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Technology and discourse: A comparison of face-to-face

and telephone employment interviews

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Abstract

Very little research has investigated the comparability of telephone and face-to-face employment interviews. This exploratory study investigated interviewers' questioning strategies and applicants' causal attributions that were produced during structured telephone and face-to-face graduate recruitment interviews (N=62). A total of 2044 causal attributions was extracted from the verbatim transcripts of these 62 interviews. It was predicted that the absence of visual cues would lead applicants to produce, and interviewers to focus on, information that might reduce the comparative anonymity of telephone interviews. Results indicate that applicants produce more personal causal attributions in telephone interviews, and that these are associated with higher ratings for these, but not face-to-face interviews. In face-to-face interviews, applicants who attributed outcomes to more global causes received lower ratings. There was also a non-significant tendency for interviewers to ask more closed questions in telephone interviews. The implication of these findings for research and practice are discussed.

Technology and discourse: A comparison of face-to-face

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Given the large volume of research that exists concerning the comparability of

different forms of employment interview (e.g., Janz, 1982; Pulakos & Schmitt, 1995;

Wiesner & Cronshaw, 1988) surprisingly few studies have explored the potential

impact of technology. The lack of research in this area is of particular concern in light

of evidence that organizations are becoming increasingly reliant upon technology-

based selection processes, both to reduce recruitment costs and to maximize the

geographic size and diversity of their applicant pool (Chapman & Rowe, 2001, 2002;

Kroeck & Magnussen, 1997). Although there has been interest in the use of

videoconferencing for selection, in reality video-interviews are still comparatively

rare (Burkitt, 1991; Coady et al. 1996). Indeed, the most prolific use of technology to

support employment interviewing has involved the telephone (Schmidt & Rader,

1999). Yet despite the popularity of telephone interviews, virtually no studies have

investigated their comparability with face-to-face employment interviews. It would

seem that the very 'normality' of the telephone as an everyday means of

communication has resulted in the assumption of equivalence.

Such an assumption may well be misplaced, however, particularly as the only

study to have directly compared telephone and face-to-face employment interviews

found that applicants were rated consistently lower in the telephone condition

(Silvester, Anderson, Haddleton, Cunningham-Snell & Gibb, 2000). Furthermore,

evidence from social-psychological research suggests audio-only communication changes the way in which people interact and make judgments about one another (Mehrabian, 1981; Rutter, 1987). Consequently, there is an important need for detailed comparison of the processes by which selection decisions are made in telephone and face-to-face interviews, in order to determine whether telephone interviews are equivalent or more or less valid, fair and reliable as those conducted face-to-face (see also Anderson, submitted). A broad aim of this investigation was to explore the equivalence of structured interviews, conducted face-to-face and by telephone, in terms of their content and selection outcomes. This was undertaken in two ways: first, by comparing interviewer question strategies across the two modes of interview. Second, by conducting a detailed content analysis of the verbal impression management strategies adopted by applicants across the two interview modes, and their relationship to interviewer judgments. We predicted that the absence of visual cues would impact differentially upon the type of information that interviewers use to make selection decisions.

Technology, Discourse and Interaction in Employment Interviews

Whilst we have little understanding of how interviewers judge applicants during telephone employment interviews, research from non-selection contexts has found that individuals alter the way they interact when they cannot see one another, and that this in turn can influence interpersonal perceptions (e.g., Stephenson, Ayling & Rutter, 1970). For example, conversations conducted by telephone contain fewer pauses, fewer interruptions, longer utterances and more questions than face-to-face conversations (Rutter & Stephenson, 1977; Rutter, 1987). Similarly, as visual cues

deteriorate, participants tend to interrupt one another less, and take fewer but longer

turns (Sellen, 1995). In telephone interactions people are also more likely to adopt

task-oriented styles, where they ask more questions and solicit more information from

one another (Argyle, 1992; Rutter, 1987; Short, Williams & Christie, 1976). Morley

and Stephenson (1970) also found that more settlements were made in favor of the

side with the stronger case in sound only compared with face-to-face conditions in a

study of negotiating strategies.

