PERSONNEL PSYCHOLOGY
2002, 55

BEYOND EMPLOYMENT INTERVIEW VALIDITY: A COMPREHENSIVE NARRATIVE REVIEW OF RECENT RESEARCH AND TRENDS OVER TIME

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The last major narrative review of the employment interview was published over 10 years ago. Since then, 278 studies have examined numerous aspects of the interview. This review summarizes and critically examines this recent research. A framework is developed that partitions research into social, cognitive, individual difference, measurement, and outcome factors. This organizing framework allows an examination of trends over time and facilitates identification of gaps in the empirical literature. Within each of these major factors, each research topic is identified, defined, and reviewed. For each topic, the results of the previous 3 narrative reviews are briefly summarized, recent research is reviewed and critiqued, and directions for future research are identified.

The employment interview continues to be one of the most popular selection and recruiting devices in organizations. Thus, it is not surprising that researchers have paid so much attention to this important topic. However, over 10 years have elapsed since the last comprehensive narrative review of the employment interview (Harris, 1989). In this time, 278 studies have been published, which is a greater volume of work than the three previous reviews. For example, there were 25 studies per year over the last 10 years, compared to 14 per year in Harris (1989), 17 per year

The authors gratefully acknowledge the contributions of the following individuals who made helpful comments on earlier versions of this manuscript: Winfred E. Arthur, Jr., Richard D. Arvey, James E. Campion, Robert W. Eder, Malcolm Finney, Michael M. Harris, Allen I. Huffcutt, Gary P. Latham, Craig J. Russell, Michael A. McDaniel, Neal W. Schmitt, and Patrick M. Wright.

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TABLE 1

Interview Studies by Topic for Each Review Period

	2002		1989		1982		1976		Total	
	N	%	*N*	%	*N*	%	*N*	%	*N*	%
Social Factors										
Interviewer-applicant similarity	11	3.86	8	7.92	0	0.00	9	14.75	28	5.54
Applicant fit	8	2.81	0	0.00	0	0.00	0	0.00	8	1.58
Verbal/nonverbal behavior	36	12.63	4	3.96	9	15.52	1	1.64	50	9.90
Impression management	20	7.02	1	0.99	2	3.45	0	0.00	23	4.55
Information exchange	2	0.70	3	2.97	0	0.00	0	0.00	5	0.99
Subtotal	77	27.02	16	15.84	11	18.97	10	16.39	114	22.57
Cognitive Factors										
Decision making	7	2.46	7	6.93	9	15.52	17	27.87	40	7.92
Pre-interview impressions	15	5.26	3	2.97	0	0.00	1	1.64	19	3.76
Confirmatory bias	4	1.40	4	3.96	0	0.00	0	0.00	8	1.58
Applicant & job information	5	1.75	0	0.00	2	3.45	12	19.67	19	3.76
Subtotal	31	10.88	14	13.86	11	18.97	30	49.18	86	17.03
Individual Difference Factors										
Applicant Characteristics										
Appearance	11	3.86	8	7.92	2	3.45	2	3.28	23	4.55
Demographics	11	3.86	13	12.87	8	13.79	1	1.64	33	6.53
Disabilities	15	5.26	1	0.99	3	5.17	0	0.00	19	3.76
Training	16	5.61	9	8.91	4	6.90	2	3.28	31	6.14
Personality	26	9.12	2	1.98	2	3.45	0	0.00	30	5.94
Interviewer Characteristics										
Training and experience	11	3.86	3	2.97	5	8.62	1	1.64	20	3.96
Recruiter behavior	15	5.26	10	9.90	3	5.17	1	1.64	29	5.74
Stereotypes and expectancies	10	3.51	1	0.99	1	1.72	9	14.75	21	4.16
Other	3	1.05	2	1.98	1	1.72	0	0.00	6	1.19
Subtotal	118	41.40	49	48.51	29	50.00	16	26.23	212	41.98
Measures										
Constructs measured	18	6.32	0	0.00	1	1.72	1	1.64	20	3.96
Stimulus materials/sample type	7	2.46	3	2.97	6	10.34	1	1.64	17	3.37
Differential interviewer validity	5	1.75	16	15.84	0	0.00	1	1.64	22	4.36
Subtotal	30	10.53	19	18.81	7	12.07	3	4.92	59	11.68
Outcomes										
Applicant reactions	23	8.07	1	0.99	0	0.00	2	3.28	26	5.15
Interview goals/purpose	3	1.05	1	0.99	0	0.00	0	0.00	4	0.79
Legal compliance issues	3	1.05	1	0.99	0	0.00	0	0.00	4	0.79
Subtotal	29	10.18	3	2.97	0	0.00	2	3.28	34	6.73
Total Topics in Each Review	285	100	101	100	58	100	61	100	505	100
Total articles in each review	278		97		102		61		538	

Note: *N* = number of studies containing the topic (several studies are listed under multiple topics)

in Arvey and Campion (1982), and 9 per year in Schmitt (1976). This suggests an increased research interest in the employment interview.

In addition, there have been several recent meta-analyses of the reliability and validity of the interview (Conway, Jako, & Goodman, 1995; Huffcutt & Arthur, 1994; Huffcutt, Roth, & McDaniel, 1996; Huffcutt & Woehr, 1999; Jelf, 1999; Latham & Sue-Chan, 1999; Marchese & Muchinsky, 1993; McDaniel, Whetzel, Schmidt, & Maurer, 1994; Wiesner & Cronshaw, 1988). The present article goes beyond these meta-analytic summaries of reliability and validity.

Rather than provide an estimate of an effect size between global measures (e.g., between interview scores and job performance), a narrative review examines the qualitative nuances of the effects. This may include which specific predictors relate to which specific criterion, in what settings, when the effects are not found, and so on. In addition, a narrative review can describe and critique the research methodology of the studies reviewed in greater detail. A narrative review can also describe recommendations for future research, show how the recommendations derive from past research, and highlight the limitations of past research. This narrative review develops a comprehensive, conceptual framework in which the entire range of topics studied in interview research over the past 30 years is examined. This framework classifies the topics, highlights trends over time, and points to gaps in the literature.

Overview and Conceptual Framework

This manuscript reviews empirical research published since the narrative review of Harris (1989). Searches of the following published and unpublished sources were conducted. First, relevant electronic databases were examined. These included *Psychinfo*, *Econlit*, *ABI-Inform* (the most recent 4 years), and *Lexis-Nexis*, searching on such keywords as interview, employment, and selection. Second, the programs and published proceedings of the Annual Conferences of the Society for Industrial and Organizational Psychology and the Academy of Management were searched. Authors were contacted to obtain copies of unpublished manuscripts. Third, unpublished doctoral dissertations were examined though *ProQuest* dissertation abstracts, again searching on keywords such as interview, employment, and selection. In instances where conference papers or dissertations were later published, the published versions were again reviewed. Fourth, *Personnel Psychology*, *Journal of Applied Psychology*, and *Academy of Management Journal* were manually searched from 1988 to present. Fifth, an electronic message was posted on the HRNet electronic mail discussion list requesting copies of unpublished works and works in progress. Finally, the reference lists in all the interview articles, manuscripts, and dissertations identified through the above methods were examined and cross checked against the database

of articles accumulated. A total of 278 articles published since 1989 were identified for review.

Based on a content analysis of all topics in the past and present reviews, a conceptual framework was developed that categorized research into five broad factors (social, cognitive, individual difference, measurement, and outcomes). These factors are not intended to provide a theory but are intended to reflect the distinctions commonly used in other areas of psychology (e.g., Morgeson & Campion, 1997). These factors and the research topics they subsume are shown in Table 1. Two of the authors independently coded studies by type of empirical result reported. The vast majority of studies were coded similarly by both coders. Next, two authors met to resolve discrepancies between their coding. They each discussed their rationale for how they coded the studies. After discussing their differences they agreed upon the best coding for all of the studies. This framework acts as an integrative mechanism by situating previous research in a larger context and providing an organizing framework for the present review. It also enables the summarization of past research and identification of trends over time.

In each of the five sections of the paper (corresponding to the framework in Table 1), the topics are defined and trends over the past three major narrative reviews are noted (Arvey & Campion, 1982; Harris, 1989; Schmitt, 1976). Then, for each topic, recent research is reviewed and critiqued, major findings are summarized, and directions for future research are outlined. Due to length limitations, in-depth review and discussion are devoted to more methodologically sound and rigorous studies. These studies enabled reasonable inferences from the data by using appropriate samples, avoiding common-method variance, and so on. Although not all studies could be described in detail, references to all relevant research were included in the Appendix. This was done to save space, yet be exhaustive. Finally, for each topic, the Appendix provides a brief summary of the findings from pre-1989 studies, a comprehensive list of citations for post-1989 studies, a brief summary of the findings from post-1989 studies, and questions for future research. Where we discuss effect size, we follow Cohen (1977), wherein small, medium, and large effect sizes are represented by bivariate correlations of .10, .30, and .50 or more, respectively. In addition, we considered effects to be inconsistent when they were large or statistically significant in one context or study, but small or not significant in another study.

Social Factors

At a fundamental level, the interview is a social interaction between the interviewer and applicant. As such, a number of scholars have exam-

ined how various social factors can influence interview outcomes. This research is predicated on the notion that individuals act and reside in a social context and this context can influence their behavior and the processes and outcomes of an interview. There has been a large increase in number of studies conducted on these various topics when compared to the three previous reviews, with 77 recent studies compared to a total of 37 studies in the three previous reviews (see Table 1).

Interviewer–Applicant Similarity

Investigations of interviewer–applicant similarity examine how similarity in such things as attitudes, race, and sex might influence interview processes and outcomes. As such, it is not the respective attributes of the interviewer or the applicant that are important, but their similarity in these attributes. Schmitt (1976) concluded that racial and attitudinal similarity was related to higher ratings of applicants, but attitudinal similarity was unrelated to hiring recommendations. Arvey and Campion (1982) suggested that interviewers higher in cognitive complexity were more likely to give higher ratings to applicants who were similar to the interviewer. Harris (1989) reported that interviewer–applicant sex similarity resulted in interviewers asking positive questions, suggesting a confirmatory bias for applicants of the same sex and a disconfirmatory bias for applicants of the opposite sex. Schmitt (1976) reported 9 studies on interviewer–applicant similarity, Arvey and Campion (1982) did not report any, and Harris (1989) reported 8 studies. Eleven studies have been conducted on interviewer–applicant similarity since 1989.

Recent research. Lin, Dobbins, and Farh (1992) found that ratings of Black and Hispanic, but not White, applicants were higher when interview panel members were the same race as the applicant. It is possible, however, that these effects were confounded with differences in applicant qualifications. Nonetheless, the effects were small and were eliminated when mixed race panels were used. Applicant–interviewer age similarity was not related to ratings. Contrary to their expectations, Graves and Powell (1995) found that recruiters viewed applicants who were of the opposite sex more similar to themselves. Perceived similarity was positively related to interpersonal attraction, and these two variables were positively related to subjective qualifications, which was, in turn, positively related to ratings of applicants.

Prewett-Livingston, Field, Veres, and Lewis (1996) found a same-race rating effect for balanced interview panels and a majority-race rating effect for unbalanced panels. It appeared that lone White or Black members of an unbalanced panel identified more with the panel than their own racial group. Howard and Ferris (1996) reported that

interviewer perceptions of applicant attitudinal similarity to interviewer were strongly related to perceived applicant affect and competence. Although they used experienced interviewers and experimental manipulations, the short video clips used may not have captured the social dynamics that occur in actual interviews. Finally, Schmitt, Pulakos, Nason, and Whitney (1996) found that although applicant likability and similarity to interviewer were related to both predictor and criterion constructs, this only had a minimal effect on the relationship between predictor and criterion.

Discussion and future research. Similarity between applicant and interviewer can occur in demographic characteristics and in attitudes. The demographic similarity of interviewers and applicants tends to have small and inconsistent effects on the ratings of applicants. The perception of attitudinal similarity seems to influence ratings of applicant affect and competence, although it does not appear that this affects the validity of interviewer judgments. Given these findings, future research should articulate the underlying psychological mechanisms through which similarity may influence interviewer judgments. For example, social identity theory (Tajfel, 1978) suggests that life events induce adoption of social identification with a group and subsequent behavior consistent with group membership. Interviewers who have a similar group identity as the person being interviewed may rate them more favorably. If measured, similarity in terms of social identity may help clarify the inconsistent findings and lead researchers to investigate how similarity on other dimensions (e.g., empathy, communication style, listening skills) may affect the interview process.

Although interviewers and applicants can easily discern similarity based on demographic factors, attitudinal similarity is less obvious but potentially more important. The perception of attitudinal similarity may increase applicant liking and may influence interviewer ratings and the types of questions that are asked (Graves, 1993). Additional work is needed to understand how interviewers attempt to ascertain attitudinal similarity, what effect the perception of attitudinal similarity has on interviewer and applicant behavior, and the mechanisms through which attitudinal similarity influences interview results.

Applicant Fit

Research that examines issues of applicant "fit" concerns itself with measuring the match between applicant characteristics and the job or organization. Although some aspects of applicant fit research are the same as research conducted under the auspices of interviewer–applicant similarity, there are at least three key differences. First, inter-

viewer–applicant similarity research typically occurs at the individual level of analysis, whereas fit research can occur at higher organizational levels. Second, although both applicant fit and interviewer–applicant similarity research concern themselves with "sameness," applicant fit research extends beyond this to include the notion of complementary fit. Third, each topic arises from and represents distinct research literatures.

Schmitt (1976) suggested that background sociocultural variables may act as indicators that applicants have similar attitudes to those in the organization and this may affect their capacity to "fit in," although no studies on fit were reported in that review. Likewise, Arvey and Campion (1982) and Harris (1989) did not report research on applicant fit. Eight studies have been conducted on this topic since 1989.

Recent research. Rynes and Gerhart (1990) investigated whether interviewers have some firm-specific criteria they are looking for in applicants. They found that within-firm ratings were more highly related than between-firm ratings of the same candidate. Further analyses indicated that firm-specific ratings of fit were associated with applicant interpersonal skills, goal orientation, and prior accomplishments. In a field study of campus interviews, Adkins, Russell, and Werbel (1994) found that similarity of applicant and recruiter values was related to applicant assessment of their value congruence with the organization. From the recruiter's perspective, however, person–organization fit and value congruence were not significantly related, and rating of the applicant's general employability was the only significant predictor of invitations to a second interview. Cable and Judge (1997), however, found that interviewer assessment of applicant fit with organizational values was related to applicant physical attractiveness, interviewer liking of applicant, applicant GPA, and interviewer hiring recommendation.

Discussion and future research. Research on fit has the potential to enhance our understanding of the interview. Research in the area of fit has recognized the distinction between person–job fit and person–organization fit (e.g., Kristof, 1996). There is some evidence that interviewers first attempt to assess applicant values and personality and then assess the match with the job or the organization. Although objective applicant qualifications such as experience and training tend to be better predictors of actual selection decisions, the assessment of fit between the person and the organization may play an incremental role. One unanswered question is whether effect sizes are as substantive as many recruiting practitioners and job candidates appear to think they are. The early evidence suggests that effect sizes are small.

Another unanswered question is whether person–organization fit is a valid predictor of future job performance and if it has any incremental validity compared to other predictors. Likewise, future research should

examine whether fit increases job acceptance rates and reduces turnover because these are two of the purported beneficial outcomes of fit. Another question is whether applicant–interviewer similarity biases the interviewer's ratings of the applicant's fit with the job or organization. Interviewers may define fit as similarity to themselves. Thus, the interviewer may select an applicant similar to the interviewer, but not necessarily one that fits the job or the organization.

Another issue concerns the conceptualization and measurement of fit. Parsons, Cable, and Liden (1999) discuss three methods: profile comparisons, polynomial regression approaches, and subjective interpretations of fit in their review of person–organization fit. Venkatraman (1989) described six possible conceptions of fit in the context of organizational strategy: moderation, mediation, matching, Gestalt, profile deviation, and covariation. Choice of statistical analysis depends on which of these fit concepts is being employed. Exploring the strengths and weaknesses of these alternative conceptualizations and analytical techniques may be a useful direction for future research on fit.

