twelve structured questions to the 31 areas of knowledge, skills and abilities and to indicate the most central dimensions for each question. Agreement was at least 60% on the intended central dimension for each questions and 100% on linkage in general for the intended dimension.

Anchors for each point on the response range for each question were drafted by this author to mirror the quality and content of situational question response anchors. Three SMEs reviewed and revised these anchors for clarity,

comparability to the situational response anchors, and realistic content.

A preliminary estimate of reliability for the structured interview across 40 subjects was calculated using Cronbach's alpha. This measure of internal consistency was found to be .21 for the job knowledge questions, .44 for the willingness questions and .39 for the interview overall. Interrater agreement between 25 sets of job knowledge and willingness ratings, calculated with an intraclass correlation technique, was found to be .84 and .88, respectively, and .86 overall. Again, the reliability estimates obtained are discussed at length in the Results section.

Table 1 presents the situational, willingness, and job knowledge questions that correspond with each of the six areas of Graduate Teaching Assistant job content. Each of the six items within each scale were designed to measure a different job dimension, thus each job content area is addressed by one situational question, one willingness question, and one job knowledge question. The linkages between questions and job dimensions are presented in order to explicitly illustrate how similar content is addressed by the different types of interview questions. Only the questions themselves are indicated; the corresponding response anchors for each item can be found in the Appendix.

Table 1

Linkages Between the Six Job Content Areas and the Six
Situational, Six Job Knowledge and Six Willingness Interview
Items

"Reasonable Expectations"

- Situational:** Your students do not seem to be learning the material as thoroughly as you would like. In fact, most of them earned below average grades on their first assignment. What do you do?
- Job Knowledge:** Describe where a TA sets performance standards, given what students should learn and what they are able to learn?
- Willingness:** How willing would you be to set the performance expectations for your class at a level that is lower than the expectations you set for yourself?
-

"Humility"

- Situational:** You are teaching a statistics class, and the formula that you are working with on the board is not producing the correct answer. There are still twenty minutes left in the class period. How do you handle the situation?
- Job Knowledge:** What does a TA do when the attendance rate in class gradually drops off?
- Willingness:** In general, how willing are you to admit, in public, to a mistake that you have made?
-

Table 1 (continued)

"Thinks twice before acting"

Situational: During a test, you think that you see a student copying from her neighbor. You are not 100% sure that she was cheating, but neither are you completely sure that she was not cheating. What do you do for the remaining time?

Job Knowledge: What does a TA do if he/she suspects that a student has plagiarized?

Willingness: How likely are you to consider all reasonable alternatives before making a decision?

"Fairness"

Situational: A student challenges a grade that he has received for an oral presentation on the grounds that it is subjective and clearly unwarranted. He adds that unless he gets a better grade, he will not be able to graduate. What do you do?

Job Knowledge: What does a TA do to insure that students are graded fairly?

Willingness: With regard to people you have supervised, how consistently do you follow the policies, guidelines and standards of conduct that you have set up?

Table 1 (continued)

"Recognizing personal limits"

- Situational:** A student talks to you about his anxiety concerning his performance in your class. You suggest ways for him to reduce stress and anxiety, how to study better, etc. After a few more talks with the student, he reveals that he has often considered suicide as a solution to his problems. The student asks you to not mention this to anyone. How do you react?
- Job Knowledge:** What should "Joe TA" do when "Bob TA", who has helped out Joe in the past, asks him to cover his class that day because an emergency situation? Joe desperately needs to study for a very major test that day, but there is no one else around to ask to cover Bob's class.
- Willingness:** How likely are you to take on unmanageable amounts of responsibility?
-

"Openness to student dissent"

- Situational:** In your discussion section, a student complains about the method used to teach the class (using TAs and/or TV lectures). Several other students appear to agree with his opinion. How do you react?
- Job Knowledge:** What does a TA do when a student asks, in class, why there is so much assigned reading?
- Willingness:** How willing are you to have your authority challenged by others?
-

Note. All situational, job knowledge and willingness interview questions are presented with the corresponding set of prescored response anchors in the Appendix.

Demographic Survey

This instrument contained questions about the subject's gender, age, major field of study, and year in school. The subjects' past and present teaching experience was assessed several ways: area of specialization, type of teaching (e.g. classroom, tutoring, laboratory, etc.) type of student population (e.g. child, adolescent, adult) and tenure in each capacity (see Appendix).

Procedure

Interviewer Training

Interviewers were scheduled to arrive one-half hour before subjects in order to receive training in the use of the structured and situational interview formats.

Interviewer training was conducted in the same manner for each experimental session. Upon arriving, each interviewer was assigned an experimental number to record on all of their interview documents. They filled out the experimental consent form and demographic survey.

Interviewers were then briefed on the general purpose of the study and their role as an "assistant" in collecting these data.

Interviewers were given a copy of each interview. Each interview was reviewed, in turn, by explaining (briefly) the respective interview's development and its administration and scoring procedures. A practice interview was conducted

using each format and interviewers' ratings were discussed. For the last five minutes of training, carrying over into subjects' arrival, the interviewers read through each interview thoroughly to familiarize themselves with the response anchors. They were instructed to clarify any confusing points with the author or the research assistant.

Data Collection

Subjects were each assigned an experimental number to be used by the interviewer to label their respective interview packets. Subjects completed the experimental consent form and the demographic survey. They were then briefed on the general purpose and objectives of the study.

Only one piece of deception was employed in describing the purpose of the study. Subjects were informed that, by request of the Center for Faculty Development at UNO, average UNO undergraduate performance would be compared to average UNL undergraduate performance on all measures, ostensibly to determine which body of students would make "better" GTAs. The same intentions were stated in terms of a UNO/UNL GTA comparison to determine which population of GTAs is "better" qualified for the position. This false pretense was used to add the spirit of a "challenge" to the testing protocol derived from an external, authoritative, but nonthreatening, source. Subjects were also informed that their performance scores on all measures would be

available to them at a later date, if desired. This information was not only true, but provided interested subjects with the potential intrinsic reward of personally relevant feedback.

An informal manipulation check was performed after debriefing. Subjects were asked whether the intercollegiate comparison had made any difference in their attitude toward the experiment. Many undergraduate subjects stated that they had not only believed the story but had considered it, briefly, in the course of the study. Most of the GTA subjects said that the group comparison hadn't made much of a difference in their level of motivation, but expressed interest in receiving their test scores when available. It appears that, at least for some subjects, the attempt to provide extrinsic motivation or to support intrinsic motivation was effective.

All subjects were assessed with four measures: two intelligence tests - the Wonderlic Personnel Test (WPT) and the Group Embedded Figures Test (GEFT) - and two interviews - structured and situational (see Appendix for interview materials). The order of these measures was counterbalanced, such that interviewees either received both intelligence tests first or both interviews first, and received either the WPT or the GEFT first and structured or situational interview first. Overall, there were 16

different order conditions with seven or eight subjects in each condition.

In each session, half of the subjects completed the two intelligence tests, in sequence, while the other half were interviewed with both interviews, in sequence. Within the group being interviewed, each interview was conducted with one subject at a time by one interviewer. Subjects were interviewed (with either the structured or situational format, depending on the condition) and waited until all interviews in this first round were finished. Subjects then rotated to a different interviewer for the second interview of the other variety. When both interviews were completed and both intelligence tests had been administered to the other group of subjects, the two groups switched places such that interviewed subjects were administered the intelligence tests and tested subjects received the two interviews. The overall sequence of two intelligence tests and two interviews took approximately one hour.

Subjects' scores for each measure were calculated in the following manner. The situational interview score is the average of the six item scores. Each item score has a range of 1 to 5, which makes the average score range the same. The structured interview contains two six item scales for job knowledge and willingness, respectively. Each of the subscale scores was computed in the same manner as the

situational score to produce a job knowledge average item score and a willingness average item score. The structured interview score is the average across all twelve items. In sum, the situational, job knowledge, willingness and structured scores each range in value from 1 to 5; the first three scores are based on six items each and the last score is based on twelve items.

The WPT was scored with the standard grading materials provided by Wonderlic, Inc. The WPT has a score range of 0 - 50, with a central tendency of 27-29 for college juniors and seniors. The GEFT was also scored with materials provided with the test booklets. The score range for the GEFT is 0 - 18, with a mean of 11.6 across all populations.

Job experience was calculated as the number of months that the subject had worked as a discussion section leader or classroom instructor. Other types of teaching experience were not incorporated into this measure.

Analyses

The experimental hypotheses investigated in this study are presented again below in conjunction with the statistical analyses used to test each one.

H1a: Interviewee intelligence is positively related to situational interview performance.

A simple regression of situational interview scores on WPT scores was performed, and the explained variance tested for significance.

H1b: Interviewee intelligence is positively related to structured interview performance.

A simple regression of structured interview scores on WPT scores was performed, and the variance tested for significance.

H1c: Intelligence is a better predictor of situational interview performance as compared with structured interview performance.

The explained interview performance variance obtained by regressing each interview on WPT were compared and tested for significance.

H2a: The relationship between situational interview scores and intelligence test scores is moderated by interviewee job experience.

A multiple regression of situational interview scores on intelligence and job experience was performed. The incremental R^2 for the interaction effect beyond the main effects was tested for significance.

H2b: The relationship between structured interview scores and intelligence test scores is moderated by interviewee job experience.

A multiple regression of structured interview scores on intelligence and job experience was performed. The incremental R^2 for the interaction effect beyond the main effects was tested for significance.

H3a: Interviewee job experience is positively related to interviewee job knowledge.

A Pearson Correlation coefficient between interviewee job knowledge scores and interviewee job experience was computed and tested for significance.

H3b: The relationship between situational interview scores and intelligence test scores is moderated by interviewee job knowledge.

A multiple regression of situational score on intelligence and job knowledge was performed. The incremental R^2 for the interaction effect beyond the main effects was tested for significance.

Results

The results of this investigation are presented in six sections. First, preliminary analyses concerning order effects are presented. Second, the reliability estimates for independent and dependent measures that were utilized or developed for this study are reviewed, and inter-item correlations within measures are indicated. Third, the results of factor analyses that were performed on the interview scales are presented. Fourth, descriptive statistics in terms of relationships between the experimental variables are reviewed. Fifth, the two sets of analyses conducted to test the experimental hypotheses are described. In the sixth and last section, the results of these analyses are presented in the context of supporting or not supporting the experimental hypotheses.