These differences have been summarized in terms of the existence of an

increased psychological distance between participants during telephone interactions

(Rutter, 1987). More specifically, an absence of visual cues and altered

communication style appear to result in a depersonalized atmosphere that is thought

to lessen individuals' social or interpersonal orientation and strengthen their task-

orientation (Harmon, Schneer & Hoffman, 1995; Rogelberg, O'Connor & Sederberg,

2002). Certainly, in face-to-face interactions individuals are more likely to make an

effort to persuade the other person to like them, they also find it less easy to disregard

interpersonal considerations (Anderson, Silvester, Cunningham-Snell, & Haddleton,

1999; Argyle & Dean, 1965). For example, Sykes & Collins (1988) found that

individuals produced more socially desirable responses in a face-to-face problem-

solving task than when they performed the same task by telephone.

These findings are potentially important for our understanding of decision-

making in telephone and face-to-face employment interviews. We know from

research investigating face-to-face interviews that applicants' nonverbal behaviors

can act as important determinants of interviewer impressions (e.g., Imada & Hakel,

1977; Rassmusen, 1984), and that associative nonverbal behavior is consistently associated with higher interview ratings (e.g., Anderson, 1991; Anderson & Shakleton, 1990; Gifford, Ng & Wilkinson, 1985; Imada & Hakel, 1977; Liden & Parsons, 1989). However, applicant nonverbal behavior may impact more upon an interviewer's judgment of 'likeability' rather than competence in any future job situation. Consequently, a more task-oriented style in telephone interviews may in fact help to minimize bias by focusing attention upon the elicitation of competency-relevant evidence. It is also possible that an absence of visual cues will mean that interviewers and applicants rely more on what is said rather than how it is said.

In order to explore whether interviewer styles differ across the two modes of interview, we formulated a number of tentative hypotheses based on previous social-psychological research. We predicted that interviewers would ask more closed questions in telephone interviews compared with face-to-face interviews (hypothesis 1a), and more open questions in face-to-face compared with telephone interviews (hypothesis 1b). In addition, we predicted that applicants would produce less discourse in telephone compared with face-to-face interviews (hypothesis 1c).

Causal attributions and interviewer ratings

Although most research concerned with applicant impression management tactics has focused on nonverbal interview behavior (Gilmore, Stevens, Harrell-Cook & Ferris, 1999) most communication in the employment interview is verbal. Clearly applicants across both modes of interview also seek to impress interviewers through what they say. One way in which this occurs is via the causal explanations that

applicants produce when they are asked to account for previous behavior and outcomes. Whilst attribution theory has been identified as an important framework for understanding selection decisions (Arvey & Campion, 1982; Herriot, 1981), most research to date has focused recruiters' attributions for applicant behavior (e.g., Nemanick & Clark, 2002; Ramsay, Gallois & Callan, 1997) rather than the attributions made by applicants. Yet as Silvester (1997) points out, applicants produce large numbers of attributions during employment interviews when they are asked about previous outcomes and to justify why they believe they are suited to that particular role. It has been argued that such spoken attributions constitute an important source of information for interviewers formulating their own causal attributions about applicants. Supporting evidence was found in a study of naturally occurring attributions that found that applicants who attributed past failures to more internal and controllable causes received higher ratings from interviewers (Silvester, 1997). A further study by Silvester, Anderson-Gough, Anderson and Mohammed (2002) also found that applicants who indicated that they would explain past negative outcomes in terms of internal and controllable causes, were rated more highly by interviewers in subsequent employment interviews. Therefore certain patterns of applicant causal attributions would appear to be associated with higher levels of success in employment interview contexts.

