Does adjusting the screenshot frame alter the first impression of the videoconference interviewer?

By

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Abstract

Videoconference technology is being utilized in interview selection processes more frequently, however, little research has been performed on the effect of the technology on interviewer impressions. This study investigates whether altering the screenshot frame affects the first impression of the videoconference interviewer. A short video clip of an interviewee was cropped at three different screenshot frames – full body, waist up and shoulders up. Three stratified groups of respondents, with equal numbers of males and females, each viewed one of the video clips and answered a short survey. First impression descriptions, first impression determinant ratings and additional comments were compared between groups for each of the screenshot frames. The full body screenshot respondents noted distractions due to body movement and focused on visual cues. Waist up respondents considered visual and verbal cues in their impression descriptions, but were overwhelmed with information. Shoulders up respondents rated determinants more easily, however, were pre-occupied with eye contact. The results of this study indicate that screenshot frame does affect the first impression of the videoconference interviewer. Awareness of the benefits and disadvantages provided by the context of each screenshot frame is advised to establish fair and equitable videoconference interview practices.

Literature Review

Introduction

Videoconference technology is widely utilized in interview selection processes and yet research into how this medium affects the interviewer's perception of the interviewee is very limited. The research that has been performed indicates inequities in video versus face-to-face interview scores and discrepancies in interviewer judgments of the candidates. Studies that shed light on identifying the cause of the discrepancies are long overdue.

Four years ago Baker and Demps (2009, p. 10) noted the limited recent research performed in the use and effectiveness of videoconferencing technology. A current literature scan reveals that the research in this area has not improved since 2009 and in fact to obtain research information on this topic one must search back at least five years in peer reviewed articles.

Canadian researchers Derek Chapman and Patricia Rowe, United Kingdom researcher Chris Fullwood, American researchers Susan Straus, Jeffrey Miles and Laurie Levesquec, Swedish researchers Sara Landstrom and Par Anders Granhag, and Dutch researcher Neil Anderson are the major researchers on the subject of videoconference interviewing. Chapman and Rowe (2001) and Landstrom and Granhag (2008) provide the most relevant research on this topic. Chapman and Rowe highlight the need for awareness of potential biases when using different technologies in interview processes and Landstrom and Granhag highlight that the video screenshot frame changes the observer's perception of appearance.

An obvious question from the research performed over the previous 20 years on the effects of videoconference interviewing and impression formation is: does the video screenshot frame change the contextual information, causing interviewers to form different first impressions

of interview candidates? This leads directly into this study's research question: Does adjusting the screenshot frame alter the first impression of the videoconference interviewer?

A literature review resulted in the organization of previous research into five major areas of consideration: communication theory foundation; first impression formation; illusory causation; the importance of presence in interactions; and equivalencies to consider when using videoconferencing technology.

Communication Theory Foundation

The post-modernist sociocultural tradition of communications theory provides the framework for this research study (Craig & Muller, 2007). Well before the electronic age as we know it today, George Herbert Mead introduced the principle of basic human social organization as "communication involving participation in the other" (Mead, 1934, p. 253). The ability of humans to not only use words to communicate, but to interpret body language and voice to understand the other person and relate to them when communicating is what Mead meant by "participation in the other". According to Mead altering how communication takes place, depending on who is communicating, is "participating in the other" and is what allows people to communicate with one another. In 1934 when Mead introduced this concept, videoconferencing was not a means of communication, yet the ability of today's videoconference technology to provide the context through the screenshot frame, for people to relate to one another is an important consideration.

According to Poster, as cited by Craig and Muller (2007), communication in an electronic world is unstable. Unlike the print world of communication where the reader and the author have a fixed identity, electronic communications produce communicators with multiple identities. As Poster explains, the subject is always partly "other" (p. 378). This leads to the question, has the

videoconference technology changed the nature of communication? Does our technology allow symbolic interaction to continue to develop the mind, self and society as Mead theorized? Or has our digital electronic communication created a culture where decisions are influenced by symbols outside of the society in which we physically live? Poster (Craig & Muller, 2007, p. 379) asserts that the large distances, shortened through electronic communications, both separate and bring together the speaker and the listener. This is easily conceptualized in videoconference interviewing. Although it brings people together over great distances, it also has the potential to remove some of the togetherness that is captured through the context created when individuals meet face-to-face.

To determine how context affects communications, Poster (Craig & Muller, 2007, p. 387) describes how electronic communications have actually forced communication theory to a post-modernist view, recognizing the importance of reflection and the dependence of knowledge on context. Poster theorizes that the sociocultural tradition of communication theory is not absolute, but rather relies on society to shape theory, with context providing the theory's foundation (p. 388).

It appears the modernist theories, rather than post-modernist theories of communication, continue to prominently influence the practices of videoconference interviewing. While the technology is widely accepted as a tool for interviews, the effects of the context provided by the tool are given little consideration, as noted by the limited recent research performed in this area. If videoconference interviewing is viewed through a post-modernist theory lens, the assumption that the video medium, and more succinctly the video screenshot frame, may influence the interviewer's first impression becomes a question worthy of investigation. As Poster (Craig & Muller, 2007) explains, "electronic communication systematically removes the fixed points, the

grounds, the foundations that were essential to modern theory" (p. 379). No longer can we continue to assume that the medium from which we receive information has no effect on the context of the message. This was also relayed by McLuhan (1967) when he stated that "any understanding of social and cultural change is impossible without a knowledge of the way media work as environments" (p. 26). Yet, over forty-five years later, technology is still being used without really understanding how it affects context, and ultimately the message.

This research project is designed from a post-modernist sociocultural tradition point of view. Providing three different contexts in which an identical message is portrayed, aims to determine if the context provided by the screenshot frame changes the impression formed by videoconference interviewers.

First Impression Formation

It is important to understand how impressions are formed before researching whether the video screenshot frame affects the interviewer's first impression. Seminal research in first impression formation began with Asch's (1946) studies which determined that impressions are formed from a holistic perspective based on a category approach. In other words, people think in broad terms and assign overarching categories to form their impressions. Almost forty years later, Anderson (1981) published his theory that people look at isolated features and traits in forming impressions. This was followed by Fiske and Neuberg's (1990) proposal that individuals form both holistic and individuated impressions dependent on different attributes they are presented with, as well as their motivation for forming an impression. This model takes both holistic and isolated features into consideration.

Fiske and Neuberg's (1990) research led to the continuum model of impression formation which stipulates that when making an impression, individuals rely on individuating and

category-based processes. The research for the study discussed in this paper used Fiske and Neuberg's model to design a survey ensuring respondents were given the opportunity to free text their answers prior to being exposed to first impression determinant categories. By providing different video screenshot frames to three different groups of individuals, the influence of the video screenshot frame on whether respondents provide individuated or category-based impressions, can be analyzed.

A variety of research has been performed in the years following Fiske and Neuberg's (1990) continuum model of impression formation research. Johri (2012, p. 1997) performed a review of the literature on impression formation and notes that the social psychological construct of impression formation is greatly understudied in technology-mediated communications. In his review of research performed in this area, Johri proposes that impressions formed through technology-mediated communications are more intense, but less complex when compared to face-to-face interactions. Johri bases this proposition on studies by Hancock and Dunham (2001) which indicate that technology-mediated communication reduces the variety and amount of contextual information, thereby causing individuals to focus disproportionately on smaller pieces of information (Johri, 2012, p. 2000). A closer look at Hancock and Dunham's (2001) computer-mediated communication work reveals it was text based, not video based, leading to the obvious question, does their hypothesis also apply to a video computer-mediated scenario?

Whether first impressions are formed by individual pieces of information or information from a holistic perspective, the type and amount of information received is at the root of impression theory. The video screenshot frame determines the amount and type of nonverbal information received by the interviewer. It is in this capacity that researching this component of videoconference interviews will reveal the importance of the videoconference screenshot frame.

Judgmental accuracy is strongly linked to overall impressions formed by nonverbal behaviour (Ambady & Rosenthal, 1993, p. 439). The Ambady and Rosenthal study indicates that if people are aware they were making a judgment based on certain criteria, their judgments are likely to be quite accurate. For example, in the Ambady and Rosenthal study it was found that study participants who knew they were making rapid judgments on teacher effectiveness while observing teachers' behavior, were quite accurate in their assessments. If interview selection processes continue to mix videoconference with face-to-face encounters, it is important to standardize the applicant-interviewer interaction between the two interview methods. As judgments are strongly linked to non-verbal behaviors, perhaps the first place to investigate should be how these behaviors are being perceived visually through the videoconference medium. This directly relates to the ecological theory of perception (McArthur & Baron, 1983).

McArthur and Baron's (1983) ecological theory of perception is based on the premise that individuals communicate certain information or qualities that enable others to quickly form valid impressions of them. While the study referred to in this paper is not concerned with validity of impression formation, but rather whether impressions differ between screenshot frames of the same video, the study is designed with the assumption that the candidate in the video relays information and qualities that allow others to form impressions of him.

This study is designed on the basis of the ecological theory of perception, however, other studies were also considered during analysis of the study data. It may seem intuitive that contextual experiences provided by videoconference media make impression formation easier than strictly audio media. Studies have demonstrated, however, that when there is an overload of information provided to someone making an evaluation of others, there is an increase in stereotyping (Gilbert & Hixon, 1991). Gilbert and Hixon's research found that "people are more

likely to rely on activated stereotypes when conscious deliberation becomes difficult" (p. 515). Hinds (1999, p. 285) performed additional research supporting the hypothesis that an increase in social information provided by a rich media experience causes an increase in cognitive load leading to first impression formation based on stereotype judgments.

It is also important to take into account factors that affect first impression formation in regards to gender differences. A recently published study explores the difference in male and female reactions to nonverbal communication (Kotlyar & Ariely, 2013). It was found that proximity and the profile view influenced men's perceptions (p. 550). Women on the other hand were influenced by body movements and facial expressions. Kotlyar and Ariely's research reveals the importance of noting gender when researching first impression formation in video-mediated communications.

Illusory Causation

Illusory causation refers to the phenomenon that occurs when people assign importance to a stimulus because it is more prominent, not necessarily more important, than other stimuli (McArthur, 1980). One of the few studies found that looks at variability in screenshot frames, performed by Landstrom and Granhag (2008, p. 393), shows that the video screenshot changes the observer's perception of appearance. These researchers found that the closer shots created a less favourable impression than longer shots. Long shots personalized the individual within a setting while medium shots emphasized body gestures and facial expressions. Close up shots drew attention to reactions, emotions, and facial details. These results confirm earlier research performed by Stiff, Miller, Sleight, Mongeau, Rogan and Garlick (1989, p. 555) who found that while nonverbal cues do not distract observers from processing the accuracy of verbal content, visual information is primarily used to make judgments. The Stiff et al. study, found that the

ability of observers to assess accuracy relies on the familiarity of the observer with the situation. The more unfamiliar observers are with the situation, the more heavily they rely on nonverbal cues in making their judgments. In summary visual cues, compared to verbal cues, have a greater impact on making judgments.

Burgoon, Blair and Strom (2008) studied four biases associated with making judgments, one of which is visual bias. They define visual bias as "the tendency to place more reliance on visual than vocal, linguistic, and other forms of social information" when forming a judgment (p. 573). The study tests observers' ability to judge a truthful or deceptive interview performed by text, audio or audiovisual means. This allows the researchers to see whether addition or deletion of visual and nonverbal cues affects observer judgments of truthfulness. Their study reveals that the best mode to discriminate between truthful and deceptive interviews is in the audio only mode (p. 592). In the audiovisual mode and text only mode, observers are not able to discriminate between truthful and deceptive interviews. The visual bias observed may be due to an overload of information where the task of interpreting many different types of information (verbal and nonverbal) increases the cognitive load to the point where the observer relies on previous experiences and stereotypes to form an impression (p. 577).

The Importance of Presence in Interactions

The choice of communication medium affects "people's experience of social presence" (Sallnas, 2005, p. 434). Social presence is defined as "the degree to which a person is perceived as a 'real person' in mediated communication" (Gunawardena, 1995, p. 151). In her research study, Gunawardena notes that people who are more noticeable in interactive communication have a better social presence, and further concludes that communication which provides the feeling of close proximity increases the social presence felt. In addition, Gunawardena notes that

the ability of the communications medium to exhibit "facial expression, direction of looking, posture, dress and nonverbal cues, all contribute to the degree of social presence of a communications medium" (p. 151). The Sallnas (2005) research focuses on written, audio and video interactions, supporting Gunawardena's (1995) research in highlighting that perceptions of "presence" affect how people perform and interact.

According to early research, social presence of a communications medium relies on being able to provide a level of intimacy and immediacy (Short, Williams, & Christie, 1976, p. 129). The intimacy depends on physical distance, eye contact, smiling and personal conversations. Immediacy on the other hand is a feeling of psychological distance which can be portrayed through physical distance, dress and facial expressions. Short, Williams and Christie conclude that social presence relies at least partially on the medium.

Researchers Hinds and Kiesler (1999) identified two key features of video media that influence perceptions of presence: bandwidth (the number of signals transmitted by a medium) and synchrony (the speed with which information can be exchanged in a medium). Bandwidth becomes important when exchanging social information or contextual clues, whereas synchrony becomes important in the exchange of a large amount of information in a short period of time. Essentially, the quality and speed of information transmitted by a medium are the key factors in determining the presence felt by individuals in the interaction. More recent research indicates that the strength and clarity of video signals affects impressions of individuals involved in the interaction. Fullwood (2007) conducted a study involving pairs of participants involved in a mind-reading scenario performed face-to-face and via videoconferencing. A follow up questionnaire revealed that participants in the videoconference exercise rated each other as less likeable and intelligent than participants in the face-to-face exercise. This led Fullwood to

conclude that there are practical implications that need to be considered when comparisons are being made between candidates in face-to-face and videoconference interviews. Perhaps with the increased access and quality of videoconferencing, the assumption is that videoconference technology has the bandwidth and synchrony to support an equivalent experience when compared to a face-to-face interaction.

Equivalence Cannot Be Taken for Granted

While the research into video interviewing is limited, it does highlight the danger in making assumptions about equivalency between the two interview methods. Previous studies draw different conclusions regarding comparison of video-based versus face-to-face traditional interviews. Chapman & Rowe (2001) find a bias in favor of videoconference applicants. Conversely, Van Iddekinge, Raymark, Roth and Payne (2006) find a bias in favor of face-to-face interview ratings in comparison to videotaped interview ratings. To round out the research, Straus, Miles and Levesquec (2001) find no difference in ratings between face-to-face and video-rated subjects. As Anderson (2003) states, "equivalence cannot be taken for granted in new technological administrations of selection methods" (p. 127). This begs the question – what is it about videoconferencing that differs from face-to-face encounters?

Videoconference interview studies by O'Conaill, Whittaker and Wilbur (1993), note a decrease in visual cues in videoconferencing resulting in a decrease in interruptions, longer and fewer interactions with participants compared to face-to-face conversations. Nonverbal behaviours, including eye contact, are noted as the most prominent reduced visual cues in videoconference interviews. Chapman and Rowe (2001) find that interviewers rate videoconference applicants higher than face-to-face applicants. Due to the decreased social presence afforded by the technology, interviewers take more notes and refer to additional

applicant paperwork during the videoconference interview, as opposed to the face-to-face interview. In addition, some interviewers note that decreased visual cues allow them to concentrate more on the verbal responses in the videoconference interview. The newness of the technology to both the interviewer and interviewee reduces the power imbalance of the interviewer/interviewee, although interviewee discomfort was difficult to attribute – were they uneasy with the interview interaction or the technology being utilized? Chapman and Rowe feel that the medium is responsible for reducing anxiety between the interviewer and applicant and therefore creates a favourable interviewer evaluation. They further explain that reduced anxiety may have directly influenced the ratings by affecting the interviewers' impression of the applicant or indirectly by improving the applicants' performance, although applicant self-reporting indicates they did not feel they had a better performance in the videoconference interview, thereby making the indirect influence less likely. Another explanation of the interview score variance may be due to empathy extended by the interviewers to the applicants. The interviewers feel applicants deserve the benefit of the doubt due to inexperience with videoconference conversations, thus inflating videoconference interview scores. Chapman and Rowe recommend the medium of communication as an important variable to consider when studying interviewer decision processes - mixing interview media may result in inflated results for one medium over the other.