Researchers also need to address whether fit means being similar or complimentary. For instance, individuals may fit because they are exactly the same as all other members of the work group, or they may fit if they provide needed skills and abilities that a work group is lacking. Future research on fit should be careful to draw this distinction.

Much of the research on fit has been done with real jobs for college students. However, there have been relatively few studies on this topic and the measurements of fit and complementariness may be quite complex. Thus, there should be more controlled laboratory studies on fit to support the conclusions of the field studies, and to facilitate the refinement of the measurement of fit.

Verbal and Nonverbal Behavior

As a social interaction, the interview offers the opportunity for different types of verbal and nonverbal behavior. Schmitt (1976) reported that visual cues were often more important than verbal information but a combination of visual and verbal was most important in predicting ratings. Arvey and Campion (1982) reported that nonverbal cues influenced interviewer ratings, but they were less influential than verbal cues. Harris (1989) supported the notion that nonverbal cues affected ratings of applicants, but found some evidence that the impact of nonverbal cues might be influenced by the content of the verbal information provided by the candidate. Schmitt (1976) reported only one study on this topic, Arvey and Campion (1982) reported 9, and Harris (1989)

reported 4 studies. There has been a large increase in interest in this topic, with 36 studies conducted since 1989.

Recent research. Investigating the impact of interviewer nonverbal behavior, Liden, Martin, and Parsons (1993) found that when interviewers exhibited cold nonverbal behavior (e.g., no eye contact or smile), applicant verbal and nonverbal behaviors were rated less favorably. Interestingly, the negative influence on perceptions of applicant interview behavior was greater for applicants with low self-esteem. This effect occurred whether the participants saw only, heard only, or both saw and heard the videotapes. Although this study used students in simulated interviews, it was strengthened by the use of independent observers who rated the reactions of applicants.

Attempting to tease apart the influence of verbal and nonverbal aspects of communication, Motowidlo and Burnett (1995) found that students who received only visual information or who received only aural information in a laboratory setting were able to make valid judgments of future job performance of the interviewee. With a similar methodology, Burnett and Motowidlo (1998) found that physical attractiveness was positively related to a variety of criteria. Those both watching and hearing the videotapes, however, improved predictions of performance compared to those who watched but did not hear the videotapes and those who only read the transcripts. This suggests that both verbal and nonverbal sources convey important job-related information.

To sort out the specific components of verbal and nonverbal behavior, DeGroot and Motowidlo (1999) examined the influence of applicant vocal cues (pitch, pitch variability, speech rate, pauses, and amplitude variability) and visual cues (physical attractiveness, smiling, gaze, hand movement, and body orientation) on both interviewer judgments and performance evaluations. There was a small relationship between both vocal and visual cues exhibited during the interview and evaluations of the interviewees performance during the interview and on the job. Additional analysis suggested that liking, trust, and credibility of the applicant mediated these relationships.

Finally, several studies in this category focused on applicant speech characteristics, such as the use of accents and dialects. One example is the study by Willemyns, Gallois, Callan, and Pittam (1997), who found that applicants tended to modify their accent to match interviewers with a broad Australian accent but not those with a more cultivated English accent.

Discussion and future research. Not surprisingly, this research suggests that both verbal and nonverbal behavior are important signals in the employment interview. The finding that visual-only information may have some validity in predicting performance measures is likely to spur

future research on nonverbal communication. For example, future research should determine whether nonverbal behaviors enhance job performance, or whether interviewers and managers who provide performance ratings simply share the same biases (e.g., in favor of the same nonverbal behaviors). Similarly, perceptions of nonverbal behaviors may be influenced by the physical characteristics (e.g., attractiveness) of the candidates.

Interviewers may use nonverbal behaviors to make attributions about applicants, and the meaning of specific types of nonverbal behavior may depend on situational factors that have not yet been explored. For some jobs, nonverbal behaviors may infer job-related traits such as extraversion or a dynamic presence (e.g., for sales jobs). More research on interviewer interpretation of applicant nonverbal behaviors may facilitate a better understanding of the process by which nonverbal behaviors are used by interviewers in forming judgments about applicants.

The possibility that the interviewer's nonverbal behavior may influence applicant behavior presents another potentially fruitful area for future research. A model of interviewer effectiveness proposed by Graves (1993) suggests that effective interviewers use more positive nonverbal behaviors. The literature reviewed above provides some evidence that applicants respond more favorably to positive interviewer nonverbal behavior, suggesting it may play a role in affecting applicant reactions. Yet, whether interviewer use of positive nonverbal behavior will enhance the validity of the interview remains to be established. In addition, future research might examine whether interviewer nonverbal behavior is constant across applicants, or if interviewers use different nonverbal behavior with different applicants (e.g., perhaps based on their implicit evaluation of the applicant or perceived similarity).

The work reviewed on speech characteristics raises some interesting questions about their potential impact on the employment interview. Applicant speech characteristics may present the interviewer with information cues that the interviewer uses to make either accurate or inaccurate attributions about the applicant. Unlike demographic characteristics, accents and dialects are something that are learned and can be changed by the applicant. Unfortunately, many studies in this area suffered from methodological weaknesses, which raise concerns about the reported findings (e.g., low reliability of measures, single-item measures, common method variance).

The resurgent interest in nonverbal behavior may be due, in part, to the widespread availability of videotape technology as a research tool. This is a mixed blessing. Videotape technology adds a modest amount of realism to laboratory studies and enables the separate examination of verbal and nonverbal cues. On the other hand, videotapes may lack the

physical, emotional, and cognitive fidelity of real interviews. As such, it is uncertain whether these "video-people" studies are only replacing the "paper-people" studies of the past, with the same limited generalizability to real interview settings.

Impression Management

Impression management research examines how applicants attempt to present themselves in a favorable light by engaging in certain behaviors (e.g., self-promotion, ingratiation). Prior reviews of the employment interview literature addressed only a small number of issues in impression management research. Schmitt (1976) referred to some preliminary work on interpersonal perception, although none of the studies could be included in the impression management category. Arvey and Campion (1982) suggested that psychological research in the person-impression literature could provide a useful framework for studies of the employment interview. Harris (1989) recommended that researchers look to social–psychological research in general, and impression management theory in particular (e.g., Baron, 1989) as a framework for studying the employment interview. None of the studies Schmitt (1976) reported could be included in the impression management category, Arvey and Campion (1982) reported 2 studies, and Harris (1989) reported one study. The present review finds a substantial increase in the number of studies on impression management, with 20 studies conducted since1989.

Recent research. In a study that had several methodological strengths, including multiple measurements techniques (questionnaires and coded interview transcripts) and multiple raters (observers, interviewers, and applicants), Stevens and Kristof (1995) found that applicants used more assertive self-promotion behaviors than ingratiation tactics, but structured interview techniques reduced the use of ingratiation tactics. Interviewer perceptions of applicant self-promotion and fit with the organization predicted perceptions of applicant suitability and likelihood of pursuing a job with the organization. In a field study of campus interviews, Stevens (1997) examined applicant use of impression management and pre-interview beliefs. Significant relationships were found between use of other-enhancement tactics and beliefs about positive aspects of the job and the expectancy of receiving a job offer. Other influence tactics (self-promotion and opinion conformity) were unrelated to pre-interview beliefs.

Gilmore and Ferris (1989) studied impression management techniques and applicant credentials. In their experiment, a higher level of impression management was related to higher interview performance ratings and marginally related to hiring decisions and rated qualifica-

tions, whereas applicant credentials were not related to any criterion variable. In another laboratory study, Kacmar, Delery, and Ferris (1992) found that use of self-promotion (compared to other-focused) tactics was related to higher ratings, more job offers, and fewer rejections.

Howard and Ferris (1996) found that self-promotion behaviors were modestly and negatively related to similarity to the interviewer. In addition, trained interviewers who perceived high levels of applicant self-promotion behaviors viewed applicants as less competent. Delery and Kacmar (1998) found that applicant self-esteem, communication apprehension, experience, and organizational tenure were negatively related to applicant use of entitlements (e.g., behavior indicating they felt entitled to the job). Interviewer age and organizational tenure were positively related to applicants enhancing their qualifications. Finally, in McFarland, Ryan, and Kriska (1997), trained coders used audiotapes of actual interviews to rate the extent that applicants used influence tactics. There were modest relationships between coders' ratings of influence tactics and the interviewers' ratings of the applicants' interpersonal ability, information analysis, and a composite interview score.

Discussion and future research. This research suggests that specific types of impression management behaviors, such as self-promotion, may be related to ratings of applicants, typically in a positive direction. However, this research does not conclusively establish whether impression management is influencing interviewer affect or interviewer impressions about job-related traits of the applicant. For example, self-promotion may create bias or it may enhance the communication of job-related credentials. Future research might focus on whether interviewers can be trained to recognize impression management, whether they can still make accurate judgments when impression management occurs, and whether applicants can be successfully trained to use impression management behaviors.

In addition, the studies reviewed found that pre-interview beliefs about the job, similarity to the interviewer, and communication apprehension may be related to applicant use of impression management behaviors. This suggests that certain aspects of the interview context and characterisitics of the applicant or interviewer are related to the use of impression management tactics. Thus, applicant use of impression management may result from something more than an intention to deceive the interviewer. Finally, this research has little to say about whether impression management is a job-related skill. If so, it may be a valid predictor of future job performance and, therefore, justifiably relate to interview ratings. However, to the extent that impression management represents bias, it may be introducing a systematic source of inaccuracy into the interview and may negatively impact interview

validity. Future research should explore which aspects of interview structure reduce the biasing effects of impression management, yet permit applicants to demonstrate job-related self-presentation skills (Stevens & Kristof, 1995).

Information Exchange

Two additional studies have been conducted that fall under the social category but do not fit in any of the existing subcategories. Tullar (1989) studied the type of information that is exchanged in the interview by drawing on Bateson's (1958) theoretical work on relational control, which posits that dyadic communication takes one of three forms: dominance, equivalence, or submission. Graduate students coded applicant behaviors in videotaped campus interviews as reflecting dominance, equivalence, submission, or structuring (an additional category). It was found that successful applicants tended to be more dominant, showed more equivalence, dominated more when the interviewer was submissive, and were more submissive when the interviewer was more dominant. When the interviewer structured, successful applicants structured less. This evidence suggests that successful applicants adapt to the interviewer's communication style.

Williams, Radefeld, Binning, and Sudak (1993) examined whether an applicant's other job offers had a social cue effect on interviewer decisions. Hard-to-get applicants (i.e., considering other job offers) were rated higher than easy-to-get applicants (i.e., not considering other offers). This suggests that playing hard-to-get may have social cue value and thereby influence interviewer decisions.

Focusing on the dynamics of information exchange in the interview may be a promising area for future research because it emphasizes the relational character of the employment interview. It provides a description of the give-and-take of the interview and describes the underlying mechanisms through which applicant behavior can affect interview outcomes. Future research might employ other methods for analyzing the relational aspects of the employment interview, such as interaction process analysis (e.g., Bales, 1950), the relational approach of communication dominance (Rogers & Farace, 1975), the time-event-member-pattern-observation (TEMPO) system used to analyze group interaction processes (Futoran, Kelly, & McGrath, 1989), and the pattern of acts approach (Jablin, Miller, & Sias, 1999).

Further Comments on Social Factors Research

Despite the large number of studies on social factors, there remain many unexplored questions. Surprisingly, the social dynamics of panel

interviews have not been investigated. Yet there is reason to believe that group interaction processes will influence judgments made in the work setting (Sackett & Wilson, 1982). For example, conformity research suggests that individuals tend to comply with group norms (Asch, 1951). Individual interviewers may shape their behaviors to comply with other panel member behaviors, particularly if there are status differences among the panel members.

Furthermore, group polarization research suggests that groups often make more extreme or more conservative decisions than individuals (e.g., Brauer, Judd, & Gliner, 1995; Moscovici & Zavalloni, 1969; Myers & Lamm, 1976). When the interview is being conducted by a panel of individuals, there is the potential for interviewers, acting as a group, to polarize their decisions. This may mean that interview panels may either be more likely to select borderline candidates or adopt more stringent standards than individual interviewers acting alone. Social loafing research suggests that when individual performance is not readily observable, there is a tendency for individuals to exert less effort toward the group task (Kidwell & Bennett, 1993). This may manifest itself in panel interview members who exert less effort in paying attention to or systematically evaluating the candidate. If this happens, interviewers will process information in an automatic (versus controlled) manner (Schneider & Shiffrin, 1977), potentially leading to a greater reliance on stereotypes or simplifying heuristics. Given the potential for these processes to occur, research on them should be conducted.

In terms of methodological issues, much of this research relies on experimental designs with mock interviews and college student participants. This may threaten generalizability to actual employment interviews where real jobs are at stake. This methodological feature of the literature is particularly important for social factors because of the rich social context that surrounds actual employment interviews. It may be more difficult for laboratory studies to approximate the social environment of the interview, which involve real consequences for the candidates and interviewer. Finally, a large number of studies in the social factors category are plagued by common-method variance. This is the reason many of the studies identified in the Appendix were not reviewed in this section.

Cognitive Factors

Interviews are designed, in part, to gather information about job applicants so judgments about future work performance can be made. As information processors, however, humans have limitations and biases (Morgeson & Campion, 1997). Researchers have examined how

interviewers' information processing strategies and capabilities affects interview outcomes. There has been a consistent interest in cognitive factors research with 31 studies in the period covered by this review and 55 studies covered under the three previous reviews. However, the relative emphasis appears to have shifted away from decision making studies towards more studies of pre-interview impressions (Table 1).

Decision Making

Decision-making studies examine the factors that influence how interviewers render judgments. This includes such things as heuristics, order and contrast effects, and differential weighting of information. Schmitt (1976) concluded that contrast effects were minimal although there were significant differences in the way individual interviewers processed cues. He reported some evidence for primacy and recency effects, which may be overcome by the way information is presented to interviewers. He also found minimal effects for the temporal placement of information. Arvey and Campion (1982) concluded that contrast effects and primacy–recency effects influenced ratings of applicants and the length of time it takes interviewers to make decisions. Evidence was mixed on whether interviewers made hiring decisions early in the interview. Harris (1989) suggested that individual differences in interview validities might be due to different interviewers using the same rating scale differently. He also discussed research using the Brunswick lens model of decision making and other empirical models of interviewer decision making, but noted that cognitive processing models had not been used. A substantial number (17) of the studies reported by Schmitt (1976) dealt with decision making. Arvey and Campion (1982) reported only 9, Harris (1989) reported only 7, and there are 7 studies which have been conducted on decision making since 1989. This suggests a declining and leveling-off of research on this topic.

Recent research. One decision-making process that has been investigated is the anchoring and adjustment heuristic, which is the tendency for individuals to make judgments by selecting some standard as an anchor and then failing to sufficiently adjust from that anchor as new information is obtained (Tversky & Kahneman, 1974). When providing interviewers with either high or low anchors, Kataoka, Latham, and Whyte (1997) found that interviewers given a rating scale with a high anchor had higher ratings than interviewers given a low anchor. This effect, however, was less when the interview was structured with situational interview questions.

In a policy-capturing approach, Hitt and Barr (1989) studied the interaction of demographic and other cues on selection decisions.

Experienced managers were presented with demographic information and videotaped presentations by hypothetical job candidates applying for two different positions. They found that managers combine both relevant (experience, degree, position) and irrelevant (age, sex, race) cues in complex nonlinear ways when making decisions. Finally, Gatewood, Lahif, Deter, and Hargrove (1989) reported that interviewers who were trained to avoid rating errors conducted longer interviews, talked more, and asked more questions but the study did not measure rater errors.

Discussion and future research. Given that the employment interview is primarily a decision-making tool, it is surprising that so few studies have utilized theories of decision making. As it stands, the studies that have been conducted provide only a modest amount of insight into the interviewer's decision-making process. Future research could apply one of the numerous decision-making models to the employment interview. One potentially useful framework is framing and prospect theory (Kahneman & Tversky, 1990), which focuses on how positive or negative frames can affect decision making. This is similar to the anchoring and adjustment heuristic, albeit with an affective character. It may be the case that individuals high in negative affect enter the interview situation with a negative frame, thereby rendering judgments consistent with that frame (and not with actual applicant behavior). It may also be that when the interview's purpose is screening as opposed to recruiting, the interviewer may have a more negative frame and may rate applicants lower (Stevens, 1998). Given the research recently conducted on affect and mood in the applied literature (e.g., George, 1991; Judge, 1993) and the linkages that could be made, this may be a promising decision-making model.