These findings have been explained in terms of Weiner's (1986) socio-cognitive theory of achievement motivation. Weiner argues that those individuals who typically attribute success to internal, controllable and stable causes (e.g., I came first in class because I believe in applying maximum effort to my work), and failure to internal, controllable and unstable causes (e.g., I failed the exam because I did not

spend enough time preparing), are more likely to be motivated to achieve in future situations because they believe that they will be able to influence similar outcomes. In contrast, individuals who attribute failure to uncontrollable and stable causes are likely to demonstrate lower levels of motivation, because they do not believe that they are capable of influencing similar outcomes in future. Consequently, they will exert less effort or attempt fewer strategies in order to maximize their likelihood of success. Silvester et al. (2002) argue that these attributions impact upon selection decisions because they provide interviewers with clues as to how the individual is likely to respond in future. For example, an interviewer who listens to an applicant consistently attributing failure to external and uncontrollable causes may judge that person less motivated, because they consider them unwilling or unable to accept responsibility and learn from their failures. In the absence of visual cues, it may be that these verbal cues become more influential in terms of interviewer decisions about applicants. We therefore predict that whilst there will be a relationship between more internal-controllable attributions and higher interviewer ratings across both interview modes (hypothesis 2a), this relationship will be stronger for interviewer ratings in the telephone interviews compared with face-to-face interviews (hypothesis 2b).

However, there are a number of other ways in which applicants' causal accounts can impact upon interviewer selection decisions. In broad terms, interviewers are required to make three judgments based upon the information that the applicant provides. First, is the applicant competent, that is, can she or he do the job? Second, to what extent is he or she different from other applicants? This can be defined in terms of the applicant's individuality or uniqueness with respect to other applicants. Third, to what extent are these characteristics likely to be long-lasting?

That is, will the characteristics continue to exert an influence once the person has been hired? According to Kelley's model of covariation (1973), such decisions underlie our judgments of other people. However, information relating to these areas can also be derived from the attributions that applicants produce themselves. For example, judgments of competence relate to internal and controllable attributions for past behavior and events (e.g., I was chosen because I campaigned hard for the leadership challenge). Individuality judgments can be based upon the extent to which applicants attribute outcomes to causes that are personal or unique to them (e.g., I think I'm a good applicant for this job because I have an unusual combination of experience and skills). Judgments about 'permanence' can be derived from the extent to which an applicant attributes their behavior to stable causes (e.g., I know I'm suited to this role, because I've always been interested in solving technical problems). Finally, the extent to which the applicant attributes outcomes to important or 'global' causes may reflect an individual's efforts at self-promotion, particularly in the case of positive outcomes (e.g., I seem to have a real talent for putting together successful promotions).

However an absence of visual cues increases the level of anonymity in telephone interviews. Consequently, this may alter the way in which applicants strive to present themselves to interviewers, as well as the type of information that interviewers focus on in order to make decisions about applicants. For example, applicants may work harder to differentiate themselves from other applicants by making more internal and personal attributions (e.g., I was chosen because I was the only person with such a strong profile of experience). Similarly, interviewers may seek to overcome the anonymity of applicants by attending more closely to

information that differentiates one from one another. We propose the following

tentative hypotheses. First, applicants will make more internal and personal

attributions in telephone interviews compared with face-to-face interviews

(hypothesis 3a). Second, internal, personal and stable attributions for positive

outcomes will be associated with higher interviewer ratings in telephone interviews

(hypothesis 3b).

Method

Sample

A total of 31 applicants (21 male and 10 female) to the UK graduate training

program of a multinational oil corporation participated in the study. Each applicant

received a telephone and a face-to-face interview with different interviewers as part

of the selection procedure. The modal age of the sample was 22 years with a mean

age of 22.7 years (SD = 1.62). A total of 21 experienced interviewers (18 male and

three female) also took part in the study, all had been trained in how to conduct face-

to-face but not telephone-based, interviews.

Procedure and study design

Following an initial 'paper sort' of application forms, letters were sent to

successful candidates inviting them to a first stage interview at the company's London

head office. The letters also explained that the company was investigating the use of

telephone interviews as part of the graduate recruitment process, and that each

applicant would receive two interviews: one of which would be conducted by telephone. They were informed that their performance in <u>both</u> interviews would be used to decide whether they would progress to a second stage assessment center.