Van Iddekinge et al. (2006) also find that there is a difference in videotaped interview scores compared to face-to-face scores, however, they find the bias to be in favor of face-to-face applicants. Van Iddekinge et al. videotaped face-to-face interviews and compared the face-to-face interview scores with the scores of individuals who rated the interviews by watching the videotapes. While this did not allow the videotape evaluator the same interaction as the

videoconference interviewer, the fact that the results from this study showed a discrepancy between face-to-face scores and video scores is still significant. Is the discrepancy due to the fact the videotape evaluators were completely removed from the interviewer-interviewee interaction experience? In direct opposition to Chapman and Rowe (2001), Van Iddekinge et al. (2006) hypothesize that decreased proximity to the applicants allows the interviewers to be more critical of the applicants, resulting in lower interview scores in the videotaped assessments. While the two studies contradict one another in their results and explanation for their findings, both studies agree that organizations need to be careful when using different interview modes to evaluate candidates within the same applicant pool.

The Chapman and Rowe (2001) and Van Iddekinge et al. (2006) studies both found discrepancies in video versus face-to-face interview ratings, while Straus et al. (2001) did not find significant discrepancies in ratings between the two interview methods. In the Straus et al study, interviewers and interviewees both indicate that it is more difficult to regulate the conversation in a videoconference setting. However, the applicants were not rated lower in this setting as compared to face-to-face. Straus et al, similar to Chapman and Rowe (2001), suggest that perhaps interviewers adjust their expectations in the videoconference interviews to compensate for difficulties in using the technology, thereby negating the disadvantages presented by the technology. In the Straus et al (2001) study this compensation resulted in similar ratings for videoconference and face-to-face applicants. Straus et al feel that their study elicits a critical topic that must be considered: “the accuracy of interviewers’ judgments” (p. 375). They questioned whether misunderstandings created by the bandwidth and synchrony of the media or comfort level of the candidate with the technology affect the accuracy of interviewer judgments.

Literature Review Summary

Overall, previous research in the area of videoconference interviewing was primarily conducted from the late 1990's to 2008 and focuses on the equivalence of the technology with face-to-face interviews. Research studies span Europe and North America to provide the foundation for research in this area. Despite the increase in the number of video interviews and the conclusions by many researchers about the importance of first impressions, few research studies were found that included screenshot variability as a factor influencing observations about interview candidates. In summary, a review of the literature reveals a lack of up-to-date research in the area of videoconference interviewing and in particular variable screenshot impact. Considering the increased quality and access to videoconferencing technologies, this study is needed to provide insight into whether the video screenshot frame affects the videoconference interviewer's first impression.

Methodology

Research Design

This study embraces the philosophy that numerous equally valid interpretations of reality exist within the world of videoconference interviewing (Merrigan, Huston, & Johnston, 2012, p. 88). The purpose of this study is to understand if interviewer interpretations of reality, when forming first impressions, are influenced by different visual frames of reference in the videoconference interview. A cross sectional research design was utilized in this study. The post-modernist view of sociocultural tradition of communication theory guided the interpretive paradigm of an online interview setting (Craig & Muller, 2007, pp. 387-388).

Data Sources/Collection

Two important goals in this study were to obtain independent, subjective, and rich first impression descriptions and rate first impression determinants (Ambady & Rosenthal, 1993; Merrigan, Huston, & Johnston, 2012). The time and budget constraints would not allow for individual candidate interviews, and focus group interviews would not elicit the individual perceptions sought by this study, so online questionnaire surveys were chosen as the preferable data gathering tool. The online questionnaire allowed geographical reach of the survey to extend globally, although the participant criteria limited the participants to Canadians or permanent residents of Canada.

Survey tool. In order to provide research participants with a videoconference interview setting, a 58 year old male actor was videotaped using a Canon T2i camera. The actor answered the question: why are you interested in attending a health program at our institute? The video was recorded in a conference room at the Northern Alberta Institute of Technology (NAIT) in Edmonton, Alberta, Canada. The male actor was seated in a chair and the video frame recorded was a frontal shot capturing the actor from head to toe. The recording used for the study was taped in one sequence without editing and was one minute, nine seconds long. This recording was used for the full body video screenshot frame. Two additional frames were obtained by cropping the full body recording at the waist and at the shoulders using the iMovie application on a Macbook Air laptop. The three videos were then uploaded to the principal researcher's YouTube Channel as unlisted videos.

Three surveys were created using FluidSurveys'™ online tool. Each of these surveys contained identical questions and one of the three video clips. The survey tool reduced question delivery bias by providing the same questions in the same format to each respondent.

The surveys collected text, ordinal/Likert responses and nominal demographic data for quantitative and qualitative analysis purposes. Allowing for free text comments in two separate questions on the survey provided flexibility for respondents to share their responses outside the structured Likert and demographic questions. When the surveys were accessed, the questions appeared one at a time, in sequential order, on the computer screen. Respondents were required to provide answers to each question before they were able to progress to the next question in the survey. The survey tool would not allow respondents to return to a previously answered question because it was first impressions that were sought. Participants were informed that the survey would take approximately ten minutes and that they were able to opt out at any point of the survey.

The initial question on the survey asked the video participants if they were Canadian citizens or permanent residents of Canada and if they were at least 18 years of age. If participants responded “no”, they were automatically directed to a page explaining that they were unable to participate in the survey and thanking them for their intent to participate. If the participant replied that they were a Canadian citizen or permanent resident of Canada and at least 18 years of age, the survey tool automatically progressed to the video page.

The web link of the YouTube video was embedded on the survey video page. Instructions appeared above the embedded video asking the participants to watch the video and form a first impression of the person being interviewed for a student placement in a health related post-secondary program. The first question following the video asked the participant if they had viewed the video. If they responded that they had not watched the video, they were redirected to an identical video page and again provided with the instructions, the video link, and asked if they had watched the video. If the participant indicated they had not watched the video for the second

time, they were directed out of the survey and thanked for their intention to participate. If the participant indicated that they had watched the video, they were automatically presented with the next question in the survey.

The question immediately following the video, asked the respondent to describe their first impression of the video candidate in a free text answer. Capturing the first impression immediately after the video ensured details of the impression were documented before additional information could influence responses or cause the respondent to forget details.

The fourth question asked the participant to rate how easily they were able to form a first impression of the candidate according to 12 first impression determinants adapted from research performed by Ambady and Rosenthal (1993): attentiveness, competency, confidence, dominance, empathy, enthusiasm, honesty, likability, optimism, professionalism, supportiveness and warmth. Ambady and Rosenthal stress the importance of choosing measurement criteria based on molar behavior, rather than micro behavior. For example, measuring optimism, a molar behavior is preferable to noting if a person smiles, a micro behavior. Molar behaviors incorporate many micro behaviors in their assessment. Following the ordinal rating question a fifth question provided participants with a second opportunity to free text additional first impression descriptions.

The survey concluded with two demographic questions asking the respondents to identify their gender and their age category. The demographic questions were included so biases due to gender or age could be analyzed.

Prior to publishing the surveys, sixteen volunteers each tested all three surveys. One survey pilot identified inconsistencies with the video embedded in the second loop created for individuals who indicated they had not initially viewed the video. This problem was corrected

and no further issues were identified by the survey pilots. A non-interactive copy of the survey may be viewed in Appendix A.

Sampling Technique

Purposive, random and snowball sampling techniques were used to form a participant pool (Merrigan, Huston, & Johnston, 2012, pp. 64-65). Multiple authoritative contacts and mixed modes were used to recruit participants (Kaplowitz, Lupi, Couper, & Thorp, 2012). Volunteer participants were purposely recruited by e-mail from a convenience sampling of acquaintances known to the five Chairs in the School of Health Sciences at NAIT. Random sampling by the principal researcher was achieved through Twitter™ messages. Snowball sampling was achieved by encouraging all contacts through email and Twitter™ to forward the opportunity to participate in the research project to their contacts.

The participation criteria stated that all respondents needed to be 18 years of age or older and Canadian citizens or permanent residents of Canada. Generally interviewers in selection processes are over 18 years of age and therefore this criterion strengthened the external validity of the study (Merrigan, Huston, & Johnston, 2012, p. 87). It is acknowledged that Canadian citizens and permanent residents of Canada may have various mother tongues and different cultural backgrounds. The intention, however, was for this criterion to produce a common perceptual foundation to reduce the influence of language and culture that might be unintentionally brought to the study by foreign nationals.

A message was emailed to the Chairs in the School of Health Sciences at NAIT to forward to their contacts. The email message provided a short description of the research and asked contacts to self-identify to the principal investigator if they were interested in receiving more information about the study. If they contacted the principal researcher they were emailed

information about the study. This prospective participant information document is found in Appendix B. Interested parties were asked to declare their intentions to be added to the participant pool for the study if they were interested in participating after reviewing the information. This selection process required interaction of the respondents with the principal investigator prior to participation in the survey. The intent of these contact points was to increase the potential of a high response rate and to choose informed participants who would be motivated to respond and provide thoughtful, rich answers to survey questions.

Sixty-one people volunteered for the study, thirty females and thirty-one males. In order to ensure there were equal numbers of participants and equal numbers of each gender assigned to each survey, one male was randomly selected and excluded from the study. The pool of participants was stratified into three groups, ten male and ten female respondents were selected randomly for each group. It is notable that the 60 participants exceeded the study's established minimum of 30 participants.

Each group of 20 participants received an email with the link to a survey containing one of the embedded video screenshot frames. An email preamble followed by the survey link and an attached participant information letter (found in Appendix C) provided participants with the information needed to complete the survey. Providing adequate information in the attached letter and providing the link near the bottom of the email preamble was deliberate and consistent with previous research shown to increase survey response rates (Kaplowitz, Lupi, Couper, & Thorp, 2012). The information letter provided the respondents with the principal investigator and research supervisor contact details, background information, study purpose and procedures, benefits and risks of participating, the voluntary nature and confidentiality of participating, ethics approval information and informed consent details. The participants were provided with the

conceptual framework within which they were being asked to form first impressions of the video actor. Ensuring the participants knew the expectations for their first impression formation is supported by Ambady and Rosenthal's (1993, p. 439) research. Two reminders were sent to participants; one reminder at 8 days and a second reminder at 18 days after the initial email. The survey deadline for responses was set at three weeks after the initial email. Two female respondents did not complete the survey before this deadline. Snowball sampling was used to recruit two additional females who contacted the principal researcher indicating their interest in participating. Both volunteers completed the survey within 48 hours. This resulted in a total of 60 responses, 30 male and 30 female, for this research study.

Data Coding, Analysis and Interpretation

Free text responses. The first impression textual descriptions were reviewed and key words were tagged to fit in categories identified by the researcher. Tagging allowed categorization of certain characteristics for comparison purposes. The following categories organized the tags applied to the first impression description responses:

- Age mention;
- Appearance;
- Benefit of doubt given to candidate due to technology/process;
- Body language mentioned;
- Eye contact mentioned;
- Facial expression mentioned;
- Molar judgments;
- Negative overall impression;
- Neutral or conflicting overall impression;

- Noted distraction of candidate's movement;
- Positive overall impression;
- Verbal answer mentioned;
- Stereotype judgment made.

Tag categories were analyzed to compare content of the first impression descriptions between the three video screenshot frames. Word count of free text answers was compared to determine if there was a difference in the amount of first impression information documented by respondents of the three different screenshot frames. Gender and age bias in relation to first impression descriptions were also analyzed.

Ordinal/Likert Responses. Twelve first impression determinants were rated by survey respondents: attentiveness, competency, confidence, dominance, empathy, enthusiasm, honesty, likeability, optimism, professionalism, supportiveness and warmth. These first impression determinants were coded with numerical values: Very Easy = 4, Easy = 3, Somewhat Difficult = 2, Difficult = 1, Unable to Assess = 0. The score for each of the first impression determinants was calculated and the scores compared across the three screenshot frames. Again, gender and age categories were investigated to determine if biases due to these demographic variables were indicated.

Additional Comment Responses. These free text responses were tagged and categorized for comparison purposes. The following categories organized the tags as follows:

- Had no further comments;
- Indicated they liked the video interview experience;
- Indicated they liked their screenshot frame of reference;
- Expressed desire for interactive communication with candidate;

- Summarized their impression of the candidate;
- Wanted more time to form a first impression of the candidate;
- Analyzed their first impression;
- Expressed concern with interpretation of first impression determinants;
- Extrapolated their experience to another screenshot frame or face-to-face encounter;
- Questioned the importance of a first impression.

These categories were analyzed to compare content between the screenshot frames as well as analyzed for respondent gender and age bias.

Evaluation Standards

As stated earlier, this study employs interpretive research design which is grounded in the belief that "numerous equally valid interpretations of reality exist" (Merrigan, Huston, & Johnston, 2012, p. 88). Because subjectivity is valued in interpretive research design, the standards guiding the research must portray researcher credibility, plausible interpretations and transferable findings (p. 89).

Researcher credibility. In this study, the researcher collected and interpreted the data. For this reason it was important for the researcher to have training and experience, as well as dedication to the research subject (Merrigan, Huston, & Johnston, 2012, pp. 90-91)**.** The principal researcher has performed interviews in student and staff selection processes on numerous occasions. In addition she has participated in two research studies that involved data collection through videoconference interviews. This experience, coupled with previous survey development, has provided the researcher with training and knowledge in the interview, videoconference and survey processes, contributing to her credibility as a researcher for this study. The experience of the principal researcher enabled her to understand the types of

questions that would best relate to first impression formation. Previous research in videoconferencing has also provided the principal researcher with a high level of commitment. She has an interest in ensuring videoconferencing in interviews lends itself to best practices for the benefit of a fair and equitable process.

Plausible interpretations. The researcher developed plausible interpretations of the survey data through ensuring adequacy of evidence, coherence and negative case analysis (Merrigan, Huston, & Johnston, 2012, pp. 92-93). Once responses from approximately half of the respondents were received, similarity of findings became evident, which indicated adequacy of evidence for this small study. Coherent interpretations of the data involved clustering similar responses, noting themes and patterns, drawing comparisons, incorporating specific detailed data into a general interpretation and building a logical chain of evidence (p. 92). In addition, negative case analysis was used to ensure tagging of textual data was accurate (p. 93).

Transferable findings. The researcher was able to transfer insights from the data within the study to real world videoconferencing situations (Merrigan, Huston, & Johnston, 2012, pp. 88-93). Transferability of insights was increased due to the fact that the project was designed to be as similar to a live videoconference experience as possible. The following points helped to increase the relevance of the interpretations to a real world videoconference interview:

- the actor was required to respond to the question by answering directly into a video camera as would an interview candidate being interviewed by videoconference;
- the response was a one minute nine second clip, and although there was no interviewer/interviewee interaction, it is not unreasonable to assume that this length

of response would not require interruption from an interviewer in a real videoconference interview process;

- the computer screen was the medium used by the interviewer – the same medium that would be used in a videoconference setting;
- the respondents received the same information as they would have received if they were interviewing a videoconference candidate.