Preliminary Analyses of Order Effects

All subjects were assessed with four measures: two intelligence tests - the Wonderlic Personnel Test (WPT) and the Group Embedded Figures Test (GEFT) - and two interviews - structured and situational (see Appendix for interview materials). The order of these measures was counterbalanced, such that interviewees either received both intelligence tests first or both interviews first, and received either the WPT or the GEFT first and structured or situational interview first. Overall, there were 16

different order conditions with seven or eight subjects in each.

An analysis of variance was conducted to test each measure for significant order effects resulting from the being administered first, second, third, or fourth in the testing sequence (see Table 2). Overall, no significant differences were found for any measure as a function of the order in which it was administered. It thus appears that the testing sequence did not significantly influence subjects' performance on the WPT ($F(109,3)=.8064$, ns), the GEFT ($F(109,3)=.0797$, ns), the situational interview ($F(109,3)=1.482$, ns) or the structured interview ($F(109,3)=1.963$, ns).

Reliability and Inter-item Correlations Within Scales

Both inter-rater and internal consistency estimates of reliability were computed for the situational and structured interviews. These data are presented in Table 3 for the situational interview and in Table 4 for the structured interview.

The degree of agreement among interviewers was assessed with repeated independent ratings of a "hypothetical" candidate. In this procedure, the author first selected a response to each interview question from the pool of job expert responses gathered during the interview development phase of this project. A random sample of 25 interviewers

Table 2

Analyses of Order Effects

Variable	Presentation Order			
	1st	2nd	3rd	4th
Wonderlic Personnel Test (WPT)				
<u>n</u>	29	27	29	28
<u>M</u>	26.482	26.963	24.793	25.893
<u>SD</u>	5.138	6.484	6.201	4.040
Group Embedded Figures Test (GEFT)				
<u>n</u>	27	29	28	29
<u>M</u>	12.000	12.552	12.214	12.035
<u>SD</u>	5.765	4.485	4.856	3.905
Situational Interview				
<u>n</u>	30	27	27	29
<u>M</u>	3.216	3.519	3.265	3.477
<u>SD</u>	.588	.759	.617	.665
Structured Interview				
<u>n</u>	27	30	29	27
<u>M</u>	3.667	3.464	3.574	3.503
<u>SD</u>	.357	.345	.431	.433

Note. n = sample size of group. M = mean. SD = standard deviation. Presentation order indicates whether the measure was administered first, second, third or fourth in the overall sequence of four measures. Wonderlic Personnel Test scores are based on a 50-point scale, 1 = low, 50 = high. Group Embedded Figures Test are based on an 18-point scale, 1 = low, 18 = high. Interview measures are based on a 5-point scale, 1 = low, 5 = high.

Table 3

Intercorrelations among Situational Interview Items

	1	2	3	4	5	6
1. Reasonable Expectations	---	.125	.280**	.142	.300**	.120
2. Humility		---	.197*	-.010	.005	.241*
3. Thinks Twice Before Acting			---	.135	.229*	.283**
4. Fairness				---	.139	.112
5. Knows Personal Limits					---	.200*
6. Openness to Student Dissent						---

Cronbach's alpha: .51 Kendall (W): .76

Note. N = 113.

* $p < .05$, ** $p < .01$

Table 4

Intercorrelations Among Structured Interview Items

	<u>J1</u>	<u>J2</u>	<u>J3</u>	<u>J4</u>	<u>J5</u>	<u>J6</u>	<u>W1</u>	<u>W2</u>	<u>W3</u>	<u>W4</u>	<u>W5</u>	<u>W6</u>	
<u>J1</u>		.193*	.054	.138	.055	.046	-.144	-.127	.091	.152	-.024	-.085	
<u>J2</u>			-.072	-.018	-.022	.168	-.166	.102	.080	.032	-.026	.135	
<u>J3</u>				.155	-.214*	.120	.049	.158	-.011	.088	-.005	.009	
<u>J4</u>					.135	-.011	.131	-.007	.247**	.115	-.069	.180	
<u>J5</u>						.119	.020	-.137	-.078	-.014	.112	-.082	
<u>J6</u>							.070	-.082	-.188*	-.243**	-.113	-.163	
<u>W1</u>								.123	-.184	-.023	-.099	.006	
<u>W2</u>									.142	.003	-.091	.369**	
<u>W3</u>										.182	-.109	.289**	
<u>W4</u>											-.081	.049	
<u>W5</u>												.012	
<u>W6</u>													--

Cronbach's Alpha:

Job Knowledge: .25
 Willingness Scale: .27
 Overall Interview: .24

Kendall W:

.84
 .88
 .86

Note: J1 through J6 = job knowledge items 1 through 6; W1 through W6 = willingness items 1 through 6. N = 113 for inter-item correlations and Cronbach's alpha; N = 25 for Kendall W.

* p < .05 ** p < .01

were then asked to interview the author in addition to interviewing subjects. In each case, the author provided the same set of responses to the interview questions for scoring.

The interrater agreement among these 25 raters for the same set of responses was computed with the Kendall coefficient of concordance (W). This statistic, which ranges from 0 to 1, provided an index of average interrater agreement across the six items in the situational interview and across the 12 items in the structured interview. The degree of interrater agreement for the situational interview and for the structured interview was found to be .76 and .86, respectively. Within the structured interview, interrater agreement across the six job knowledge items was .84 and interrater agreement across the six willingness items was .88. Overall, interrater agreement for all scales is high, which reflects equivalent interpretation of responses and consistent use of the scoring anchors.

Internal consistency estimates for each scale were computed with Cronbach's coefficient alpha and are presented in Table 3 for the situational interview and in Table 4 for the structured interview. This statistic, ranging from 0 to 1, was based upon the total sample of 113 subjects and represents the degree to which all items within a particular scale are interrelated. The internal consistency was found

to be .51 for the situational interview and .24 for the structured interview. Within the structured interview, coefficient alpha was found to be .25 for the job knowledge items and .27 for the willingness items. Cronbach's alpha for all scales are very low, which indicates low inter-item correlations within each scale.

The interitem correlations among situational interview items are presented in Table 3, and the interitem correlations among structured interview items are presented in Table 4. These matrices indicate that significant correspondences between items within each interview scale are sparse, as suggested by the low internal consistency estimates.

Campion et al. (1988) report low internal consistency for their highly structured interview ($r=.72$), and attribute the low reliability to heterogeneity among the 20 items in their interview. Interitem heterogeneity will inevitably result when multiple criteria are assessed by a single instrument, as in the case of an interview that is tailored to assess many areas of knowledge, skills and abilities associated with a particular job. Each of the interviews developed for this investigation was designed to address six critical areas of Graduate Teaching Assistant job content, thus the attenuated reliability due to heterogeneous items

referred to by Campion et al. (1988) is likely to have occurred here, as well.

The heterogeneity of scale items and their reduced internal consistency prompted further efforts to improve the quality and experimental viability of interview scales. Principle axis-varimax factor analyses were conducted to extract the largest homogenous component from each scale. In this way, a more internally consistent and unidimensional version of each interview scale was obtained for testing hypotheses.

Factor analysis was determined to be more appropriate and compatible with the objectives of this investigation than other methods for improving scale reliability. For example, Nunnally (1978) discourages statistically correcting for attenuation when the reliability coefficient is based upon a sample of less than 300 subjects, because the corrected estimate can sometimes exceed 1.00. In addition, correcting the unreliability of a predictor is discouraged since "the issue is how well the test actually works rather than how it would work if it were perfectly reliable" (Nunnally, 1978, p.238). Although interviews were treated as criteria in these analyses, the implications of the results apply to interview predictive validity. Lastly, the unidimensionality of the scales produced by the factor analyses enabled hypotheses to be tested with interview

scales that incorporate either a narrowly-focused or a comprehensive scope of job content.

In sum, factor analysis enabled internally consistent, unidimensional forms of the situational and structured interviews to be constructed in a statistically and conceptually appropriate manner. The results of these factor analyses are presented in the next section.

Factor Analyses Results

Correcting for the attenuated reliability due to heterogeneous scale content was pursued with a factor analysis of each interview scale. A principle axis approach was used to extract as many homogenous components as possible, and varimax rotation grouped items and their loadings into an orthogonal factor structure. The details of the factor analysis are presented in Table 5, and include the number of factors extracted from each interview scale, the variance accounted for by each factor, all item loadings and associated factor interpretation.

Within each scale, the items that were found to load most highly onto the most substantial factor were considered to be the largest homogenous subset of items within the particular scale. Thus, items 1, 3 and 5 were identified as the largest homogenous subset within the situational interview and willingness items 2, 3, and 6 were identified

Table 5

Factor Analyses of Situational and Structured Interviews

<u>Interview Items</u>	<u>Factors</u>		<u>Communality</u>		
Situational Interview Items					
	I.	II.			
1. Reasonable Expectations	.476	.167	.255		
2. Humility	-.015	.567	.321		
3. Thinks Twice	.419	.388	.318		
4. Fairness	.270	.045	.075		
5. Knows Personal Limits	.582	.043	.340		
6. Openness to Dissent	.252	.423	.241		
Eigenvalue	1.16	.39			
R ² (%)	19.4%	6.9%			
Structured Interview Items					
	I.	II.	III.	IV.	
Job Knowledge					
1. Reasonable Expectations	-.049	-.012	.038	.208	.217
2. Humility	.129	.118	-.092	-.058	.288
3. Thinks Twice	.049	.086	.805	.118	.676
4. Fairness	.075	-.110	.071	.707	.539
5. Knows Personal Limits	-.136	.175	-.295	.257	.207
6. Openness to Dissent	-.131	.603	.029	-.012	.684
Willingness					
1. Reasonable Expectations	.130	.231	.003	.176	.332
2. Humility	.705	-.018	.141	-.104	.550
3. Thinks Twice	.624	-.611	-.020	.166	.588
4. Fairness	-.021	-.011	.074	.117	.192
5. Knows Personal Limits	-.067	.029	-.011	.006	.104
6. Openness to Dissent	.561	-.195	-.008	.171	.402
Eigenvalue	1.33	.995	.876	.667	
R ² (%)	11.1%	8.3%	7.3%	5.6%	

Note. Boldface factor loadings indicate the factor upon which each item loaded the highest. Only factor loadings greater than .30 were recognized as being significantly related to the respective factor.

as the largest homogenous subset of items within the structured interview.