Another possible model is image theory (Weatherly & Beach, 1996), which suggests that organizational decisions are related to individual perceptions of the organization's culture, vision, and strategy. This may be particularly important for the employment interview because of the role the interview can play at assessing applicant fit. It may be that one key role of the interview is to assess the extent to which applicants fit with the interviewer's image of the organization.

Pre-Interview Impressions

Pre-interview impressions refer to applicant evaluations that are formed from information received prior to the actual interview. This is distinct from confirmatory biases (reviewed later), which deal with interviewer behaviors designed to confirm prior impressions. Schmitt (1976) reported that applicant personal history was more influential than applicant appearance. Arvey and Campion (1982) concluded that

interviewers were influenced by pre-interview information, although this conclusion was based on paper-people studies. Harris (1989) reviewed the first of several studies by Dipboye and colleagues, which found that pre-interview impressions were related to post-interview judgments. Schmitt (1976) reported one study on this topic, there were no studies in Arvey and Campion (1982), and there were 3 studies in Harris (1989). Following the introduction of Dipboye and Macan's interview process model (1988), the number of studies in this area has increased, with 15 studies since 1989. That model posits relationships among and between behaviors and cognitive events as the interview passes through three phases: pre-interview, interview, and post-interview.

Recent research. In a comparison of pre-interview impressions to impressions gained as a result of an interview, Kinicki, Lockwood, Hom, and Griffeth (1990) found that interview impressions accounted for a large portion of the variance in hiring recommendations, but pre-interview applicant screening accounted for little variance. Macan and Dipboye (1990) found that recruiter's post-interview ratings of the applicants were highly related to their pre-interview impressions (based on knowledge of coursework and job experience), but interview performance had a significant effect after controlling for pre-interview impression, grade point average, duration of the interview, and applicant perceptions.

In a field study of life insurance agent applicants, Dalessio and Silverhart (1994) examined the impact of prior knowledge of biodata on interview evaluations. They found that when a composite biodata score was low, good performance in the interview was more highly associated with favorable decisions by the interviewer and continued employment for 12 months after hire. Macan and Dipboye (1994) examined undergraduate student pre-interview impressions of applicants and whether note-taking reduced the effect of initial impressions. More favorable initial impressions were related to higher performance in the interview. Although note-taking had a positive influence on accuracy in identifying information from the interview, it did not moderate the influence of pre-interview impressions on post-interview evaluations of the candidate or the validity of the interview.

Finally, Cable and Gilovich (1998) studied whether a college recruiter's pre-interview decision to screen out an applicant influenced subsequent judgments of applicant qualifications. The results of hierarchical regression suggest that after controlling for applicant biodata, the recruiter's decision to interview the applicant had a small relationship to perceptions of applicant subjective qualifications, but no relationship to perceptions of applicant objective qualifications.

Discussion and future research. This research suggests that pre-interview judgments are made by the interviewer and these judgments have varying degrees of influence on ultimate interview judgments. But as before (Harris, 1989), most of the published studies that confirmed the existence of this phenomenon have involved student participants. Thus, questions of generalizability to actual interview settings remain and future research should seek to gather data from actual interview settings.

The studies also suggest that there may be a stronger relationship between pre-interview ratings and post-interview ratings, than between pre-interview screening decisions and post-interview ratings. This may be so because pre-interview screening decisions are affected by several factors external to the applicant's qualifications such as time limitations on the number of possible interviews, selection ratios, and a desire to interview a diverse applicant pool. Thus, because the pre-interview screening decision may involve factors other than applicant qualifications, it may be a cognitively different event for the interviewer than the rating of applicants.

An even more pragmatic question remains unanswered by this research. If pre-interview impressions influence subsequent judgments, perhaps they reflect accurate judgments about applicant qualifications. It may not be surprising that pre-interview judgments are related to ratings of interview performance if they both reflect higher applicant ability or experience levels. Future research should attempt to address this question and determine if these pre-interview impressions represent accurate judgments or introduce bias or error into the interview process.

Confirmatory Bias

Confirmatory bias is a phenomenon in which individuals seek out information that supports or confirms their hypotheses (Dougherty & Turban, 1999). The topic of confirmatory bias was not addressed by Schmitt (1976) or Arvey and Campion (1982). However, Harris (1989) reported on the possible existence of confirmatory biases in the interview. That review indicated there was little evidence to support the hypothesis that interviewers act in ways that tend to confirm their initial impressions of applicants. In fact, one study found that they tended to disconfirm their initial impressions. Harris (1989) reported four studies on the possible existence of confirmatory biases in the interview. Four more studies have been conducted on confirmatory bias since 1989.

Recent research. In a field setting, Phillips and Dipboye (1989) examined whether pre-interview ratings of applicants influenced how the interviews were conducted. Favorable pre-interview impressions increased: (a) the time spent recruiting the applicant, (b) interviewer

attributions of favorable interview performance to internal causes and unfavorable performance to external causes, and (c) post-interview impressions. By analyzing audio tapes of interviews for a corrections officer, Kohn, Dipboye, and Gaugler (1994) found that test scores, health status, and applicant size were unrelated to interviewer behavior. Arrest record showed modest relationships with interviewer emphasis on negative job features, affective tone, question focus, question bias, and duration of the interview. Finally, Dougherty, Turban, and Callender (1994) found that interviewers with positive first impressions of applicants (based on test scores and application blank information) used a more positive style, increased behaviors orientated towards extending an offer, increased "selling" of the organization and the job, and provided more information about the job.

Discussion and future research. Harris (1989) concluded that confirmatory bias appears to occur in only limited circumstances. The studies that have occurred since that time have found some form of confirmatory bias. As with pre-interview impressions, however, it remains unclear if this biases interviewer judgments or reflects applicant qualifications.

Several studies (e.g., Dougherty et al., 1994; Phillips & Dipboye, 1989) suggest that when interviewers have a favorable pre-interview impression of the applicant, they act more positively toward the applicant. This might be considered a form of confirmatory bias, but it is also consistent with the use of the interview as a recruiting as well as a selection tool. Favorable pre-interview impressions of the applicant may cause the interviewer to increase recruiting behavior in hopes of increasing eventual job acceptance. Future research should examine whether this increased positive behavior affects the accuracy or validity of interviewer judgments.

Applicant and Job Information

Research has examined how characteristics of information (e.g., favorability, amount) impact cognitive processing in the interview. Schmitt (1976) concluded that negative information about the applicant tends to be weighted more heavily than positive information and that the order of presentation of negative and positive information may affect interviewer judgments. He also reported that interviewers with more job-related information use it to focus their questions, and that applicants appreciate receiving more job-related information. However, Arvey and Campion (1982) reported research suggesting that the amount and favorability of job information had no impact on perceptions of applicants. More information about the negative aspects of the job did improve applicant perceptions of recruiters but reduced the chances applicants would

accept the job. Each of the three prior reviews also discussed studies that examined other aspects of information presented in the interview, such as the amount and distinctiveness of information, but there has been less recent research on these topics. Schmitt (1976) reported 12 studies on information characteristics, Arvey and Campion (1982) reported 2 studies, and Harris (1989) reported no studies. Although 5 studies have been conducted on information characteristics since 1989, this area continues to occupy proportionally less attention than was reported during the Schmitt (1976) review.

Recent research. Morton (1994) found that interviewers were more influenced by positive than negative information when making judgments about a candidate's abilities. If interviewers were making judgments about an applicant's morality-related traits, however, negative information was more influential. Highhouse and Bottrill (1995) examined the effects of misleading information on the accuracy of interviewer judgments. Raters who unknowingly received misleading information recalled applicant behavior less accurately. Raters who received the same misinformation, but were told that some of it was inaccurate, evidenced similar levels of accuracy as those without misleading information, suggesting reduced accuracy was attributable to not knowing that the information was inaccurate.

Nordstrom (1996) examined the influence of self-regulatory cognitive load on interviewer use of background information. Contrary to expectations, interviewers (students observing mock interviews) were more likely than observers to take background information into account in their evaluations of the applicants. However, a more recent study suggested that interviewers were less able than observers to correct early evaluations of applicants with situational information (Nordstrom, Hall, & Bartels, 1998). In a field study of graduate recruitment interviews, Silvester (1997) examined the influence of positive versus negative applicant attributions of prior events on evaluations of applicants. Successful candidates made more personal and stable attributions about prior negative events than unsuccessful candidates.

Discussion and future research. The research conducted since 1989 suggests that the influence of information characteristics may be more complex than previously thought. Factors such as the content of the attribution being made from the information, the interviewer's degree of involvement in the process, or social influence processes surrounding the processing of the information may affect how the favorability of information affects interviewer judgments. Future research should incorporate this more complex view of favorability. Also, more research is needed on how the characteristics of information presented by the interviewer affect applicant reactions, a topic generally neglected since Harris (1989).

Further Comments on Cognitive Factors Research

Although the total number of studies on cognitive factors is greater than in the three previous reviews, as a percentage of the total amount of research conducted it is smaller than the three previous reviews. In fact, a clear trend is evident, with successively smaller amounts of research being devoted to research on cognitive factors. This may be due, in part, to the relatively small amount of variance explained by cognitive factors research. This parallels the decline in other areas (e.g., performance appraisal) as cognitive models have been investigated and replaced with more complex social-cognitive models. One exception to this trend is research into pre-interview impressions, which has showed an upswing in research activity, no doubt due to the introduction of Dipboye and Macan's (1988) process model.

Recent research on cognitive factors has focused on the interviewer's internal information processing, including the acquisition of information about the applicant and judgments rendered as a result of the interview. Future research should examine underlying cognitive processes to determine whether the pre-interview to post-interview relationship is a cognitive bias or an accurate evaluation of the applicant based on his or her qualifications. Future research should also use designs that avoid common-method variance. Furthermore, the research on decision-making heuristics relies to a large extent on student participants and simulated interviews, so its generalizability to more naturalistic settings can be supported by more field studies.

The range of cognitive factors investigated in the interview has been relatively small. There are a host of other cognitive factors that could be examined. For example, it is likely that interviewers categorize applicants when attempting to make sense of the large amount of information obtained in the interview. Once placed in a category, detailed information about the applicant may not enter into the evaluation process (Wyer & Srull, 1994). Such automatic information processing (Schneider & Shiffrin, 1977) may systematically bias interview judgments. Future research should examine the extent to which interviewers rely on automatic or controlled information processing when evaluating applicants.

In addition, it is likely that information processing demands during the interview are very large. These demands may be managed by simplifying the judgment task via interview structure, otherwise interviewers may rely on simplifying heuristics. Although recent research has investigated the use of the anchoring and adjustment heuristic (Kataoka et al., 1997), future research should investigate the extent to which other heuristics, such as representativeness and availability (Tversky & Kahneman, 1974), are used by interviewers. This is particularly important

because people may use these heuristics in a variety of different contexts (e.g., job analysis; Morgeson & Campion, 1997). In addition, the cognitive resources of the interviewer may play an important role in judgment accuracy. If interviewers have greater cognitive ability, they may be better able to manage the judgment task (Kanfer & Ackerman, 1989) and be less subject to various sorts of inaccuracies.

Individual Difference Factors

A large amount of research has examined how individual differences affect the employment interview. This research has focused on a variety of applicant and interviewer characteristics. The interest on individual differences has remained consistently high over the years, constituting approximately 41% of all studies in the periods covered by prior reviews and this review. The subtopics of applicant disabilities and personality have seen the largest growth in research interest in recent years (Table 1).

Applicant Characteristics

Appearance

Research into applicant appearance examines how the applicant looks during the interview and includes such things as physical attractiveness, dress, and weight. Schmitt (1976) reported that negative ratings given to unattractive applicants may be influenced by personal history information. Arvey and Campion (1982) concluded that applicant attractiveness was related to higher evaluations of applicants, but the research evidence was mixed. Harris (1989) also reported mixed results on the influence of applicant attractiveness. He suggested that the job-relatedness of attractiveness may influence its effect on applicant ratings but cautioned against causal inferences from field studies in which applicant qualifications might influence perceptions of applicant attractiveness. Schmitt (1976) and Arvey and Campion (1982) reported only 2 studies each, whereas Harris (1989) reported 8 studies. Eleven additional studies have been conducted on appearance since 1989.

Recent research. In a laboratory study, Forsythe (1990) examined the impact of type of clothing on managerial evaluations of female applicants. The applicants appeared in silent videotaped recordings of mock interviews in which clothing was manipulated between more masculine (e.g., dark blue suit) and more feminine (e.g., a soft beige dress). Candidates wearing more masculine clothing were judged to be more forceful, self-reliant, dynamic, aggressive, and decisive, and they were more likely to be recommended for hire. In another laboratory study,

Pingitore, Dugoni, Tindale, and Spring (1994) examined the influence of applicant obesity on perceptions of applicant personality. Professional actors posing as job applicants for a sales representative or systems analyst job were made to appear normal weight or moderately obese. Applicant obesity had a negative influence on perceptions of personality traits and explained 35% of the variance in hiring decisions. In addition, the biasing effects of obesity were more pronounced for women than men.

Discussion and future research. Recent research lends additional support to the position that applicant appearance is related to interviewer evaluations. Unfortunately, much of the data from these studies comes from college student participants in settings that may or may not generalize to real interviews, have single-item measures, or are plagued with common method variance. These factors make it difficult to have high confidence in these findings and decide whether they will generalize to real jobs. Generalizability is especially important for research on applicant appearance because laboratory studies of the employment interview are low investment situations for participants. Recent attractiveness research suggests that choices for higher investment situations (e.g., marriage) depend more on psychological than physical characteristics (Keller & Young, 1996). Thus, participants may be more influenced by physical attractiveness in rating applicants for hypothetical jobs than would actual interviewers who are faced with a higher investment decision about hiring a real person for a long-term employment relationship. In addition, in field settings the interviewer may have much more information about applicant qualifications or be more concerned about legal defensibility that might minimize or eliminate the effects of physical attractiveness.

Finally, some applicant appearance factors are controllable by the applicant. Factors such as grooming, clothing, adornments, eyeglasses, and weight (to a certain extent), are factors that the applicant has an ability to manage or control. When applicants appear to have done something positive about these factors, interviewers may react more favorably. Future research should investigate the differential effects of controllable (e.g., grooming and weight) versus noncontrollable (e.g., height) facets of physical appearance.

Demographic Characteristics

Demographic characteristics consist of attributes such as age, sex, and race that describe large groups of persons. Schmitt (1976) noted a small effect for applicant sex, possibly linked to expectations about traditional sex roles. Arvey and Campion (1982) reported female applicants generally receive lower ratings than male applicants and noted there was

a growing awareness that contextual factors may influence ratings (e.g., a lower percentage of females in the applicant pool might raise ratings of female applicants). But they suggested there was insufficient knowledge to conclude that there was any causal relationship between demographic factors such as sex or race and applicant ratings. Harris (1989) concluded that ratings of applicants based on sex, race, and age were generally inconsistent. Schmitt (1976) reported one study dealing with main effects for demographics, whereas Arvey and Campion (1982) reported 8 studies and Harris (1989) reported 13 studies. Eleven studies have been conducted on demographic characteristics since 1989.

Recent research. In studying potential age bias, Singer and Sewell (1989) found that managers had no age-related preferences for high status jobs. However, for low status jobs managers preferred hiring older candidates if the managers had read a magazine article about a group of successful older workers, and younger candidates if they read an article about a 100-year celebration of national parks. Conversely, students preferred older candidates for high-status jobs if they had read the celebration article, but preferred young applicants for both high- and low-status jobs if they had read the article about successful older workers. When investigating sex differences in nonverbal behaviors, Johnson (1990) found that undergraduate women used more head-nodding and smiling and were more likely to alter their nonverbal behavior in response to the friendliness of the interviewer, whereas undergraduate men used more gesturing. Assertiveness was judged to be a more masculine characteristic and increased evaluations of applicants, although unassertive women were rated lower and given shorter interviews than unassertive male applicants. In a laboratory study, Ringenbach (1994) examined the influence of applicant age on hiring decisions. Undergraduates viewed mock videotaped interviews in which applicant age and the behavior of the applicant was manipulated to simulate behavior that would be more commonly expected (stereotypically) among younger or older people. Performance of older nonstereotypical candidates was rated highest, followed by young stereotypical, old stereotypical, and young nonstereotypical candidates.