An audit trail was used as the method to confirm the transferability of the findings. Raw data was shared with the research supervisor to confirm that interpretations of data were logical and accurate.

Findings

Respondents from each of the three surveys (full body, waist up and shoulders up) supplied three types of data for consideration in this study: textual, nominal-Likert rating and multiple choice demographic. In addition the FluidSurveys™ online tool automatically recorded the time it took for each respondent to complete the survey and calculated the average response time for each of the three surveys. The online survey tool provided filtering capability to assist with reporting and analyzing results. The responses to the three screenshot frames were compared by analyzing: 1) first impression description word counts, tags and word clouds; 2) first impression determinant scores and medians; 3) additional comment tags. Additionally, first impression description tags, determinant scores and medians, and additional comment tags were compared between respondent genders and among respondent age groups.

Response Times

The range in response times for full body respondents was 4:05 (4 minutes, 5 seconds) to 35:16, waist up respondents 4:24 to 24:19, and shoulders up respondents 4:30 to 14:39. The

average survey completion time for full body respondents was 8:56, waist up respondents 7:45 and shoulders up respondents 9:01. A close examination of the data revealed that two data points in the full body data set and one data point in the waist up data set were outliers. Therefore, the median response time was calculated as it is a more accurate reflection of the time taken for participants to complete the survey. The median response time for full body respondents was 7:06, waist up respondents 6:51 and shoulders up respondents 7:06.

While the medians do not indicate a significant difference in response times between the screenshot frames, it is notable that only three respondents in the full body survey and two respondents in the waist up survey took longer than the estimated ten minutes to complete the survey. In the full body survey,18/20 respondents fell within one standard deviation of the mean, one data point was outside two standard deviations and one data point was three standard deviations away from the mean. In the waist up survey 19/20 respondents fell within one standard deviation of the mean and one data point was outside three standard deviations of the mean. In the shoulders up survey, 16/20 respondents fell within one standard deviation of the mean with all data points falling within two standard deviations of the mean. In the shoulders up survey seven respondents took longer than the estimated ten minutes to complete the survey with four respondents taking over 14 minutes.

Figure 1 shows seven shoulders up respondents taking longer than the estimated ten minutes to complete the survey and two respondents in the full body and one in the waist up surveys with significantly higher response times:

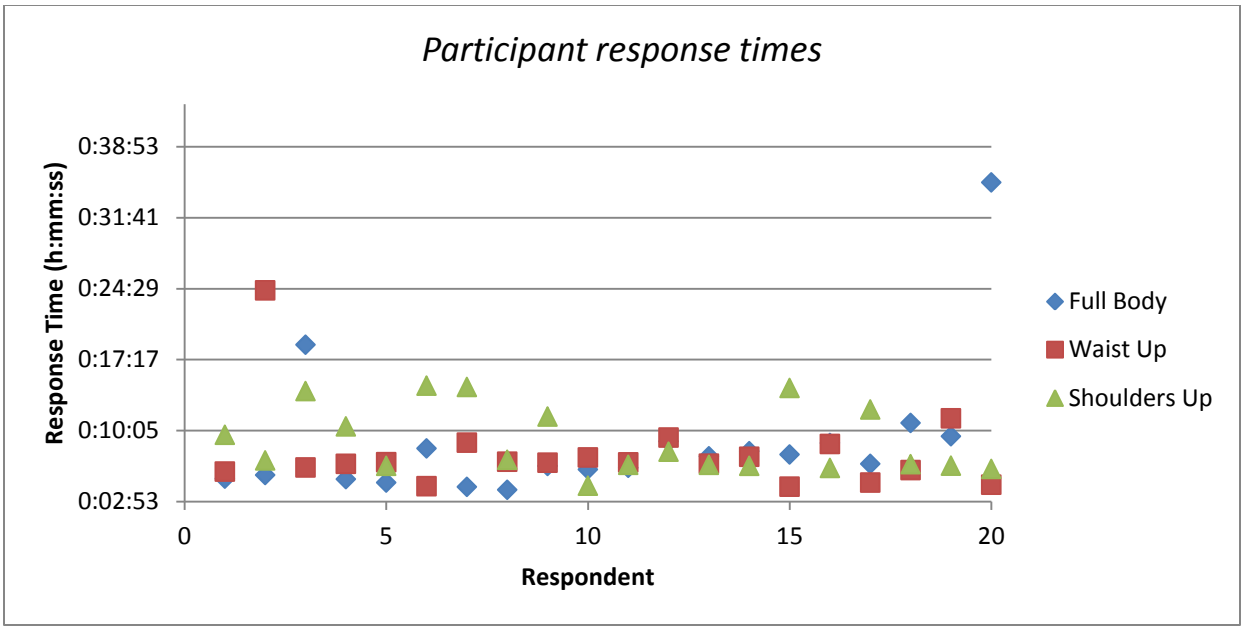

Figure 1: Participant response times for all three screenshot frames

First Impression Descriptions

Participants were asked to provide a free text response to describe their first impression of the video interview candidate. The analysis of these descriptions included comparison of word count, tagged text categories and word clouds.

Word count comparison of first impression descriptions. The first impression description median word count of full body respondents was 26 words, waist up respondents 36 words and shoulders up respondents 33 words. The word count range for full body respondents was 13 to 58 words, waist up respondents 4 to 67 words and shoulders up respondents 15 to 70 words. The standard deviation for the word count was calculated for each survey and showed that two full body respondents, one waist up respondent and one shoulders up respondent had word counts outside two standard deviations.

Figure 2 shows a visual representation of the word count for respondents in each survey. The full body respondents have a fairly even scatter of responses between that survey's lowest and highest word count with the majority falling within 15 to 35 words. The waist up

respondents have the highest median word count and also the description containing the fewest words, with the majority of respondents falling within the 20 to 45 word count range. The shoulders up response data shows a fairly even distribution of first impression description word counts, with the majority falling between 15 to 50 words. The longest description of all three surveys was found in the shoulders up screenshot frame at 70 words.

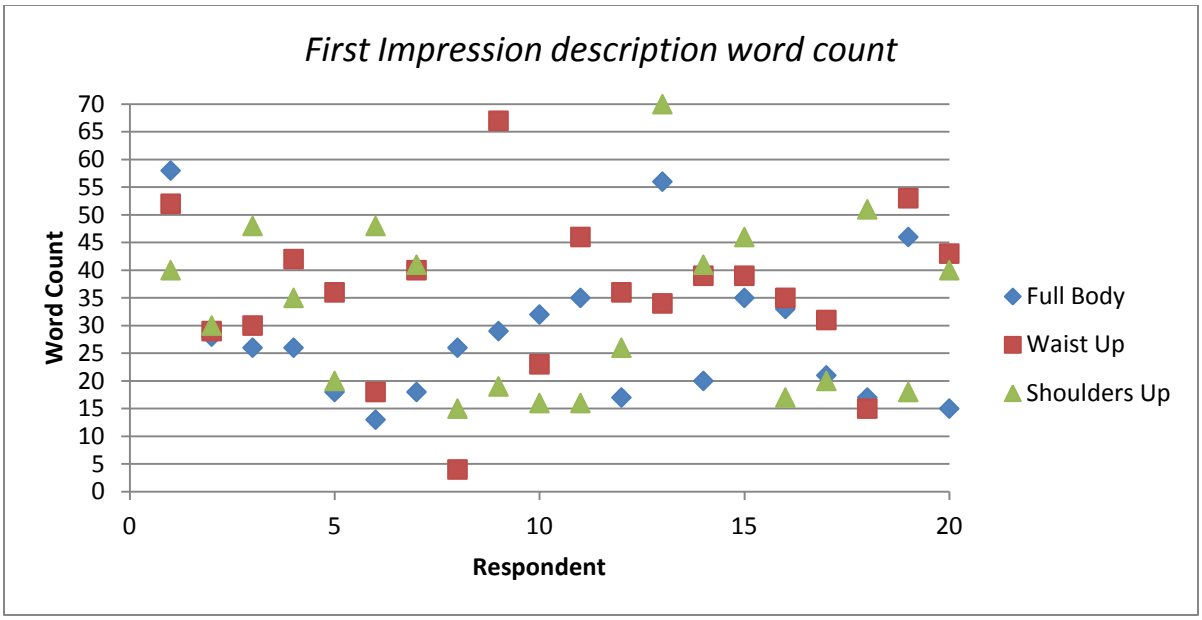

Figure 2: First impression description word count for all three screenshot frames

Text categorization of tagged words. The following categories were used to sort through the tagged words identified by the researcher in the first impression descriptive responses:

1. Age Mention – keyword search: mature, old, age, elderly;
2. Appearance – keyword search: jeans, attire, dress, tidy, professional, look, cloth, footwear, casual, plain, put together, fashion, clean, neat, appearance, attire;
3. Body Language Mentioned – keyword search: feet, hand, leg, appendage, toe tapping, posture, twitch, thumb twirling, moved, laid back, chair, move, expression, body, fidget, gesture, tilt, sit, ease, rock, tense, head, bouncing;

4. Eye Contact Mentioned – keyword search: eye, contact, glancing;
5. Facial Expression Mentioned – keyword search: facial, expression;
6. Verbal Answer Mentioned – keyword search: spoke, speaking, research, liked, program, interested, articulate, difficulty, communicating, answer, question, research, thoughtful, knowledgeable, detail, explain, homework, articulate, say, intelligent, prepare, understood, repeat, inform, website, thoughtful, contemplative, practical, speech, vocabulary, course, verse, focus, goal, interest, talk, diligence;
7. Stereotype Judgment Made – keyword search: more experienced, trades background, typical, expect, educated, someone his age, approval seeking;
8. Molar Judgments – keyword search: pleasant, approachable, excited, enthusiastic, sure of himself, sincere, engaged, calm, confident, personality, polite, self control, anxiety, insecure, shy, nervous, relax, approachable, professional, nice, reserved, unsure, honest, thoughtful, zealous, friendly, concern, genuine, bored, unenthusiastic;
9. Noted Distraction of Candidate's Movement – keyword search: focus, distract;
10. Benefit of the Doubt Given to Candidate due to Technology/Process – keyword search: camera, jitters, first, unusual;
11. Positive Overall Impression – impressions within the description were deemed positive if there were more positive impressions formed in a description compared to negative impressions;
12. Negative Overall Impression - impressions within the description were deemed negative if there were more negative impressions formed in a description compared to positive impressions;

13. Neutral or Conflicting Overall Impression - impressions within the description were deemed neutral if there were equal numbers of positive and negative impressions or the impressions could not be analyzed as either positive or negative.

Every keyword search result was analyzed to be sure it wasn't being taken out of context and did relate directly to the category assigned. In addition, a negative analysis was done to be sure the first impression descriptions not tagged with the category did not belong to that category.

The categories mentioned by more full body respondents than the other two screenshot frames were: age, appearance, body language, and distractions. The categories mentioned by more waist up respondents were: verbal answer, stereotype judgment, molar judgments, benefit of the doubt and positive overall impression. The categories mentioned more by the shoulders up respondents were: eye contact and facial expression. The full body and shoulders up respondents formed the same number of positive, negative and neutral/conflicting overall impressions.

The number of responses assigned to each category from each screenshot frame is outlined in Figure 3 below. In examining Figure 3, the number of references to appearance and body language decrease as the video screenshot frame moves closer to the candidate - from the full body to the waist up to the shoulders up screenshot frames. In addition, the references to eye contact increases as the screenshot frame moves from the full body to the waist up to the shoulders up view.

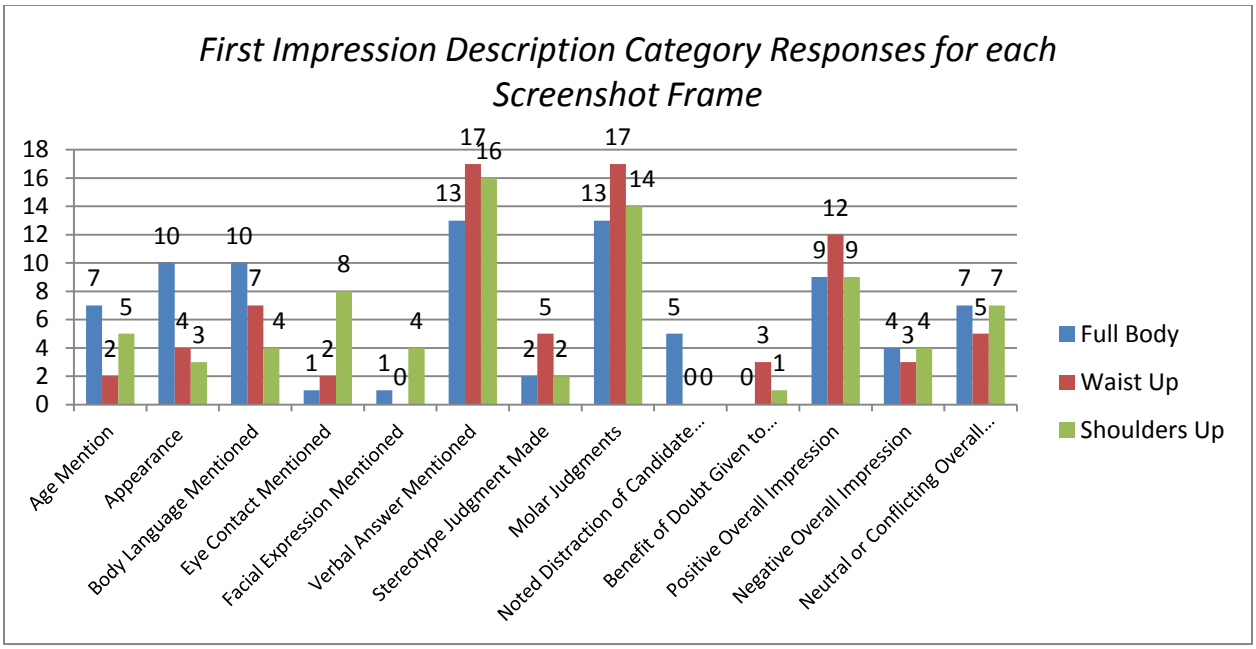

Figure 3: Categorization of first impression descriptions for each of the three surveys

Text was analyzed through word clouds. Word clouds created by the FluidSurveys™ software highlighted the most prominent words provided by respondents in their first impression descriptions. The larger the word the more times it was mentioned in first impression descriptions. These word clouds provide a qualitative summary of responses for each of the screenshot frames and can be found in Figure 4, Figure 5 and Figure 6.