Interpretation of factor meaning by this author was based upon the content of the associated items. The homogenous situational scale meaning was thus derived from synthesizing the associated item contents of "reasonable expectations" (item 1), "thinks twice before acting" (item 3), and "knows personal limitations" (item 5). After considering the relative weights of these items as well, the factor seemed to represent "awareness of boundaries" in terms of oneself, student abilities and justifiable conduct.

The primary structured factor meaning was derived from willingness items that address "humility" (item 2), "Thinks twice before acting" (item 3), and "openness to student dissent" (item 6). After considering the relative weights of these items, the structured interview factor was interpreted as "self-analysis" with regard to one's job performance, perceptions and attitudes.

The secondary situational factor consists of two of the three areas of content in the structured interview's primary factor, "self-analysis." This close approximation of the primary structured factor suggests that the secondary situational factor could reasonably be interpreted as representing "self-analysis" as well. The rest of the structured interview factors contain one job knowledge item

each, which hardly represents a factor in each case but more an acknowledgement of the unique contribution by each of these items to structured interview performance.

A reduced, 3-item version of the job knowledge scale was extracted from the overall, 6-item job knowledge scale. This component was not derived via a factor analysis technique, however, but was constructed specifically to match the contents of the homogenous situational scale items. It was then used in conjunction with the other homogenous scales for hypothesis testing. The actual wording of job knowledge items that correspond with each situational items in terms of similar job content can be found in Table 1, presented previously. The "reduced job knowledge scale" described is identified in this manner throughout this document.

The next section presents descriptive information for the heterogeneous and homogeneous versions of each interview scale. The relationships between the scale versions and with the other experimental measures are briefly reviewed.

Descriptive Statistics

Descriptive data for the homogeneous interview scales, heterogeneous interview scales, intelligence measures and job experience measure are presented in Table 6. Information pertaining to means, standard deviations, internal consistency and correlations between scales is

Table 6

Means, Standard Deviations, Reliabilities and Intercorrelations Among Measures

Measure	# Items	Mean	SD	1	2	3	4	5	6	7	8	9	10
Intelligence													
1. WPT	50	26.02	5.53	(.94)	.45**	.22*	.16	.02	.23*	.23*	.25**	-.10	.26**
2. GEFT	18	12.20	4.72		(.90)	.21*	.11	.01	.16	.18*	.06	.00	.16
Heterogeneous													
3. Situational	6	3.19	.57			(.51)	.10	-.01	.26*	.77**	.22*	.03	.28**
4. Structured	12	3.59	.50				(.24)	.80**	.65**	.04	.47**	.61**	.34**
5. Job Knowledge	6	3.09	.73					(.25)	.06	-.10	.05	.74**	.23*
6. Willingness	6	4.09	.60						(.27)	.20*	.72**	.06	.26**
Homogenous/Reduced													
7. Situational	3	3.38	.73							(.40)	.20*	.02*	.22*
8. Structured	3	3.93	.75								(.52)	-.02	.23*
9. Job Knowledge	3	3.53	.76									(.27)	.19*
10. Experience (mos.)													--

Note: N = 113. Cronbach's alpha reliability is on the diagonal; off diagonal values are Pearson r correlation coefficients between measures. SD = standard deviation; WPT = Wonderlic Personnel Test; GEFT = Group Embedded Figure Test. Scale values are averages of 5-point Likert type scales, 1 = low, 5 = high.

* p < .05

** p < .01

indicated in order to illustrate the relationships between the interview scale versions and the other experimental measures.

Table 6 shows that, as predicted, the reliability of the structured interview was improved dramatically by the use a homogenous factor. In contrast, the homogeneous situational interview achieved reliability that was comparable to the total scale reliability. This latter result may be a statistical artifact due to a smaller pool of homogenous situational items being captured by the factor analysis as compared with assessment of the complete scale.

Significant relationships between the Wonderlic Personnel Test and the Group Embedded Figures Test ($r=.45$, $p<.01$) and between the Wonderlic Personnel Test and job experience ($r=.25$, $p<.01$) were obtained. In the former case, the shared variance is theorized to be a fluid cognitive component, and in the latter case a crystallized cognitive component is theorized. The lack of shared variance between the GEFT and job experience provides divergent information to support this interpretation.

Overview of Analyses Conducted

Two complete sets of analyses

Two sets of analyses were performed to test the hypotheses. In the first case, the full set of items for each scale were utilized in order to control for content

differences across measures. In other words, exactly the same areas of job content are addressed by the six items within the situational interview, the six items in the job knowledge scale and the six items in the willingness scale (the latter two scales comprising the structured interview). The results of this first set of analyses are presented below, in the "Heterogeneous Analyses" results section.

In the second set of analyses, the primary factor within each interview scale was extracted and utilized. The factor score approach was employed in order to overcome attenuated reliability due to heterogeneous scale content, and to achieve unidimensional versions of interview performance. These results are presented in the "Homogenous Analyses" results below. The other independent measures utilized (intelligence test scores and job experience) are the same in both sets of analyses.

Statistics Used

To recapitulate, several simple and multiple regression analyses were performed to test the seven hypotheses set forth in this investigation. These analyses were performed twice; once with the complete heterogeneous version of each scale and once with internally homogenous components of each scale.

The first two predictions, Hypotheses 1a and 1b, regarding the relationship between intelligence and

performance in each interview were assessed with simple regression analyses.

Hypothesis 1c addressed the relative contribution of intelligence to each type of interview performance. To test this potential difference, the variance explained by intelligence in each interview context was compared.

The second set of hypotheses, 2a and 2b, identified job experience as a possible moderator in the intelligence-interview performance relationship. This interaction effect was assessed with a series of multiple regression analyses for each type of interview performance.

The third set of hypotheses explored the possibility that job knowledge serves as a surrogate for job experience in moderating the intelligence-interview performance relationship. A Pearson correlation coefficient between job knowledge and job experience was computed to test for the significant positive relationship proposed in Hypothesis 3a.

The moderating effect of job knowledge predicted in Hypothesis 3b was assessed with sequential multiple regression analyses, in the same manner previously used to test the moderating effect of job experience.

Results of Analyses

Heterogenous Analyses

As stated previously, these analyses utilized the full set of items for each scale to control for content

differences across measures. The same six areas of job content were addressed by the six items within the situational interview, and by the six job knowledge and six willingness items within the structured interview. The results of this first set of analyses are summarized in Table 7.

Hypothesis 1a: Test of an intelligence component within the heterogeneous situational interview. It was predicted that intelligence test scores would be positively related to heterogeneous situational interview performance.

This hypothesis was supported by the results of the simple regression of situational interview scores onto intelligence test scores. Intelligence was found to account for 5% of situational interview performance ($R^2=.050$; $F(1,111) = 5.843, p<.05$).

Hypothesis 1b: Test of an intelligence component within the heterogeneous structured interview. It was predicted that intelligence test scores would be positively related to heterogeneous structured interview performance.

This prediction was not supported by the results of the simple regression of structured interview scores onto intelligence test scores ($R^2=.024$; $F(1,111) = 2.772, ns$).

Hypothesis 1c: Comparison of intelligence component magnitude between the interviews. It was predicted that a stronger relationship would exist between intelligence and

Table 7

Tests of Hypotheses with Heterogenous Measures

<u>H#</u>	<u>Interview</u>	<u>Predictor</u>	<u>R²</u>	<u>F</u>	<u>p</u>	<u>R²Δ</u>	<u>t</u>	<u>p</u>
1a.	Situational	IQ	.050	5.843	.02	--	--	--
1b.	Structured	IQ	.024	2.772	ns	--	--	--
2a.	Situational	IQ	.050	5.843	.05	--	--	--
		EXP	.105	6.429	.005	.055	2.591	.01
		IQ*EXP	.124	5.150	.005	.019	1.588	ns
2b.	Structured	IQ	.024	2.772	ns	--	--	--
		EXP	.117	7.302	.005	.093	3.401	.001
		IQ*EXP	.123	5.092	.005	.006	.843	ns
3b.	Situational	IQ	.050	5.843	.02	--	--	--
		JKN	.050	2.920	ns	.000	.215	ns
		IQ*JKN	.051	1.995	ns	.001	.276	ns

Note. N = 113. H# = Hypothesis number; IQ = Wonderlic Personnel Test; EXP = job experience in months; JKN = job knowledge score.

heterogeneous situational interview scores than between intelligence and heterogeneous structured interview scores.

The former relationship was found to be significant ($R^2 = .050$, $p < .05$) while the latter relationship was not ($R^2 = .024$, ns) in the first set of analyses. These results, when combined, support the prediction that situational interview performance is more closely related to intelligence than is structured interview performance.

Hypothesis 2a: Test of job experience effect on the intelligence-heterogeneous situational interview relationship. The relationship between heterogeneous situational interview scores and intelligence test scores was predicted to be moderated by interviewee job experience. Using hierarchical multiple regression, intelligence was entered first, job experience second and the interaction of the two variables was entered last. The unique effect of job experience combined with intelligence could thus be assessed, above and beyond the effect of each variable separately.

The hypothesis was not supported. The interaction of these two variables, when added to the model, did not add unique variance beyond the main effects ($R^2\Delta = .019$; $t(113) = 1.588$, ns). The main effect of job experience, however, was found to add 5% of unique heterogeneous situational interview performance in the second step of the

analysis ($R^2\Delta=.054$; $t(113)=2.591$, $p<.01$), beyond the 5% already accounted for by intelligence.

Hypothesis 2b: Test of job experience effect on the intelligence-heterogeneous structured interview relationship. The relationship between heterogeneous structured interview scores and intelligence test scores was predicted to be moderated by interviewee job experience. This analysis was performed in the same manner as the test of Hypothesis 2a, except for using heterogeneous structured interview performance as the dependent variable.

As in Hypothesis 2a, the prediction was not supported. When added to the main effects, the interaction of the two variables did not account for a significant portion of variance ($R^2\Delta=.006$; $t(113)=.843$, ns). Independently, job experience was found to add 9% of unique structured interview performance variance ($R^2\Delta=.093$; $t(113)= 3.401$, $p<.001$) beyond the 2% of variance accounted for by intelligence.