Finally, Huffcutt and Roth (1998) conducted a meta-analysis of the influence of applicant race on interview evaluations. Nine of the 21 studies included in that meta-analysis were conducted during the time frame of this review. Not surprisingly, subgroup differences were higher for low structure interviews. Behavior description interviews had lower subgroup differences than situational interviews. Blacks and Hispanics scored higher in the highly complex jobs whereas Whites scored higher for medium and low complexity jobs. The higher the proportion of Blacks in the applicant pool, the greater the subgroup difference

scores. Unfortunately, this study did not code the similarity of interviewer and interviewee race. Given the findings of same-race bias studies discussed previously, this could be an important future contribution to meta-analytic studies of race effects in the interview. In addition, the rationale for the differences in validities based on job complexity needs further elaboration. That is, observed differences may be due to job complexity (as suggested by Huffcutt & Roth) or to the distribution of candidate qualifications in the applicant pool. Future research should examine this issue.

Discussion and future research. Research continues to show small and inconsistent effects for demographic characteristics. This may reflect the positive influence of equal employment opportunity laws. Alternatively, given the strong possibility for social desirability in responding, it may simply be very difficult to study the true influence of demographic characteristics in laboratory studies. Other important factors such as the labor market and real outcomes for interviewers and applicants are also difficult to simulate in laboratory studies.

When effects are detected, they are modest and may reflect the similarity between applicant and interviewer. Schmitt (1976) noted the importance of similarity of sex, as opposed to the effect of sex, yet most of the studies reported since that time have focused on the main effects of applicant sex and other demographic characteristics. Future research on demographic characteristics as main effects should perhaps give way to research on demographic similarity, which has begun to be more widely investigated in other contexts (e.g., Tsui, Egan, & O'Reilly, 1992; Tsui & O'Reilly, 1989). This recommendation should be tempered by the fact that meta-analytic evidence from the performance appraisal literature on the influence of demographic similarity has been mixed (Kraiger & Ford, 1985; Sackett & DuBois, 1991). Thus, it may be time to abandon the search for simple demographic effects and instead examine the underlying factors. Demographics may simply be cues for other underlying characteristics, such as attitudes and values. Future research should explore those underlying characteristics, and whether they are the real causal factors.

Disabilities

Several researchers have examined how physical or mental disabilities influence interview outcomes. Arvey and Campion (1982) reported lower ratings for applicants with mental disabilities but higher for physical disabilities that the applicant acknowledged. Harris (1989) discussed the timing of applicant disclosure of disability. Schmitt (1976) did not report any studies on applicant disabilities. Arvey and Campion (1982)

reported 3 studies and Harris (1989) reported one study. Probably due to the passage of the Americans with Disabilities Act of 1990, there has been a substantial increase in interest in this topic among researchers. Fifteen studies have been conducted on disabilities since 1989.

Recent research. Charisiou et al. (1989) studied whether two subtypes of schizophrenia were related to employment interview skills. The group with more negative symptoms had lower-rated employability scores on a number of single-item measures of verbal and nonverbal employability skills. With an experimental design, Cesare, Tannenbaum, and Dalessio (1990) studied the influence of different types of disabilities on interview ratings. Undergraduate participants viewed videotaped simulated interviews in which the same male applicant applying for a computer sales representative job was presented as possessing different disabilities. The highest rating of applicant affect occurred when the applicant was using crutches and the lowest rating of applicant qualifications occurred when the applicant was presented as hearing impaired. Raters with lower empathy gave higher ratings for applicants with disabilities, although it is possible that they were cued by the administration of the empathy scale and overcompensated in their ratings of handicapped applicants.

Henry (1994) used an elaboration likelihood model to study the impact of an applicant's disability. In this laboratory study, videotaped mock interviews of a woman applying for a word processing job portrayed her as having either no disability or varying levels of evident and disclosed disabilities. The disclosed disabled applicant was rated as the most likely to be hired, but when the disability was not disclosed, a polarization effect occurred. Being disabled had a positive impact for qualified applicants and a negative impact on unqualified applicants. Marchioro and Bartels (1994) found no significant main effects for either disability or attitudes toward disabilities on ratings of applicant qualifications. Wright and Multon (1995) studied the influence of disabled interviewee nonverbal communication skills on employability. Student interview raters judged the disabled students with good nonverbal communication skills as having better personal traits related to employability (e.g., discipline, assertiveness) than those with poor nonverbal skills. This study replicates earlier research using nondisabled persons (Ralston, 1989) that found nonverbal skills are related to increased employability.

Macan and Hayes (1995; Hayes & Macan, 1997) indicated that disclosure of information about the disability (such as how the applicant would function and encouraging the recruiter to ask questions about the disability) was positively related to interview evaluations. Finally, Herold (1996, 2000) studied the influence of applicant self-disclosure on interviewer perceptions of persons with disabilities among employ-

ment counselors from the Minnesota Job Service. In contrast to Macan and Hayes (1995), these interviewers rated applicants who self-disclosed handicaps lower than those who made a nonthreatening disclosure or no disclosure. Visible disability also reduced ratings of the applicant.

Discussion and future research. This research shows mixed results for the impact of disability on applicant ratings. Some studies reported a negative impact of disability, other studies showed a positive impact, and one study reported no impact. Much of this research examines potential moderator variables between applicant disability and interviewer ratings of applicants. The research suggests that nonthreatening disclosure of a non-obvious disability, acknowledgement of obvious disability, and higher job-related qualifications (communication skills, education) may increase ratings of employability. Applicant disclosure of non-obvious disabilities may be particularly important in applied settings because many people classified as disabled have impairments such as lifting restrictions and mental disabilities, which may not be apparent in a typical job interview (McNeil, 1997).

A key feature of the Americans with Disabilities Act is its ban on asking applicants questions about their disability prior to receiving a job offer. This makes recommendations regarding applicant disclosure uncertain. Although some studies suggest that applicants may receive a favorable response to disclosure of a non-obvious disability, it is not clear that applicants applying for real jobs will expect or receive a positive response to disclosure. Future research should examine this issue in more detail.

Some recent research fails to consider the importance of the job's requirements on ratings of applicants with disabilities. Several studies (Cesare et al., 1990; Henry, 1994; Marchioro & Bartels, 1994; Wright & Multon, 1995) used computer-related jobs for which the disability would not likely impair the applicant's ability to function on the job. In many other jobs, the disability might impair the applicant's performance. Future research should examine whether applicant disclosure of a disability that requires an employer to provide accommodation for the disability influences interviewer judgments.

Unfortunately, the majority of these studies used students and hypothetical jobs. Students might give disabled applicants high ratings because, unlike real interviewers, they will not face negative feedback from supervisors who are required to exert effort to provide the hired applicant with an accommodation. In addition, participants in laboratory studies may be affected by socially desirable responding. Thus, future research in field settings with real jobs will be needed to verify that these results will generalize.

Training

Some research has examined how training applicants on the interview process and interviewing skills affects interview outcomes. Schmitt (1976) reported studies in which the interviewing skills of the hard-to-employ were improved by training techniques such as videotape feedback, role playing, behavior modification, and counseling. Arvey and Campion (1982) and Harris (1989) reported applicant training generally received positive reactions from trainees, but mixed results on applicant knowledge and performance in mock interviews. There was no evidence that training improved applicant chances of getting a job offer or increased the starting salary. Schmitt (1976) reported 2 studies, Arvey and Campion (1982) reported 4 studies, and Harris (1989) reported 9 studies on applicant training. There have been 16 studies on applicant training since 1989.

Recent research. Maurer, Solamon, and Troxtel (1998) and Maurer, Solamon, Andrews, and Troxtel (2001) found that police officers and firefighters who volunteered for coaching performed better on panel interviews. Because participation in the training was voluntary, however, there are potential selection threats to the study's internal validity. McEachern (1990) evaluated the effectiveness of three types of interviewing skills training programs for college students. Participants in the videotaped instruction retained more information than those in the counselor-led instruction or computer-assisted instruction, although evaluations of the participants in mock interviews showed no difference between the types of training. In a laboratory study, Long, Long, Dobbins, and Roithmayr (1995) provided some evidence that behavioral modeling training was related to higher attributions among trainees of internal causes for their interview performance.

Discussion and future research. A fair number of interviewee training program studies have been conducted, with many focusing on applicants with special needs. It is possible that interview training teaches applicants to simply impression manage, which artificially inflates interviewer assessments, as opposed to improving the measurement of job-related skills. Notwithstanding this concern, evidence supporting the effectiveness of various training techniques for improving interviewee skills is equivocal, especially for candidates with no special needs. There is mixed evidence about transfer of knowledge into mock videotaped interviews, no evidence of transfer to real interviews, and no linkage to actual job offers. Considering the small sample sizes of many of these studies and the mixed results, a meta-analysis might identify stable estimates of effect sizes. However, some limitations of the source studies

may not be overcome. Thus, based on the evidence at this point in time, large investments in interviewee training may be hard to justify.

Personality

Only recently have researchers shown interest in relationships between personality and interviewing behavior. Schmitt (1976) did not discuss applicant personality. Arvey and Campion (1982) suggested that applicant self-esteem and state anxiety were unrelated to interview performance. Harris (1989) suggested that interviewers may be able to assess the personality characteristics of applicants, but future research was needed to determine whether these judgments were related to job performance. There were no personality studies reported in Schmitt (1976). Arvey and Campion (1982) and Harris (1989) reported only 2 studies each. There has been a marked increase of interest in personality research since the last review with 26 studies conducted on applicant personality since 1989.

Recent research. Conwell (1991) examined the relationship between applicant personality and judgments of applicant suitability for particular jobs. This laboratory study found that participants gave higher ratings to applicants whose personality traits were congruent with traits expected in specific occupations. Ryan, Daum, and Friedel (1993) found that interview performance of undergraduate participants was positively related to job-seeking self-efficacy, interview self-efficacy, job-hunting assertiveness, interview motivation, and need for achievement, and negatively related to anxiety. In a field setting, Motowidlo, Burnett, Maczynski, and Witkowski (1996) examined the relationship between personality in the interview and job performance. Mock interviews with managers were videotaped and transcribed, and undergraduates either saw silent videotapes of the interviews or read the interview transcripts and rated the managers on Extraversion and Conscientiousness. The supervisor's ratings of job performance were related to transcript ratings of Extraversion.

In a series of studies, Ayres and colleagues (Ayres, Ayres, & Sharp, 1993; Ayres & Crosby, 1995; Ayres, Keereetaweep, Chen, & Edwards, 1998) found that students high in communication apprehension were rated less suitable, used less effective methods to prepare for the interview, used less eye contact, talked less, displayed more disinfluences (e.g., saying "uh"), asked fewer questions, were judged less effective communicators, and were less likely to be offered a job. In a laboratory study, Cook, Vance, and Spector (1995) found modest relationships between applicant personality and interview performance. In a field study, they found modest relationships between applicant Type A achievement,

grade point average, trait anxiety, locus of control, and the number of second interviews received. However, personality was not related to the number of initial interviews or actual job offers.

In an attempt to understand the mechanisms through which personality influences applicant behavior, Caldwell and Burger (1998) had graduating seniors respond to two sets of questionnaires about their recent interview experience in actual job interviews. The personality traits of Extraversion, Openness to Experience, and Conscientiousness were positively related to using social methods of preparation, such as talking to others. Conscientiousness also predicted use of nonsocial sources (e.g., reading material about the company), and applicants who used social sources were more likely to receive follow-up interviews and job offers.

Discussion and future research. There has been a steady growth in research on applicant personality in the interview, no doubt due to evidence showing the validity of personality measures (Barrick & Mount, 1991; Tett, Jackson, & Rothstein, 1991). The studies reviewed suggest that such applicant personality characteristics as Extraversion, Conscientiousness, and need for achievement are modestly related to applicant performance in the interview. It should be noted, however, that most studies were conducted in research settings. In operational settings, where actual jobs are at stake, faking or socially desirable responding may be more likely to distort personality measurement and obscure relationships. To address these concerns, researchers in both laboratory and field settings may benefit from using pencil-and-paper measures of personality. These could be compared to interviewer ratings of applicant personality. Alternatively, researchers might also obtain ratings of applicant personality from persons who know the applicant from prior acquaintance but are not related to the interview process.

A larger question about personality revolves around why applicant personality might affect interview outcomes. Caldwell and Burger (1998) found that certain personality characteristics are related to preparing for interviews. It may also be the case that personality causes applicants to seek certain kinds of information, or to ask certain kinds of questions. Or it may be that interviewers are looking for certain kinds of personality characteristics to fit with an organization's culture and values. For example, if an organization values teamwork and helping, it may be particularly interested in employees with high levels of Agreeableness.

Research investigating interviewee anxiety and apprehension is unclear. Two recent experimental studies found relationships between applicant trait anxiety and lower interview scores (Arvey, Strickland, Drauden, & Martin, 1990; Ryan, Daum, & Friedel, 1993). This contrasts with

an earlier field study that found no relationship between state anxiety and applicant performance in campus interviews (Keenan, 1978). It may be that the strength of the experimental manipulations accounts for part of the observed effects. By contrast, interviewers in applied settings may make different judgments about applicant anxiety than persons merely acting as interviewers in laboratory studies. Arvey, Strickland, Drauden, and Martin (1990) found that applicants had higher test-taking anxiety than job incumbents. Interviewers may recognize that when there are real outcomes at stake, the applicant is likely to exhibit some level of anxiety. This may lead raters to discount the importance of anxiety. They may even view some level of anxiety as a positive sign of applicant interest in the job. However, a field experiment conducted by Barber, Hollenbeck, Tower, and Phillips (1994) found that higher anxiety was related to less information acquisition by applicants. This suggests that it may be more difficult for applicants to perform well if their anxiety interferes with the acquisition and processing of information presented by the recruiter.

Interventions targeting applicant anxiety may be more successfully targeted towards state anxiety as opposed to trait anxiety or communication apprehension. State anxiety is a transitory and fluctuating emotional state evoked by environmental stress, whereas trait anxiety is a relatively stable personality characteristic (Spielberger, Gorsuch, & Lushene, 1970). Communication apprehension appears to overlap with both state and trait anxiety (Booth-Butterfield, 1989; Booth-Butterfield & Butterfield, 1986). If state anxiety is more malleable than either trait anxiety or communication apprehension, then interventions aimed at reducing applicant state anxiety may be more successful than those targeting either trait anxiety or communication apprehension.

Interviewer Characteristics

Training and Experience

Research continues to examine the effects of level and type of interviewer training and experience on interview behavior and outcomes. Schmitt (1976) suggested no effect for interviewer experience on the reliability of measures of applicant performance. Less experienced interviewers, however, were more likely to hire poorer applicants when stress for quotas was a concern. Arvey and Campion (1982) suggested that some training programs were effective whereas others were not. They also expressed concern that too much emphasis was placed on improving the psychometric properties of interviewer ratings instead of actual changes in interviewer behavior. Similarly, Harris (1989) suggested that

there were inconsistent results for interviewer training, and urged comparisons between different types of interviewer training methods and different criteria for success. Schmitt (1976) reported one study, Arvey and Campion (1982) reported 5 studies, and Harris (1989) reported only 3 studies. Eleven studies have been conducted on this topic since 1989.

Recent research. Werner (1991) examined training that focused on the types of questions that are asked in the interview. When trained to ask more neutral questions, interviewers asked less loaded and more open-ended questions. Mattimore and Balzer (1993) studied the effectiveness of behavior modeling training. Participants learned factual information and skills during the workshop, and performance in simulated interviews improved after training. The lack of a control group,however, makes it difficult to rule out alternative explanations for the findings.