Face-to-face and telephone-based interviews followed the standard procedure adopted by the company. In both cases interviewers received a copy of the candidate's application form and an Interview Report Form [IRF] prior to the interview. All interviews were semi-structured and lasted approximately 30 minutes including ten minutes for the applicant to ask questions. At the beginning of each interview the interviewer introduced him or herself briefly, explained the structure of the interview, and began with several general questions about the applicant's interests and skills. The interviewer then posed a series of job-related problem drawn from a pool of questions available to each interviewer. Apart from the involvement of a different interviewer, the content and structure of interviews was held constant across both modes of interview.

A counter-balanced design was used to control for possible order effects. Applicants were allocated randomly to one of two groups: group A received a face-to-face interview followed by a telephone interview, and group B a telephone interview followed by a face-to-face interview.

<u>Interviewer Ratings</u>: Interviewers completed Interview Report Forms [IRF] immediately after all telephone and face-to-face interviews. These forms are a standard part of the company's recruitment procedure and require the interviewer to rate each candidate on a series of job-related criteria such as 'Leadership' and

'Communication Skills' using a 1-9 Likert scale. Interviewers also provide an overall rating of the candidate's suitability for selection on a scale of 1 = totally unsuitable to 9 = extremely suitable. Inspection of the individual job-related criteria revealed them to be all highly inter-correlated, hence the overall interviewer rating was used as the single dependent variable in this study.

Content Analysis of Candidate Attributions and Interviewer Questions: Applicants' attributions were extracted from interview transcripts and coded using a modified version of the Leeds Attributional Coding System (LACS: Munton et al, 1999). The LACs was designed specifically as a method for identifying and analyzing causal attributions as they occur naturally during discourse. It has demonstrated good levels of reliability and validity using material derived from a variety of organizational and non-organizational sources. Two researchers, who were blind to the interviewers' ratings for applicants, extracted and coded the causal attributions. A procedure was adopted whereby the coders alternated between extracting and coding interviews for each applicant. For example, rater one extracted attributions from applicant one's face-to-face interview and rater two coded them. Rater two then extracted attributions from this applicant's telephone interview and rater one coded them. Coders then alternated between extracting and coding face-to-face and telephone transcripts for each of the 31 subjects.

Causal attributions were defined as statements providing an indication of the relationship between events, outcomes and/or behaviors, and their causes. Extracted attributions are individually coded on each of five causal dimensions (see Table one) using a 1-3 scale. In the case of each dimension '2' is used to indicate where the rater

is uncertain or when insufficient evidence is provided to enable the coder to determine whether the attribution should be coded (for example) 'stable' (3) or 'unstable' (1). Inter-rater reliability kappas were calculated using 146 attributions selected from different interview transcripts. These are provided together with definitions of the coding dimensions and example attributions in table one. According to recommendations by Fleiss (1970) all dimensions achieved acceptable levels of reliability. Finally, all interviewer questions were identified and coded to provide a count of the number of open and closed questions asked in telephone and face-to-face interviews. The amount of discourse produced by applicants was also calculated.

INSERT TABLE ONE ABOUT HERE

Results

A total of 2044 causal attributions were extracted from 62 interview transcripts, of these 954 (46.7%) came from telephone interviews and 1090 (53.3%) from face-to-face interviews. Overall, 458 (22.4%) of the attributions described negative outcomes and 1586 (77.6%) described positive outcomes. Chi square analyses revealed no significant differences in the proportion of positive and negative attributions across the two interview modes for the group as a whole and for male and female applicants. In order to determine the equivalence of interview modes in terms of the types of questions asked by interviewers, a series of paired t-tests were conducted. No significant differences were found in the total number of questions or the number of open questions asked between the two interview modes (hypotheses 1b and 1c). However, a tendency for recruiters to ask more closed questions in telephone

interviews, as predicted in hypothesis 1a, approached significance ($\underline{t}$ = 1.91, $\underline{p}$ = .07). Chi-square analyses were also conducted to determine whether applicants produced different numbers of attributions in telephone and face-to-face interviews for each of the causal dimensions. No significant differences were found for stable, global, internal, and controllable attributions. However, applicants produced significantly more personal attributions in telephone interviews ($\underline{N}$ = 146) than in face-to-face interviews ($\underline{N}$ = 112, Chi-square = 10.10, $\underline{p}$ = .006), providing support for hypothesis 3a.