Hypothesis 3a: Test of relationship between job knowledge and job experience. It was hypothesized that job knowledge shares a significant proportion of variance with job experience, since job experience is theorized to be the means by which job knowledge is acquired. This relationship lays the groundwork for Hypothesis 3b, which tests for a job knowledge moderating effect on the intelligence-interview

performance relationship that is parallel to the job experience moderating effect.

This prediction was supported. Job experience and job knowledge were found to correlate significantly ($r=.2307$, $p<.05$), indicating a significantly large component of shared variance (see Table 6).

Hypothesis 3b: Test of job knowledge effect on the intelligence-heterogeneous situational interview relationship. It was predicted that the relationship between heterogeneous situational interview scores and intelligence test scores would be moderated by interviewee job knowledge. This prediction expands upon the logic of Hypothesis 2a and Hypothesis 3a: If job experience is found to be similar to job knowledge, does job knowledge also moderate the intelligence-situational interview performance relationship? In this analysis, the interaction of job knowledge and intelligence was added to the independent effects of these two variables in explaining heterogeneous situational interview performance.

This prediction was not supported. The interaction of job knowledge and intelligence did not add significantly beyond the main effects of intelligence and job knowledge on heterogeneous situational interview performance ($R^2\Delta=.001$; $t(113)=.276$, ns). The independent effect of job knowledge

also did not add significantly beyond the 5% accounted for by intelligence ($R^2\Delta=.000$; $t(113)=.215$, ns).

Homogenous Analyses

In this set of analyses, hypotheses were tested with the homogenous, primary factor within each interview scale. As described previously, the factor score approach was employed in order to overcome the attenuated scale reliability arising from heterogeneous scale content. The results of these analyses are summarized in Table 8.

Hypothesis 1a: Test of an intelligence component within the situational interview. It was predicted that intelligence test scores would be positively related to homogenous situational performance.

This hypothesis was supported. Intelligence was found to account for 5.1% of homogenous situational interview performance ($R^2=.051$; $F(1,111) = 6.075$, $p<.05$).

Hypothesis 1b: Test of an intelligence component within the structured interview. It was predicted that intelligence test scores would be positively related to homogenous structured performance.

This prediction was supported. Intelligence was found to account for 6.2% of structured performance ($R^2=.062$; $F(1,111)= 7.373$, $p<.01$).

Table 8

Tests of Hypotheses with Homogeneous Measures

<u>H#</u>	<u>Interview</u>	<u>Predictor</u>	<u>R²</u>	<u>F</u>	<u>p</u>	<u>R²Δ</u>	<u>t</u>	<u>p</u>
1a.	Situational	IQ	.051	6.075	.05	--	--	--
1b.	Structured	IQ	.062	7.373	.01	--	--	--
2a.	Situational	IQ	.051	6.075	.05	--	--	--
		EXP	.080	4.797	.01	.028	1.841	ns
		IQ*EXP	.133	5.560	.005	.052	2.570	.05
2b.	Structured	IQ	.062	7.373	.01	--	--	--
		EXP	.090	5.471	.005	.028	1.846	ns
		IQ*EXP	.104	4.253	.01	.014	1.321	ns
3b.	Situational	IQ	.051	6.075	.05	--	--	--
		JKN	.052	3.010	ns	.000	.001	ns
		IQ*JKN	.060	2.294	ns	.007	.932	ns

Note. N = 113. H# = Hypothesis number; IQ = Wonderlic Personnel Test; EXP = job experience in months; JKN = reduced job knowledge scale, matched to situational scale content.

Hypothesis 1c: Comparison of intelligence component magnitude between the interviews. It was predicted that a stronger relationship would exist between intelligence and homogenous situational scores than between intelligence and homogenous structured scores.

Both relationships were found to be significant, but contrary to the prediction, the percentage of variance explained by intelligence was relatively larger in homogenous structured scores ($R^2=.062$, $p<.01$) than in homogenous situational scores ($R^2=.051$, $p<.05$). Thus, the hypothesis was not supported.

Hypothesis 2a: Test of job experience as a moderator of the intelligence-situational interview relationship. The relationship between homogenous situational interview scores and intelligence test scores was predicted to be moderated by interviewee job experience.

The hypothesis was supported. The interaction of job experience and intelligence added 5.2% unique variance in homogenous situational scores beyond the main effects ($R^2\Delta=.052$; $t(113)=2.570$, $p<.05$). The main effect of job experience did not add insignificantly to homogenous situational performance ($R^2\Delta=.028$; $t(113)=1.841$, ns). Thus, the prediction that job experience interacts with intelligence to predict homogenous situational performance was supported.

Hypothesis 2b: Test of job experience effect on the intelligence-structured interview relationship. Job experience was predicted to moderate the relationship between homogenous structured scores and intelligence. This hypothesis was not supported. Independently, job experience added 2.8% unique homogenous structured interview variance ($R^2\Delta=.028$; $t(113)= 1.846$, ns) beyond the 6.2% explained by intelligence. The interaction of these variables did not add unique variance beyond these main effects ($R^2\Delta=.014$; $t(113)=1.321$, ns).

Hypothesis 3a: Test of relationship between job knowledge and job experience. Job knowledge was predicted to share variance with job experience, as described previously. Again, this relationship establishes a premise for pursuing Hypothesis 3b, in which a moderating effect by job knowledge, parallel to the job experience moderating effect, is investigated.

This prediction was supported. Job experience and job knowledge were found to correlate significantly ($r=.194$, $p<.05$), indicating a significant portion of shared variance.

Hypothesis 3b: Test of job knowledge as a moderator of the intelligence-situational interview relationship.

It was predicted that job knowledge moderates the relationship between homogenous situational performance and intelligence.

This prediction was not supported. The interaction of the two variables did not add significantly to the model ($R^2\Delta=.007$; $t(113)=.932$, ns). Similarly, the independent effect of job knowledge was not found to explain additional variance ($R^2\Delta=.000$; $t(113)=.001$, ns) beyond the 5.1% accounted for by intelligence. Thus, neither job knowledge alone nor in combination with intelligence were found to be useful in predicting homogenous situational interview performance.

Discussion

Discussion of the methodology, results and implications of this investigation are presented in several sections. First, the purpose and theoretical significance of the study is presented. Secondly, the measures developed and utilized are briefly described and critiqued. Third, the results of each set of analyses are summarized and combined. Fourth, the evidence and its theoretical implications are discussed, and areas for future research are identified. Concluding remarks comprise the fifth and last section.

Purpose of the Study

The purpose of this investigation was to empirically test the contention that situational interview validity for predicting job performance stems from its measurement of cognitive ability, as suggested by Hunter and Hirsh (1987). These authors speculate that the situational interview, more than any other type of structured interview, measures the same highly valid constructs that are measured by cognitive ability tests. Hunter & Hirsh theorize that the situational interview functions as an "orally administered intelligence test" (p.330) which promotes a high degree of accuracy for predicting job performance.

This investigation also addressed the possibility that the situational interview functions differently for different populations of interviewees. Hunter & Hirsh

(1987) suggest that for entry-level applicants, the situational interview functions as an intelligence test but that for incumbent employees it functions as a job knowledge test, as well.

In the context of this study, incumbent and entry-level Graduate Teaching Assistants were interviewed with a situational and a structured interview format. Their performances were compared to intelligence test performances, both alone and in combination with their degree of job experience and job knowledge. This study assessed the viability of Hunter and Hirsh's (1987) assertions that the situational interview is unique in its relationship to intelligence and that job experience and job knowledge moderate this relationship.

Experimental Measures

In this section, the merits and drawbacks of the heterogeneous and homogenous forms of situational and structured interviews that were used in this study are reviewed. In addition, the two forms of the job knowledge scale and associated merits and drawbacks are described. Lastly, the intelligence and experience measures are briefly evaluated.

Interview Measures

Interview scales were developed with the intention of measuring qualitative differences between interview formats

with content and degree of structure held constant. The situational interview is often referred to as a very highly structured format (Campion et al., 1988; Latham & Saari, 1984; Wiesner & Cronshaw, 1988). It has been found that increased structure in the interview correlates positively with interview reliability and validity (Arvey & Campion, 1982; Hoffcutt & Woehr, 1992). Thus, a common explanation for the superior validity of the situational interview is its supposed greater degree of standardization in its administration, scoring and interpretation.

In order to test the role of intelligence as an explanation for high situational validity, this potential source of variability between formats was removed by comparably standardizing all forms of interviews in the study. All interviews were based upon a job analysis and were reviewed and revised by job experts, all formats had prescored response anchors, and all interviewers were trained. This procedure resulted in a uniformly high degree of structure for both situational and structured interviews. The formation of homogenous and heterogeneous measures for both situational and structured interview performance did not compromise the degree of structure; each was necessary to achieve an additional unique goal.

Heterogeneous measures of interview performance. The major advantage conferred by the use of heterogeneous

measures of interview performance was standardization of content across all interviews. Identical areas of job content were incorporated into each set of interview items to control for potential performance variability due to differences in the topics covered. Each set of six items within the situational, job knowledge and willingness scales addressed the same six areas of job competency that were deemed to be critically important for job success by the job experts involved in this project. The job competency areas addressed were: reasonable expectations, humility, thinking twice before acting, fairness, awareness of personal limitations and openness to student dissent.

Few studies exist that compare the different types of interview performances within the same experimental protocol; even fewer control for content differences. This investigation represents one of the few studies in which item content was held constant across multiple interview formats.

The drawback of the heterogeneous measure, however, was that standardization of content was achieved at the expense of scale reliability. Though the content areas tapped in each interview were identical, the diversity of content covered attenuated the internal consistency within each scale.

Homogenous measures of interview performance. In order to increase the internal reliability of the situational and structured interview performance, homogenous measures were derived via factor analysis.

The factor analysis technique reduced the situational scale from six heterogeneous items to three items loading homogeneously onto one factor. This factor is interpreted as "awareness of boundaries," in terms of oneself, student abilities and professional conduct. Although unidimensionality was achieved by only using the items that loaded onto the first factor, the 50% reduction in the number of scale items apparently offset any gains in reliability.

The primary factor within the structured interview was found to consist of three of the original six willingness items, and none of the original job knowledge items. This factor was interpreted as willingness to "self-analyze" one's performance, attitudes and perceptions. Despite the reduction in the number of scale items, the internal consistency of the homogenous structured scale was greatly improved by extraction of the homogenous factor.