Although there has been very little work on the influence of interviewer experience, experience may affect ratings of applicants. A few studies suggest that interviewer experience lowers applicant ratings (e.g., Furnham & Burbeck, 1989), and one study suggested experience reduces the validity of those ratings (Gehrlein, Dipboye, & Shahani, 1993). Given the paucity of empirical research in this area, however, it is difficult to draw any firm conclusions about the influence of interviewer experience. As a consequence, future research should determine what underlying factors are responsible for any observed effects. For example, Dipboye and Jackson (1999) and Graves (1993) suggest that interviewer experience may improve interviewer decision making if increased experience is related to greater cognitive complexity. This may be an important area for future research.

Discussion and future research. The recent research on interviewer training has begun to use a wider variety of criteria to evaluate training effectiveness. Unfortunately, measures of reactions to training and amount learned in training generally have small relationships with actual behavioral change (Alliger, Tannenbaum, Bennett, Traver, & Shotland, 1997). Thus, future evaluations of alternative training program methods and content should assess change in interviewer behavior. Although some research has begun in this area (e.g., Gatewood et al., 1989), future research should seek to more firmly establish the link to behavior in actual interviews. After that, the next step will be to measure the impact on validity. But given the large investments in interview training made by organizations, it is surprising that there is not more and stronger evidence for the value of interviewer training. Yet, this finding should be tempered by the observation that many popular interview training programs focus on how to implement structured interviews, and there is strong support for the value of structured interviews (see Campion, Palmer, & Campion, 1997, for a review).

Recruiter Behavior

Research here concerns the role of the interviewer as a recruiter and the impact of recruiter behavior on applicant behavior. Schmitt (1976) reported that applicants were more likely to accept a job if the interviewer showed personal interest and concern and discussed the careers of others who had been hired. Arvey and Campion (1982) reported that interviewer personality and delivery style affected applicant reactions, and interviewers who provided adequate information improved applicant reactions. They also reported that providing negative information increased interviewer credibility, but it also reduced the likelihood applicants would accept the job. Harris (1989) reported that applicants had better reactions when the interviewer provided an opportunity to talk about qualifications and more information about the job, but mixed results on the influence of recruiter behavior on applicant intentions to accept job offers. He also noted that all of the research he reviewed involved college student reactions to campus interviews and questioned the generalizability to other jobs. Schmitt (1976) reported one study, Arvey and Campion (1982) reported 3 studies, and Harris (1989) reported 10 studies. Fifteen studies have been conducted on recruiter behavior since 1989.

Recent research. Giannantonio (1988) examined the influence of recruiter friendliness and verifiable versus nonverifiable job attributes on reactions to the interview. This laboratory study suggested that both recruiter friendliness and job attributes affected applicant reactions, but the probability of receiving a job offer and inferences about unknown organization characteristics mediated the effects on applicant reactions. Powell (1991) found that interviewer recruiting practices (described as positive affect) had a small but significant effect on the likelihood that the applicant would accept a job offer after controlling for applicant pre-interview and post-interview measures of job attributes.

Maurer, Howe, and Lee (1992) examined the influence of interviewer behavior and information provided about the job on applicant reactions. A multifaceted measure of interviewer behavior was moderately related to likelihood of job acceptance. Liden et al. (1993) found that an interviewer's cold nonverbal behavior significantly lowered judges' ratings of applicant verbal and nonverbal behavior. Turban and Dougherty (1992) found that applicant perceptions of recruiter interest in them were positively related to their expectancy of receiving a job offer and interest in the job. When applicants felt uncomfortable or intimidated in the interview, they were less likely to expect a job offer and were less interested in the job. Finally, in a field study of campus interviews, Ralston and Brady (1994) found that applicant

communication satisfaction with the interviewer contributed significant incremental validity in predicting post-interview attraction to the job and intention to accept an offer for a second interview.

Discussion and future research. The recent interest in the effects of interviewer recruiting behavior parallels the growing interest in applicant reactions to interviews (discussed below). It may reflect a growing recognition that the interview functions as a recruiting device as well as a selection tool and the important role of recruiting in the tight labor markets experienced in the 1990s.

Recent research suggests that after controlling for objective characteristics of the job, the influence of interviewer behavior on applicant willingness to accept a second interview or job offer is statistically significant, but the effect size is often small. Furthermore, because a substantial amount of this research was conducted in laboratory settings, it is unclear to what extent these findings will generalize to field settings. This is particularly important because applicants may discount interviewer behavior in favor of information about objective characteristics of real jobs (e.g., pay level), especially as an actual job-choice decision approaches (Rynes, 1991). Future research should address what can be done to enhance the role of the interviewer to increase the effectiveness of the recruitment process.

It may be that applicants make inferences about the likelihood of obtaining the job based on the interviewer's behavior. If they perceive (based on interviewer's behavior) that it is unlikely they will receive an offer, they may tend to reduce or devalue their perceptions of the attractiveness of the job so that they can avoid thinking that they were not good enough to be selected. Alternatively, if interviewers are too positive, applicants may react by devaluing the job opportunity out of mistrust or skepticism. The literature on reactive devaluation suggests that creating an appearance of objectivity may reduce the possibility that applicants will devalue the job in reaction to overly positive interviewer behaviors (Neale & Bazerman, 1992; Stillenger, Epelbaum, Keltner, & Ross, 1990). Thus, future research should examine whether the positive impact of good recruiting behaviors can be enhanced by behaviors which appear objective and genuine.

Finally, recent research in this area generally fails to control for job characteristics or suffers from common method variance. In order to parcel out the influence of recruiter behavior from job characteristics, future research should be careful to take both into account. It is also possible that applicants use the behaviors of recruiters to make inferences about the recruiter, the job, and the organization (e.g., friendly recruiter behaviors reflects friendly recruiter and friendly company). In addition, the applicant's cognitions about the recruiter, the job, and the

organization may influence each other. Therefore, future research should parcel out the potentially multifaceted outcomes of recruiter behavior.

Stereotypes and Expectancies

Several studies have examined the influence of interviewer expectations and stereotypes on interview outcomes. This research concerns the opinions or beliefs interviewers may have about hypothetical ideal candidates or particular groups of candidates, and the influence this may have on their subsequent judgments. Interviewer stereotype was a popular topic at the time of Schmitt's (1976) review. He reported that interviewers have an "ideal" applicant in mind that is used to evaluate applicants, and there may be some individual differences between raters of the conception of this ideal applicant. Schmitt (1976) reported 9 studies on this topic whereas Arvey and Campion (1982) and Harris (1989) only reported one study each. There has been renewed recent interest, with 10 studies conducted since 1989.

Recent research. In the research on applicant fit, discussed above, both Adkins et al. (1994) and Rynes and Gerhart (1990) found some evidence that rater evaluations of applicants carried across one organization to another, suggesting that they had some conception of an ideal candidate unrelated to the organization.

Van Vianen and Willemsen (1992) studied sex stereotypes in a field study of applicants for technical and academic positions in the Netherlands. They found a different set of positive and negative attributes emerging for men and women, and the personality attributes of an ideal candidate tended to be positive and masculine (e.g., ambitious, daring) or positive and sex neutral (e.g., active, versatile). Kacmar, Wayne, and Ratcliff (1994) examined the influence of presenting job-related information (a job description and candidate resume) on stereotyping of Black and female job candidates. When job-related information was presented, Black applicant ratings improved, but there was no change for either sex, and it did not influence the decision to hire.

Discussion and future research. The early studies of stereotypes suggested an underlying cognitive process that might explain differences in attributions about applicants based on demographic characteristics. Schmitt (1976) noted that interviewers often have cognitive impressions about ideal candidates. More recent research lends further support to the idea that individual recruiters may have conceptions about ideal candidates that carry across organizations. However, recent research has also examined whether interviewer cognitions about these ideal candidates are related to sex, race, or age. The limited experimental evidence suggests that for some jobs and interviewers, sex-related stereotypes may

be related to interviewer cognitive schema. This evidence also suggests that although these stereotypes are related to interviewer thought processes, they are less likely to be related to actual decisions about whom to hire. It could be that the unlawfulness of employment discrimination in selection decisions may be an important contextual constraint on interviewer decision making. Future research should examine whether legal constraints outweigh the influences of stereotyped cognitive schema.

Kacmar et al. (1994) suggested that controlled information processing can reduce the effects of race-related stereotyping even in the laboratory. It seems plausible that interviewers in the field will engage in controlled information processing, which may enable them to reduce the influence of stereotyping.

Other Interviewer Characteristics

Several studies have investigated how other interviewer characteristics influence the interview. These include such things as cognitive complexity and interviewer mood. Cognitive complexity is a dimension of intelligence that reflects an ability to deal with complex social phenomena. Schmitt (1976) did not report any studies on this topic. Arvey and Campion (1982) reported that interviewers with high cognitive complexity tended to give higher ratings to applicants who were similar to the interviewer. Harris (1989) reported that interviewer ratings of applicants were higher when they were experiencing more positive mood states. Since 1989, three studies dealt with other interviewer characteristics.

Recent research. Ferguson and Fletcher (1989) examined the influence of cognitive complexity on interviewer rating effectiveness. Undergraduates completed cognitive measures and then conducted a mock interview for the job of accountant. Female interviewer accuracy was associated with their cognitive complexity, but male interviewer accuracy was not. Herrin (1990) studied the influence of interviewer attributional complexity (the belief that people's behavior is variable and complex) on interviewer judgment processes. Actual employment interviewers with higher attributional complexity were more likely to discount some nonverbal applicant behaviors, were less likely to discount some verbal applicant behaviors, had more appropriate use of internal attributions about applicants, and had higher variability in their scoring of applicants. Interviewer predictions of applicant job success were related to actual job performance, but their attributional complexity was not.

Baron (1993) published the only study on interviewer mood. In this laboratory study, undergraduate students were induced to a state of positive affect, negative affect, or no change in their current affect and then conducted mock interviews with applicants of different qualification

levels. Mood was not related to ratings of applicants who were highly qualified. Positive mood was related to higher ratings for candidates with ambiguous qualifications and lower ratings for those with poor qualifications.

Discussion and future research. The limited evidence suggests that interviewer differences in cognitive complexity may affect attributional processes about applicants and the accuracy of their evaluations of applicants. This conclusion should be tempered by the acknowledgement that some interviewers have higher levels of general mental ability, which may account for their differential ability to comprehend complex social behaviors. Interviewers with higher mental ability may also have greater resources upon which to draw. Additional research is needed to compare the effects of interviewer cognitive complexity and general mental ability. With respect to mood, the laboratory evidence suggests that interviewer mood relates to ratings of applicant qualifications. It is unclear, however, whether this influence will generalize to situations where mood is not experimentally manipulated.

Further Comments on Individual Difference Factors Research

The number of studies of applicant individual difference factors shown in Table 1 indicates that this area has continued to generate a great deal of attention in recent years. In prior periods, the largest proportion of studies focused on applicant demographic characteristics. Since 1989, however, demographics constitute a smaller proportion of studies whereas the areas of applicant training, disabilities, and personality have grown substantially. Considering the small and inconsistent effect sizes usually found for applicant demographic characteristics, the decline in such studies in favor of other topics is a welcome trend. It is likely that the passage of the American's with Disabilities Act has spurred research into applicant disabilities, whereas research into applicant personality has no doubt been encouraged by the finding that certain personality characteristics predict job performance (Barrick & Mount, 1991).

Research on interviewer characteristics has grown in recent years, with the largest proportion of studies of recruiting behavior in the interview. This may be due to the relatively low unemployment rates in recent years, which underscore the importance of the recruiting function of the interview.

Measurement Issues

Although a great deal of research addresses the predictive validity of interviews, other studies have investigated alternative measurements of the interview, including the constructs measured in the interview, choice

of stimulus materials and sample type, and differences in interviewer validity. This paper does not discuss different question types such as behavioral or situational (Janz & Mooney, 1999; Little, Schoenfelt, & Brown, 2000) or criterion-related validity evidence because comprehensive reviews have recently covered these topics (Buckley & Russell, 1999; Campion et al., 1997; Conway, Jako, & Goodman, 1995; Huffcutt & Arthur, 1994; McDaniel et al., 1994; Taylor & Small, 2000). Interest in measurement issues has remained steady over the years, constituting about 11% of all studies, but in the period covered by this review there has been a significant increase in interest in the measurement subtopic of constructs measured in the interview.

Constructs Measured in the Interview

Researchers have attempted to understand the psychological constructs measured in the interview. Schmitt (1976) suggested that researchers pay more attention to the social and personality constructs measured in the interview such as sociability, personal relations, motivation, dependability, and conscientiousness. Arvey and Campion (1982) reported that interviews are typically used to measure constructs such as likability, applicant work motivation, sociability, verbal fluency, job interests, career plans, and likes and dislikes. Harris (1989) suggested that different interview formats may be measuring different constructs, and interviews may be measuring a broad range of constructs such as applicant personality and assertiveness. He noted the lack of coherent conceptual frameworks for the range of constructs, but recently suggested (Harris, 1999) that the constructs measured in the interview include cognitive ability, tacit knowledge, assessment center dimensions, and person–organization fit. Schmitt (1976) and Arvey and Campion (1982) each reported only one study on constructs measured in the interview. Harris (1989) discussed several studies, but none specifically addressing the interview. Since 1989, 18 studies dealt with the constructs measured in the interview.

Recent research. Using a policy-capturing approach, Siem (1991) calculated individual regression equations for each interviewer's assessments of applicants on five traits. Although there was modest validity, there was virtually no cross validity, suggesting that individual interviewers may use different criteria to select candidates. Graves and Karren (1992) found that interviewers used 13 different patterns of criteria to judge candidate qualifications, and 6 different patterns to make hiring recommendations. Interviewer effectiveness was related to their ranking of the importance and actual use of the criteria, suggesting that effectiveness was related to conscious control of decision processes.

Huffcutt, Conway, Roth, and Stone (2001) performed a meta-analysis of 47 interview studies to examine the constructs being measured. They found that interviews measure applicant mental capability, personality tendencies (e.g., conscientiousness), applied social skills, interests, background credentials, person–organization fit, and other attributes. They analyzed the relationships between several of these constructs and performance evaluation measures, and they presented evidence that personality and social skills predict performance and are not highly correlated with mental ability.

Finally, Russell (1999) used structured interviews to measure prior life experiences reflecting specific executive competencies such as resource problem solving (e.g., financial analysis, understanding the business) and people-oriented competencies (e.g., staffing, customer interaction). Results suggested that some constructs may be better predictors of initial performance, whereas others may be better predictors of later performance.

The recent research has helped clarify the range of constructs thought to be measured in the interview. These constructs include citizenship (e.g., Facteau, Bordas, & Jackson, 2000), emotional intelligence (Fox & Spector, 2000), mental ability, personality (e.g., Archuleta & Collins, 2000), honesty (e.g., Hollwitz & Harrison, 2000; Wheeler, 1997), social skills, verbal skills, and job interests. Because of its interactive nature, the employment interview may be able to assess unique skills not traditionally measured in selection contexts, such as social skills, communication skills, and so on (Borman & Motowidlo, 1993; Latham & Skarlicki, 1995). The research conducted to date, however, has not yet conclusively determined whether interviews can validly measure such constructs.

Discussion and future research. The interview can measure any number of constructs, depending on what questions are asked and how it is scored. Because of its interpersonal nature, however, it is likely that it can assess some important applicant characteristics not easily measured with other selection tools (e.g., fit with organizational values, interpersonal skills, decision making). Future work might focus on understanding the nature of the constructs best measured in the interview. In addition, in some ways the interview is more flexible than other selection methods because the interviewer can adapt and/or change the questions to fit a particular context or job, or in response to applicant answers. However, reducing interview structure may tend to lessen its validity. Thus, future research should explore the advantages of maintaining the adaptability of the interview without reducing validity.

We echo Harris' (1999) call for conceptual frameworks to understand the constructs measured in the interview. Furthermore, it is important to distinguish between predictor constructs such as applicant personality,

and criterion constructs such as citizenship. These predictor and criterion concepts need to be placed within a coherent and logical conceptual framework that links predictor constructs with criterion constructs in the performance domain (e.g., Campbell, McCloy, Oppler, & Sager, 1993). In this manner, interview research may take a step closer to the type of construct validation envisioned in the literature (e.g., Binning & Barrett, 1989; Schwab, 1980).

