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Article

Interviewing by Telephone: Specific Considerations, Opportunities, and Challenges

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Abstract

The use of telephones as a medium for conducting interviews is becoming an increasingly popular data collection method. Despite both the frequency of use of this data collection method and the many advantages conferred to researchers, this method is often considered suspect within the academic community. In methodological discussions of interviewing, the use of the telephone is frequently ignored. The purpose of this article is to explicate the key differences between interviewing by telephone and interviewing in person and highlight three specific challenges to interviewing over the telephone—the sample, the tools, and the medium. This article considers specifically how recent research in management and communications on distanced leadership provides insight into the tradeoffs associated with interviewing through this medium. This data collection medium has clear and distinct advantages, such as providing researchers with flexibility and access that is unavailable through traditional methods, and many of the challenges of telephone interviewing may simply be the result of a natural trade off that exists with respect to all research methods. In order to safeguard against some of the inherent weaknesses of this method, this article provides several lessons that can better inform those researchers who wish to engage in telephone interviews.

Keywords: data collection, interviewing, telephone interviewing, research methods, relational distance, qualitative research

The use of interviews to obtain data for academic inquiry has a long history in many scientific disciplines including anthropology (Lave & Kvale, 1995), health care (Pettigrew, Wilson, & Teasdale, 2003; Sobo, Simmes, Landsverk, & Kurtin, 2003; Worth & Tierney, 1993), sociology (Benney & Hughes, 1956; Frey & Fontana, 1991), psychology (Ilies et al., 2007; Polkinghorne, 2005), management (Cooper & Kurland, 2002; Schweitzer & Duxbury, 2006), and marketing (O'Dell, 1962; Wilson, 2007). This method has traditionally employed face-to-face interaction where rapport could be developed and visual aids could be used. However, in recent years, interviewing has transformed in response to the proliferation of technology as researchers seek alternative methods to reduce costs and increase the reach of their data collection. One way that researchers have approached this is through the increasing use of telephones in the collection of interview data. For example, in our multidisciplinary review only one work from the 1980s specifically cited using the telephone as a data collection medium. In the 1990s that number grew to eight and from 2000 on that number grew to 17 (see Appendix A).

A number of studies conducted in the 1970s compared the efficacy and reach of interviewing by telephone with face-to-face interviewing. This research highlighted the benefits of this medium, suggesting that data quality was comparable between face-to-face and telephone interviews. As a result, random digit dialing became a popular way of contacting a representative sample (Chang & Krosnick, 2009; Groves & Kahn, 1979). Although many general textbooks on research methods have short sections on telephone interviewing (e.g., Fowler, 2001), a small body of research has emerged that specifically addresses the concerns of conducting interviews through this medium.

Despite both the frequency of use of this data collection method and the many advantages conferred to researchers (Sarantakos, 1998), this method is often considered suspect within the academic community (Frey, 1989; Taylor, 2002). We explore the specific opportunities and challenges posed by collecting personal data over the telephone by reviewing existing literature on face-to-face and telephone interviewing and by overlaying management research in organizational communication and leadership at a distance to better understand how researchers can better manage the inherent tradeoffs associated with interviewing by telephone.

There are many similarities between the manner in which telephone and face-to-face interviews are conducted, thus we begin with a very short description of this methodology and highlight some of the advantages of the telephone as a data collection medium. Next, we review existing research that compares with other methods the impact of using the telephone to conduct interviews. Third, we consider three specific challenges to interviewing over the telephone. Next, we present research from management to illuminate some of the ways to manage those challenges. Finally, we will discuss strategies for interviewers conducting telephone research.

The Telephone as a Data Collection Tool

Interviewing is a tool that involves orally asking participants both quantitative and qualitative questions. Interviews facilitate the collection of detailed personal data that provides a high degree of response quality, the opportunity for probing deeply into issues, and relatively low refusal rates from participants. The format of interviews can range from highly structured to conversational, and the choice of format is tightly coupled with the type of research being conducted. The concerns of interviewers conducting interviews over the telephone are generally the same as those conducting them face-to-face. In fact, Dinham's (1994) principles for effectively using the telephone read very much like those texts describing traditional face-to-face interviews; his principles include discussions of pilot testing, question sequencing, prompts, and contact strategies. As is the case with face-to-face interviews, questions arise for telephone interviews

with respect to which individuals are appropriate for interviews, what questions to ask, how many interviewers to use, and how to train those interviewers (Fowler, 2001).