The homogenous interview scales were designed to improve the experimental viability of interview scales by improving their internal consistency. In the process, however, control of scale content was sacrificed. Thus,

analyses that utilize the homogenous scales must be interpreted in light of the different factor meanings that each scale represents.

Job knowledge measures. Job knowledge was assessed with a heterogeneous and a "reduced" scale. As stated previously, the heterogeneous scale was comprised of six items which assessed the same six content areas assessed by both the situational and structured willingness items. The result was standardized content across measures, but a low degree of internal consistency. Interrater agreement, in contrast, was acceptable.

Because job knowledge was hypothesized to moderate the relationship between intelligence and situational interview performance, a second version of the job knowledge scale was constructed to match the same content areas as the homogenous situational interview scale. The results of analyses that utilize the homogenous situational interview and the matching reduced job knowledge scale thus do not have to be interpreted in light of different factor meanings.

Intelligence and Experience Measures

The Wonderlic Personnel Test (WPT) and Group Embedded Figures Test (GEFT) were used to assess fluid and crystallized cognitive ability. Both measures have acceptable reliability, but only the WPT has established

construct validity as a measure of intelligence.

Job experience, in months, was measured by self-report on the questionnaire administered at the end of the experimental session. There is no reliability or validity associated with it, but there is no reason to believe that people would falsify their job tenure.

Summary of results

The following section summarizes the results obtained when hypotheses were tested with the heterogeneous and homogenous forms of each interview performance measure.

Results for Relationship Between Intelligence and Interview Performance.

Situational interview performances using homogeneous and heterogeneous measures were both significantly related to intelligence test performance. However, only homogenous measures of structured interview performance were related to intelligence test performance. All relationships were positive, such that higher intelligence test scores corresponded with higher interview performance scores.

In addition, homogeneous structured interview performance was more closely related to intelligence than homogeneous situational interview performance.

Results for Job Experience as a Moderator of the Intelligence-Interview Performance Relationship.

As predicted, job experience was found to moderate the relationship between homogenous situational performance and intelligence, such that increased job experience was accompanied by a decrease in the effect of intelligence on situational interview performance.

No other interview performance-intelligence relationship was moderated to a significant degree by job experience.

Results for the Job Knowledge Relationship With Job Experience and Job Knowledge as a Moderator of the Intelligence-Interview Performance Relationship.

As expected, both the heterogeneous and reduced job knowledge measures were significantly positively related to job experience. Those with more job experience tended to score higher on job knowledge items. Contrary to the prediction, however, job knowledge was not found to moderate the relationship between situational interview performances and intelligence for either the heterogeneous or homogenous measures.

Unexpected findings

Job experience had a significant independent effect on the heterogeneous measures of both situational and structured interview performance, such that increased job

experience was associated with higher interview scores. In contrast, job experience was not significantly related to the homogeneous measures of either situational or structured interview performance.

Interpretations and Implications of Results

Results from these analyses offer some useful information for attempting to clarify the construct validity of situational and structured interview formats. In this section, the broader issues addressed in this investigation are stated, pertinent evidence is presented and interpreted, and the implications of the research findings in terms of the broader issues are drawn.

Does the situational interview measure intelligence? Does it measure intelligence better than other types of interviews?

Evidence. There were significant correlations between both situational interview measures and intelligence, indicating that a cognitive component is present within situational interview performance. A cognitive component was revealed in structured interview performance as well, after the homogenous component of willingness items was extracted with factor analysis.

The shared variance between situational performance and intelligence is theorized to be the "fluid" reasoning component of cognitive ability primarily, and the

"crystallized" general knowledge component of cognitive ability peripherally. Fluid intelligence is defined as "the ability to dissemble relevant information in complex situations" (Linn & Kyllonen, 1981, p.269) which lends itself to complex situational interview performance. In this context, the interviewee utilizes fluid abilities to pick out important aspects of the scenario, retrieve relevant knowledge from general knowledge, reason through the dimensions of the problem, and inductively determine the best solution.

The lack of relationship between the heterogeneous structured scale and intelligence and the strong relationship between homogenous structured performance and intelligence were unexpected results, and warrant some explanation and speculation.

First, the relationship between heterogeneous structured interview items and intelligence was predicated on the utilization of "crystallized" cognitive abilities to answer structured questions, primarily those of the job knowledge variety. It is possible that the theory is correct and that the job knowledge items within the overall structured scale are simply not powerful enough to illustrate the cognitive component. The reliabilities associated with each job knowledge scale were very low, and this sets a very low ceiling on the degree to which the

scales can be related to anything. If job knowledge scale within the heterogeneous structured interview had possessed higher reliability, a relationship between this interview performance and intelligence might have been obtained.

On the other hand, job knowledge was found to be related to job experience, which supports the notion that experience adds to one's knowledge base. It is the link between this knowledge base and the knowledge component of intelligence that is missing.

The typology associated with cognitive scripts and schemata may help to clarify this discordance. Abelson (1981) proposes three stages in the evolution of knowledge which range from very specific, elemental bits of knowledge to very general, abstract principles and rules. The former type of knowledge is referred to as "episodic scripts" and the latter "metascripts." The two types of knowledge, when measured, may not have enough in common to be significantly related due to the limited scope of the episodic scripts in relation to the extreme generality of the metascript.

According to the comprehensive model of intelligence offered in this investigation, crystallized intelligence is described as "general," while job knowledge items are specific to particular tasks and activities. Job knowledge thus appears to conform to episodic knowledge, while crystallized intelligence appears most similar to metascript

knowledge. Job experience, to be discussed in greater detail presently, seems to fall somewhere in the middle of this hierarchy, overlapping both knowledge domains. In any case, the "gradient of knowledge" model suggested by Abelson (1981) illustrates how two measures of crystallized information might be conceptually related but may not correlate due to different levels of specificity.

The other half of the structured interview-intelligence relationship is the strong correspondence between the homogenous measure's willingness items and intelligence. This has no immediate explanation in terms of either the fluid/crystallized intelligence dichotomy or the hierarchy of specificity suggested previously. As a purely speculative interpretation of these findings, one's willingness to act may be a product of confidence in one's abilities. In other words, a person might be more willing to take appropriate action if one has confidence in one's aptitude from past successes in problem-solving and reasoning. Willingness items could actually be a measure of self-efficacy, which can promote taking action (Bandura, 1977; Lawler, 1973). Thus the link between intelligence and willingness items may be mediated by this emotional and motivational state of self-efficacy, rather than due to a direct linkage with fluid or crystallized cognitive abilities.

To summarize, the situational interview appears to be tied primarily to the measurement of fluid intelligence. The lack of correspondence between the heterogeneous structured scale and intelligence was tied to either low job knowledge scale reliability or to potentially disparate levels of knowledge specificity inherent in the two measures. Lastly, the motivational construct of self-efficacy was theorized to mediate the strong correspondence between willingness item performance and intelligence.

Implications. All of the evidence combined suggests that Hunter & Hirsh are premature in their suggestion that situational items have a stronger relationship with intelligence than other types of structured interview items. It is true that with equivalent standardization and content in the overall situational and structured interview, the situational items were found to associate more strongly with intelligence. However, when comparable reliabilities for the two instruments were obtained via factor analysis, willingness items within the structured interview were found to associate more strongly with intelligence.

It is possible that if job knowledge items had possessed higher reliability or had represented broader domains of knowledge, these items would have corresponded to intelligence as well. At this point, it can only be said that situational items appear to measure interviewee

intelligence, but other types of items can perform the same function and sometimes do a better job of it.

Does Experience Moderate the Relationships Between Interviewee Intelligence and Performance in Each Interview?

Evidence. Job experience was theorized to moderate the influence of intelligence on interview performance such that increased job experience would reduce the relationship between the two measures. In the case where homogenous situational items were extracted from the overall scale, this interaction effect was observed. The pattern of results indicates that the relationship between intelligence and situational interview performance is stronger when job experience is low rather than when it is high. In theoretical terms, more job experience is thought to reduce the use of fluid cognitive abilities by providing readily-available answers to the situational questions that are posed, so that the interviewee does not have to engage reasoning abilities to solve them.

This moderating effect was obtained with regard to the homogenous situational interview performance, but not with regard to the heterogeneous situational interview performance. According to the theory set forth in this study, job experience reduces reliance upon fluid abilities because the questions cease to be difficult or require problem-solving abilities. It would appear from the data

that job experience enabled interviewees to answer questions more readily only when situations associated with the primary factor, "awareness of boundaries," were addressed. When situational items associated with the secondary "self-analysis" interview factor were included, fluid abilities were required regardless of job experience level.

In developing these interviews, situational interview items were obtained from job experts with the understanding that proposed scenarios should be representative of typical job demands. The actual relevance of the situations to the job, however, was not explicitly measured. It is possible that the content validity of the two sets of items could vary, and result in the observed inconsistency in the moderating effect by job experience on the situational interview-intelligence relationship.

This notion is expanded upon in greater detail. As stated previously, the homogenous situational interview, containing only the primary "awareness of boundaries" items, was moderated by job experience while the heterogeneous situational interview, containing both the primary "awareness of boundaries" items and the secondary "self-analysis" items, was not moderated by job experience. If the "awareness of boundaries" items are more closely related to actual job experiences than are "self-analysis" items, job experience might have provided specific knowledge

readily applicable to the primary factor items, precluding the need for extensive problem-solving and reasoning efforts. In contrast, job experience might have provided only general, abstract knowledge for solving the less relevant "self-analytic" items since these situations had not been directly experienced. Such general information would not preclude the need for fluid reasoning abilities. In sum, job experience might be more relevant to certain scenarios as opposed to others, which would reduce fluid reasoning efforts only in those cases as opposed to all cases.

In terms of Abelson's cognitive structure, it was noted earlier that job experience might represent the middle ground between highly specific and vastly generalized knowledge. Job experience fits the middle stage of this evolution of knowledge in which similar bits of information gradually come to be grouped together into knowledge clusters, or "categorical scripts." Job experience, from this perspective, could represent the mechanism by which specific "episodic" situational items are grouped into "categorical" factors, and from there are generalized into the crystallized intelligence "metascripts." In this process model of knowledge, it is conceivable that job experience might contribute the episodic script to match a situational question in some cases, and only a general

categorical script for a situational question in other cases. The former condition would reduce reasoning efforts, while the latter would still require careful thought and consideration.