Furthermore, we note that there may be some linkages between the topic of individual differences in interviewers and the constructs measured in the interview. It may be that the individual differences in interviewers are related to the types of constructs that they measure. Future research should explore these relationships.

Stimulus Materials and Sample Type

Research on the employment interview has used written descriptions of applicants (paper-people), videotaped interviews (video-people), or live interviews with real people. Research has used students, employees, managers, or applicants. Arvey and Campion (1982) discussed several studies and concluded that research using paper-people yielded different results than those in actual interviews. They suggested, however, that the differences between students acting as interviewers and real interviewers are minimal. Harris (1989) concluded that there were important differences between students acting as interviewers and real interviewers. He also reported a significant decline in the use of paper-people stimuli. Schmitt (1976) reported only one study on this topic, Arvey and Campion (1982) discussed six studies and Harris (1989) reported three studies. Seven studies have been conducted on stimulus material and sample type since 1989.

Recent research. The only study that directly compared different types of respondents was conducted by Singer and Bruhns (1991). Using simulated interviews and hypothetical job candidates, they reported that managerial ratings were affected more by applicant work experience, whereas student ratings were more affected by academic qualifications.

Discussion and future research. Although there is little comparative research, many studies reviewed in this article incorporate one or more methodological factors that may limit their generalizabilty to field settings. In particular, employment contexts are usually different than laboratory studies in terms of the consequences of decisions and influential environmental factors. To the extent that these factors affect the results of the studies, we can be less confident in their external validity.

Recent research on the employment interview shows a shift away from paper-people studies toward video-people studies. More than 50

research articles and dissertations conducted since Harris (1989) used videotaped interviews. In many of these studies, students watched videotapes of actual or simulated interviews and evaluated the performance of the applicant, interviewer, or both. The trend toward video-people may be an improvement in research methodology because it increases the richness of information available to participants. Nevertheless, videotaped interviews may still lack the physical, emotional, and cognitive fidelity of interviews where there are real outcomes for both interviewer and applicant. Thus, future research that studies actual applicants and interviewers in real employment interviews for actual job openings, is an important complement to laboratory research and provides evidence that the results of laboratory research will generalize to field settings.

Differential Interviewer Validity

Research has investigated whether some interviewers render more valid judgments than other interviewers. Schmitt (1976) suggested there may be wide differences between interviewers. Arvey and Campion (1982) did not report any studies but suggested that focusing on the validity of the interview by collapsing across interviewers may obscure individual differences in interviewer validities. Harris (1989) suggested that some interviewers were better able to make valid judgments because they ask better questions, process or integrate information better, or are more motivated to make accurate decisions. Schmitt (1976) reported one study, Arvey and Campion (1982) did not report any studies, and Harris (1989) reviewed 16 studies. Five studies have been conducted on differential interviewer validity since 1989.

Recent research. Gehrlein, Dipboye, and Shahani (1993) compared validities calculated across interviewers to validities statistically adjusted for interviewer effects (Dreher, Ash, & Hancock, 1988; Kenny & La Voie, 1985). The relationships between interview scores and grade point averages was not significant, but adjusted validities were significant (rs were from .10 to .14). Motowidlo, Mero, and DeGroot (1995) studied whether holding interviewers individually accountable influenced interviewer validities. This laboratory study assessed individual rating tendencies, including favorability and discriminability, as well as validity. The data showed higher validity for the accountable than nonaccountable interviewers.

Pulakos, Schmitt, Whitney, and Smith (1996) studied the influence on validity caused by differences in individual interviewer ratings (means and standard deviations), consensus decision making, and sampling error. They used a concurrent criterion-related validation study in which interviewers conducted structured interviews of professionals in a large

federal agency. They found that most of the differences in individual interviewer ratings were accounted for by sampling error. Thus, individual interviewers made equally valid predictions of job performance. This suggested that standardization and training can help eliminate individual differences in interviewer validities.

Finally, Ryan and Sackett (1989) conducted an exploratory study of practices used by psychologists in performing individual assessments. They had 3 sales training employees assessed by 3 psychologists, and then the assessments performed by the psychologists were evaluated by 50 other psychologists. The assessments involved semistructured interviews that varied in mean length from 48 minutes to 78 minutes. The findings showed that psychologists disagreed about the usefulness of the different interview questions.

Discussion and future research. Recent research provides mixed evidence about individual differences in interviewer validities. Graves and Karren (1999) have suggested that more research is needed to determine if individual differences in validity are, in fact, consequential. Although there are some differences between interviewers, it appears that differences can be mitigated by increasing interview structure or by increasing interviewer accountability. Future research in this area may find useful linkages to the decision making studies discussed above. For example, research could examine whether interviewers with higher validities use more or different types of decision making processes, engage in more controlled information processing than other interviewers, or have more mental ability.

Outcomes

One of the most important outcomes of the interview is its ability to aid in the selection of the best candidates for employment. There have been several recent meta-analyses of the validity of the interview as a selection device. These meta-analyses illustrate how structure enhances both the reliability and validity of the interview (Conway, Jako, & Goodman, 1995; Huffcutt & Arthur, 1994; Huffcutt & Woehr, 1999; Wiesner & Cronshaw, 1988; Wright, Lichtenfels, & Pursell, 1989) and that structured interviews can provide incremental validity over other selection instruments (Cortina, Goldstein, Payne, Davison, & Gilliland, 2000; Huffcutt & Arthur, 1994). Furthermore, there is meta-analytic evidence that the interview scores correlate with measures of cognitive ability but that structure can reduce this correlation (Huffcutt, Roth, & McDaniel, 1996). Furthermore, there is meta-analytic evidence that suggests that interviews have higher validity for criteria such as job performance and training performance than for tenure (McDaniel, Whetzel, Schmidt, &

Maurer, 1994). Thus, it is fair to say that several aspects of structure are likely to enhance the validity and reliability of the interview, although there are several moderator variables of this relationship (Campion et al., 1997; Gibb & Taylor, 2000; Latham & Sue-Chan, 1999).

However, the interview has other important outcomes for individuals and organizations beyond its role as a potentially valid selection instrument. Therefore, this study goes beyond the discussion of validity and reliability issues by adding a discussion of other categories of outcomes. During the period covered by this review the number of studies on outcomes, and applicant reactions in particular, grew substantially. Now, studies on interview outcomes constitute nearly 10% of all interview research (Table 1).

Applicant Reactions

Recently, researchers have investigated how applicants react to the interviewer and the interview process. Schmitt (1976) reported that applicant reactions are improved when interviewers show an interest in and concern for the applicant and give more information about the job. Arvey and Campion (1982) suggested that the lack of research on applicant reactions might have resulted from a perception that asking applicants about their views would be intrusive. Harris (1989) reported mixed evidence on the effect of job attributes on applicant reactions. He also reported that applicant perceptions of events in the interview have some validity. Schmitt (1976) reported 2 studies, Arvey and Campion (1982) did not report any studies, and Harris (1989) reported one study. There has been substantial increased interest in this topic since 1989, with 23 recent studies.

Recent research. Martin and Nagao (1989) examined how using computers to conduct interviews influenced applicant reactions. In this laboratory study, participants were interviewed by a warm person, a cold person, a computer, or filled out a pencil-and-paper instrument. Although there were no differences in resentment between the warm and cold interview conditions, participants expressed greater resentment in the computer and pencil-and-paper conditions. Applicants for the management trainee position expressed greater resentment than those applying for the clerk position, suggesting an interaction between position and type of interview. Wagner (1991) examined the impact of applicant reactions to interview structure and other selection methods. The laboratory study found that selection system attributes did not affect the likelihood of accepting a job or regard for the company.

In another laboratory study, Rynes and Connerley (1993) found that students preferred interviews that were more like actual business

settings compared to more generic interviews. In addition, participants preferred being interviewed by line representatives over staff representatives. Smither, Reilly, Millsap, Pearlman, and Stoffey (1993) examined applicant reactions to a variety of selection procedures in an actual hiring context, including interviews. Managers reported that interviews, simulations, and cognitive tests with concrete items were more job related than personality, biodata, and cognitive tests with abstract items, and applicants had higher procedural and distributive justice evaluations of tests that had perceived predictive validity. This suggests that measures that enable the applicant to see job-relatedness result in more favorable reactions than more abstract measures.

Harland, Rauzi, and Biasotto (1995) compared the perceived fairness of personality tests with interviews. They found that the interview-only condition was perceived as fairer than any of the conditions with a personality test. In two experiments with undergraduate students, Kohn and Dipboye (1998) examined applicant reactions to various aspects of the interview. In the first experiment, participants evaluating unstructured interviews rated the organization more attractive, less authoritarian, more social, and more achievement oriented. They also rated the interviewer as fairer and more likable, and the interview was rated as more accurate, resulting in a greater willingness to accept a job offer. The negative impact of interview structure was reduced when more information was presented to participants. The second experiment found that organization attractiveness was influenced by job relatedness of questions, less standardized questions, more applicant voice, and more interviewer warmth.

Powell and Goulet (1996) studied the relationships between applicant reactions and the intentions of applicants and recruiters. They found that recruiter perceptions of applicant intentions were related to applicant acceptance of job offers, but neither recruiter perceptions of applicant intentions nor recruiter intentions toward the applicant predicted actual job offers. Steiner and Gilliland (1996) studied fairness perceptions of a variety of selection procedures. Both French and American students indicated that the interview, work sample, and resume were the most favorable. In general, the authors concluded that the face validity of selection procedures predicted applicant reactions in both samples.

Finally, Dew and Steiner (1997) examined the impact of inappropriate questions on applicant reactions. Campus recruiters and students completed surveys asking whether the interviewer asked questions deemed by the authors to be inappropriate under the EEOC's Uniform Guidelines. Contrary to their expectations, inappropriate questions (e.g., about the applicant's children) were positively related to percep-

tions of interview fairness by females and negatively related to perceptions of fairness by males.

Discussion and future research. Recent research provides fairly consistent evidence that applicants have more positive affective reactions to interviews than other selection devices such as personality tests, biodata inventories, or computerized tests. Further, the Smither et al. (1993) and Steiner and Gilliland (1996) studies suggest face validity is a key cause of positive applicant reactions. There were mixed results on the effect of adding structure to the interview (Hyde, 1997) and asking inappropriate questions (Dew & Steiner, 1997).

The significant growth in the number of studies focused on applicant reactions reflects increased recognition that the interview serves a dual purpose: selection and recruiting. Unfortunately, research to date suggests that these purposes may conflict because some elements that improve validity (e.g., increased interview structure) may also result in more negative applicant reactions. Thus, a key issue for future research is the identification of aspects of interview structure that can simultaneously improve validity and result in more favorable applicant reactions. It may be that improvements in the face validity of questions based on a well done job analysis will enhance the predictive validity and applicant reactions of the interview (Blumenthal, 1999). Furthermore, future research should examine whether the elements of interview structure have any negative affect on actual applicant behaviors, such as job acceptance rates, filing lawsuits, and so on. It may be that applicants prefer less structure so they can manipulate the interview to focus on their strengths, but more structure may not have any negative consequences for the organization (Latham & Finnegan, 1993).

Future research should also be careful to distinguish applicant reactions to the fairness of the interview from applicant perceptions of the attractiveness of the organization. As one anonymous reviewer noted, although the former may affect the latter, these may be two distinct concepts.

Interview Purpose

An interview's goals or purposes (e.g., initial screening, final selection, recruiting, or realistic job preview) can have a marked influence on interviewer–applicant interaction and interview outcomes. Whereas the goals of initial screening and final selection reduce the number of candidates under consideration, the goal of recruiting is intended to increase the number of persons in the applicant pool. Schmitt (1976) suggested that future research should address possible multiple purposes of the interview, including its uses as a selection tool, initial screening de-

vice, or educational device, but he did not report any research studies. Arvey and Campion (1982) recognized that the interview may serve as a recruiting as well as a selection function, although they also did not report any research on the topic. Harris (1989) suggested that interview purpose may relate to interviewer and applicant agreement on the topics that were covered, but he concluded that we do not know whether the interview can effectively function as both a recruiting and selection tool. Schmitt (1976) and Arvey and Campion (1982) did not report any studies. Harris (1989) reported one study. Despite the importance of this topic, only three studies have been conducted on interview purpose since 1989.

Recent research. Costigan (1997) suggested that presenting unfavorable information about the job during the interview did not affect the ratings of applicants. Barber, Hollenbeck, Tower, and Phillips (1994) examined the effects of combining selection and recruitment functions in the same interview. Applicants in recruitment-only interviews acquired more information, but those in the dual purpose interviews (both selection and recruitment) were more likely to remain in the applicant pool. The deleterious effect of the dual purpose interviews on information acquisition was greater for applicants low in cognitive ability and greater for applicants high in trait anxiety and low self-monitoring. Stevens (1998) examined how interview purpose (recruitment or selection) affected interviewer behavior. In recruiting interviews, the interviewer talked more, volunteered more information, and asked fewer questions. In addition, untrained interviewers had harsher evaluations when the purpose of the interview was screening instead of recruiting.

Discussion and future research. As highlighted earlier, there is a continuing recognition that the interview functions as a recruitment tool as well as a selection device (Rynes, 1991). Recent research suggests that when interviews are used for recruitment as well as selection, the interviewer gives more information to the applicant and the applicant has a more positive reaction to the interview. Future research should identify how the interview can be optimally designed to serve both recruitment and selection purposes. For example, the interview can be divided into two segments, one focusing on selection and another on recruiting. In this way, it may be possible to balance the inherent conflict of purpose between interviewers and candidates as they both try to select and attract simultaneously (Palmer, Campion, & Green, 1999). It is also possible that adding a recruitment component to the selection interview may reduce any potential negative reactions to interview structure.

The interview may also be used to present verbal realistic job previews to applicants. In a realistic job preview (RJP), negative as well as positive information about the job is given to applicants. Recent

meta-analytic evidence suggests that when RJPs are presented in a verbal format, as opposed to written or videotaped, their effect on reducing turnover is enhanced (Phillips, 1998).

Perhaps the interview may also serve other purposes such as initial orientation and socialization of the applicant to the organization (Allen & Meyer, 1990; Major, Kozlowski, Chao, & Gardner, 1995) or enhancing awareness of valuable fringe benefits (Hennessey, Perrewe, & Hochwarter, 1992; Wilson, Northcraft, & Neale, 1985). Future research should identify all the possible interview functions and the factors that enhance the usefulness of these functions.

Legal Compliance Issues

Court decisions and legislative actions have had a significant effect on many selection processes, and it is highly likely that compliance with these legal constraints is an important outcome for interviewers and organizations. Schmitt (1976) suggested that pressure for quotas would affect interview outcomes and that it was becoming increasingly important for interviews to be validated as job-related selection tools. Arvey and Campion (1982) suggested that court cases tended to revolve around two themes, discriminatory intent (evidenced by the use of certain questions or words in the interview) and disparate impact of the interview against certain subgroups. Harris (1989) predicted that the passage of the Americans with Disabilities Act (ADA) would stimulate research on discrimination in the interview. He urged researchers to monitor court decisions to determine the standards used to judge the legal defensibility of the interview with regard to the ADA. Schmitt (1976) and Arvey and Campion (1982) did not report any studies on this topic, but Harris (1989) reported one study. Three studies have been conducted on the legal compliance issues of the interview since 1989.

Recent research. Gollub-Williamson, Campion, Malos, Roehling, and Campion (1997) studied federal district court cases that alleged discrimination in the employment interview. The sample included both disparate treatment and disparate impact cases that were reported between 1972 and 1995. Three dimensions of interview structure, (1) objective/job-related questions, (2) standardized administration, and (3) multiple interviewers were related to verdicts in favor of employers. In addition, two recent studies examined applicant reactions to inappropriate or unlawful questions in the interview. One study suggested inappropriate questions resulted in negative reactions (Saks, Oppenheimer, & Grossman, 1993) but another study found mixed results (Dew & Steiner, 1997).