In many domains, the medium of data collection is considered as a subject of academic inquiry. For example, methodologists have considered web-based versus pen-and-pencil based versions of surveys (Cole, Bedian, & Field, 2006; Simsek & Veiga, 2001). In contrast, interviewing comparisons are rarely conducted. Methodological comparisons between information gathered in person and information gathered over the phone are not frequently conducted with respect to social science research (Kliegel, Martin, & Jager, 2007; for exceptions, see Sturges & Hanrahan, 2004). In fact, in more than 300 pages dedicated to the craft of qualitative interviewing, Kvale and Brinkmann (2009) assume the interviews will occur face-to-face. In a few sentences they acknowledge two advantages of telephone interviewing (access to people who are geographically distant or located in dangerous places) but do not discuss any differences between the two methods.

One source of skepticism among academics regarding the effectiveness of telephone interviewing may be due to its frequent use in market research and polling (Cannell, 1985; Frey, 1989). However, telephones have also been used in more methodologically traditional ways, such as for the collection of data for academic research (Dinham, 1994; Gibson, 1994; Taylor, 2002). Telephone interviews have been used to collect qualitative data to inform or explain more traditional survey results (Cooper & Kurland, 2002; Malhotra, Gosain, & El Sawy, 2005; Martins, 2005). Telephones have been used to access populations that might be difficult to reach in person or by other means (Ilies et al., 2007; Maritan, 2001; Sturges & Hanrahan, 2004). Finally, researchers occasionally use secondary datasets compiled from national government-sponsored surveys that are conducted over the phone (Delios & Beamish, 2001; Schweitzer & Duxbury, 2006). In fact, we suggest that researchers may not even disclose the frequency of data collection over the telephone, omitting specifying the medium in their write ups and assuming that the medium would not be a significant element of the data collection strategy. Thus, there are likely many studies that, either wholly or partially, collect interview data over the telephone without explicitly considering its implications.

Telephones can also be used to collect a variety of different types of data. Although the vast majority of research that specifies the use of telephones has consisted of relatively structured interviews conducted on purposeful or random samples of the general population (e.g., Blumberg, Cynamon, Osborn, & Olson, 2003), recent research has used this medium to collect more open-ended data. In fact, several ethnographies have been conducted over the telephone (Dinham, 1994; Gibson, 1994; Taylor, 2002). Two such studies concerned educators in Australia. Gibson (1994) interviewed education department administrators and Dinham (1994) used telephone interviews to conduct life histories of teachers. While these studies exist in the education domain, they act as evidence that telephone interviewing is gaining acceptance outside polling and market research. This article should help to make researchers, as they continue to use the medium more broadly, aware of the medium's potential impact.

Advantages of Telephone Interviewing

It is not surprising that the telephone is being increasingly used as a data collection medium because there are several significant benefits. The two most obvious benefits are cost effectiveness and time efficiency (Cannell, 1985; Dinham, 1994; Sarantakos, 1998; Taylor, 2002). Telephones give researchers access to varied resources and experiences without the need to endure the expense and time consumed by travel to different locales. It is possible to interview individuals who may not otherwise be available due to their location. Access to these individuals

is particularly important because of the increasingly global nature of research (Gibson & Cohen, 2003; Townsend, DeMarie, & Hendrickson, 1998). As a result, telephone interviewing can allow for a much more exhaustive sample. The cost savings of conducting research by telephone has been estimated at fifty to seventy-five percent of face-to-face interviews (Marcus & Crane, 1986; Worth & Tierney, 1993). Research conducted in 1979 (Groves & Kahn, 1979) was converted to reflect equivalent dollars in 2001 (Miller & Salkind, 2003), and this research showed a savings of 45% between telephone and face-to-face interviews.

A second major advantage of telephone interviews is time efficiency. Some researchers cite interviewing by telephone as an easy way to gather contextual information for quantitative studies because telephone interviews tend to take less time than face-to-face interviews (Sobo et al., 2003). Groves and Kahn (1979) found that face-to-face interviews across their surveys took an average of 50 minutes while telephone interviews took an average of 30 minutes—a time savings of close to 50%. Telephone interviews also have smaller personnel needs (Miller & Salkind, 2003). Fewer interviewers, supervisory staff, and coordination staff increase the efficiency of interviewing by phone.