This interpretation, derived from the evidence at hand, potentially qualifies the job experience moderating effect: experience will moderate the intelligence-situational interview performance when the situations addressed in the interview conform to the interviewee's experiences. When job experience is less directly applicable in terms of context-specific scripts, it will only contribute to situational performance rather than moderate its relationship with intelligence.

A moderating effect by job experience was not present in heterogeneous or homogenous structured interview relationships with intelligence. With regard to the heterogeneous structured interview, the job knowledge and willingness items within this measure were not found to be very internally consistent. The low reliability could have attenuated a job experience moderating effect if it were to exist. At the same time, job experience had a substantial independent effect on heterogeneous structured performance, which suggests that the interview scale was not completely incapable of validity. Two potential explanations for the lack of a moderating effect are thus dubious reliability and

a lack of influence by general crystallized and fluid cognitive ability on this particular type of interview performance.

The relationship between homogenous structured interview performance and intelligence also was not moderated by job experience. This lack of effect could be due to the unique nature of willingness items previously described. If performance on willingness items is due to confidence in one's aptitude and represents self-confidence and self-efficacy, more or less experience on the job would not logically be expected to moderate this relationship. From this perspective, self-efficacy is derived from stable attitudes regarding one's general abilities which job experience would not necessarily change. Job experience could conceivably contribute independently to one's willingness to act, since past execution of the tasks increases one's confidence for performing them again in the future (Vroom, 1964).

It thus seems possible that one's willingness to perform certain actions could be derived from behavioral evidence that is both general (confidence in one's aptitude) and specific (past success in the activities). This perspective conforms to the concept of expectancy in which instrumentality and self-confidence combine to enhance one's motivation to pursue a particular goal (Pinder, 1991).

This line of reasoning suggests that both intelligence and experience could add significantly to the prediction of on-the-job willingness, but would not be expected to interact in any appreciable manner. As it turned out, intelligence contributed significantly to performance on the willingness items, while neither the main effect of job experience nor the interaction was found to be significant. Here again, the possibility is raised that the job experience effect depends upon whether it is general or specific with regard to question content. It is possible that the lack of job experience effects could be due to the irrelevance of the interviewees' job experience in relation to the particular willingness questions that were asked in the interview. Thus the effect of past success in a particular context may not contribute to the confidence or willingness one feels for performing a different sort of task, beyond the stable level of self-confidence that one possesses in general.

In sum, the combined heterogeneous and homogenous structured interview evidence reveals a pattern of results in terms of factors that is somewhat consistent with the combined situational factor data. Job experience seems to provide general, categorical information for willingness and situational items associated with "self-analysis" and specific episodic information for the job knowledge items

and for the situational items associated with "awareness of boundaries." General information in the heterogeneous situational interview was useful but did not preclude fluid reasoning, while the specific information in the homogeneous situational interview did have this effect. Specific knowledge in the heterogeneous structured interview was useful for answering job knowledge questions, while the general knowledge in the homogeneous structured interview was not useful for determining one's willingness to perform specific actions.

Implications. The evidence in this area of investigation generally support Hunter and Hirsh's suggestion that the situational interview functions differently for different populations of interviewees. These authors suggest that the situational interview functions as an orally administered intelligence test for all interviewees, but to varying degrees depending upon the extent of one's job experience.

The data also suggest that this moderating relationship might be restricted to conditions where the scenarios presented have actually been experienced by the interviewee, as opposed to situations that have occurred to other instructors or that are wholly unknown. To be specific, job experience might have supplied directly applicable answers for correspondent situational questions,

with the effect of reducing fluid problem-solving efforts. Answers to correspondent job knowledge items might have been facilitated in the same fashion, resulting in a job experience main effect for these items. In contrast, job experience might have contributed only categorical knowledge for solving indirectly related situational questions, thus adding a job experience main effect to the main effect of intelligence for these items. Lastly, job experience could have contributed general and irrelevant knowledge for determining one's willingness to perform an indirectly related job behavior, resulting in a lack of effect on this performance measure.

In sum, the different levels of specificity in interview questions and variations in the degree of job experience relevance is theorized to influence the presence and absence of independent and moderating job experience effects on the interview performance-intelligence relationship.

Does Level of Job Knowledge Correspond to Level of Job Experience? Does Job Knowledge Moderate the Relationships Between Intelligence and Performance in Each Interview?

Evidence. The heterogeneous and reduced job knowledge scales were found to be significantly positively related to job experience. These findings were interpreted as evidence that increased job experience leads to increased job

knowledge, as a function of one's opportunity to acquire job-related information on the job. The correspondence between these measures establishes a difference in job knowledge level for those individuals with and without job experience. This difference provides the logically necessary condition for testing Hunter and Hirsh's notion that the situational interview picks up on an experienced interviewee's job knowledge as well as their intelligence, and that more job knowledge will reduce reliance upon cognitive abilities for answering situational interview questions.

Job knowledge was not found to contribute to situational interview performance whether added alone or in combination with intelligence. As suggested previously, the moderating effect by heterogeneous and homogenous job knowledge on the intelligence-situational interview relationships might have been visible if more job knowledge items of higher reliability had been developed and included in the measures. The internal consistency estimates of the scales were low, and this reduces the power of either measure to pick up on any significant effect that might exist. Inclusion of more job knowledge items measuring the same content areas and with greater reliability might have produced more conclusive results.

On the other hand, it is possible that the general versus specific phenomenon regarding job experience might be relevant to job knowledge as well. It was proposed that job experience might only interact with intelligence when the situational questions posed match the situations that have actually been experienced. Job experience would thus be expected to moderate intelligence-interview performance when it is specific, or episodic, and only contribute to interview performance when it is general, or categorical. Likewise, job knowledge might only interact with intelligence when the same specific content areas are addressed by the job knowledge and situational questions being compared

This possibility was assessed somewhat by the analysis utilizing the homogenous situational scale and the reduced job knowledge scale constructed to match these "awareness of boundaries" items. Job knowledge performance still failed to relate significantly to situational performance or to moderate the relationship with intelligence. This content-specific hypothesis thus appears to be refuted by the lack of a moderating effect in this matched-content condition.

Upon closer inspection, however, the "match" between these items was determined to be on the factor level rather than on the incident level. This difference in the level of specificity suggests that content may not have been matched

closely enough. Therefore, a context-specific qualification of the job knowledge moderating effect remains possible until job knowledge and situational questions that address exactly the same job experiences are devised and analyzed.

Implications. Although the obtained results do not support Hunter and Hirsh's theory that job knowledge as well as intelligence are measured by the situational interview, a more reliable measure of job knowledge might have indicated such a relationship.

The other possibility is that the knowledge measured by each situational and job knowledge item is specific to that item, such that item performance does not generalize. Job experience could provide information to match or approximate each context-specific question, resulting in an overlap with each scale, but the two scales may not overlap with each other. Thus a link could exist between the general and specific levels of knowledge, while different sets of specific knowledge may not be directly related.

As such, the lack of support for the moderating effect of job knowledge may be due to two possibilities. First, the low reliability of the job knowledge scales would reduce the capacity to measure anything, either independently or in combination with other variables. Low reliability was certainly a factor in this study. Alternatively, variation in situational and job knowledge item contents could have

reduced the overlap of knowledge measured by the two scales such that the two performances were qualitatively distinct and unique. It thus remains to be seen whether a more reliable job knowledge scale that matches the specific contexts and experiences addressed by a situational scale would result in either an independent effect on interview performance or a moderating effect on the situational-intelligence relationship, or perhaps both.

Summary of Evidence and Implications

The results and implications of this investigation provide partial support for Hunter and Hirsh's theory of an intelligence component within the situational interview. Under conditions of high standardization and equivalent interview content, situational items were found to measure interviewee intelligence more accurately than did job knowledge items, but less accurately than did willingness items. Job experience was found to moderate this situational interview-intelligence relationship, but only some of the time. Job knowledge was not found to be predictive of situational interview performance, but was not disconfirmed as the mechanism by which job experience moderation occurs due to its questionable reliability and specificity.

Variations in knowledge specificity and correspondence were theorized to influence the predicted relationships

between interview performance, intelligence, and job experience. In addition, the motivational construct of self-efficacy was theorized to play a role in determining interviewee willingness.

Limitations and Future Directions

Many researchers including Campion et al. (1988), Robertson et al. (1989), and Weekley & Gier (1987) endorse the existence of a cognitive component within the situational interview, and this study provides empirical validation for this belief. The significance of this study, however, is governed by limitations related to its scope, methodology and measures.

Scope

This study was designed to test interview performances for a particular qualitative difference under conditions that control for differences in standardization. Thus interview development, administration and scoring were highly standardized for all formats to facilitate the interpretation of performance differences as being due to the presence or absence of a cognitive component or moderator thereof.

Under these highly structured conditions, situational items were found to correspond with interviewee intelligence as predicted, but the equally reliable willingness items showed an even stronger effect in this manner. It thus

appears that situational items are not unique in their relationship with intelligence. This finding suggests that other qualitative differences between the situational and willingness formats must exist in order to explain the differences in structured interview validity found in the literature.

The most important limitation in terms of the scope of this study is that only one potential qualitative difference between interview formats, i.e. cognitive ability, was operationalized and tested. Another viable qualitative difference that has been proposed is the role of "intentions" in predicting future performance (Latham et al., 1980). The situational interview's superior validity for performance was attributed by Latham et al. (1980) to "the theoretical proposition (Locke, 1968) that intentions correlate with behavior" (p.426). These authors suggest that the situational interview elicits an interviewee's intended future actions, which then leads the individual to follow through on their publically-stated convictions.

It is conceivable that publically-stated willingness could also elicit this follow-through effect. Hence, the competing qualitative distinction of "intentionality" should be investigated in future research if the relative weights of cognitive abilities and intentions within a particular interview format are to be assessed and understood.

Methodology and measures

Clearly, the major weakness of this study is the low internal consistency associated with several scales, particularly the job knowledge scales. In the structured interview literature, internal consistency is rarely assessed. In one case where it was assessed and reported, it was low (Campion et al. 1988) but no recommendations for improving or controlling for it were provided. This study is the only example known to this author where heterogeneous interviews were factor analyzed and homogeneous components were regressed onto the variables of interest. This statistical approach was successful for improving the structured interview reliability, but was less successful with regard to the job knowledge scales.