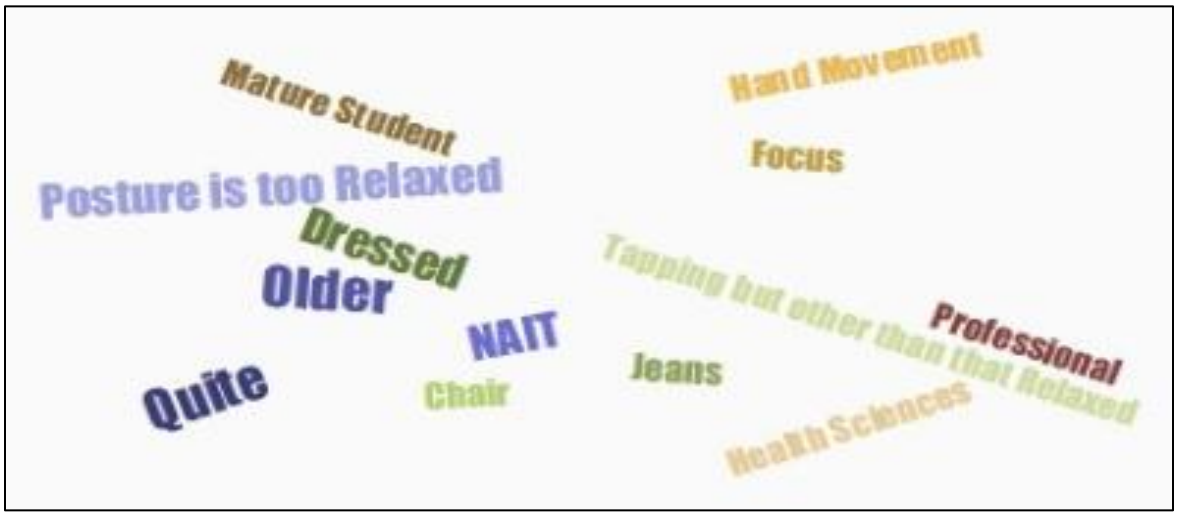

Figure 4: Full body word cloud

Figure 5: Waist up word cloud

Figure 6: Shoulders up word cloud

First Impression Determinants

First impression determinants were adapted from Ambady and Rosenthal's (1993) research. Respondents were asked to rate the ease with which they were able to form a first impression about each of 12 first impression determinants. The ratings were as follows: very

easy = 4, easy = 3, somewhat difficult = 2, difficult = 1 and unable to assess = 0. The maximum possible total score for each determinant was 80 (4 rating x 20 respondents).

Full body screenshot frame. The first impression determinant that had the highest rated score within the full body screenshot frame was "confidence". The empathy determinant received the lowest rating in the full body screenshot frame with a score of 29 and did not receive any assessment ratings of very easy. The dominance, supportiveness and professionalism determinants each only received one score of very easy from the respondents in this screenshot frame. Empathy and competency determinants were each rated as unable to assess by six respondents, the highest number of unable to assess ratings in this frame. The overall rating score (all determinant scores added together) for this screen shot frame was 563. The full body screenshot frame respondent scores for each determinant are found in Figure 7:

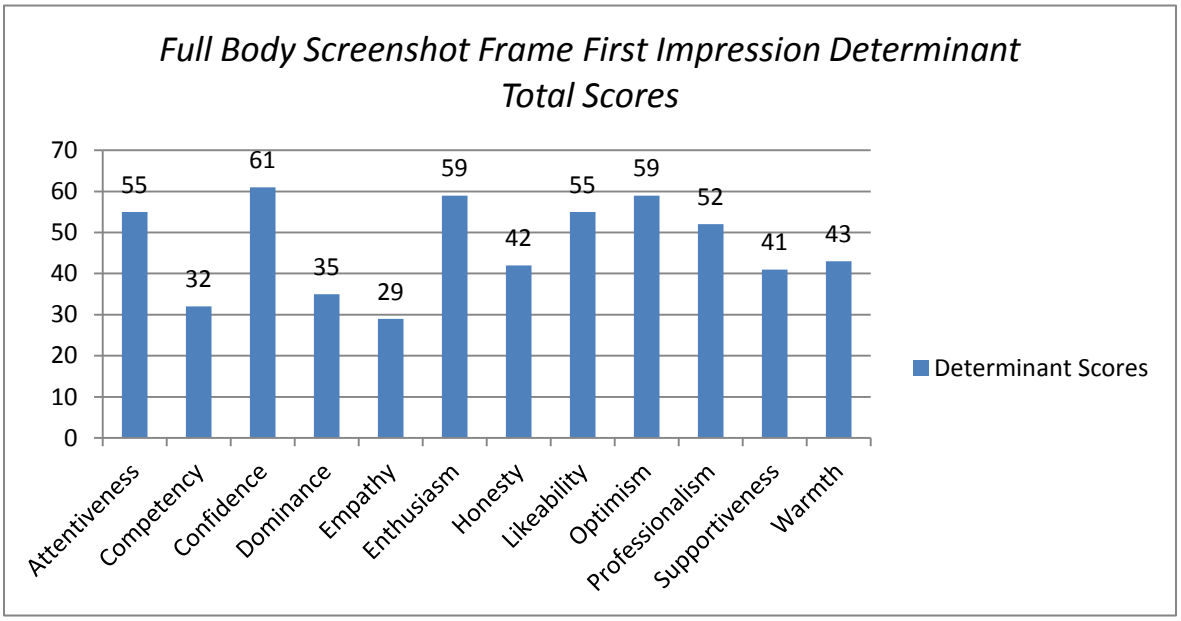

Figure 7: Full body screenshot frame first impression determinant total scores

Six determinants in the full body screenshot frame were rated overall as difficult or unable to assess reflecting median scores of 2.0 for the individual responses. These six

determinants were competency, dominance, empathy, honesty, supportiveness and warmth. The median scores for the full body screenshot frame are found in Figure 8:

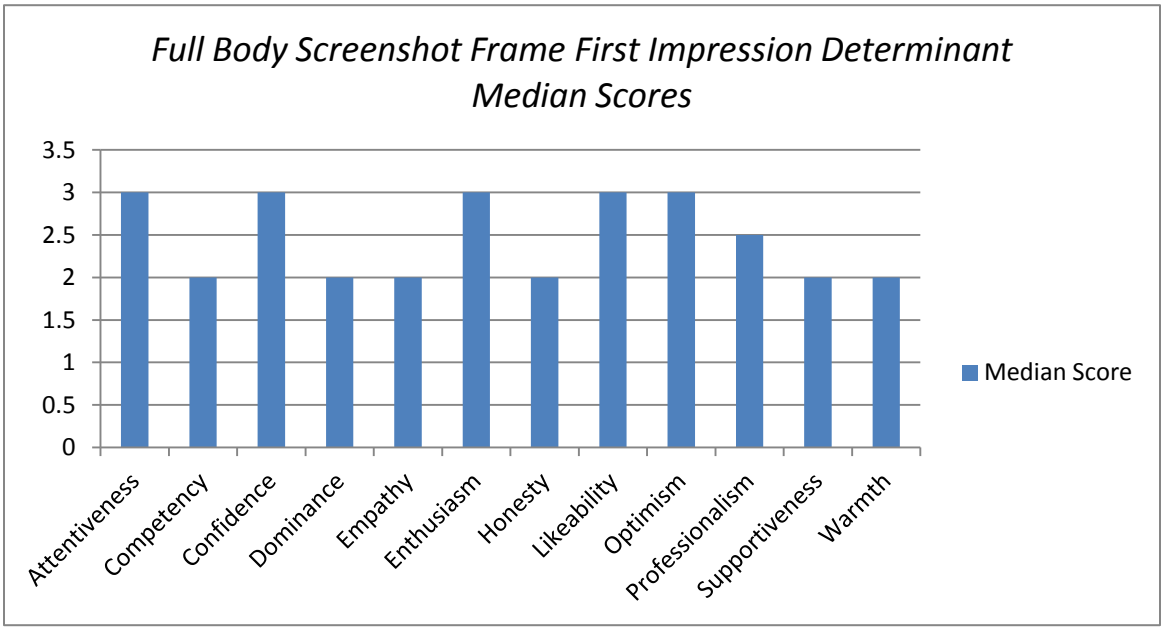

Figure 8: Full body screenshot frame first impression determinant median scores

Waist up screenshot frame. The first impression determinant that had the highest rated score within the waist up screenshot frame was "professionalism" with a score of 64. The lowest rated score within this frame was "dominance" with a score of 34 and received only one rating of very easy. The supportiveness determinant also only received one score of very easy in this frame. The empathy determinant did not receive any scores of very easy by respondents in this screenshot frame. Supportiveness was rated as unable to assess by five respondents, the highest number of unable to assess ratings in this frame. The overall rating score for this screenshot frame was 594. The waist up screenshot frame scores for each determinant are found in Figure 9.

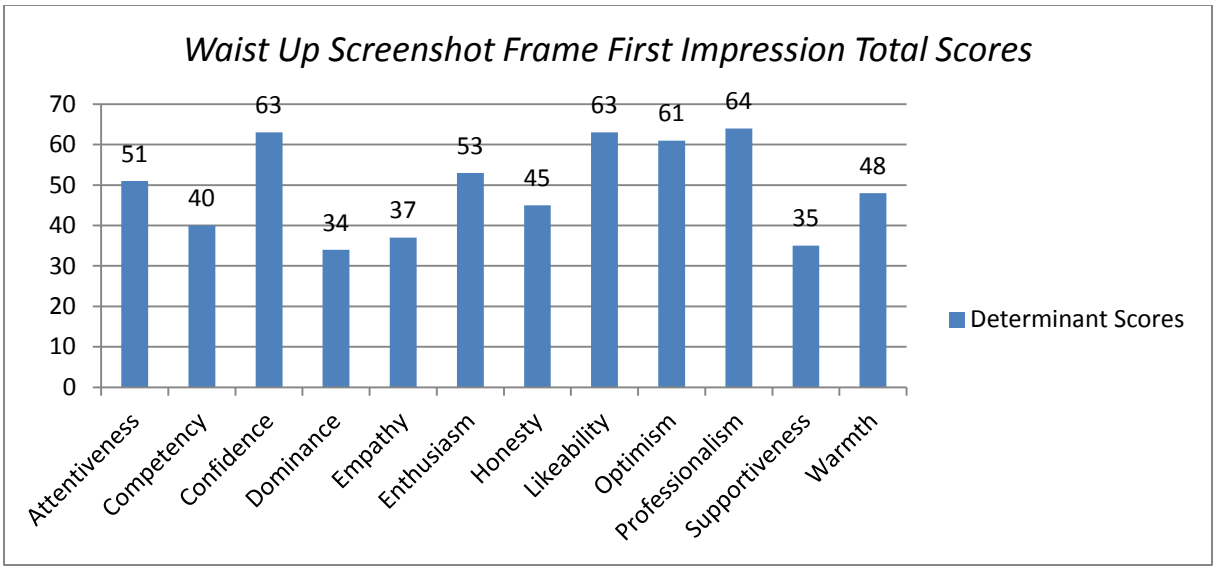

Figure 9: Waist up screenshot frame first impression determinant total scores

Five determinants in the waist up screenshot frame were rated overall as difficult or unable to assess reflecting median scores of 2.0. These five determinants were competency, dominance, empathy, honesty and supportiveness with dominance receiving the lowest rating. The waist up screenshot frame median scores for each determinant are found in Figure 10:

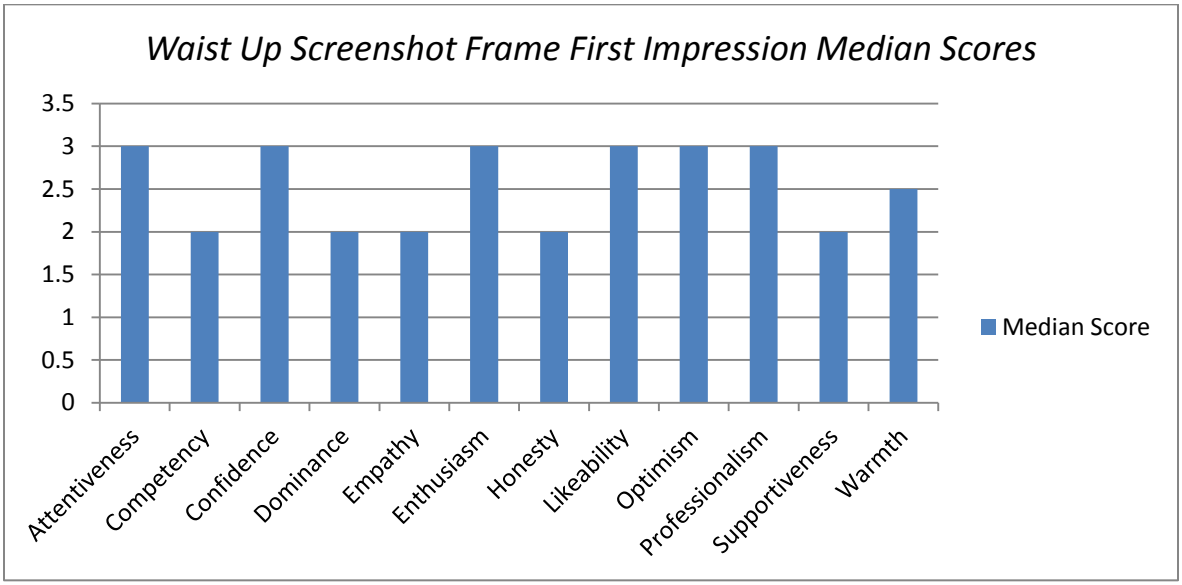

Figure 10: Waist up screenshot frame first impression determinant median scores

Shoulders up screenshot frame. The first impression determinant that had the highest rated score within the shoulders up screenshot frame was "attentiveness" with a score of 60. The lowest rated score within this frame was "supportiveness" receiving a score of 38 and received only one rating of very easy. The dominance determinant also only received one score of very easy from the respondents in this screenshot frame. Empathy did not receive any very easy assessments by the respondents in this frame. Dominance and supportiveness determinants were each rated as unable to assess by three respondents, the highest number of unable to assess ratings in this frame.. The overall rating score for this screen shot frame was 602. The shoulders up screenshot frame scores for each determinant are found in Figure 11:

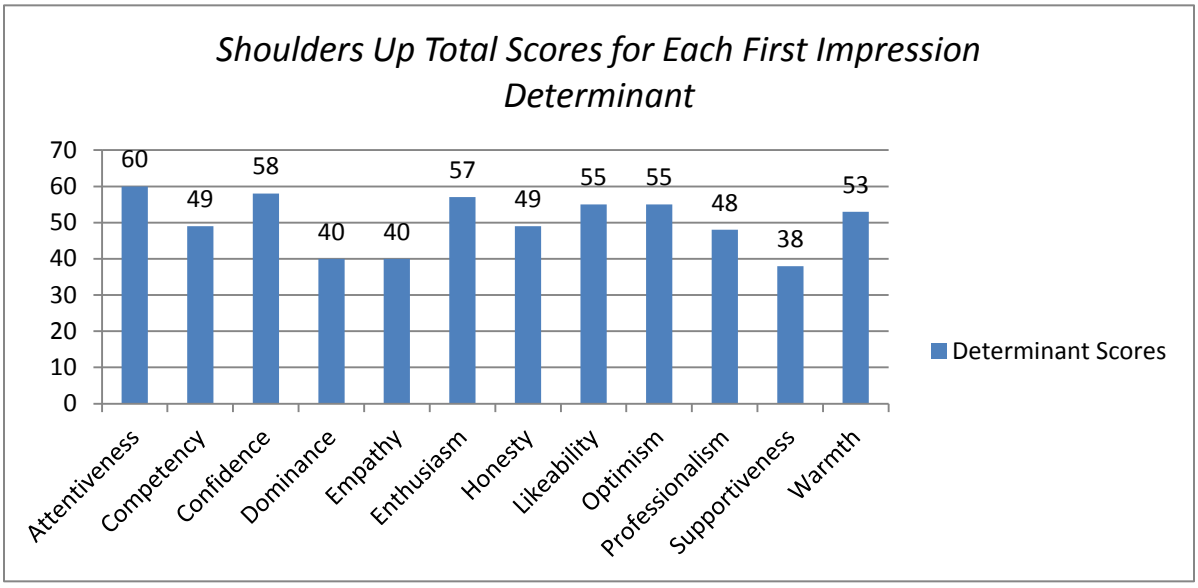

Figure 11: Shoulders up screenshot frame first impression determinant total scores