The Impact of Telephone Interviews

Given the benefits associated with using the telephone as a medium for collecting data, it is not surprising that researchers may avail themselves of this option. As a result, a number of studies have emerged, primarily in the public policy domain, that have tested whether conducting interviews over the phone may in fact influence findings. However, this research has focused on a limited set of interview types and subjects, and has yielded relatively inconsistent results as to the consequences of using the telephone as a data collection medium. The majority of studies report that there are few differences between data collected by telephone as compared with traditional interviews, diaries, and mail surveys (Brustad, Skeie, Braaten, Slimani, & Lund, 2003; Gano-Phillips & Fincham, 1992; Groves, 1979; Hoppe, Gillmore, & Valadez, 2000; Pettigrew et al., 2003). This finding was robust with respect to the distribution of alcohol consumption, sexual behavior, and drug use (Greenfield, Midanik, & Rogers, 2000; Kraus & Augustin, 2001). Findings were consistent both broadly and with respect to specific populations based on age, sex, and socioeconomic status where there was expected variation in consumption (Greenfield et al., 2000).

On the other hand, in a study of marital questionnaires, findings were consistent across methods on some variables and significantly different on others (Gano-Phillips & Fincham, 1992). Consistent findings were found with respect to accounts of more concrete factors, such as the division of labor in a marriage. Inconsistent findings were found with respect to more abstract judgments of marital quality. However, the distinction between complexity and abstraction of items did not yield different results in telephone and face-to-face interviews in a study of opinions of city services (Rogers, 1976). In this study there were no differences in the respondents' ability to provide answers to complicated questions when interviewed by telephone or face-to-face. Therefore, there is some evidence that telephone interviews provide comparable data as compared with other methods. However, this evidence does point to the importance of both context and the type of question as factors that may influence the integrity of the data collected. This evidence points to the need to specify the data collection method used in a research study and to ensure that the data from subjects interviewed over the phone is statistically similar to data gathered using other methods. Too often these populations and question types are combined without examining potential differences (Malhotra et al., 2005; Maritan, 2001).

Few studies conducted by telephone have employed a semi-structured interview methodology. Both Taylor (2002), in her study of adolescent boys, and Sturges and Hanrahan (2004), in their study of prison visitors and guards, moved from the use of face-to-face interviews to telephone interviews to provide convenience for the interviewees. In these studies, the information gathered was equally robust with respect to breadth and depth. These different studies suggest that while differences may exist in certain circumstances, these may be an artifact of structured interviews conducted over the telephone rather than all interviews conducted over the telephone.

In addition to the content of the responses, several studies have focused on the effect of anonymity on the willingness of individuals to provide personal information. Studies of risky sexual behavior (Nebot et al., 1994) and alcohol consumption (Aquilino, 1994; Greenfield et al., 2000) have demonstrated that individuals are more likely to admit socially deviant behavior over the telephone than if they were within the line of sight of the interviewer. However, Rogers (1976) found that when participants were asked their opinions about sensitive public policy issues (rather than their actual behaviors), there was no difference between telephone and face-to-face encounters.

There are some response rate discrepancies associated with the use of the telephone as a medium for conducting data collection. Sarantakos (1998) demonstrates that telephone interviews are associated with high refusal rates. Fowler (2001) suggests that where in-person interviews generally yield participation rates of 70%, telephone interviews yield response rates that are five to ten percent lower than response rates from face-to-face interviews. He also suggests that although response rates are trending downward for all forms of data collection, this is especially pronounced for telephone surveys (Fowler, 2001). However, Fowler (2001) considers all forms of interviewing in these statistics, including those that employ cold calling. Other researchers have demonstrated that when first contact is initiated, either personally or through the mail, the differences between the response rates of the two methods disappear (Dillman, Gallegos, & Frey, 1976; Marcus & Crane, 1986; Rogers, 1976; Taylor, 2002).