In the future, research should be directed toward improving the reliability of interview measures in order to produce a more internally consistent interview that is still externally valid with regard to job content. In the extreme sense, the two goals seem to be mutually exclusive since heterogeneous job content attenuates internal consistency, and the homogeneity associated with internal consistency results in a deficient job content sample.

A possible compromise between these competing objectives could be to develop multiple items that measure slightly fewer job content areas. The external validity of

the measure would be improved by increasing the number of ways that each content area is addressed and measured, and the internal consistency would be improved by the increased length of the test as well as the increased capacity for discarding low quality items. Fewer content areas of greater similarity could, likewise, increase the internal consistency of the measure without severely compromising its content validity.

This twofold strategy could help to facilitate both external validity and internal consistency within the same measure of interview performance. However, these benefits are offset by the significant increase in the time and effort required for developing a multitude of items that are content valid and homogeneous. Thus, improved reliability and viability is pursued at additional cost, and must be judged accordingly.

Another improvement on the methodology employed in this study would be to develop more sensitive indices of specificity and generality with regard to job experience, job knowledge and item content. One could gather a greater number and diversity of situational items that address critical incidents occurring across multiple variations and classifications of the job. At the same time, a more sensitive measure of job experience could be employed in order to gauge whether the individual's experience would be

considered general or specific in relation to each situational item content. Job expert opinion and consensus would be a crucial component of such research, as well as careful analysis of the requisite abilities and tasks of each job classification.

Conclusions

This investigation tested Hunter and Hirsh's (1987) theory that the situational interview measures interviewee intelligence, and that it performs this function to a greater degree as compared with other types of employment interviews. The situational interview was found to contain a cognitive component that was just slightly smaller than the cognitive component found within the structured willingness items. These findings suggest that interviewee intelligence is measured almost equally well by both of these formats, thus the enhanced validity of the situational interview beyond other structured formats must be attributed to some other qualitative distinction, such as the role of intentions (Latham et al., 1980).

The situational interview was found to measure different qualities for different interviewees. Specifically, the relationship of interview performance with intelligence was found to be different for experienced versus inexperienced interviewees. Hunter and Hirsh (1987) suggest that the difference is due to the measurement of job

knowledge as well as intelligence for incumbent interviewees, rather than only intelligence for nonincumbent interviewees. This effect was not obtained in this investigation, but the insignificant result was attributed to low reliability within the measure and specification differences rather than inaccuracy in the theory.

In conclusion, the situational interview appears to function as an orally administered intelligence test, to different degrees for different populations of interviewees. Organizations tend to interview as a matter of course, and many administer cognitive ability tests to job applicants as well since intelligence is a highly valid predictor of performance (Hunter and Hunter, 1984). As a fairly reliable measure of intelligence for entry-level applicants, the situational interview could be used in place of the cognitive ability test and thus decrease redundancy in the selection process. The situational interview may not always perform this function better than other interview formats, but is a viable option for measuring applicant aptitude in a manner that permits managerial involvement in the process.

In terms of future research, Schuler and Funke (1989) point out the dearth of construct validation of the situational, and virtually all other, interview formats. The employment interview is now gaining ground as a viable predictor of performance after being almost universally

regarded as unreliable and useless in organizational selection. Further integration of convergent and divergent validation evidence for different types of employment interviews is needed in order to clarify the nature of this extremely popular and promising organizational tool.

References

- Abelson, R. P. (1981). Psychological status of the script concept. American Psychologist, 36, 715-729.
- Arvey, R. D. & Campion, J. E. (1982). The employment interview: A summary of and review of recent research. Personnel Psychology, 35, 281-322.
- Baker, H. G. & Spier, M. S. (1990). The employment interview: Guaranteed improvement in reliability. Public Personnel Management, 19(1), 85-90.
- Bandura, A. (1977). Self-Efficacy: Toward a unifying theme of behavioral change. Psychological Review, 84, 191-215.
- Burt, C. (1949). The structure of the Mind. In S. Wiseman (Ed.) Intelligence and Ability. Baltimore, MD: Penguin Books, Inc.
- Campion, M. A., Campion, J. E., & Hudson, J. P. (1993). Structured interviewing: A note on incremental validity and alternative question types. Unpublished manuscript, Purdue University.
- Campion, M. A., Pursell, E. D., & Brown, B. K. (1988). Structured interviewing: Raising the psychometric properties of the employment interview. Personnel Psychology, 41, 25-42.

- Cook, J., Whittaker, A. D., Thieme, R. H., Smith, O. R., & Salvendy, G. (1988). Human intelligence models and their implications for expert system structure and research. Behavior and Information Technology, 7(4), 417-430.
- Dunnette, M. D. (1972). Validity study results for jobs relevant to the petroleum refining industry. Washington, DC: American Petroleum Institute.
- Flanagan, J. C. (1954). The critical incident technique. Psychological Bulletin, 51, 327-358
- Ghiselli, E. E. (1966). The validity of a personnel interview. Personnel Psychology, 19, 389-395.
- Goodstein, L. D. (1978). Group Embedded Figures Test. In O. K. Boros (Ed.) The Eighth Mental Measurement Yearbook: Vol. 1. (pp.836-839). Highland Park, NJ: The Gryphon Press.
- Guilford, J. P. (1959). The three faces of intellect. American Psychologist, 14, 469-479.
- Gustafsson, J. (1984). A unifying model for the structure of intellectual abilities. Intelligence, 8, 179-203.
- Harris, M. M. (1989). Reconsidering the employment interview: A review of recent literature and suggestions for future research. Personnel Psychology, 42, 691-726.

Hoffcutt, A. I. & Woehr, D. J. (1992). A meta-analytic examination of the relationship between employment interview validity and the degree of structure.

Paper presented at the eighth annual conference of the Society for Industrial and Organizational Psychology, Montreal, Quebec, Canada.

Hoffman, C. C. (1993). Dissecting the interview: An application of generalizability theory. In D. L. Denning (Chair), Psychometric analysis of the structured interview. Symposium conducted at the eighth annual meeting of the Society for Industrial and Organizational Psychology, San Francisco, CA.

Hunter, J. E. (1989). The Wonderlic personnel test as a predictor of training success and job performance. Northfield, IL: E. F. Wonderlic.

Hunter, J. E., & Hirsh, R. E. (1987). Applications of meta-analysis. In C. L. Cooper & I. T. Robertson (Eds.), International Review of Industrial and Organizational Psychology. Chichester: John Wiley & Sons, Ltd.

Hunter, J. E., & Hunter, R. F. (1984). Validity and utility of alternative predictors of job performance. Psychological Bulletin, 96(1), 72-98.

- Johnson, E. K. (1990). The structured interview: Manipulating the structuring criteria and the effect on validity, reliability and practicality. (Doctoral dissertation, Tulane University) Dissertation Abstracts International, 51, 5622.
- Latham, G. P., & Saari, L. M. (1984). Do people do what they say? Further studies on the situational interview. Journal of Applied Psychology, 69, 569-573.
- Latham, G. P., Saari, L. M., Pursell, E. D., & Campion, M. A. (1980). The situational interview. Journal of Applied Psychology, 65(4), 422-427.
- Latham, G. P., & Wexley, K. N. (1977). Behavioral observation scales for performance appraisal purposes. Personnel Psychology, 30, 255-268.
- Linn, M. C., & Kyllonen, P. (1981). The field dependence-independence construct: some, one, or none? Journal of Educational Psychology, 73, 261-273.
- Locke, E. A. (1968). Toward a theory of task motivation and incentives. Organizational Behavior and Human Performance, 3, 157-189.
- Mayfield, E. C. (1964). The selection interview - A re-evaluation of published research. Personnel Psychology, 17, 239-260.

- McKenna, F. P. (1990). Learning implications of field dependence-independence: Cognitive style versus cognitive ability. Applied Cognitive Psychology, 4, 425-437.
- Motowidlo, S. J., Carter, G. W., Dunnette, M. D., Tippins, N., Werner, S., Burnett, J. R., & Vaughn M. J. (1992). Studies of the structured behavioral interview. Journal of Applied Psychology, 77, 571-587.
- Nunnally, J. M. (1978). Psychometric Theory (Second Ed.). New York: McGraw Hill.
- Pinder, C. C. (1991). Valence-Instrumentality-Expectancy Theory. In Steers, R. M. & Porter, L. W. (Eds.), Motivation and Work Behavior (5th Ed.). New York: McGraw-Hill.
- Pursell, E. D., Campion, M. A., & Gaylord, S. R. (1980). Structured interviewing: Avoiding selection problems. Personnel Journal, 59, 907-912.
- Reilly, R. R., & Chao, G. T. (1982). Validity and fairness of some alternative employee selection procedures. Personnel Psychology, 35, 1-62.
- Robertson, I. T., Gratton, L., & Rout, U. (1990). The validity of situational interviews for administrative jobs. Journal of Organizational Behavior, 11, 69-76.
- Robertson, I. T. & Kandola, R. S. (1982). Work sample tests: Validity, adverse impact and applicant reaction. Journal of Occupational Psychology, 55, 171-183.

- Schmitt, N. (1976). Social and situational determinants of interview decisions: Implications for the employment interview. Personnel Psychology, 29, 79-101.
- Schuler, H., & Funke, U. (1989). The interview as a multimodal procedure. In R. W. Eder & G. R. Ferris (Eds), The employment interview: Theory, research and practice. Newbury Park, CA: Sage.
- Spearman, C. (1927). The doctrine of two factors. In S. Wiseman (Ed.), Intelligence and Ability. Baltimore, MD: Penguin Books, Inc.
- Sternberg, R. J., Conway, B. E., Ketron, J. L. & Bernstein, M. (1981). People's conceptions of intelligence. Journal of Personality and Social Psychology, 41, 37-55.
- Ulrich, L. & Trumbo, D. (1965). The selection interview since 1949. Psychological Bulletin, 63(2), 100-116.
- Vernon, P. E. (1950). The hierarchy of ability. In S. Wiseman (Ed.), Intelligence and Ability. Baltimore, MD: Penguin Books, Inc.
- Vroom, V. H. (1964). Work and Motivation. New York: Wiley.
- Wagner, R. (1949). The employment interview: A critical review. Personnel Psychology, 2, 17-46.
- Wechsler, D. (1974). Manual for the Wechsler Intelligence Test Scale for Children - Revised. New York: Psychological Corporation.