Four determinants in the shoulders up screenshot frame were rated overall as difficult or unable to assess reflecting median scores of 2.0. These four determinants were dominance, empathy, professionalism, and supportiveness. The shoulders up median scores for each determinant are found in Figure 12:

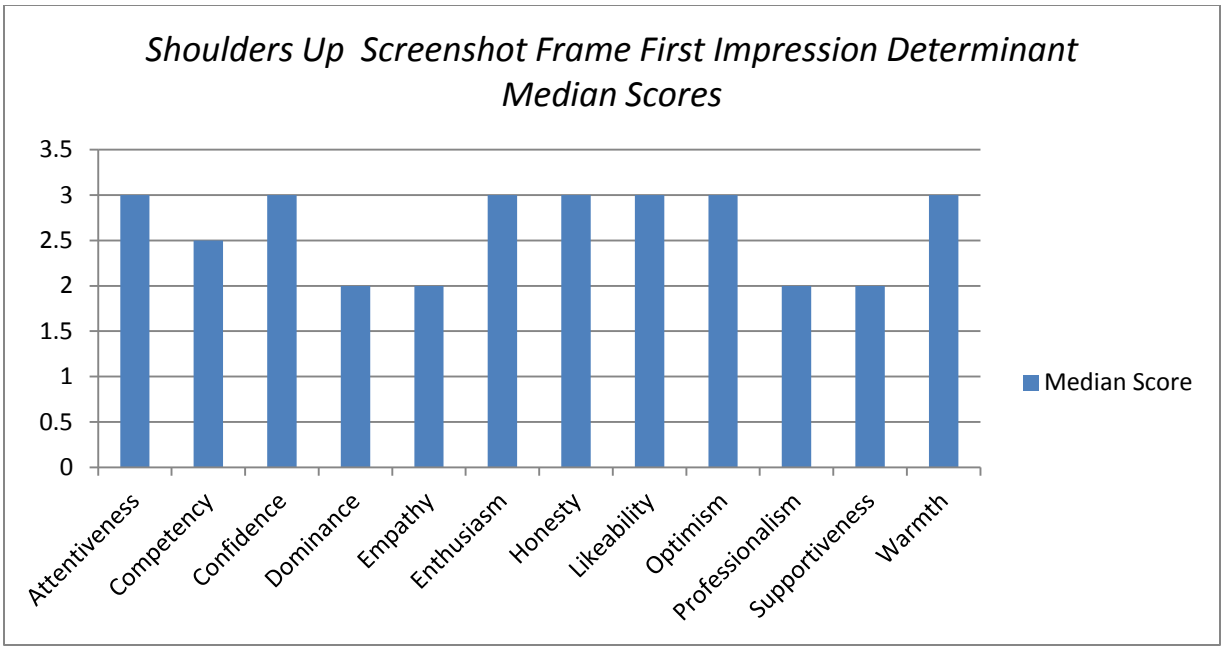

Figure 12: Shoulders up median scores for each first impression determinant

Comparison of all three screenshot frames. For the most part the medians reflect a similar ease of rating first impression determinants across all three screenshot frames. Three determinants received median ratings of 2.0, somewhat difficult to assess, in all three screenshot frames. These determinants were dominance, empathy, and supportiveness. Two additional determinants received median ratings of 2.0 in the full body and waist up screenshot frames. These determinants were competency and honesty. The rating median for professionalism in the shoulders up frame and the rating median for warmth in the full body frame were also 2.0. The only determinants to receive a different rating score in all three screenshot frames were warmth and professionalism. A comparison of the medians for first impression determinant ratings from each of the screenshot frames is provided in Figure 13:

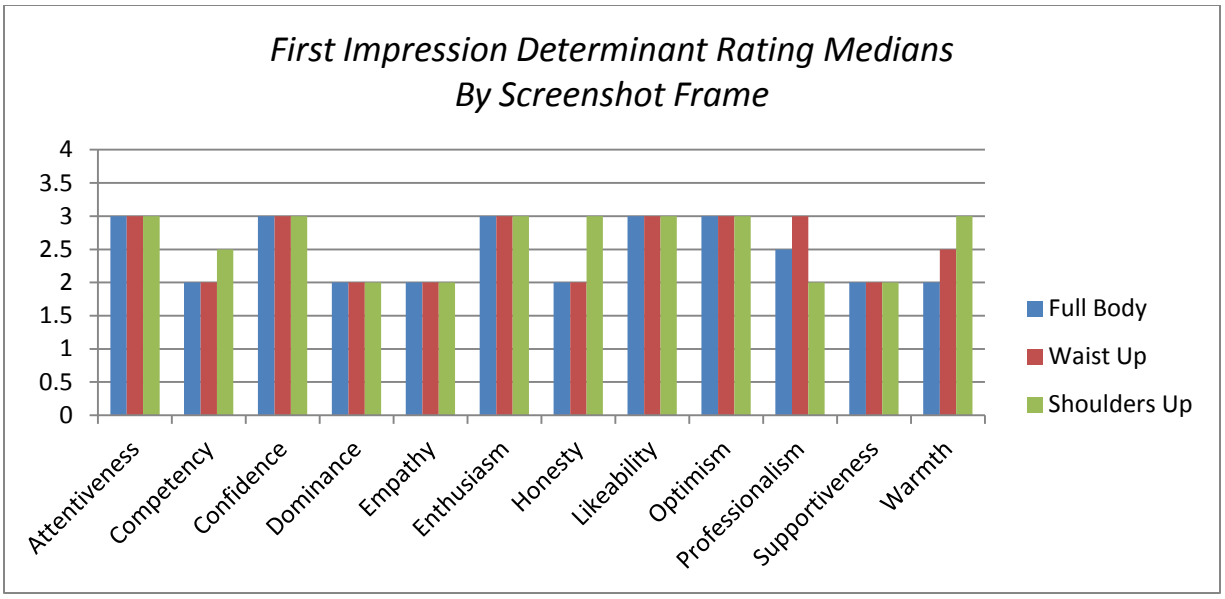

Figure 13: First impression determinant rating medians by screenshot frame

The rating total scores of first impression determinants for each screenshot frame increased as the frame of reference zoomed in from full body to waist up to shoulders up views for four determinants: competency, empathy, honesty and warmth. In addition, the total number of indications from respondents that they could not assess various determinants for each of the screenshot frames decreased as the screenshot frame closed in on the shoulders up frame: full body frame 23, waist up frame 22 and shoulders up frame 12. While fewer numbers of respondents indicated they were unable to assess determinants in the shoulders up frame, the same six determinants in all three screenshot frames received unable to assess ratings. These six determinants were: competency, dominance, empathy, honesty supportiveness and warmth. The waist up screenshot frame also had two respondents indicate that they were unable to assess attentiveness. The empathy determinant did not receive any very easy to assess ratings in any of the screenshot frames. It is interesting to note that professionalism received the highest rating score within the waist up screenshot frame, but received one of the lowest scores in the shoulders

up screenshot frame. A comparison of total scores for each determinant between screenshot frames is provided in Figure 14:

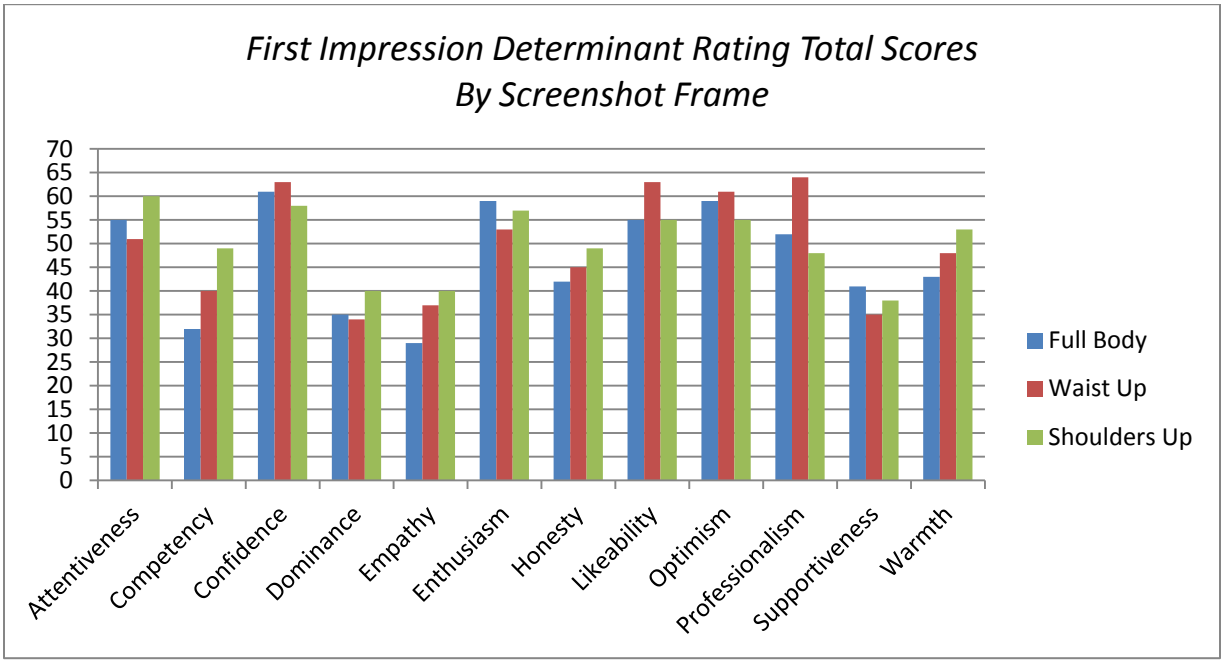

Figure 14: Comparison of total first impression determinant rating scores between full body, waist up and shoulders up screenshot frames

Additional first impression comments

After rating the first impression determinants, respondents were given an opportunity to provide additional comments about forming a first impression of the videotaped interview candidate. Each comment was reviewed and placed in one or more of the following categories:

1. Had no further comments
2. Indicated they liked the video interview experience
3. Indicated they liked their screenshot frame of reference
4. Expressed desire for interactive communication with candidate
5. Summarized their impression of the candidate
6. Wanted more time to form a first impression of the candidate
7. Analyzed their first impression

8. Expressed concern with interpretation of first impression determinants
9. Extrapolated their experience to another screenshot frame or face-to-face experience
10. Questioned the importance of a first impression

Four respondents in the waist up screenshot frame mentioned a desire to interact with the candidate compared to only one in each of the other screenshot frames. In addition four respondents in the waist up screenshot frame mentioned a desire to spend more time with the candidate compared to two in the full body frame and none in the shoulders up frame. More respondents in the full body and shoulders up screenshot frames (3 and 4 respondents respectively) analyzed their first impression compared to only one in the waist up frame. Conversely only 2/20 full body respondents compared to 5/20 waist up and 6/20 shoulders up respondents used the additional comments section to summarize their first impression. The comment categories are presented in Figure 15 for each of the screenshot frames:

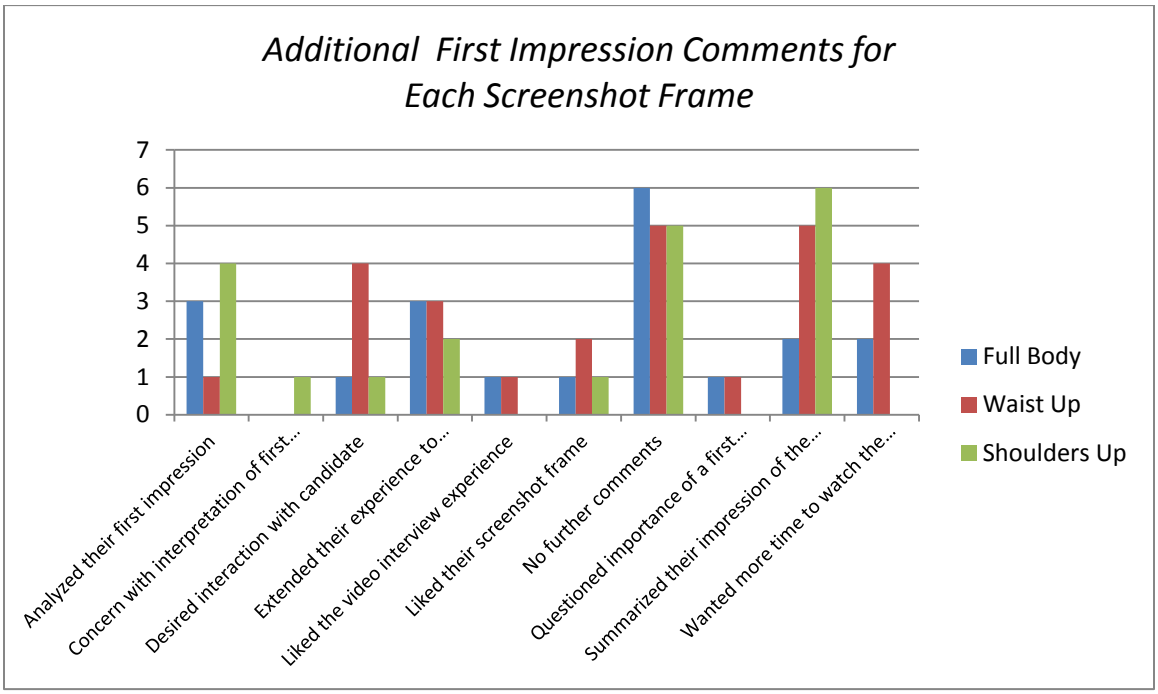

Figure 15: Additional first impression comments for each screenshot frame

First Impressions by Gender

Equal numbers of males and females participated in each of the three surveys. This mitigated any bias that might be due to gender in the first impression formations. Identification of respondents by gender provided an opportunity to review the data from a gender perspective, testing Chapman and Rowe's (2001) hypothesis that genders form different first impressions.