Challenges of Telephone Interviewing

The literature reveals similarities in the data collected in different mediums; nevertheless, there are also reasons to expect that there may be differences between telephone and face-to-face interviews. These differences bring to light larger significant issues that must be addressed by researchers attempting telephone interviews because they may produce differences in subject responses (Groves & Kahn, 1979). Groves and Kahn (1979) compared (a) a face-to-face interview survey conducted on a national sample of 74 counties and metropolitan areas, (b) a telephone survey in the same sample area in which the numbers were chosen with a random-digit-dialing method, and (c) a national sample of telephone numbers selected throughout the contiguous United States. All three surveys contained the same questions in essentially the same form.

Although there may be systematic differences between the sample and the tools employed, the most important differences are a function of the use of the telephone as a medium. This reflects the possibility that people may respond differently over the telephone than they would if they were faced with the same question in person. The concerns expressed by Groves and Kahn (1979) provide a framework that we extend by including research from management, political science, education, and other fields in order to further explicate these challenges and potentially provide solutions useful to researchers.

The Sample

The first element of the Groves and Kahn (1979) framework deals with the sample employed in the research. Sampling reflects a comparison between those individuals who are accessible by telephone and those who are not, through variation in phone ownership, cell phone reliance, and response rates related to willingness to respond to questions over the phone. The fact that the population accessible by telephone may not be representative is a severe concern and it may have important implications for the findings of a particular study (Chang & Krosnick, 2009; Groves & Kahn, 1979; Sturges & Hanrahan, 2004). Many scholars do not explicitly address sampling issues, particularly when samples are often purposeful. However, the issues surrounding sampling should not be ignored as the use of telephone interviewing increases. To show the potential relevance of sampling issues, we turn to research from education and public policy.

The most significant research on sampling issues related to telephone interviews concerns demographic differences between those individuals who own telephones and those who do not. Elderly, low income, and poorly educated individuals are less likely to own telephones (Aquilino & Losciuto, 1990; Kraus & Augustin, 2001; Worth & Tierney, 1993), although the problem of social class bias has greatly diminished (Miller & Salkind, 2003). In some cases this sampling may have a significant effect on the variables in question. Education and income is significantly related to alcohol and drug consumption (Greenfield et al., 2000) and there has been a direct negative relationship established between telephone ownership and alcohol, drug, and tobacco use (Aquilino, 1992). There is also a relationship between age and willingness to respond to requests for interviews over the telephone. Younger and more affluent individuals are more difficult to reach (Fowler, 2001), which leads to greater bias because of the non-response of a certain demographic (Groves, 1979).

Finally, even within the sample of households who own telephones and who are willing to respond over the telephone, there may be differences between households with respect to the individual answering the questions. It is important for researchers to have some systematic way to ensure sampling within that population. For example, in one study, the respondent interviewed in each household was selected according to their date of birth (Kraus & Augustin, 2001).

Another issue that has received little academic note but a great deal of recent attention in the popular press is the growing prevalence of individuals who rely solely on cell phones for communication. This issue has been of significant debate with respect to polling for the general election (Keeter, 2006); however, this growing trend causes sampling problems for researchers attempting to perform representative sampling through the use of telephone books. In 2010, approximately 25% of households relied solely on cell phones and this number is almost double for adults between the ages of twenty-four and twenty-nine (Christian, Keeter, Purcell, & Smith, 2010). As a result, in cases where sampling is not purposeful, researchers must explicitly consider the challenges of using telephones to identify a representative sample of respondents. However, many researchers use the telephone as a method of accessing, not identifying, potential respondents, and the majority of samples are purposefully generated. In these cases, the consideration of the implications of telephone interviewing on sampling is likely less crucial. Although random sampling is often used in social science, many data collection situations involve purposeful samples. Some illustrative cases are in disciplines such as management, (Cooper & Kurland, 2002; Ilies et al., 2007; Schweitzer & Duxbury, 2006), education (Gibson, 1994; Taylor, 2002), and health care (Pettigrew et al., 2003; Sobo et al., 2003; Worth & Tierney, 1993).