- Weekley, J. A. & Gier, J. A. (1987). Reliability and validity of the situational interview for a sales position. Journal of Applied Psychology, 72(3), 484-487.
- Wiesner, W. H. & Cronshaw, S. F. (1988). A meta-analytic investigation of the impact of interview format and degree of structure on the validity of the employment interview. Journal of Occupational Psychology, 61, 275-290.
- Wright, P. M., Lichtenfels, P. A., & Pursell, E. D. (1989). The structured interview: Additional studies and a meta-analysis. Journal of Occupational Psychology, 62, 191-199.
- Wonderlic, E.F. (1983). Wonderlic personnel test manual. Northfield, IL: E.F. Wonderlic.

Appendix

Situational Interview

Time 1 2 3 4

Your # is: _____

Interviewee #: _____

1. Your students do not seem to be learning the material as thoroughly as you would like. In fact, most of them earned below average grades on their first assignment. What do you do?

5

- Review the assignment in class, pointing out common errors.
- Review study habits in class.
- Give more background information and examples.
- Evaluate if the material you are teaching, your teaching methods, and your grading plan are reasonable.
- Encourage students to meet with you during office hours.

4

Incomplete "5" answer.

3

- Tell the students that their grades are not very good, and that they need to study more.

2

- Ignore the situation and move on to new material.
- OR--
- Assume that they are below average students.

1

- Chew the students out, tell them to "get with it."
- Continue to assign low grades.

"Reasonable Expectations"

SCORE: _____

2. You are teaching a statistics class, and the formula that you are working with on the board is not producing the correct answer. There are still twenty minutes left in the class period. How do you handle the situation?

5

- ___ Attempt to solve it quickly:
- ___ Admit there is a problem.
- ___ Ask the students to help you find the error in each step of the calculation.
- ___ If a "quick fix" does not work:
- ___ Move on to something else.
- ___ Tell the class that you will figure out the problem after class and start the next class with it.

4

Incomplete "5" answer:
Missing "step-by-step" class input.

3

- ___ Only the second part of "5" (you will solve the problem later and start the next class with it)
- OR--
- ___ Get input from the class for the rest of the class time, attempting to find the error.

2

- ___ Skip the problem completely. Go on to another problem.

1

- ___ Spend the remaining class time examining the problem, on your own, until you find the error.

"Humility"

SCORE: _____

3. During a test, you think that you see a student copying from her neighbor. You are not 100% sure that she was cheating, but neither are you completely sure that she was not cheating. What do you do for the remaining time?

5

- ___ Establish with complete certainty that cheating has occurred before accusing anybody.
- ___ Tell the entire class to keep their eyes on their own papers.
- ___ Watch the student for further evidence of cheating:
- ___ If you see cheating, tell her to see you after class.
- ___ If you do not see cheating, drop your suspicions.
- ___ Work out new testing methods to decrease or eliminate cheating opportunities. (ex: different test forms)

4

Incomplete "5" answer.

3

- ___ Watch her in order to gather further evidence of cheating behavior.
- OR--
- ___ Follow supervisor's policy concerning cheating.

2

- ___ Stand behind her for the remaining time, keeping an eye on her.
- ___ Do not mention your suspicions to her or to the class.

1

- ___ Confront the student immediately, accuse her of cheating.
- OR--
- ___ Do nothing at all.

"Thinks twice before acting"

SCORE: _____

4. A student challenges a grade that he has received for an oral presentation on the grounds that it is subjective and clearly unwarranted. He adds that unless he gets a better grade, he will not be able to graduate. What do you do?

5

- ___ Clarify that the issue is the grade, not graduation.
- ___ Explain the grading criteria, pointing out where he made mistakes and where he performed well.
- ___ Give an example of an "A" answer.
- ___ Explain formal grade appeal procedures.

4

Incomplete "5" answer.

3

- ___ Explain that it is subjective, but that you do the best that you can under these circumstances.

2

- ___ Tell him to talk to your supervisor.

1

- ___ You let him do extra credit work to bring up his grade, even though this is not in the syllabus.

--OR--

- ___ Change the grade, out of sympathy for him.

"Fairness"

SCORE: _____

5. A student talks to you about his anxiety concerning his performance in your class. You suggest ways for him to reduce stress and anxiety, how to study better, etc. After a few more talks with the student, he reveals that he has often considered suicide as a solution to his problems. The student asks you to not mention this to anyone. How do you react?

5

- Tell him that you cannot keep it confidential.
 Refer him to campus counseling or an outside professional.
 Notify your supervisor immediately to contact appropriate people.
 If supervisor does nothing, you contact a trained practitioner yourself for advice.

4

Incomplete "5" answer.

3

- Contact higher authorities immediately.

2

- Talk to a friend, get their opinion of how serious it seems, get suggestions for what to do.
 Make sure the matter remains confidential.

1

- Ignore it.
 Counsel the student yourself.

--OR--

"Recognizing personal limits"

SCORE: _____

6. In your discussion section, a student complains about the method used to teach the class (using TAs and/or TV lectures). Several other students appear to agree with his opinion. How do you react?

5

- Listen to students' concerns.
- Explain why TAs and TVs are used. (the most practical option)
- Review alternatives (other courses that use different methods.
- Encourage them to switch if others are more appealing.
- Direct them to supervisor if concerns linger.

4

Incomplete "5" answer.

3

- Send the complainers to your supervisor after class.

2

- Ignore their concerns since you can't do anything about them.

1

- Open it up for class discussion (no time limit)
- Agree that it's hard to learn in this way, but that's life.

"Openness to student dissent"

SCORE: _____

Structured Interview

Time 1 2 3 4

Your # is: _____

Interviewee #: _____

1. Describe where a TA sets performance standards, given what students should learn and what they are able to learn?

- 5 - Set the standards high enough to be difficult, but are within reach with work.
- 4 - Set the standards at a moderately high level, within students' current abilities.
- 3 - Set the standards according to what students can do.
- 2 - Set different standards depending on the task.
- 1 - Set the standards according to what the TA thinks should be done.

2. In general, how willing are you to admit, in public, to a mistake that you have made?

- 5 - Very willing.
- 4 - Quite willing.
- 3 - Moderately willing.
- 2 - Somewhat unwilling.
- 1 - Not willing at all.

3. What does a TA do if he/she suspects that a student has plagiarized?

- 5 - Establish that plagiarism has actually occurred before accusing anyone. Get the student to produce his/her sources, and get a second opinion.
- 4 - Incomplete 5.
- 3 - Follow established policy on cheating.
- 2 - Refer the case to your supervisor
- OR--
- Forget about it.
- 1 - Confront the student and accuse him/her of it.

4. With regard to people you have supervised, how consistently do you follow the policies, guidelines and standards of conduct that you have set up?

- 5 - Always.
- 4 - Usually.
- 3 - Sometimes.
- 2 - Rarely.
- 1 - Never.

5. What should "Joe TA" do when "Bob TA", who has helped out Joe in the past, asks him to cover his class that day because an emergency situation? Joe desperately needs to study for a very major test that day, but there is no one else around to ask to cover Bob's class.

- 5 - Decline, but offer alternative solutions like suggesting that Bob talk to the supervisor.
- 4 - Decline.
- 3 - Offer to find a film to show the class.
- 2 - Offer to find someone else to cover.
- 1 - Teach the class.

6. How willing are you to have your authority challenged by others?

- 5 - Very willing.
- 4 - Quite willing.
- 3 - Moderately willing.
- 2 - Somewhat unwilling.
- 1 - Not willing at all.

7. How willing would you be to set the performance expectations for your class at a level that is lower than the expectations you set for yourself?

- 5 - Very willing.
- 4 - Quite willing.
- 3 - Moderately willing.
- 2 - Somewhat unwilling.
- 1 - Not willing at all.

8. What does a TA do when the attendance rate in class gradually drops off?

- 5 - Asks students, peers and supervisor for suggestions for ways to improve the quality and value of classtime, and then implements these changes.
- 4 - Thinks of and tries out different teaching approaches without asking anyone else for advice.
- 3 - Discusses with students the importance of class attendance; does not try anything different.
- 2 - Changes the course requirements to include class attendance.
- 1 - Ignores it.

9. How likely are you to consider all reasonable alternatives before making a decision?

- 5 - Always.
- 4 - Usually.
- 3 - Sometimes.
- 2 - Rarely.
- 1 - Never.

10. What does a TA do to insure that students are graded fairly?

- 5 - Uses consistent and unbiased grading standards and makes sure that students know and understand these standards.
- 4 - Incomplete 5.
- 3 - Uses the supervisor's grading policy.
- 2 - Changes the grade if the student complains about unfairness.
- 1 - Uses a "gut-feeling" approach to assign the grade that the student deserves.

11. How likely are you to take on unmanageable amounts of responsibility?

- 5 - Always.
- 4 - Usually.
- 3 - Sometimes.
- 2 - Rarely.
- 1 - Never.

12. What does a TA do when a student asks, in class, why there is so much assigned reading?

- 5 - Opens it up for a SHORT class discussion about why the reading is necessary. Emphasizes that reading a lot is part of a college education.
- 4 - Opens the topic up for class discussion, for unlimited time.
- 3 - Ask the student to meet with you after class to discuss the concern.
- 2 - Ignore the remark and continue to teach.
- 1 - Double the reading assignment.

DEMOGRAPHIC SURVEY

Subject I.D. # _____

1. Student status: (circle one) Undergraduate Graduate
2. Major: _____
3. Year in school: (circle one) Frsh Sph Jnr Snr 1 2 3 4 5
4. Age: _____ yrs.
5. Sex: M F

6. Teaching Experience:Graduates:

- a. How long have you taught at UNO? _____ yrs _____ mos.
 at another university? _____ yrs _____ mos.

- b. What type of teaching do/did you do?
 (indicate months/yrs)

Discussion sections	_____ yrs/mos.
Your own class	_____
Tutoring	_____
Laboratory	_____
Administrative	_____
Research Assistant	_____
Counseling	_____
other: _____	_____