First impression descriptions. When the data was sorted according to gender, it was obvious that more females than males comment on age, appearance, eye contact and facial expressions. In addition females had more neutral or conflicting overall impressions. Males made more stereotype and molar judgments, gave more benefit of the doubt considerations to candidates, and provided more overall positive impressions. Mention of the verbal response, body language and distraction notations were consistently mentioned by both genders. Figure 16 shows the responses for the first impression descriptions according to gender:

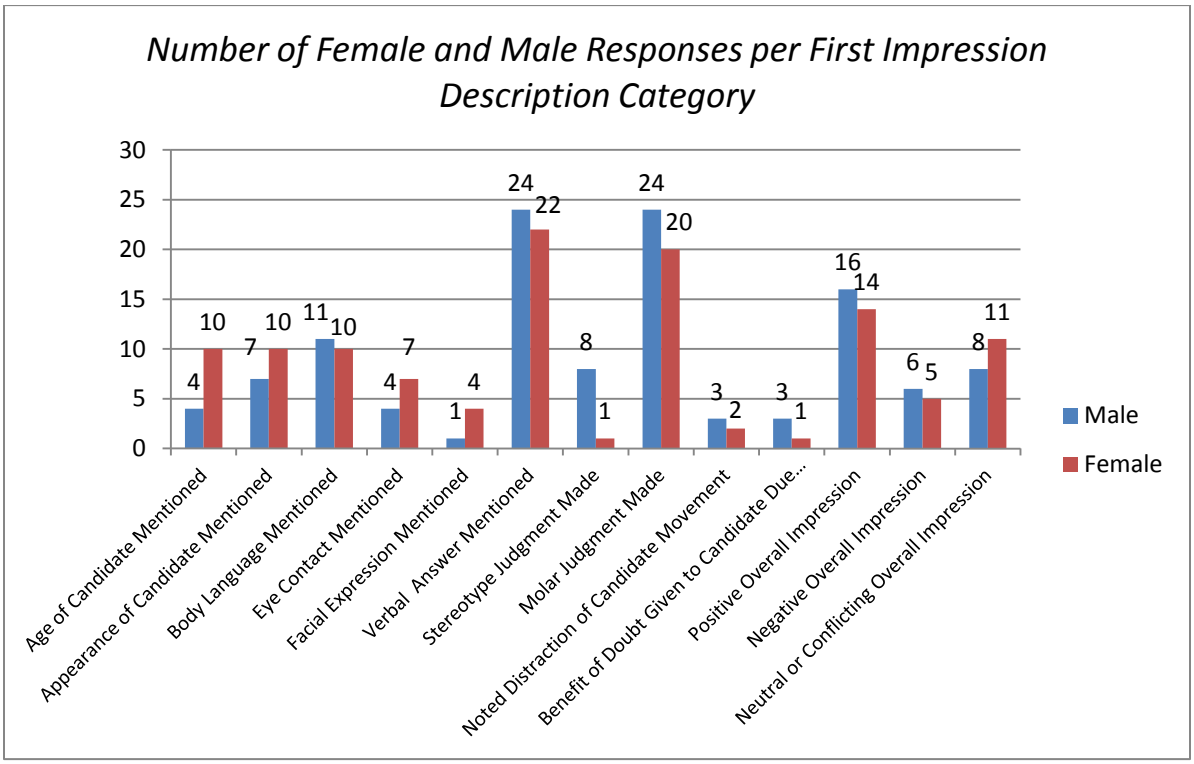

Figure 16: First impression descriptions for each screenshot frame delineated by gender

First impression determinant ratings. The median score for determinants was calculated for each gender to establish whether genders scored the determinants differently. The only difference in median scores was noted in the honesty and warmth determinants. The median scores indicate that males found it easier to rate honesty than females while females found it slightly easier to rate warmth than males. First impression determinant rating data is delineated by gender in Figure 17:

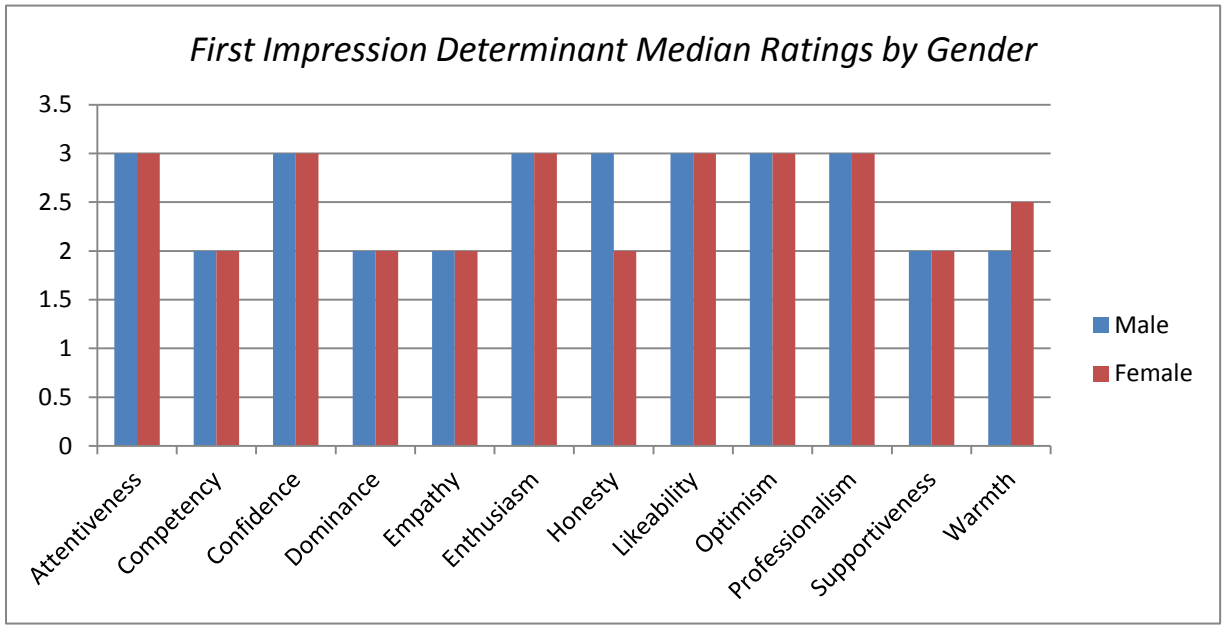

Figure 17: First impression determinant median ratings by gender across all screenshot frames

Additional first impression comments. Females had a tendency to provide more comments than males. Females also summarized their impressions more often than males, seemed to want more time with the candidate to form a first impression and extrapolate their experience to another screenshot frame or face-to-face experience. Further first impression comments delineated according to gender are available in Figure 18.

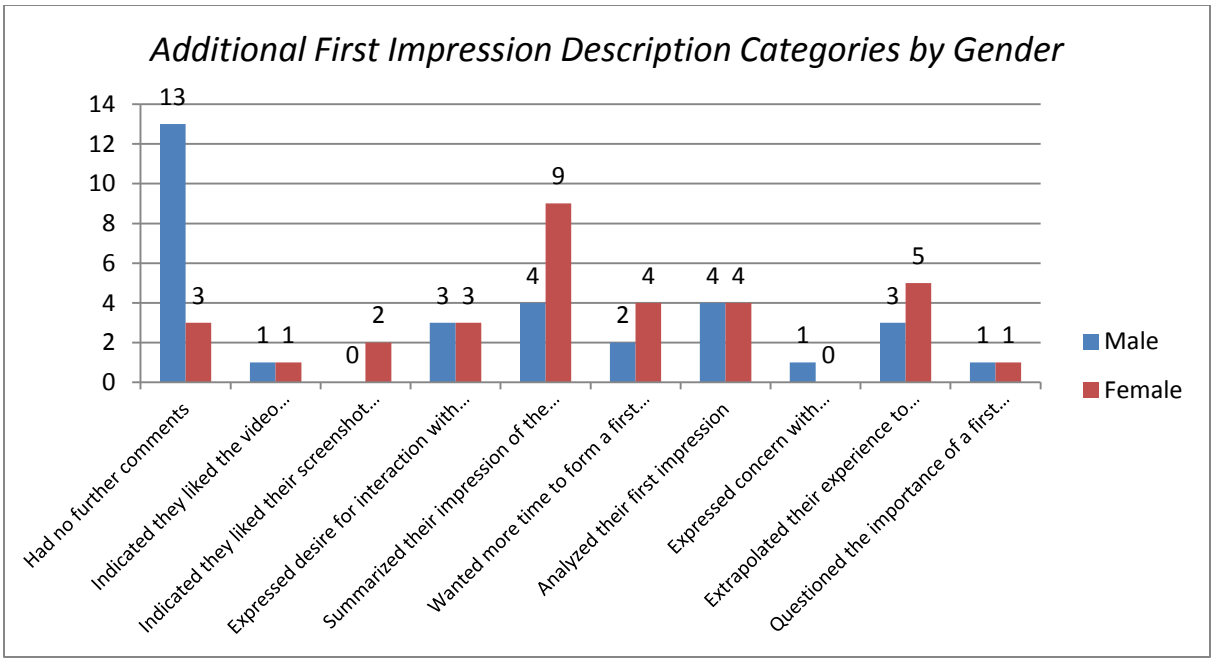

Figure 18: Further comment categories according to gender for each survey type

First Impressions by Age Group

Age Distribution. The pool of participants was divided into males and females and then ten names from each gender were randomly selected and assigned to one of the three surveys. The ages of the volunteer respondents was not known prior to survey completion and was therefore not a consideration in determining the 20 person participant groups. The random distribution of respondents resulted in only six respondents over the age of 40 in the waist up survey compared to 14 respondents over the age of 40 in the full body survey and 13 respondents over the age of 40 in the shoulders up survey. The age distribution of the respondents in the full body screenshot frame and the shoulders up screenshot frame were more closely aligned than they were with the waist up screenshot frame. The similarity in the age distribution between the full body and shoulders up screenshot frames, and the difference in age distribution in the waist

up screenshot frame is easily visualized in Figure 19:

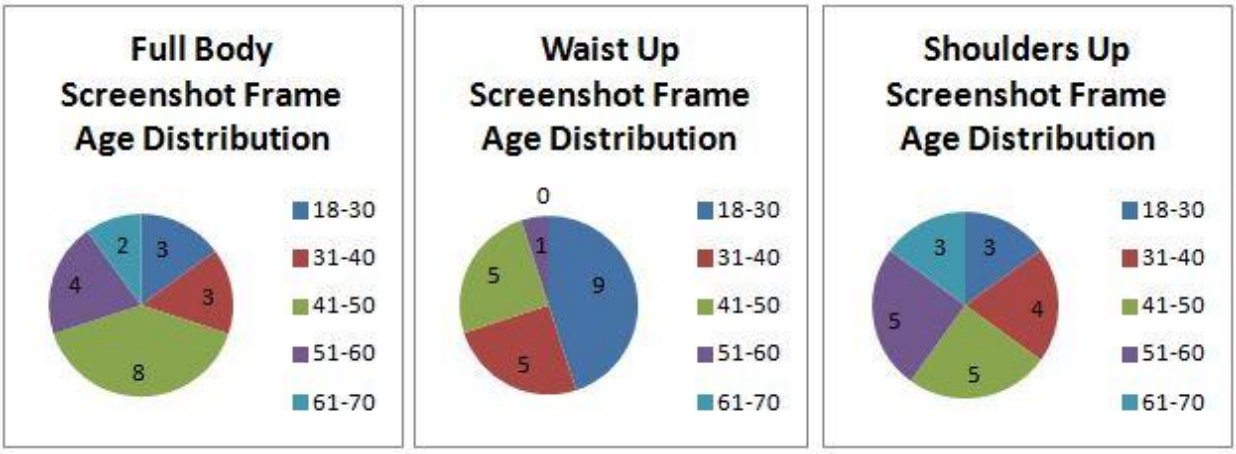

Figure 19: Age distribution of respondents for each of the video screenshot frames

Age affect on first impression descriptions. The age groups were combined to allow for comparison of age groups of roughly the same number of respondents. The responses of all respondents 18 to 40 years of age were combined and the responses of those 41 to 70 years of age were combined. This gave group sizes of 27 for the 18-40 year old group and 33 for the 41 to 70 year old group. The percentages of respondents providing first impression descriptions in each category were then calculated for comparison purposes. The notable differences were: 18 to 40 year olds provided more molar judgments and mentioned verbal answers more than the 41 to 70 year old age group. The 41 to 70 year old age group mentioned age, eye contact, and facial expression significantly more often than the 18 to 40 year olds. First impression description categories according to age group are found in Figure 20:

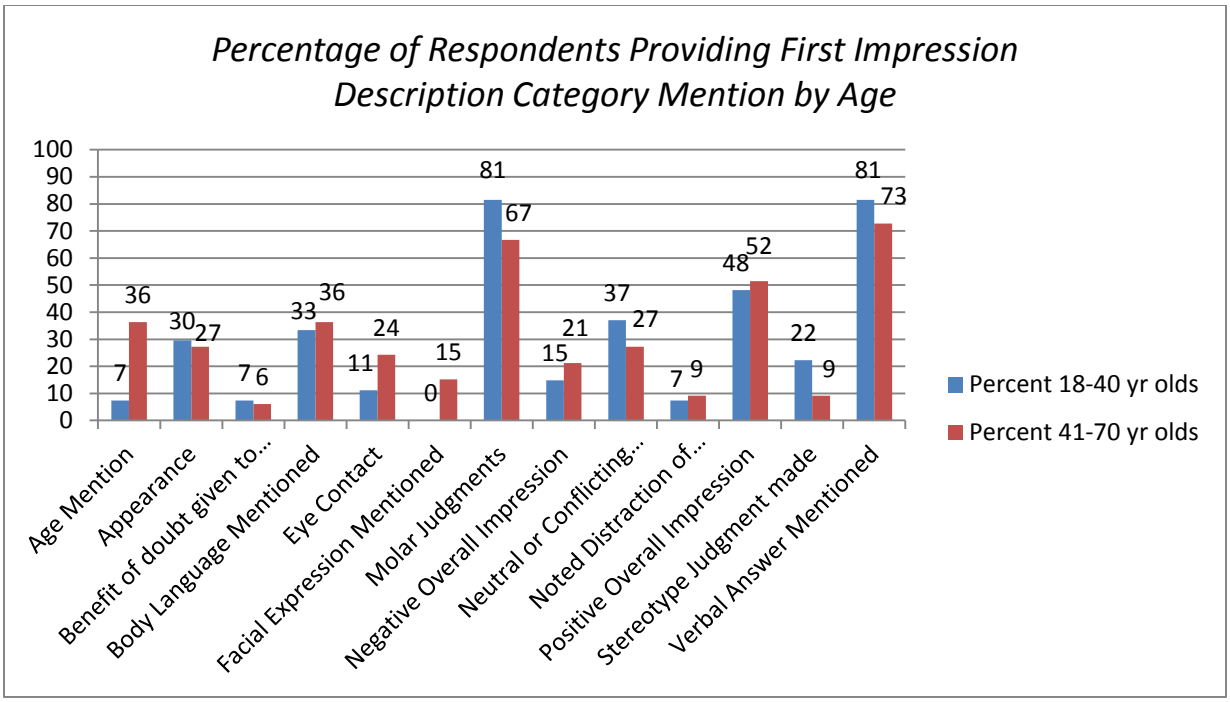

Figure 20: Percentage of first impression descriptions categories according to age

Age affect on first impression determinants. To create a meaningful data set where the total number of respondents in each age group was more standardized, the median scores were calculated for respondents 18-40 years of age (27 respondents) and 41-70 years of age (33 respondents). The determinants confidence, enthusiasm, likeability and optimism all had the same median scores by each of the age groups. There were two determinants that had different rating medians between the two groups: attentiveness and honesty. Both of these determinants were rated as more difficult to assess in the 18-40 age group than the 41-70 age group. First impression determinant medians are compared between the 18 to 40 age group and the 41 to 70 age group in Figure 21:

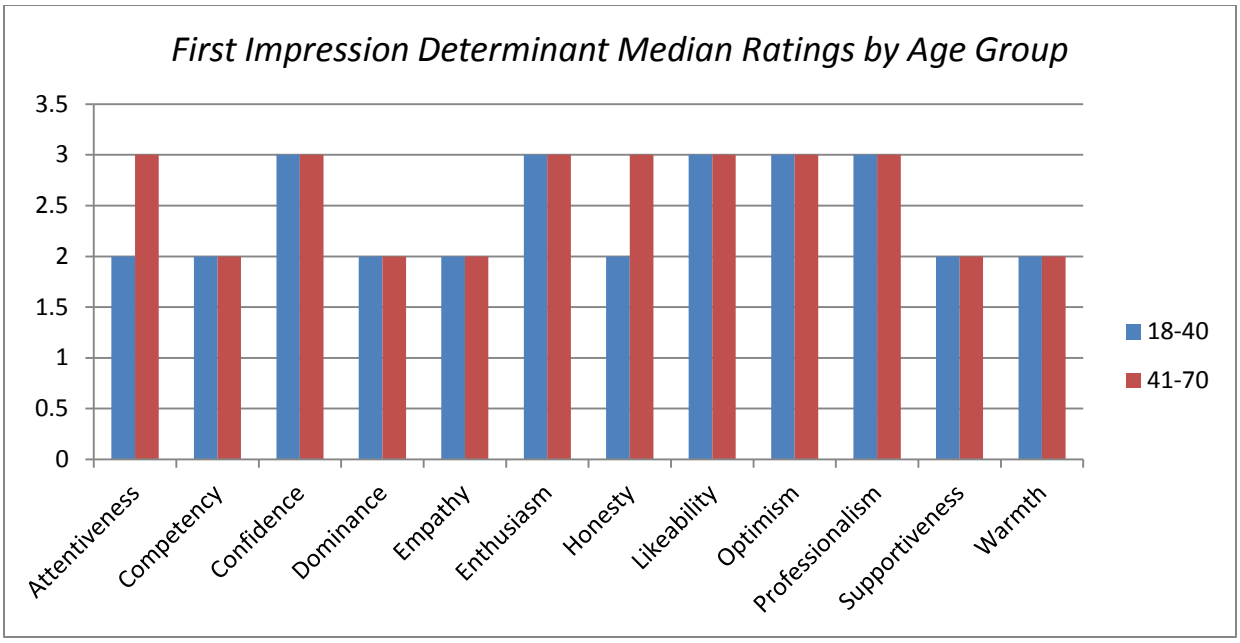

Figure 21: First impression determinant average ratings by age group

Age affect on further comments. More 41 to 70 year old respondents provided additional comments. More 18-40 year olds expressed the desire for interaction and additional time with the candidate. Further comments are analyzed as percentages according to age group in Figure 22:

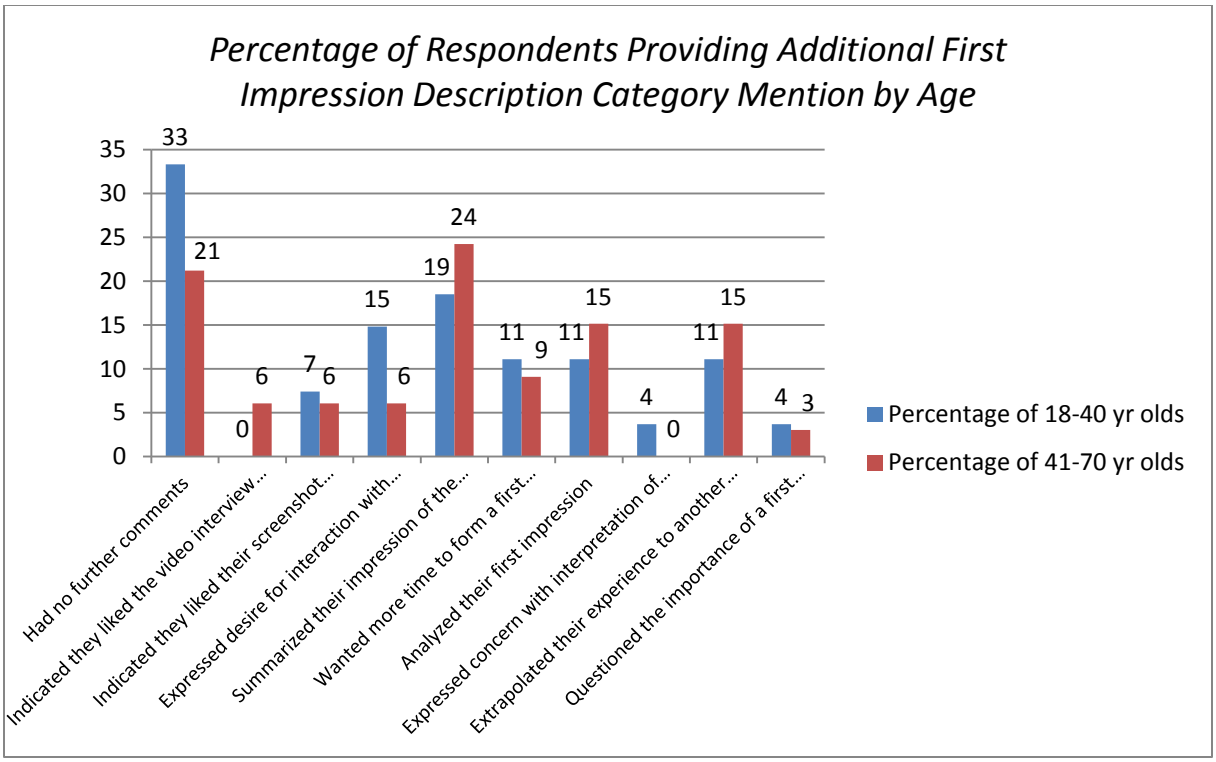

Figure 22: Percentage of respondents providing additional first impression description category mention by age

Summary of Findings

The findings of the three surveys revealed that different first impression descriptions, different ratings of first impression determinants and different focus on further comments were obtained by the three video screenshot frames. In addition, gender differences in first impression formation were noted, although accounted for in the design of the project. The age group of the respondents was not accounted for and may have created biases in the data reported.

Discussion

The results of this study indicate that the video screenshot frame has an effect on the first impressions formed by respondents of a videotaped candidate. The respondent first impression descriptions, determinant ratings and additional comments highlight some similarities as well as

subtle and obvious differences between the three screenshot frames. In addition, the effect of gender and age group on first impression formation is noted in the analysis of the data.

Simple impression description such as mention of eye contact or appearance, as well as complex molar impressions such as judgments of honesty and nervousness are noted in first impression descriptions in all three screenshot frames. This aligns with Fiske and Neuberg's (1990) continuum model of impression formation stating that individuals form both holistic and individuated impressions. The bandwidth and synchrony of the technology in this study provide a high quality experience and do not affect the first impressions formed by the respondents. It should be noted that this study used a high quality camera and a video, not a real-time videoconference experience. After uploading the video to YouTube, the bandwidth would have been comparable to most videoconference experiences, however, as there was no interaction between the candidate and interviewer, the synchrony was not simulated. Therefore, this study does not reflect the synchrony that would have been experienced in a true videoconference situation.

Comparison of the first impression determinant ratings of all three screenshot frames reveals that videoconference interviewers find it more difficult to rate some determinants compared to others. In this study five determinants are rated as easy to assess in all three screenshot frames: attentiveness, confidence, enthusiasm, likeability and optimism. In addition, three determinants are assessed as somewhat difficult to assess by all three screenshot frames: dominance, empathy, and supportiveness. Also notable are five determinants that received ratings indicating they were able to be assessed (i.e., did not receive any ratings of "unable to assess") in all three screenshot frames: confidence, enthusiasm, likeability, optimism and professionalism. Two factors indicate that respondents found the shoulders up screenshot frame

easier to rate first impression determinants than the full body or waist up views. First, various determinants are rated 23 times as “unable to assess” in the full body frame and 22 times in the waist up frame as compared to only 12 “unable to assess” determinant ratings in the shoulders up frame. Secondly, the shoulders up frame received the highest total determinant score.

The notable difference in ratings between screenshot frames occurs with the competency, empathy and professionalism determinants. The competency determinant showed an increase in total score from 32 to 40 to 49 as the screenshot frame zoomed in on the face. The empathy determinant also showed a difference in total scores, again showing an increase from the full body screenshot frame to the waist up and shoulders up frames. Scores of 29, 37 and 40 were noted for the empathy determinant as the screenshot frame was cropped closer to the candidate. The professionalism determinant peaked in the waist up screenshot frame with the total score 16 points higher than the shoulders up frame and 12 points higher than the full body frame. The trend to increase total score from the full body to the waist up and shoulders up frames, in addition to the competency and empathy determinants, was also noted in the honesty and warmth determinants, although the difference in scores was less than 10 across the three frames. It is noted that there were no trends in reverse where scores decreased as the screenshot frame moved from full body to waist up to shoulders up views. The fact that nine of the 12 determinants total scores did not vary more than 10 score points, indicates that rating of determinants between the screenshot frames is fairly consistent. Further research with a larger sample size should be undertaken to ensure consistency. It should be noted that confidence and dominance were least affected by screenshot frame variability with only 5 points separating the highest from the lowest total scores.

Additional first impression description comments are comparable across the screenshot frames. The two stand-out comment categories are the increased mention of desire for interaction with the candidate and more time with the candidate from waist up respondents.

This research study is designed to determine if the video screenshot frame affected the first impression of the videoconference interviewer. Each screenshot frame is discussed in an effort to highlight the impression formed by the respondents in each survey group. Effects of respondent gender and age are also presented following screenshot frame discussions.

Full Body Screenshot Frame

When asked to provide phrases or sentences to describe their first impressions of the candidate, full body screenshot frame respondents provide the lowest median word count out of all three screenshot frames despite the median response time being comparable to the other two respondent groups. This is the first indication that these respondents found it more difficult to form a first impression.

The focus on appearance and body language by respondents highlights illusory causation (Stiff, et al., 1989). The reporting of distractions due to body movement and the decreased mentions of the candidate's verbal response speaks to the visual elements being more prominent in the full body view, even though they may not be the most important features to consider when judging an interview candidate. Molar judgments are also decreased in this screenshot frame when compared to the other two frames, indicating respondents found it difficult to correlate simple observations to form macro impressions (Ambady & Rosenthal, 1993).

According to Sallnas (2005) the element of social presence is decreased in the full body screenshot frame and the results of this research support his findings. Facial expressions and eye contact were only mentioned once and no empathy was expressed towards the candidate in this

screenshot frame, indicating that both intimacy and immediacy were decreased, thereby providing a low social presence in the full body view (Short, Williams, & Christie, 1976).

Respondents in the full body screenshot frame rate fewer determinants as easy to assess, compared to the other screenshot frames. This screenshot frame also has the lowest total first impression determinant score, supporting the conclusion that respondents found this screenshot frame to be the most difficult in which to assess first impression determinants. Full body respondents rate confidence as the easiest of all 12 determinants and rate empathy as the most difficult to assess. Enthusiasm and supportiveness, compared to the other two screenshot frames, rate as easier to assess in the full body screenshot frame than the waist up or shoulders up frames. The conclusion from this evidence is that enthusiasm and supportiveness are easier to rate when the interviewer is able to view the entire body of the candidate. This means that the cues for enthusiasm and supportiveness are more prominent in this screenshot frame than the other two frames.

Full body screenshot discussion summary. In accord with the research findings of Johri (2012) these results indicate that the full body screenshot video provides an intense, but less complex frame of reference causing respondents to make a first impression based on smaller pieces of information. Decreased word counts in first impression descriptions with focus on visual elements and lower rated first impression determinants indicate that respondents in the full body screenshot frame experienced greater difficulty in forming a first impression. While the full body screenshot provides more nonverbal cues, evidence from this small study indicates that the variety and amount of contextual information are reduced. The decreased proximity to the candidate causes respondents to focus disproportionately on smaller pieces of information. This

supports Hancock and Dunham's (2001) postulate that technology-mediated communications can cause a focus on less important information.

Waist Up Screenshot Frame

The waist up respondents give a longer first impression description, in a similar median response time, than the other two screenshot frame respondents. The waist up median number of words exceeds the full body median description by ten words. Determining why the respondents in this screenshot frame were more verbose is difficult to understand and requires a look at more data from this group of respondents.

More waist up respondents indicate they want to spend more time with the candidate and would like the opportunity to interact with the candidate. Previous research shows that decreased visual cues results in a longer interview interaction (Chapman & Rowe, 2001, p. 281). As there were no opportunities in this study for the interaction with the interviewee to be increased, the fact that waist up respondents comment that they want a longer time and more interaction with the candidate may indicate that these respondents felt they had decreased visual cues. One explanation would be that the decreased view of the entire body, and not a close up view of facial expressions leaves the waist up survey respondents wanting more.

Fewer visual cues, however, does not correlate with longer first impression descriptions nor with fewer waist up respondents giving neutral or conflicting overall impressions of the interview candidate. If decreased visual cues make it harder for the respondent to form a first impression, it would be expected that the overall impressions would indicate more neutral or conflicting impressions.

The visual cues, although reduced, did provide a strong enough connection with the candidate to give them the feeling of social presence. Gunawardena (1995, p. 151) concludes that

communication which exhibits facial expression, direction of looking, posture, dress and nonverbal cues contributes to the degree of social presence felt. In the waist up view, all of these attributes of the candidate were visible, and therefore an increase in social presence contributed to the longing for more interaction with the candidate. This also supports Short, Williams and Christie's (1976, p. 129) research that social presence of a communications medium relies on being able to provide both intimacy and immediacy. Intimacy relies on physical distance, eye contact and smiling while immediacy relies on physical distance as well as dress and facial expression. The waist up view gives a more balanced perspective of the candidate than the other two views, thereby providing both intimacy and immediacy and ultimately social presence.

If we do assume that this group of respondents had fewer visual cues, it explains why more respondents commented on the candidate's verbal response. The decrease in visual cues heightened the respondents' attention to the verbal response. This speaks to the illusory causation phenomenon where the stimulus that is more prominent gains the attention of the observer (McArthur, 1980). Since the visual and verbal cues compete on a more level playing field in the waist up screenshot frame, this explains why there are more mentions of the verbal response in this view; the visual stimulus is reduced, so the verbal stimulus becomes more prominent.

The waist up respondents provide more stereotype judgments, indicating that the information they processed overloaded them (Gilbert & Hixon, 1991). Gilbert and Hixon speculated that individuals resort to the easy way out and use stereotypes to describe their impressions when they are overloaded with information. A decrease in visual cues in the waist up screenshot frame causes the respondents to consider more verbal cues in their evaluation of the candidate. Processing visual and verbal stimuli contribute to an overload of information for

respondents, resulting in use of stereotype judgments in their first impressions. The stereotype statements noted by the waist up respondents were:

- "I assume he isn't very fashionable or concerned about his appearance"
- "approval seeking"
- "possibly a very well educated person"
- "a little quiet and shy (that is typical for interviews)"
- "He did fidget a little bit but I would expect as much in an interview setting"

It is also important to note that in addition to the mention of a verbal answer, waist up respondents make more molar first impression comments which, according to Ambady and Rosenthal (1993), are preferable types of first impression determinants to measure. Again, the reduced view of the full body of the candidate, while not providing a facial close up, provides balance between visual and verbal cues, thus allowing respondents to make more molar first impression comments.

More waist up respondents also mention concern for the effect of the process on the quality of the candidate's first impression. Chapman and Rowe (2001) hypothesize that interview scores may be increased in videoconference interviews due to interviewers giving candidates the benefit of the doubt due to inexperience with the videoconferencing technology. The results from this study support that hypothesis as more waist up respondents not only give the candidate the benefit of the doubt, but they also provide a positive overall first impression more often than the other two groups of respondents.

The waist up respondents provided similar first impression determinant ratings to the respondents in the shoulders up group. The one determinant rated as easy to assess in the waist up screenshot frame and difficult to assess in the other two frames, is the professionalism

determinant. Considering that interviewers are often concerned with determining a candidate's professionalism, this finding may be of increased importance to videoconference interview best practices.

Waist up screenshot discussion summary. The waist up screenshot frame responses imply that this screenshot frame provides a balanced presentation of verbal and visual cues. While this provides information overload to the observers (as evidenced by increased stereotype comments) as they try to sort through both types of cues, it also generates increased social presence and therefore a stronger connection to the candidate. Evidence for this stronger connection is apparent in the first impression descriptions; references to desire for more interaction and longer time with the candidate, and expressions of empathy towards the candidate.

Shoulders Up Screenshot Frame

While the median response times across all three surveys were comparable, the fact that 7/20 shoulders up respondents took longer than the estimated 10 minutes to complete the survey compared to 3/20 full body respondents and 2/20 waist up respondents, indicates that the shoulders up screenshot frame caused more viewers to reflect on their responses for longer periods of time. Whether this is due to an increased amount of information for them to digest or not enough information causing them to spend more time contemplating, cannot be determined from this small study.