The Tools

The second concern expressed by Groves and Kahn (1979) is that the lack of visual aids that are often used in face-to-face interviews may have an effect on the content of the responses obtained by informants in structured telephone interviews. The central issue with respect to telephone interviewing is the inability to use visuals to describe scale items (Groves & Kahn, 1979; Miller, 1984), which may create less precise delineation between the potential responses. This concern relates to both variations in responses between items (Groves, 1979) as well as the number of categories of responses (Fowler, 2001). Miller (1984) demonstrates that the use of a single scale with the same types of responses (e.g., more likely to less likely) will result in more valid responses to interviews over the telephone. Fowler (2001) additionally suggests that in face-to-face interviews, respondents can process between five and seven different categories. Keeping categories in memory when not face-to-face is more difficult and a more appropriate number for telephone interviews is three or four.

Visuals to describe scale items are not the only cues that are hard to translate over the telephone. Card sorts are often used in research interviews to understand how individuals categorize information (Willis, 2005), and these are remarkably difficult, if not impossible, to utilize in any other setting than face-to-face. Vignettes are occasionally used to understand comprehension of concepts (Willis, 2005) by having interviewees identify similarities and differences across stories. While it is possible to read these vignettes aloud to interviewees, they often contain too much information to be held in short-term memory. Finally, flash cards have also been used in face-to-face interviews to assist in communicating concepts or presenting visual information (Emerson, Chai, & Yancey, 2001). Various types of questions, in particular those that require visual aids or a wide range of response categories, may prove problematic over the telephone.

The Medium

A third, and particularly important, issue identified by Groves and Kahn (1979) is that individuals may respond differently over the telephone than they will in person. This can result from two factors. First, anonymity provided by separation may either amplify or minimize the subject's desire to express himself or herself in a socially desirable manner. Second, there may be challenges to interpersonal communication, specifically in the formation of trust, caused by separation between interviewer and subject.

When thinking about anonymity, the fundamental question for researchers is whether individuals are more or less likely to give the same volume of information and give information that is truthful when they are physically separated from their questioner. Researchers agree that anonymity reduces inhibitions (Sosik, Kahai, & Avolio, 1998) and increases the confidence that subjects' responses will remain private (Blumberg et al., 2003). This is especially true when participants are asked about less socially desirable information (Nebot et al., 1994). In fact, some researchers have begun to use computer-aided technology in order to even further remove the interviewer from the equation to encourage individuals to be even more candid (Blumberg et al., 2003; Turner et al., 1998). This method is based upon the notion that physical distance and the use of a "faceless researcher" (Dinham, 1994) enables individuals to "save face" (Taylor, 2002) under conditions where they may be embarrassed or sensitive about the subject matter.

The opposite perspective agrees that social desirability is based on confidentiality, but stresses that confidentiality is not only the result of anonymity but also a function of the subject's trust in the interviewer (Kraus & Augustin, 2001). Significant declines in trusting behavior are found when the context moves to one of anonymity (Buchan, Croson, & Dawes, 2002). The impersonal

nature of telephone interviews makes it more difficult to assess interviewer credibility, which may negatively impact the subject's perception of the researcher's willingness to keep their responses confidential (Kraus & Augustin, 2001). This may be the reason why telephone interviews often have lower response rates, higher interview break-offs, expressed uneasiness about discussing sensitive topics, and more refusal to answer questions (Gribble et al., 2000; Groves, 1979). As a result, telephone interviewing may both enable and inhibit forthcoming responses from subjects.

Using Organizational Theory to Address Challenges

In the last several decades, organizational theorists, responding to increasingly geographically distributed workgroups, have specifically considered the consequences of managing interpersonal relationships through technological mediums. This geographical distribution has led to the emphasis on *distance* as an important dimension to consider in the management of interpersonal relationships (Antonakis & Atwater, 2002; Erskine, 2011; Napier & Ferris, 1993) and has led researchers to consider the different ways that distance manifests. One typology was forwarded by Erskine (2011) who argues that distance between interacting individuals has three dimensions—structural distance, status distance, and psychological distance. Structural distance includes the characteristics or properties of a technology, task, or organization that influence organizational communication. Status distance refers to distance created by differences in socio-demographic factors, power, and prestige and is akin to relationship inequality. Psychological distance refers to a lack of affinity between people. We argue that understanding these dimensions of distance suggests a number of both benefits and challenges of conducting interviews at a distance. This is, in particular, where scholarship in the management disciplines can lend theory as to how separation caused by the medium can influence interpersonal interactions such as those that take place between interviewer and interviewee.