INSERT TABLE TWO ABOUT HERE

In order to compare applicant attributions with interviewer ratings, the proportions of attributions for each of the causal dimensions were calculated for each applicant. This enabled comparison across applicants who produced different numbers of attributions. For example, in the case of 'stable', the total number of attributions for each applicant was divided by the number of attributions that were coded stable. As evidence suggests that individuals explain positive and negative outcomes differently, separate analyses were conducted to explore the relationships between attribution dimensions and interviewer ratings for positive (table 3) and negative outcomes (table 4). In the face-to-face interview, recruiters appear to rate individuals less favorably when they explain positive outcomes in terms of more global ($\underline{r}$ = -.36, $\underline{p}$ <.05), and controllable attributions ($\underline{r}$ = -.29, $\underline{p}$ = .06). In the telephone interview, however, applicants were rated more favorably when they made personal attributions ($\underline{r}$ = .39, $\underline{p}$ <.01) for positive outcomes. The relationship between

internal attributions and higher recruiter ratings also approached significance (r = .26, p = .08).

INSERT TABLES THREE AND FOUR ABOUT HERE

No significant relationships were found between negative attributions and interviewer ratings in either the face-to-face or telephone interviews. However, whilst these findings are based upon a total of 458 attributions for negative outcomes, the number of participants was reduced to 27 because four applicants produced no negative attributions. Consequently, whilst these findings should be treated with caution, it is still worth noting that several correlations approached significance. For example, applicants in the face-to-face interviews were rated more favorably if they made more internal and controllable attributions but fewer global attributions. In the telephone interviews applicants received higher ratings if they made more stable and less global attributions.

Finally, a significant gender difference was found such that male applicants were asked significantly more open questions in face-to-face interviews than female applicants (r = .39, p = .03). Male applicants also produced significantly more discourse than female applicants in face-to-face interviews (r = .38, p = .04). No gender differences were found in the telephone interviews.

Discussion

This research set out to explore the equivalence of structured telephone and face-to-face interviews in terms of interviewer and applicant discourse, and interviewer ratings. In summary, the main findings were as follows:

1.   There was a non-significant trend for interviewers to ask more closed questions in telephone interviews ($\underline{t}$ = 1.91, $\underline{p}$ = .07, hypothesis 1a).

2.   Applicants were more likely to attribute outcomes to personal causes in telephone interviews (chi-square = 10.10, $\underline{p}$< .01, hypothesis 3a)

3.   Interviewers rated applicants lower in face-to-face interviews when they attributed positive outcomes to more global causes ($\underline{r}$ = -.36, $\underline{p}$< .05).

4.   Interviewers rated applicants higher in telephone interviews when they attributed positive outcomes to more personal causes ($\underline{r}$ = .39, $\underline{p}$< .05) hypothesis

These findings suggest that technology, in this case the telephone, may well impact upon the processes by which selection decisions are made in employment interviews. In line with previous social psychological research, interviewers tended to ask more closed questions in telephone interviews. This type of discourse has been associated with a more task-oriented approach, where the content of discourse is controlled and applicants are allowed less opportunity to expand upon topics beyond those considered important by the interviewer. There was no significant difference in the

Certain patterns of applicant discourse appear consistent. For example, global attributions were negative predictors of interviewer ratings in telephone and face-to-

face interviews for both positive and negative outcomes. Causes coded 'global' are defined as those that are considered important and which have extensive non-trivial consequences. It is possible that these findings can be explained in terms of interviewers reacting against applicants who strive to 'over-sell' themselves, or try too hard to impress, by inflating the importance of their actions and achievements. Eder and Harris (1999) suggest that interviewers regard too much impression management as a signal that a candidate is disingenuous and may therefore discount the sincerity of the candidate's statements. These findings may therefore relate to others that demonstrating that 'too much' impression management may be off-putting to interviewers (Gilmore et al. 1999).