Discussion and future research. There has been very little empirical research on the influence of the legal compliance issues on the interview.

The research that has been done shows that certain aspects of interview structure are associated with an organization's chances of successfully defending a lawsuit. Changes in labor laws often generate interest in the research community. Thus, it is not surprising that there was a significant increase in research on disabled applicants in the interview following the passage of the ADA.

In another major change, the Civil Rights Act of 1991 amended Title VII of the Civil Rights Act of 1964 to provide jury trials and a declaration of the law involving mixed motive cases. Section 107 states that unlawful discrimination may result from a mixed employer motive if, "race, color, religion, sex, or national origin *was a motivating factor* for any employment practice, even though other factors also motivated that practice" [emphasis added]. This may make it more difficult for employers to prevail in discrimination lawsuits. However, if the employer can show that the same decision would have been made despite the partially unlawful motive, the employee may not be awarded the job or lost pay, but may only receive attorney fees, a declaration that the employer was wrong, and an order prohibiting the employer from discriminating in the future. Thus, employers may lose more cases, but the damages will be smaller. Future research might examine what types of practices lead judges and juries to conclude that an employer had an unlawful mixed motive and the type of evidence needed to show that the employer would have made the same decision despite the partially unlawful motive.

Future research should examine what characteristics of interviews increase the likelihood of discrimination claims. It may be that applicant perceptions of some forms of organizational justice, such as procedural justice or interactional justice, will reduce the frequency of such unfounded discrimination claims. Likewise, juror perceptions of employer procedural justice during the interview might result in more favorable judgments for employers.

Further Comments on Outcomes Research

Compared to prior years, the period covered by this review showed a significant increase in the number of studies on applicant reactions to the interview. This is likely due, in part, to an increased interest in the importance of reactions to selection procedures (Gilliland, 1994; Gilliland & Steiner, 1999), the litigious nature of the employment setting, and tight labor markets. The extent to which organizations leave applicants with favorable impressions is likely to have a number of important outcomes that may not be immediately apparent, such as a positive reputation, more future applicants, and reduced likelihood of

TABLE 2

Major Recommendations from the Last Decade of Research on the Employment Interview

1.	The trend towards examining the complex and multi-faceted psychological mechanisms that underlie the interview should continue.
2.	Future meta-analytic research should focus on the following areas: interviewer–applicant similarity, verbal and non-verbal behavior, applicant reactions, personality, impression management, decision making, and the effects of both applicant and interviewer training.
3.	Effect sizes and the incremental value of interview as a predictor should be examined and reported in all studies on interviewing. Research on marginally important topics should give way to more robust ones.
4.	Many promising theoretical models exist that should be explored for their applicability to the employment interview. Examples include decision making, procedural justice, and impression management theories.
5.	Future research should continue to focus on outcomes affecting the applicant and not just the organization.
6.	Future research should pay more attention to contextual variables both inside and outside the organization.
7.	Research should be linked to important interview outcomes, such as job offers and acceptances, as opposed to a sole focus on attitudes and reactions.
8.	Research should recognize that in some instances characteristics or behaviors may not be biasing interviewer judgments, but instead may represent job-relevant cues or characteristics.
9.	Emerging research topics include nonverbal behavior, impression management, disabilities, personality, recruiter behavior, applicant reactions, and constructs measured. Declining research topics include simple demographic correlates and the impact of obvious stereotypes.
10.	Future research should avoid collecting data on a single survey instrument at one point in time to avoid threats to internal validity based on known problems with common method variance.
11.	Future research needs to focus on non-traditional interview formats (e.g., internet video-active interviewing, telephone interviews) to determine the effect that interview format has on the processes and outcomes of the interview.

lawsuits. Future research should investigate the extent to which positive applicant reactions relate to these and other more distal outcomes.

Summary of Trends and Recommendations

Recent research has provided significant insight into the processes and outcomes of the interview that go beyond predictive validity. Within each section above we summarized past research and recent findings, and discussed recommendations for the future. The Appendix summaries this effort. We now take a broader perspective on this literature. Eleven major trends in the literature are identified and discussed (and summarized in Table 2).

First, it appears there is a movement away from a focus on simple bivariate relationships and an increased recognition that the interview is a complex multifaceted process with underlying psychological determinants. For example, in social factors research there is a movement away from simple main effects of applicant and interviewer demographics toward an examination of psychological mechanisms by which factors such as similarity and stereotyping function. Research involving simple demographic correlates to interview behavior should give way to the study of the causal constructs presumed to underlie the demographics. This may lead to a change in emphasis away from discrimination overtones and toward an understanding of diversity.

Second, there are several areas of interview research where sufficient numbers of studies exist to support meta-analytic efforts. These areas include interviewer–applicant similarity, verbal and nonverbal behavior, applicant reactions, personality, impression management, decision making, and the effects of both applicant and interviewer training. Future meta-analytic research should estimate the relationships between these factors and interview validity, and any potential moderators of these relationships.

Third, it is important to consider effect sizes and the incremental value of the interview as a predictor. As new phenomena are uncovered, they often generate a great deal of research interest with little consideration of the size or consistency of their effects in real interviews in real settings. This is unfortunate because interview research is necessarily an applied topic and effects in field settings are a useful touchstone by which the importance of findings can be evaluated. This means that future research should strive to include important outcome variables such as actual job choice decisions, actual hiring decisions, and actual job performance measures. For example, research in the areas of personality, value fit, impression management, and nonverbal behaviors needs to address the degree of incremental value of these measures over other predictors of performance.

Fourth, there is an increased appreciation that theoretical frameworks will advance our understanding of the underlying processes and outcomes of the interview. Researchers are focusing beyond the simple observable variables, such as physical appearance, and targeting the processes by which these observables are perceived, understood, and applied in cognitive processes and behaviors. Recent examples include the studies that used decision-making models and the studies of the constructs measured in the interview.

Fifth, there is an increased appreciation that aspects of the interview can impact the reactions of applicants to the interview, interviewer, and the organization. This trend provides useful insights into the comp-

arative acceptability of interviews and other selection devices. Future research will be most successful when it frames these outcomes within viable theoretical frameworks (e.g., procedural justice theory).

Sixth, there continues to be a relative lack of research on contextual variables that may influence interview processes and outcomes. The settings within which people act and the constraints that exist there can have a profound influence on their behavior (Cappelli & Shearer, 1991; Johns, 1991a; O'Connor, Peters, Pooyan, Weekley, & Erenkrantz, 1984; Peters & O'Connor, 1980) and the nature and form of individual interaction (Morgeson & Hofmann, 1999). More research is needed on contextual factors. A potentially useful way to categorize contextual factors is to view them as either external or internal to the organization. Potential external factors include the amount of industry regulation, unemployment rate, selection ratio, and demographic characteristics of the labor market and applicant pool. Potential internal factors include those recently explicated by Eder's (1999) interactionist perspective including task clarity, interview purpose, consequentiality, and accountability. Other potentially important contextual factors include the presence of a union, employer type (public vs. private), and the history of legal challenges to the selection system.

The need for such research is made more important because various contextual factors may be more important than technical merit when organizations decide to adopt innovations in interviewing. Johns (1991b) describes how contextual factors such as imitation processes, environmental threats, political influence, and government regulation may influence the adoption of specific types of personnel practices. He suggests that these factors often override technical merit in the adoption of psychologically based personnel practices. A challenge in studying context, however, is the fact that it is necessary to have some variability in the contextual factors (e.g., different labor markets, geographic locations, different facilities, etc.). This will require research across organizations, an uncommon occurrence in most employment interview research.

Although the increased research on applicant disabilities may reflect changes in employment laws, there is very little research examining how the legal changes affected the interview processes or outcomes. As researchers begin to work more on examining contextual variables such as changes in employment laws, they should avoid the trap of simply measuring observable variables. Rather they should also strive to understand the underlying processes by which these contextual variables are perceived and used by both interviewers and applicants.

Finally, research is needed to examine the context within which employment interviews are conducted. The complexity, information richness, and outcomes that surround employment interviews may have an

important impact on research. Scholars should carefully consider the context within which their research is conducted, consider the cognitive and emotional fidelity of that context, and then choose the best study designs and research methods to control for or isolate these factors.

Seventh, it is important to link our understanding of cognitive processes to actual outcomes. Much of the prior literature focuses on attitudinal or perceptual measures of applicants and interviewers. These measures may facilitate our understanding of cognitive processes involved in the interview. It is critical, however, that they be linked to actual interview outcomes such as job offers and acceptances to insure that research findings will be sufficiently important to bottom-line outcomes for organizations.

Eighth, many areas of research have examined how various factors may impact interviewer judgments (e.g., pre-interview impressions, impression management behaviors). But it is important to recognize that in many instances these things may not be biasing the judgments that are made. Instead, they may represent important job-related cues interviewers use when determining the likely future job performance of an applicant. Future research should clearly and carefully separate potentially biasing factors from those factors that may actually be job-related characteristics.

Ninth, many of the recently developing research topics are likely to yield interesting findings that will enhance our understanding of the interview. These include nonverbal behavior, impression management, disabilities, personality, recruiter behavior, applicant reactions, and constructs measured. Research on other topics, however, such as simple demographic correlates and the impact of obvious stereotypes, is likely to be on the decline.

Tenth, many of the employment interview studies over the past 10 years have suffered from problems of common-method variance. Typically this involves self-report measures taken from subjects on a single survey instrument at one point in time. Such studies have weak internal validity because the results are subject to several alternative explanations. In general, subject effects such as priming, consistency, self-generated validity, negative affectivity, social desirability, and so on, may influence measures of both independent and dependent variables on the same survey instrument. This concern has been raised under the topics of method bias, method variance, and percept–percept bias (Crampton & Wagner, 1994; Howard, 1994; Schmitt, 1994; Spector & Brannick, 1995; Williams, Cote, & Buckley, 1989). Future research that avoids this methodological weakness is strongly encouraged.

Eleventh, the focus of this review has been on the traditional, in-person employment interview. However, there are other types of interview formats that are emerging with the growing acceptance of electronic media technology. These include internet voice and video-interactive techniques (e.g., Eidson, 1999; Janz & Mooney, 1999). In addition, case-based variants of the in-person interview are also emerging. It is likely that much of the existing research may have significant implications for these alternative forms of the interview. However, research also needs to address how these non-traditional interview formats may affect the social and cognitive processes that underlie the interview, the validity of the interview, and applicant reactions.

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APPENDIX

Summary of Pre-1989 Research Findings, Comprehensive List of Recent Research Studies, Key findings from Recent Research, and Future Research Questions.

SOCIAL FACTORS

Interviewer–Applicant Similarity

Prior research findings (pre-1989). Racial and attitudinal similarity may increase applicant ratings. Interviewer cognitive complexity may enhance similarity effects. Similarity may induce confirmatory biases.

Recent studies (1989-present). Crandell, Buffardi, and Holt (1997); Dawkins, Ostrov, Dawkins, and Cavanaugh (1997); Falkenberg, Gaines, and Cox (1990); Graves and Powell (1995); Howard and Ferris (1996); Jackson and Veres (2000); Lin, Dobbins, and Farh (1992); McFarland, Sacco, Ryan, and Kriska (2000); Powers and Love (1989); Prewett-Livingston, Field, Veres, and Lewis (1996); Sacco, Scheu, Ryan, and Schmitt (1999).

Key findings from recent research. Demographic similarity effects are small and inconsistent. Similarity of attitudes may influence ratings of applicant affect and competence. Unclear if similarity effects influence validity of judgments to a meaningful extent.

Future research questions. Are demographic similarity effects important? What are the psychological processes underlying effects of both demographic and attitudinal similarity?

Applicant Fit

Prior research findings (pre-1989). (No prior studies).

Recent studies (1989-present). Adams (1999); Adkins, Russell, and Werbel (1994); Bodenman (1996); Bretz, Rynes, and Gerhart, (1993); Cable and Judge (1997); Jako (1992); Parsons, Cable, and Wilkerson, (1999); Rynes and Gerhart (1990).

Key findings from recent research. Although objective qualifications are more important to interviewer judgments, recent findings suggest that the fit of applicant personality and values to the organization may also play a role.

Future research questions. Is effect size of personality and value fit large enough to be important? Does fit have incremental validity over other predictors? Does fit differ across interviewer, job, and organization? Does fit influence job acceptance and turnover? How should fit be measured?

Verbal/Nonverbal Behavior

Prior research findings (pre-1989). Visual cues are important but perhaps less so than verbal information.

Recent studies (1989-present). Ajirotutu (1990); Anderson (1991); Anderson and Shackleton (1990); Atkins (1993); Ayres, Keereetaweep, Chen, and Edwards (1998); Burnett and Motowidlo (1998); Cargile (1997); Charoenngam (1996); DeGroot and Motowidlo (1999); Deutsch (1990); Eng (1995); Gilmore (1989); Herrin (1990); Howard and Ferris (1996); Levine (1999); Liden, Martin, and Parsons (1993); Loccisano (1996); Long, Long, and Comstock (1996); McEachern (1990); Miller and Buzzanell (1996); Motowidlo and Burnett (1995); Motowidlo, Burnett, Maczynski, and Witkowski, (1996); Peterson (1991, 1997); Ralston (1989); Remland, Jones, and Brinkman (1990); Singer and Eder (1989); Stone and Winfrey (1994); Ugbah and Evuleocha (1992); Van Der Vorm,

(1996); Van Vianen and Van Schie (1995); Voigt, (1994); Vrij, Dragt, and Koppelaar (1992); Willemyns, Gallois, Callan, and Pittam (1997); Williams (1992); Wright and Multon (1995).

Key findings from recent research. Both verbal and nonverbal behavior influence ratings of applicants and may predict performance. Applicant dispositional characteristics influence both verbal and nonverbal behaviors. Aspects of speech other than its content may influence ratings of applicants. Several factors predict interviewer nonverbal behaviors.

Future research questions. How generalizable is the finding that nonverbal cues predict actual job performance? Do nonverbal cues reflect job-related characteristics of applicants? What are the determinants of interviewer nonverbal behaviors? What relationships exist between interviewer and applicant nonverbal behaviors?

Impression Management

Prior research findings (pre-1989). Few studies reported, but suggestion was made that social psychological research and impression management may provide useful insights into the employment interview.

Recent studies (1989-present). Buttner and McEnally (1996); Delery and Kacmar (1998); Ellis, West, Ryan, and DeShon (2001); Fletcher (1990); Gallois, Callan, and Palmer (1992); Gilmore and Ferris (1989); Harris (1993); Howard and Ferris (1996); Jacobson and Hazer (2000); Kacmar and Carlson (1999); Kacmar, Delery, and Ferris (1992); Kristoff-Brown, Franke, and Barrick (2001); McFarland, Ryan, and Kriska (1997); Oguchi (1991); Pagon (1995); Ramsay, Gallois, and Callan (1997); Rosen, Cochran, and Musser (1990); Stevens (1997); Stevens and Kristof (1995); Young and Kacmar (1998).

Key findings from recent research. Specific types of impression management behaviors, such as self-promotion, may relate to higher ratings of applicants. Applicants' characteristics or beliefs about the job may influence their decision to use impression management behaviors.

Future research questions. Can interviewers learn to detect impression management attempts that mask actual applicant characteristics? Is impression management a job-related skill for some jobs or contexts? Can interview structure be used to reduce the influence of impression management?

Information Exchange

Prior research findings (pre-1989). Applicants can accurately perceive information from interviewers.

Recent studies (1989-present). Engler-Parrish and Miller (1989); Tullar (1989).

Key findings from recent research. Interviewer communication style may influence the information exchange process between applicant and interviewer.

Future research questions. What are the characteristics of the information exchange relationship between interviewer and applicant and how do they function?

COGNITIVE FACTORS

Decision Making

Prior research findings (pre-1989). Temporal placement of information, primacy, recency, and contrast effects influence how interviewers process information about applicants. There is mixed evidence on how long it takes interviewers to make decisions. Individual interviewers may use rating scales differently.

Recent studies (1989-present). Brooks (1993); Gatewood, Lahif, Deter, and Hargrove (1989); Highhouse (1996); Hitt and Barr (1989); Kataoka, Latham, and Whyte (1997); Struthers, Colwill, and Perry (1992); Willihnganz and Meyers (1993).