Structural Distance

Structural distance includes three types of distance: physical distance, channel of communication, and frequency of interaction (Erskine, 2011). Structural elements of distance such as physical separation and the type of communication channel can influence perceptions and the nature of interactions between interviewer and subject. Research in managerial communications (Daft & Lengel, 1996; Mann, Varey, & Button, 2000) distinguishes between rich channels (those that can handle multiple cues at once) and lean channels (channels that are missing one or more kinds of cue). Rich channels can facilitate rapid feedback and seem very personal because of their ability to reduce ambiguity. These rich channels are often cited as more effective ways to communicate when the material is less well understood or more ambiguous (Daft & Lengel, 1996). Face-to-face exchange is the richest way to communicate because it provides immediate feedback, an increased number of paralinguistic cues, increased personalization, language variety, and ambiguity reduction (Daft & Lengel, 1996; Mann et al., 2000). Thus, the lack of nonverbal communication to clarify intended messages may contribute to communication barriers. This includes the transfer of visual cues such as eye contact, facial expressions, and body language (Kiesler, Siegel, & McGuire, 1984; Short, Williams, & Christie, 1976).

As a result, research on structural distance suggests that physical separation, similar to that which occurs when conducting interviews over the telephone, can result in less clear communication as well as reduced social presence. However, this research also suggests that there are ways to mitigate the effects of structural distance. For example, when team members make their communication intentional, focusing explicitly on the potential negative consequences of the medium in reducing understanding, team effectiveness is similar to teams operating in a face-to-

face context (Montoya-Weiss, Massey, & Song, 2001). This outcome indicates that awareness and intentional compensation for distance can potentially mitigate some of the negative consequences of the use of telephones to conduct research. Trained interviewers found not only that the number of responses but also the nature and depth of the responses were similar for a population of prison visitors and guards in a face-to-face and telephone setting (Sturges & Hanrahan, 2004).

Status Distance

A second factor that may influence the nature of a subject's response in a telephone interview is the role that anonymity might play in shaping responses. Status distance includes demographic and social distance (Erskine, 2011) and incorporates the idea of homophily—the selection of, and attraction to, others who are similar. Examples of this similarity include demographic elements, organizational status or position, socioeconomic status, and degree of power. These status differences may also come into play differentially through mediated communication.

Individuals that are similar to each other are evaluated more favorably (Mortensen & Hinds, 2001) and are more enthusiastic about interacting (Randel & Jaussi, 2003). This homophily can translate into interviewing; for example, when the interviewer and interviewee are more similar communication will not only be more likely, but often richer. While this result is more likely to be evident in a face-to-face setting, one study even found that interviewer effects with respect to the match of race between questioner and respondent persisted in telephone interviews in a similar way as face-to-face interviews (Cotter, Cohen, & Coulter, 1982). In some cases, the distance between interviewer and subject can mask demographic differences. In other cases, interviewers may not be able to capitalize on the benefits of similarity. Regardless, researchers should be aware of the function of similarity and use this knowledge to facilitate communication with subjects.

Psychological Distance

Finally, psychological distance is characterized by a lack of affinity between people and is often driven by internal and sometimes unconscious factors. Its effects, including low relationship quality and limited decision-making latitude, may have a differential impact depending on the medium of data collection. As psychological distance increases, we see decreases in levels of trust, ability to resolve issues, and willingness to share information. As a result, when psychological distance is present between interviewers and subjects, it can limit the ability of researchers to collect complete information. Interviewing over the telephone may negatively affect the interpersonal connections made between interviewer and subject. The issues associated with trust and similarity between researcher and subject are likely to be amplified when we consider conducting telephone-mediated data collection. In particular, important things such as assessing truthfulness, gauging the comfort of respondents, and gaining the trust of informants (Seidman, 1998; Whyte, 1984) may be hampered by the psychological distance that may emerge as a function of telephone mediated interviews.