Yet personal attributions, which refer to causal attributions where the cause is considered to be relatively unique to that individual, appear to have a more positive effect upon interviewer ratings, particularly in the case of telephone interviews. In this instance it may be that interviewers are looking for information that will enable them to differentiate between the applicants. Support for this comes from Werner (1978) who found that information delivered to individuals by telephone had a less persuasive effect upon individuals than information delivered in face-to-face situations.

In the face-to-face interview more stable, global and controllable causes are associated with poorer ratings. An example of this type of attribution would be: "I secured the internship because I had made sure that I had developed a strong profile

of skills". This pattern might be described as a 'strong' approach. It is possible that interviewers in the face-to-face interview were put off by candidates who sought to claim credit for positive outcomes in too strong a fashion, preferring instead, individuals who were more modest. This pattern of attributing may well be associated with arrogance rather than competence. Indeed, there is evidence that extremely high levels of impression management backfire against applicants (Eder & Harris, 1999). However, a different pattern emerged in the telephone interview, where individuals who attributed positive outcomes to internal and personal causes received higher ratings.

There was no strong association between internal-controllable attributions and interviewer ratings. Indeed, in the face-to-face interviews there was a trend for internal and controllable attributions for positive outcomes to be associated with lower ratings of candidates. This trend was reversed for negative outcomes, but neither achieved significance. It may be that the sample size was too small to detect significant relationships. There was no evidence that internal and controllable attributions related to interalso suggest that different patterns of attributions for negative outcomes may predict for face-to-face and telephone interviews, although given the sample size these findings should be treated with caution. Whereas control for positive outcomes was a negative predictor of interviewer ratings, control for negative outcomes appears to be a positive predictor. This fits with previous findings (e.g., Silvester, 1997; Silvester et al. 2002) that suggest that interviewers are concerned with the extent to which candidates take responsibility for negative outcomes. These findings suggest that interviewers in the face-to-face interviews rate candidates who attribute negative outcomes such as previous failure to more personal,

controllable, but less global causes, more favorably. An example attribution might be: "I failed the assignment because I was too pre-occupied with practicing for the tennis tournament". Not only does attributing a negative outcome to a personal and controllable cause suggests that the individual is taking responsibility for the outcome, it also implies behavior can be changed in order to achieve a more successful outcome in future.

The same pattern of personal and controllable attributions being associated with negative outcomes is not found for telephone interviews, although somewhat bizarrely, control attributions in the telephone interviews were a significant predictor of interviewer ratings in the face-to-face interviews ($\underline{r} = .34$, $\underline{p} < .05$). This may provide additional support for the contention that statements of control were less important in the telephone interview than in the face-to-face interview. In the telephone interviews negative outcomes attributed to more stable and less global causes were associated with higher ratings. For example: "I often go skiing because I enjoy being in the mountains".

Interestingly, a gender difference in interviewer strategy was found in the face-to-face interview but not the telephone interview, such that female applicants were asked significantly less open questions than male applicants. This may also relate to the finding that they also spoke less than male applicants in this mode of interview. These findings replicate those of Silvester (1996) who also found that women were asked significantly fewer questions than men during employment interviews. However, the mode-specificity of this finding raises the intriguing possibility that telephone interviews may be more equitable for women and non-

traditional applicants than face-to-face interviews, because visual information may provide clues that evoke stereotypes and thus influence opinions about applicants (Anderson, submitted; Sykes & Collins, 1988).