Key findings from recent research. Anchoring and adjustment heuristic effects may influence interviewer decision making. Interviewers may combine information in complex, nonlinear ways. Interviewing research has not considered advances in research on decision-making models.

Future research questions. Do decision-making models such as framing and prospect theory, recognition-primed decision making, and image theory apply to interviewer decision making in real interviews?

Pre-Interview Impressions

Prior research findings (pre-1989). Pre-interview information influences interviewer decisions. Pre-interview impressions are related to post-interview impressions. Personal history has a greater influence on interviewers than applicant attractiveness.

Recent studies (1989-present). Biesanz, Neuberg, Judice, and Smith (1999); Burnett, Fan, Motowidlo, and Degroot (1998); Cable and Gilovich (1998); Conway (1993); Dalessio and Silverhart (1994); Guadagno (1989); Hausdorf (1999); Hayes and Macan (1997); Kinicki, Lockwood, Hom, and Griffeth (1990); Kohn, Dipboye, and Gaugler (1994); Macan and Dipboye (1990, 1994); Macan and Hayes (1995); Ryan and Sackett (1992); Wade and Kinicki (1997).

Key findings from recent research. Interviewers do make judgments based on pre-interview information, but the evidence is primarily from lab studies with college students.

Future research questions. Do judgments of applicants based on pre-interview information influence actual hiring decisions? If so, is this relationship based on accurate perceptions of applicant job-related characteristics or does it hinder interviewer judgments?

Confirmatory Bias

Prior research findings (pre-1989). Little evidence of confirmatory bias in the interview.

Recent studies (1989-present). Dougherty, Turban, and Callender (1994); Kohn, Dipboye, and Gaugler (1994); Phillips and Dipboye (1989); Shahani, Moore, and Merlo (1994).

Key findings from recent research. Some evidence of confirmatory biases, such as favorable pre-interview impressions inducing positive behavior towards applicants. Is this bias or credentials?

Future research questions. Does favorability of judgments of applicants affect accuracy or validity through changes in interviewer behavior? Does favorability influence extent the interview is a recruiting tool?

Applicant and Job Information

Prior research findings (pre-1989). Mixed evidence on the impact of favorability and amount of information.

Recent studies (1989-present). Highhouse and Bottrill (1995); Morton (1994); Nordstrom (1996); Nordstrom, Hall, and Bartels, (1998); Silvester (1997).

Key findings from recent research. Influence of information characteristics may be affected by factors such as type of attribution being made, interviewer's involvement, and social influence processes.

Future research questions. What factors influence information favorability of the applicant and the job? Do information characteristics affect applicant reactions as well as judgments of applicants?

INDIVIDUAL DIFFERENCE FACTORS

Applicant Characteristics

Appearance

Prior research findings (pre-1989). Mixed evidence of applicant attractiveness. Factors such as applicant personal history and job-relatedness of attractiveness may moderate the influence of attractiveness on applicant ratings.

Recent studies (1989-present). Cable and Judge (1997); Christman and Branson (1990); Crandell, Buffardi, and Holt (1997); Forsythe (1990); Hebl and Kleck (1999); Jenkins and Atkins (1990); Kutcher and Bragger (1999); Mack and Rainey (1990); Motowidlo and Burnett (1995); Pingitore, Dugoni, Tindale, and Spring (1994); Stone and Winfrey (1994).

Key findings from recent research. Considerable laboratory evidence of the influence of attractiveness on ratings of applicants.

Future research questions. Does applicant attractiveness influence actual selection decisions? Is applicant attractiveness interpreted as a

signal or cue about applicant job-related characteristics? Does the controllability of the appearance factor influence the interviewer's reaction?

Demographics

Prior research findings (pre-1989). Inconsistent effects for sex, race, and age of applicants.

Recent studies (1989-present). Debell (1992); Dougherty, Turban, and Forret (1993); Hess (2000); Hrop (1990); Huffcutt and Roth (1998); Johnson (1990); Korsgaard and Rymph (1999); Nettles, Williams, and Nordstrom (2000); Ringenbach (1994); Singer and Sewell (1989); Wood-Brooks (1992).

Key findings from recent research. Small and inconsistent effects for applicant demographic characteristics.

Future research questions. Are applicant demographic characteristics interpreted as signals or cues for underlying (and more relevant) characteristics?

Disabilities

Prior research findings (pre-1989). Physical disabilities may increase applicant ratings, whereas mental disabilities may reduce ratings.

Recent studies (1989-present). Arvonio, Cull, and Marini (1997); Cesare, Tannenbaum, and Dalessio (1990); Charisiou, Jackson, Boyle, Burgess, Minas, and Joshua (1989); Christman and Branson (1990); Gething (1992); Hayes and Macan (1997); Hebl and Kleck (1999); Henry (1994); Herold (1996); Nordstrom, Huffaker, and Williams (1998); Macan and Hayes (1995); Marchioro and Bartels (1994); Miceli (1997); Reilly, Bocketti, Maser, Gregson, Records, Strickland, and Wennet (2000); Wright and Multon (1995).

Key findings from recent research. Mixed results for the influence of disabilities on applicant ratings. Applicant voluntary disclosure of non-apparent disabilities and acknowledgement of apparent disabilities may increase ratings of employability.

Future research questions. Will applicants applying for real jobs expect or receive a positive response to voluntary disclosure of non-obvious disabilities? Will the need for an accommodation moderate the positive influence of applicant voluntary disclosure of a non-apparent disability?

Training

Prior research findings (pre-1989). Applicants, especially those with special needs, react positively and acquire useful information and skills in several types of training, but it is not clear that this translates into better interview performance or job offers.

Recent studies (1989-present). Cassidy (1988); Dunn, Thomas, and Engdahl (1992); Higgins, Rynes, and Judge (2001); Hotard (1995); Howze (1990); Johnson (1993); Long, Long, Dobbins, and Roithmayr

(1995); Maurer, Solamon, and Troxtel (1998); Maurer, Solamon, Andrews, and Troxtel (2001); McEachern (1990); Mortensen (1989); Mozingo, Ackley, and Bailey (1994); Schwartz (1988); Solamon (1999); Taves, Hutchinson, and Freeman (1992); Teague (1992); Tross and Maurer (1999).

Key findings from recent research. Mixed evidence of influence of training on improvement of interviewing skills, especially for those with no special needs. Evidence that training transfers to actual interviews is lacking.

Future research questions. Does any type of applicant training influence applicant behavior and interviewer choices in real interviews? Does such training improve the measurement of job-related skills, or does it increase impression management?

Personality

Prior research findings (pre-1989). Interviewers may be able to perceive applicant personality, but limited research on the topic.

Recent studies (1989-present). Anderson, Silvester, Cunningham-Snell, and Haddleton (1999); Archuleta and Collins (2000); Ayres, Ayres, and Sharp (1993); Ayres and Crosby (1995); Ayres, Keereetaweep, Chen, and Edwards (1998); Binning, LeBreton, and Adorno (1999); Burbage (1991); Caldwell and Burger (1998); Christman and Branson (1990); Conwell (1991); Cook, Vance, and Spector (1995); Craine (1992); Jako (1992); Jones and Pinkey (1989); Liden, Martin, and Parsons (1993); Menhart (1999); Motowidlo, Burnett, Maczynski, and Witkowski (1996); Pingitore, Dugoni, Tindale, and Spring (1994); Radtke (1997); Raichle (1991); Rosse, Miller, and Stecher (1994); Schmidt (1994); Van Vianen and Van Schie (1995); Van Vianen and Willemsen (1992); Voigt (1994); White (1993).

Key findings from recent research. Applicant dispositions such as Extraversion, Conscientiousness, and need for achievement enhance interview performance. The effect of anxiety and apprehension on interview performance is unclear.

Future research questions. Do the findings from laboratory studies on the effects of applicant personality generalize to real interviews where faking is more likely? Is the distinction between state and trait anxiety useful for designing applicant training programs?

Interviewer Characteristics

Training and Experience

Prior research findings (pre-1989). Inconsistent results on the outcomes of training programs for interviewers.

Recent studies (1989-present). Connerley (1997); Fontenot (1993); Furnham and Burbeck (1989); Gatewood, Lahif, Deter, and Hargrove

(1989); Hess (2000); Kennedy (1994); Loccisano (1996); Mattimore and Balzer (1993); Rutherford (1992); Van De Water (1988); Werner (1991).

Key findings from recent research. Interviewers have positive reactions to training, and they acquire knowledge during training. However, despite widespread use of interviewer training, evidence that training transfers to actual behavior in real interviews is lacking. Yet, training as type of structure supports use of training.

Future research questions. What interviewer training changes interviewer behavior in real interviews? What training improves validity of interviewer decisions? What are relationships between interviewer training and interviewer experience, do they mix to effect decisions and validity?

Recruiter Behavior

Prior research findings (pre-1989). Recruiter behaviors, such as showing concern for applicants, providing information, and allowing the applicant to talk, can positively influence applicant reactions. However, recruiter effects may lessen compared to job attributes as a job choice decision approaches. Most research based on college student recruiting.

Recent studies (1989-present). Davis (1990); Giacalone and Pollard (1990); Giannantonio (1988); Gilmore (1989); Larkin and Pines (1994); Liden et al. (1993); Macan and Dipboye (1990); Maurer, Howe, and Lee (1992); Powell (1991); Ralston (1993); Ralston and Brady (1994); Ralston, Redmond, and Pickett (1993); Roesch (1992); Turban and Dougherty (1992); Turban, Forret, and Hendrickson (1998).

Key findings from recent research. Recruiter effects continue to be observed, but the influence of recruiter behavior on willingness to accept a second interview or job offer appears to be small after controlling for job characteristics.

Future research questions. Can recruiter behavior influence important applicant behaviors, such as actual job choice, in real job settings after controlling for job characteristics? What can be done to enhance the effects of the recruiter?

Stereotypes and Expectancies

Prior research findings (pre-1989). Interviewers perceptions of the ideal candidate may influence their evaluations of applicants.

Recent studies (1989-present). Forsythe (1990); Gallois, Callan, and Palmer (1992); Gerken (1993); Judice and Neuberg (1998); Kacmar, Wayne, and Ratcliff (1994); Larkin and Pines (1994); Neuberg, Judice, Virdin, and Carrillo (1993); Ringenbach (1994); Van Vianen and Van Schie (1995); Van Vianen and Willemsen (1992).

Key findings from recent research. Interviewer cognitions about ideal candidates may be related to demographic factors such as sex, race, or age; but not to actual interviewer decisions for real jobs.

Future research questions. Are interviewer cognitions about stereotypically ideal candidates overcome by legal constraints in actual hiring situations?

Other

Prior research findings (pre-1989). Interviewer cognitive complexity and mood may influence their ratings of applicants.

Recent studies (1989-present). Baron (1993); Ferguson and Fletcher (1989); Herrin (1990).

Key findings from recent research. Interviewer cognitive complexity may increase accuracy of ratings, whereas interviewer mood may decrease accuracy.

Future research questions. Does interviewer mental ability account for the effects of cognitive complexity on accuracy? Do the findings regarding cognitive complexity and mood generalize to real jobs?

MEASURES

Constructs Measured

Prior research findings (pre-1989). Interviews can measure social, interpersonal, and verbal skills, as well as job interests, likes, and dislikes.

Recent studies (1989-present). Bordas, Facteau, Facteau, Podsakoff, MacKenzie, and Sims (2000); Facteau, Allen, and Tears (2000); Facteau, Bordas, and Jackson (2000); Facteau, Facteau, Jackson, and Becton (1999); Fontenot (1993); Fox and Spector, (2000); Gerstein, Barke, and Johnson (1989); Graves and Karren (1992); Hollwitz and Pawlowski (1997); Huffcutt, Conway, Roth, and Stone (2001); Huffcutt, Weekley, Wiesner, DeGroot, and Jones (2001); Inwald (1988); Latham and Skarlicki (1995); Phannenstill and Horvath (1991); Russell (1999); Siem (1991); Thomas (1994); Wheeler (1997).

Key findings from recent research. Different interviewers may be measuring different constructs. Constructs measured may include citizenship, emotional intelligence, mental ability, social skills, personality, honesty, interests, and job-related credentials and skills.

Future research questions. Can interviews validly measure skills not traditionally assessed in other ways? Can a framework of constructs being measured in the interview be developed? Can it be linked to a framework in the job performance domain?

Stimulus Materials/Sample Type

Prior research findings (pre-1989). Paper-people studies yield different results than real interviews. Studies with students yield different results than those with real applicants.

Recent studies (1989-present). Cook-Gumperz and Gumperz (1997); Debell and Dinger (1997); Kacmar and Hochwarter (1996); Nelson,

McCollum, Wetchler, and McAvoy (1994); Nevo and Berman (1994); Raichle (1991); Singer and Bruhns (1991).

Key findings from recent research. In laboratory research, there is a trend away from printed stimuli to videotaped stimuli. Evidence that this improves the external validity of laboratory findings is lacking.

Future research questions. Do the findings of laboratory studies generalize to real interviews with real applicants, real interviewers, and real jobs? Does video technology improve generalizability?

Differential Interviewer Validity

Prior research findings (pre-1989). Differential interviewer validity may be related to better questions, differential ability to process or integrate info, or level of motivation.

Recent studies (1989-present). Dipboye, Gaugler, and Hayes (1990); Gehrlein, Dipboye, and Shahani (1993); Motowidlo, Mero, and DeGroot (1995); Pulakos, Schmitt, Whitney, and Smith (1996); Ryan and Sackett (1989).

Key findings from recent research. Differences in interviewer validity may be attenuated by interview structure or interviewer accountability.

Future research questions. Does interviewer differential validity result from varying decision making processes?

OUTCOMES

Applicant Reactions

Prior research findings (pre-1989). Very little research on this topic, but some evidence that applicant reactions are improved when interviewers show concern and give job information.

Recent studies (1989-present). Blumenthal (1999); Chapman, Rowe, and Webster (1999); Dew and Steiner (1997); Forret and Turban (1996); Harland, Rauzi, and Biasotto (1995); Helmick (1993); Hyde (1997); Hysong and Dipboye (1998 and 1999); Janz and Mooney (1999); Kohn and Dipboye (1998); Korsgaard and Rymph (1999); Martin and Nagao (1989); Powell (1996); Powell and Goulet (1996); Rosse, Miller, and Stecher (1994); Rynes and Connerley (1993); Saks, Oppenheimer, and Grossman (1993); Schuler (1989); Schuler (1993); Smither, Reilly, Millsap, Pearlman, and Stoffey (1993); Steiner and Gilliland (1996); Wagner (1991); Wheeler and Hamill (1999).

Key findings from recent research. Applicant reactions to interviews are more positive than for other selection devices. Face valid questions may improve reactions. However, applicant reactions to interview structure and asking inappropriate questions is mixed.

Future research questions. What aspects of the interview are positively related to both validity and applicant reactions? Are applicants more favorably disposed to interviews than pencil-and-paper instruments of

constructs such as integrity and honesty? Does added structure necessarily influence actual applicant behaviors (e.g., accepting a job)?

Interview Goals/Purpose

Prior research findings (pre-1989). There is uncertainty as to whether an interview can serve both selection and recruitment functions simultaneously.

Recent studies (1989-present). Barber, Hollenbeck, Tower, and Phillips (1994); Costigan (1997); Stevens (1998).

Key findings from recent research. When recruiting is an interview goal, more information is provided and applicant reactions are more positive.

Future research questions. Can an interview be designed to serve both selection and recruitment purposes? Can building in a recruitment component reduce any negative candidate reactions to interview structure?

Legal Compliance Issues

Prior research findings (pre-1989). Recognition that legal environment may influence conduct of interviews.

Recent studies (1989-present). Dew and Steiner (1997); Gollub-Williamson, Campion, Malos, Roehling, and Campion (1997); Saks, Oppenheimer, and Grossman (1993).

Key findings from recent research. Elements of interview structure relate to court decisions in favor of employers. Some evidence of negative reactions to illegal questions.

Future research questions. What interview practices lead to claims of unlawful mixed motives? Does procedural justice in interviews reduce discrimination claims?