As highlighted above, one important element in the interview process is the development of trust between interviewer and subject. This trust is particularly necessary to facilitate the collection of sensitive information and is instrumental in eliciting in depth responses to interviewer questions. Typically, face-to-face interaction is an important way of generating trust (Becker, Sims, & Schoss, 2003; Mann et al., 2000). In fact, difficulties stemming from issues of trust have been demonstrated in studies of telephone interviews. Under these conditions, individuals are less tolerant of silences over the telephone than they are in face-to-face interviews, and they often

provide shorter answers (Groves, 1979; Marcus & Crane, 1986; Worth & Tierney, 1993). This may limit the amount or completeness of data collected over the telephone.

In addition to reducing trust, communication technologies can also increase the degree to which cultural differences are felt and lead to conflict (Espinosa, Cummings, Wilson, & Pearce, 2003). In summarizing findings from the research on virtual teams, Espinosa et al. (2003) also point out that these teams experience more substantial delays, have higher coordination overhead, occasionally fail to communicate and retain contextual information, and experience differences in the feedback cycle. Therefore, although telephone interviews provide greater opportunities to transcend geography, they may also amplify the potential for differences between researcher and subject.

The Future of the Telephone as a Research Tool

It is clear from this review of the challenges and nuances of telephone interviewing that there are distinct advantages when researchers use this data collection medium, such as providing researchers with flexibility and access that is unavailable through traditional methods. This review also demonstrates that many of the challenges may simply be the result of a natural trade off that exists with respect to all research methods. There are several lessons that can be learned from this review that can better inform those researchers who wish to engage in telephone interviews. Applying these lessons should safeguard projects from the weaknesses introduced by the methodology.

Telephone interviews appear to be the most appropriate interview method under several conditions. First, they may be more effective when the need for anonymity is high. When sensitive questions are asked, anonymity enables subjects to save face. This benefit is not to be confused with the development of trust because developing longer-term relationships with subjects may be more difficult over the telephone. Second, telephone interviewing is appropriate when scale items are simple or questions are open ended because subjects are not required to make complex delineations between responses where they are reliant on their memory. National surveys designed to gather data on employee and civilian attitudes and behaviors may be an example of this in the management and human resources literature (Delios & Beamish, 2001; Schweitzer & Duxbury, 2006). Third, telephone interviews appear effective where there is a purposeful and appropriate sampling strategy to answer the specific theoretical question. Populations of MBA deans (Martins, 2005), telecommuters (Cooper & Kurland, 2002), and spouses of employees under investigation (Daft & Lengel, 1996; Mann et al., 2000) are examples in the literature. Targeting specific individuals or groups of individuals may be a manner in which researchers may avoid biases rather than attempts at random representative sampling. Regardless, it is important for researchers to take into consideration how demographic trends with respect to telephone ownership may impact access to respondents and how that may result in methodological artifacts.

Next, there are theoretical reasons to predict that both interpersonal (status and psychological) and structural distance will have an influence on the responses that interviewers are likely to elicit over the telephone. For example, we would predict that the use of the telephone would reduce trust and act as a barrier to the collection of candid information. However, given the increased level of anonymity, we would expect a positive interaction with the telephone and the sharing of sensitive material. Channels higher in social presence will be more subject to interviewer influence. Therefore, it might be useful to use telephone interviews in situations where the material is grounded and there is concern about subject bias. Theory suggests that telephone interviews will be both helped and hindered by the medium. While it may be harder to gain a

subject's trust and agreement to be interviewed, once agreement has occurred, it is likely that the collected data will be less subject to bias.

Finally, the qualities and characteristics of the interviewers and the emotional distance they portray may impact the quality of the information provided by interviewees. Interviewers may be able to manipulate the perceived interpersonal closeness by choosing to reveal (or not reveal) certain information that might make the interviewer and interviewee seem more similar. This is a technique that is currently being used by global call centers (Friedman, 2005). As part of their training, employees learn to moderate or neutralize their own accent in order to seem more similar to the region from which they will be taking calls. Some call centers even go so far as to use technology that provides information about sports, weather, and news stories specific to the particular city of the caller.

Although there has been some attention to the use of the telephone as a medium for conducting research, there are several opportunities for methodological contributions. Researchers have primarily focused on the use of the telephone to gather structured data aimed at theory testing rather than more open-ended questions aimed at theory building. The challenges of developing relationships where trust is not solely based on anonymity through the telephone as a medium represents an open methodological question and an area requiring exploration. In reporting their results, researchers should also be careful to note their use of telephone interviewing because the differences between telephone interviews and other methods of data are non-negligible.