Limitations of study and recommendations for further research

One potential limitation of the research presented here is that we have as yet little indication of whether the differences between telephone and face-to-face interviews that we have detected have longer-terms impacts in terms of criterion-related and discriminant validity. That is, do they contribute to differential validities for these two modes of interview? Given the popularity of telephone based employment interviews, this seems to be a fundamental question, but one that can only be answered through longitudinal predictive validity studies. The present study focused upon the important but virtually unresearched question of the equivalence between face-to-face and telephone-based interviews, with our findings revealing some important differences between the two. It appears that for even such intermediate level technology as the telephone between-form equivalence for the delivery of selection methods needs to be verified. Clearly, these findings need to be extended by longitudinal, concurrent and predictive validity designs which examine in some detail the propensity of different modes of predictor delivery upon criterion-related and discriminant validity.

A second possible limitation of the present research is its use of graduate applicants to a multinational company junior executive training programme. Applicants were therefore new to the full-time labor market, although several had held part-time jobs at some point in their undergraduate degree program. It is likely, therefore, that the

graduates were not particularly experienced in applying for external vacancies, and their past exposure to face-to-face and especially telephone-based interviews was relatively limited. Whether our findings generalize to other types of applicants undergoing different modes of interview presentation is open to question, and certainly, future research is needed to examine whether these findings do indeed generlize to other types of applicant, job vacancy, and employment sector.

A third and final limitation inherent in the present study design is that it examined an in-company semi-structured interview procedure specifically developed by the host organization to select for knowledge, skills, abilities and other factors (KSAOs) relevant to the company training program. This interview design, and the KSAO framework derived from earlier job analyses, clearly restricted the range of question items included in the interview itself. Thus, this interview process is not necessarily representative of other face-to-face or telephone-based interviews being used by other organizations to select for a different set of applicant KSAOs. Care therefore needs to be taken in generalizing from the present findings to suggest that all other telephone-based and face-to-face interviews will display similar findings over equivalence and attributional patterns.

To conclude, the present study adds to the paucity of existing research examining important aspects of interviewer and interviewee attributional styles in the context of face-to-face and telephone-based interviews. The findings of this study clearly indicate that equivalence cannot be taken for granted between different modes of interview format and that the lack of nonverbal cues available to interviewers

conducting telephone-based interviews may influence the ways in which they subsequently attribute candidate utterances and responses. As telephone-based and other modes of interview delivery such as video-based interviews become increasingly used by organizations seeking to recruit from as wide a pool of candidates as possible, research is needed to verify the impact of interview formats upon recruiter decision making processes.

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Table 1: Coding definitions for causal dimensions, kappa reliabilities and examples.

Coding Dimension	Example
Stable–Unstable: causes are coded 'Stable' (3) if they are long-lasting and have an on-going influence upon outcomes. Causes coded 'unstable' (1) are more temporary (k = .46).	Stable: I really like working with large groups of people, so I'm looking for a role that will enable me to do this. Unstable: Deciding to go to Europe that summer really opened up opportunities for me.
Global–Specific: causes coded 'Global' (3) are considered to have a broad impact on a range of nontrivial outcomes such as career opportunities. Causes coded 'Specific' (1) have a minor influence over a smaller number of outcomes (k = .52).	Global: I think managing to get into such a good university has been very beneficial in terms of my career prospects. Specific: I do a lot of sport, so I have to be organized.
Internal–External: refers to the locus of the cause. An 'internal' (3) cause originates in the speaker (i.e. behaviour or personality) an 'external' (1) cause	Internal: The company hired me because I knew about that particular system. External: I learnt a tremendous amount from the specialists in that department

includes the situation or behaviour of others (k = .48).

Personal–Universal: a causes is coded 'personal' (3) if the speaker believes it to be relatively unique to him or her. A cause is coded 'universal' (1) if it refers to something that could be considered typical of others in that particular referent group (k = .52).

Personal: They chose me because I had been team captain three years in a row. Universal: I wanted to do try something new, I guess most people my age are still deciding what they most want to do.

Controllable–Uncontrollable: a cause is coded 'controllable' (3) if the speaker indicates that he or she would have been able to influence the cause of the outcome. A cause is coded 'uncontrollable'(1) if the speaker considers it to be beyond their influence (k = .52).

Controllable: I went on writing letters and emailing, and in the end they decided to offer me the place. Uncontrollable: I didn't get accepted, sometimes decisions like that are just down to luck

Table 2: Mean differences across interview modes.

Variable	Face-to-face Interview		Telephone Interview	
	M	SD	M	SD
Number of attributions	30.61	11.19	35.16	13.87
Number of questions (all)	28.16	10.60	31.13	18.28
Number of open questions	14.32	5.38	12.90	6.12
Number of closed questions	13.84	8.14	18.23	13.40†
Interview length (pages)	11.93	3.86	13.73	4.88

† p = .07

Table 2: Means, standard deviations and correlation coefficients for candidate attributions for positive outcomes and interviewer ratings.

	M	SD	1	2	3	4	5	6	7	8	9	10	11
Face-to-face interview													
1. Stable	1.43	.27											
2. Global	1.57	.42	.11										
3. Internal	1.91	.35	-.02	.11									
4. Personal	1.28	.22	.17	.03	.42*								
5. Control	2.17	.33	-.06	.14	.74**	.13							
6. Rating	4.92	1.88	-.21	-.36*	-.10	.15	-.29†						

Telephone interview

7.	Stable	1.48	.25	.15	-.30	-.04	.16	-.10	.18				
8.	Global	1.53	.24	.03	.05	-.01	.12	-.20	.04	.27			
9.	Internal	2.02	.32	.16	.09	-.14	-.15	-.08	-.02	.25	-.09		
10.	Personal	1.35	.26	.23	.13	-.10	-.13	.10	-.15	.39*	-.01	.78**	
11.	Control	2.22	.30	.03	-.09	-.14	-.28	-.21	.20	.33*	.01	.87**	.56**
12.	Rating	4.37	1.16	.09	.01	-.19	-.14	-.01	-.13	.06	-.21	.26	.39*	.09

Note: $\underline{N}$ = 1,586 attributions, $\underline{N}$ = 31 applicants

* = $\underline{p}$ <.05, ** $\underline{p}$ <.01**, $\underline{p}$ =.06†

High scores are more stable, global, internal, personal and controllable.

Low scores are more unstable, specific, external, universal and uncontrollable.

Table 3: Means, standard deviations and correlation coefficients for candidate attributions for negative outcomes and interviewer ratings.

	M	SD	1	2	3	4	5	6	7	8	9	10	11

Face-to-face interview

		M	SD	1	2	3	4	5
1.	Stable	1.38	.46					
2.	Global	1.31	.61	.01				
3.	Internal	1.47	.45	-.17	.51**			
4.	Personal	1.17	.32	-.10	.01	.53**		
5.	Control	1.33	.33	-.04	.30	.63**	.26**	
6.	Rating	4.92	1.88	-.13	-.29	.17	.28	.28

Telephone interview

7.	Stable	1.39	.45	.06	-.18	.08	-.08	-.06	-.13				
8.	Global	1.44	.54	-.20	.06	.10	.01	-.12	.12	.32*			
9.	Internal	1.39	.35	-.21	-.14	-.05	-.15	.07	.22	.27	.30*		
10.	Personal	1.17	.27	-.26	.00	.18	.00	-.11	.13	.54**	.42**	.61**	
11.	Control	1.34	.31	.02	-.02	.03	-.12	.05	.34*	.13	.44**	.43**	.02
12.	Rating	4.37	1.16	.37*	.06	.11	.07	.16	-.13	.30*	-.26†	.02	.10	-.06

Note: $\underline{N}$ = 458 attributions, $\underline{N}$ =27-30 participants

* = $\underline{p}$ <.05, ** $\underline{p}$ <.01**, $\underline{p}$ =.06†

High scores are more stable, global, internal, personal and controllable.

Low scores more unstable, specific, external, universal and uncontrollable.