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Appendix A

Significant Sources Cited

Author(s)	Year	Format	Discipline	Description
Lave & Kvale	1995	Article	Anthropology	Methodological piece
Dinham	1994	Article	Education	Methodological piece
Gibson	1994	Article	Education	Uses telephone to gather data
Seidman	1998	Book	Education	Methodological piece
Taylor	2002	Article	Education	Uses telephone to gather data
Sturges & Hanrahan	2004	Article	Education	Methodological piece
Marcus & Crane	1986	Article	Health care	Methodological piece
Worth & Tierney	1993	Article	Health care	Uses telephone to gather data
Nebot, et al.	1994	Article	Health care	Uses telephone to gather data
Turner, et al.	1998	Article	Health care	Uses telephone to gather data
Greenfield, et al.	2000	Article	Health care	Uses telephone to gather data
Gribble, et al.	2000	Article	Health care	Uses telephone to gather data
Kraus & Augustin	2001	Article	Health care	Uses telephone to gather data
Blumberg, et al.	2003	Article	Health care	Uses telephone to gather data
Brustad, et al.	2003	Article	Health care	Uses telephone to gather data
Pettigrew, et al.	2003	Article	Health care	Uses telephone to gather data
Sobo, et al.	2003	Article	Health care	Uses telephone to gather data
Short, et al.	1976	Book	Management	Organizational theories
Kiesler, et al.	1984	Article	Management	Organizational theories
Napier & Ferris	1993	Article	Management	Organizational theories
Daft & Lengel	1996	Article	Management	Organizational theories
Sosik, et al.	1998	Article	Management	Organizational theories
Townsend, et al.	1998	Article	Management	Organizational theories
Mann, et al.	2000	Article	Management	Organizational theories
Delios & Beamish	2001	Article	Management	Uses telephone to gather data
Maritan	2001	Article	Management	Uses telephone to gather data
Montoya-Weiss, et al.	2001	Article	Management	Organizational theories
Mortensen & Hinds	2001	Article	Management	Organizational theories
Simsek & Veiga	2001	Article	Management	Methodological piece
Antonakis & Atwater	2002	Article	Management	Organizational theories
Cooper & Kurland	2002	Article	Management	Uses telephone to gather data
Kiesler & Cummings	2002	Article	Management	Organizational theories
Becker, et al.	2003	Article	Management	Organizational theories
Espinosa, et al.	2003	Article	Management	Organizational theories
Gibson & Cohen	2003	Book	Management	Organizational theories
Gibson & Manuel	2003	Book section	Management	Organizational theories
Monge & Contractor	2003	Book	Management	Organizational theories
Randel & Jaussi	2003	Article	Management	Organizational theories
Friedman	2005	Book	Management	Organizational theories
Malhotra, et al.	2005	Article	Management	Uses telephone to gather data
Martins	2005	Article	Management	Uses telephone to gather data

Cole, et al.	2006	Article	Management	Methodological piece
Schweitzer & Duxbury	2006	Article	Management	Uses telephone to gather data
Ilies, et al.	2007	Article	Management	Uses telephone to gather data
Erskine	2011	Article	Management	Organizational theories
O'Dell	1962	Article	Marketing	Methodological piece
Wilson	2007	Book section	Marketing	Methodological piece
Gano-Phillips & Fincham	1992	Article	Psychology	Uses telephone to gather data
Polkinghorne	2005	Article	Psychology	Methodological piece
Willis	2005	Book	Psychology	Methodological piece
Kliegel, et al.	2007	Article	Psychology	Uses telephone to gather data
Groves	1979	Article	Public policy	Methodological piece
Cotter, et al.	1982	Article	Public policy	Methodological piece
Aquilino & Losciuto	1990	Article	Public policy	Uses telephone to gather data
Aquilino	1992	Article	Public policy	Uses telephone to gather data
Aquilino	1994	Article	Public policy	Uses telephone to gather data
Miller	1984	Article	Public policy	Uses telephone to gather data
Keeter	2006	Article	Public policy	Methodological piece
Chang & Krosnick	2009	Article	Public policy	Methodological piece