The stand out feature of first impression descriptions for shoulders up respondents was the increased mention of eye contact. There was an even split between whether the candidate was thought to have good eye contact or poor eye contact in this screenshot frame. The fact that eye contact was mentioned by 8/20 respondents indicates it is a prominent cue in this video

screenshot frame and speaks to visual bias (McArthur, 1980). Previous research notes that eye contact is often mentioned in videoconference interviewing because it appears to be reduced (Chapman & Rowe, 2001, p. 281). Eye contact was only mentioned once in the full body view and twice in the waist up view. This indicates that it was not as prominent in these two screenshot frames, likely due to the camera appearing to move further away from the candidate. If eye contact is a distracting feature in videoconferencing, and the distance of the camera from the candidate reduces the prominence of the distraction, using the shoulders up screenshot frame in videoconference interviewing should be carefully considered.

The candidate's verbal answer was mentioned almost as often in the shoulders up video frame as in the waist up frame, indicating these respondents pay attention to verbal cues. No respondents in this screenshot frame, however, mention that they want more time with the interview candidate, thereby leading to the conclusion that this group of respondents did not feel their visual cues were reduced. This indicates that their feelings of social presence are not as strong as the waist up group of respondents. Only two respondents in the shoulders up view provided stereotype first impression descriptions, indicating shoulders up respondents are not as overloaded with information as the waist up respondents.

More determinants rate as easy to assess in the shoulders up screenshot frame, and this frame has the highest total determinant rating score. In addition, this is the only screenshot frame that rates honesty and warmth as easy to assess. It seems natural to conclude that this video screenshot frame is the easiest frame for assessing determinants when forming a first impression. The data that conflicts with this statement, however, is provided by the 7/20 respondents forming neutral or conflicting impressions. If the determinants are easy to assess, it would be expected that respondents would commit to provide either a positive or negative impression description.

On the other hand, perhaps it is so easy to assess determinants that respondents can provide both positive and negative impressions cancelling each other out and resulting in an overall neutral or conflicting impression. It is noted that out of the 7/20 respondents who provided a neutral/conflicting impression only 2 were part of the 7 respondents who took longer than the estimated 10 minutes to complete the survey. This indicates an increase in response time may not be related to neutral or conflicting overall impressions. Since the number of positive, negative and neutral/conflicting overall impressions is identical for both the full body and the shoulders up video screenshot frames, it can be concluded that the same overall assessments are drawn from these two screenshot frames.

Shoulders up screenshot discussion summary. The shoulders up screenshot frame provides a picture of the respondent focused on the face as well as verbal response. While increased social presence does not appear to be present in this screenshot frame, neither is an apparent overload of information. Increased visual stimuli, due to the close up facial image, does not reduce the ability of respondents in this category to consider verbal cues in their descriptions. When combined with the higher ratings of more first impression determinants, this video frame looks favorable for videoconference interviewing. However, distraction due to eye contact is still a factor to consider.

Gender Effects

Equal numbers of males and females participated in each survey thereby negating any gender bias within or between the surveys. Kotlyar and Ariely (2013, p. 549) found a gender difference in male and female reactions to nonverbal cues. In analyzing the data from this study, Kotlyar and Ariely's findings are only partially supported. Females mention age, appearance, eye contact and facial expressions more than the male respondents, thereby supporting Kotlyar and

Ariely's conclusions that female perceptions are influenced by body movements and facial expressions. Kotlyar and Ariely also conclude that male perceptions are negatively affected by close proximity. In this study, however, this conclusion is not supported. Males provide more overall positive impressions (6/10) in both the waist up view and the shoulders up view compared to the full body view (4/10). If males are negatively affected by the close proximity of the shoulders up view, the number of positive overall impressions would be expected to decline, not increase, as the screenshot frame focuses on the face of the candidate.

Kotlyar and Ariely (2013, p. 549) found that men are more easily distracted by increased nonverbal communications and easily become overwhelmed by too much information. In reviewing this study's survey data from a gender perspective, Kotlyar and Ariely's findings are supported. Eight out of nine stereotype judgments were attributed to males in this study. Returning to Gilbert and Hixon's (1991) research which concludes that more stereotype judgments are made when interviewers are overloaded with information, we can conclude that increases in stereotype judgments mean interviewers are overloaded with information. The increase in stereotype judgments by males in this study indicate they were overwhelmed by information compared to female respondents.

There is very little difference in rating medians for each of the first impression determinants although males found the honesty determinant to be easier to assess than females and females found the warmth determinant slightly easier to assess than males.

Females supplied the largest number of first impression additional comments with 27/30 females providing additional comments compared to 17/30 males. The comments for the categories did not show a significant difference between the genders, other than nine females

compared to four males summarized their first impressions, perhaps indicating more first impression reflections by females.

Respondent Age Group Considerations

The study accounts for potential bias due to gender by ensuring equal numbers of males and females were represented in each survey, however, age of respondents was not taken into consideration. This results in a disproportionate representation of respondent age groups in each survey. In the full body survey 6/20 respondents and in the shoulders up survey 7/20 respondents are under the age of 40 compared to 14/20 respondents in the waist up survey. It is important to analyze the data from an age category perspective to determine whether age of respondents has an effect on the results within each screenshot frame.

The first impression descriptions, ratings of first impression determinants and further first impression comments are analyzed from an age perspective and compared to screenshot frame data, keeping in mind the number of respondents in the 18 to 40 and 41 to 70 age categories within each survey.

First impression descriptions. A disparity greater than 10 percent between the 18 to 40 and 41 to 70 year old age groups was noted in six first impression description categories: age mention, eye contact, facial expression, molar judgments, neutral or conflicting overall impressions formed, and stereotype judgment made. Figure 23 compares percentage of respondents for these six categories according to their age categories and screenshot frames:

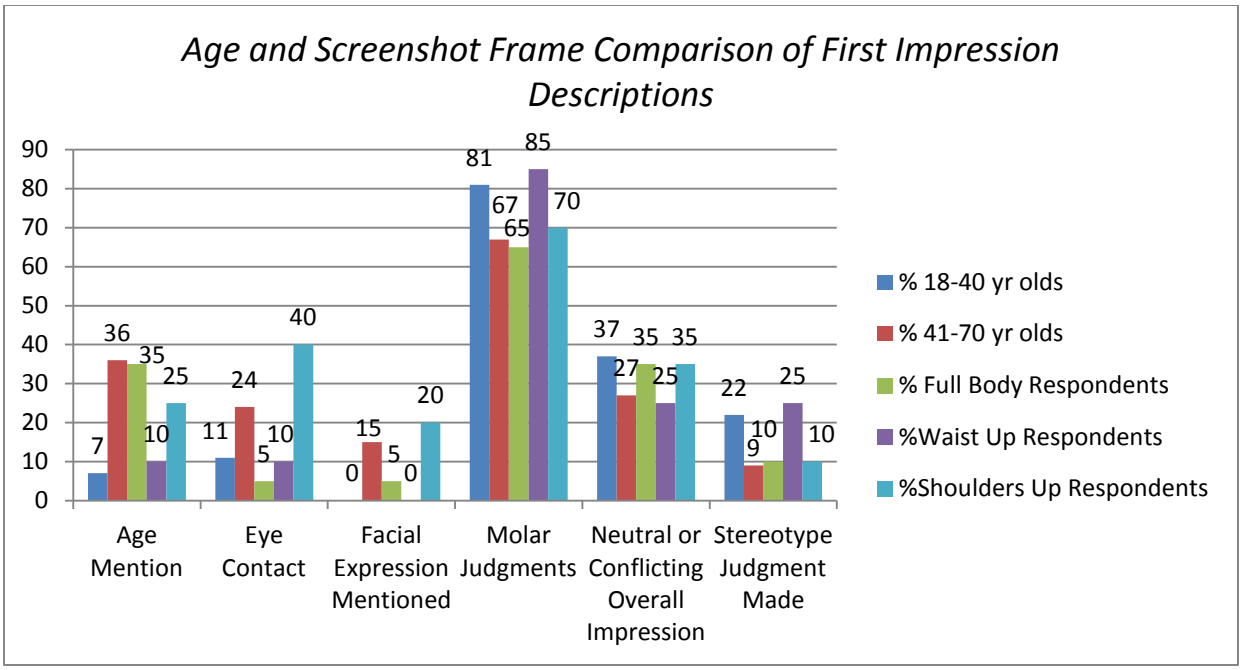

Figure 23: Percentage of respondents providing first impression description categories by age

Age of the candidate is mentioned by 36 percent of 41-70 year olds compared to 7 percent of 18 to 40 year olds. The screenshot frame which has the greatest number of respondents mentioning age are the full body and shoulders up screenshot frames, which also has the greater number of respondents in the 41 to 70 year old age group. Whether the screenshot frame or the age category influences the mention of age by respondents in first impression descriptions cannot be determined from the data in this study.

Eye contact is mentioned by 24 percent of 41 to 70 year olds compared to 11 percent of 18 to 40 year olds. The screenshot frame which has the greatest number of respondents mentioning eye contact is the shoulders up frame with 8/20 respondents compared to 2/20 waist up and 1/20 full body respondents. If eye contact mentions are influenced by age of the respondents, it is expected that more eye contact mentions will also occur in the full body screenshot frame where there were an equivalent number of 41 to 70 year old present. Since only

one of the full body frame respondents mentioned eye contact, it appears that eye contact may be influenced by screenshot frame, rather than age category.

There are no mentions of facial expression by respondents in the 18 to 40 year olds in any of the surveys. All mentions of facial expression come from 15 percent of the 41 to 70 year olds. The screenshot frame that has the most mentions of facial expression is the shoulders up screenshot frame. None of the waist up respondents, influenced by mainly 18 to 40 year old respondents, mention facial expression and only 1 respondent in the full body screenshot frame, mainly influenced by 41 to 70 year olds, mentioned facial expression. Again it is difficult to determine if mention of facial expression is influenced by the screenshot frame or age of the respondents.

Molar judgments are made by 81 percent of 18 to 40 year olds as compared to 67 percent of 41 to 70 year olds. When looking at the screenshot frame data, more respondents in the waist up screenshot frame make a molar judgment compared to the shoulders up screenshot frame and the full body screenshot frame. As the majority of respondents in the waist up frame are 18 to 40 year olds, an age bias cannot be ruled out for the molar judgment category.

Neutral or conflicting overall impressions are formed by 37 percent of 18 to 40 year olds compared to 27 percent of 41 to 70 year olds. It is expected that if age was causing a bias in the results, the waist up screenshot frame would have more neutral or conflicting impressions than full body or waist up respondents. This is not the case. The full body and shoulders up screenshot frames have more respondents (7/20 compared to 5/20 waist up respondents) expressing a neutral or conflicting overall impression. This indicates that this description does not appear to be biased due to the age group of the candidates, but again the data does not allow for a definitive conclusion.

Stereotype judgments are made by 22 percent of respondents 18 to 40 years of age compared to 9 percent of the 41 to 70 year olds. More waist up respondents make stereotype judgments compared to full body and shoulders up respondents. Since more waist up respondents fall in the 18 to 40 year old age category, a bias due to age for the stereotype first impression description category cannot be ruled out.

First impression determinants. Only two first impression determinants are rated differently between the 18 to 40 year old age group and the 41 to 70 year old age group: attentiveness and honesty. Each of these determinants is rated higher by the 41 to 70 year olds. All of the screenshot frames have a median score of 3.0 for the attentiveness determinant, making it difficult to determine if a bias affected the data. The honesty determinant, however, is rated higher (3.0) by the shoulders up screenshot frame respondents compared to the full body and waist up respondents (2.0). If age creates a bias in the results, the first impression determinant median for the full body respondents would be expected to be higher than the waist up respondents and it wasn't.

Additional first impression comments. Further, comments are provided by 67 percent of 18 to 40 year old respondents compared to 79 percent of 41 to 70 year old respondents. The limited data makes it difficult to determine the reason for this disparity. All other first impression comment categories are equivalent between the age groups, with no disparity in category mentions of greater than 10 percent.

Summary of respondent age related potential bias. Since age of the respondents was not accounted for in the group formations for each of the surveys, the bias due to this variable cannot be ruled out. While some descriptions may not appear to have an age bias, others point to a potential bias.

The first impression descriptions of the 41 to 70 year old respondents indicate references to more visual cues such as age, eye contact and facial expression, whereas the 18 to 40 year old respondents have more references to verbal cues. One possible explanation for these differences may lie in the research performed by Stiff et al. (1989) who found that the more unfamiliar observers are with a situation, the more heavily they rely on nonverbal cues when making judgments. If the 41 to 70 year olds are less comfortable with the technology, perhaps they rely more on visual than verbal cues.

Conclusions and Recommendations for Further Research

Altering the video screenshot frame in this study affected the first impression formed and the ease with which respondents were able to rate first impression determinants. Bias due to age of respondents, however, could not be ruled out. It must also be kept in mind that this was a small pilot study so conclusions made are simply indications of potential effects caused by videoconference screenshot frames, or respondent gender and age, on first impression formations.

This study did find that the video screenshot frame affects the complexity of the first impressions formed. The full body screenshot frame first impression descriptions referred to the candidate's verbal answer fewer times while molar judgments, which are considered more complex impressions, were made less frequently. The focus on appearance and distractions due to body movement in the full body screenshot frame and the focus on eye contact in the shoulders up screenshot frames provide evidence that speaks to the intensity of the experience. The waist up and shoulders up screenshot frames both provided more complex, molar first impressions. While this indicates a need for further research, it also speaks to Johri's (2012) proposal that impressions formed through technology-mediated communications are more

intense and less complex than face-to-face interactions. What this research adds, however, is that the intensity and the complexity of a technology mediated experience may be altered by changing the video screenshot frame.

Gilbert and Hixon's (1991) theory that people rely on stereotypes when there is an overload of information was found to be applicable in the responses of those viewing the waist up screenshot frame. While the reason for an overload of information in this screenshot frame is not certain, it may be surmised that viewing half a body and distant facial expressions contribute to a decrease in visual dominance, causing respondents to consider more of the verbal response in their impression formation. Taking both verbal and visual elements into consideration results in an overload of information for this group of respondents and creates uncertainty resulting in more stereotype impressions formed. Further research into finding ways to decrease the overload for interviewers in this screenshot frame would be beneficial.

Illusory causation was particularly evident in the full body and shoulders up screenshot frame respondents' first impression descriptions (McArthur, 1980). Body movement distractions are pronounced in the full body screenshot frame and eye contact is highlighted in the shoulders up frame. Further research into mitigating these distractions will lead to better videoconference interviewing practices.

The ease of rating determinants differed between the screenshot frames indicating that the frames provided different contexts. Understanding which screenshot frame allows certain first impression determinants to be assessed could be of benefit to videoconference interviewers. For example, if professionalism is an important aspect to the interviewer, the data from this survey would suggest using the waist up screenshot frame in a videoconference interview. If honesty was deemed the most important determinant to assess, the data indicates the shoulders up

screenshot frame would be the preferred view to use. Awareness of the effect of the screenshot frame on the ease of rating specific determinants could be used to inform videoconference best practices.

This exploratory study involved only a small study sample, so repeating this study with a larger sample size is recommended. Additional points to take into consideration would be to:

- ensure equal numbers of females and males in each of the respondent groups;
- ensure equal representation of age groups within each survey;
- ensure respondents in each group have equivalent previous experience with the technology and process;
- use videoconference tools such as Skype™ or Facetime™, rather than a tripod mounted camera to increase the transferability of the results to a real-life videoconference situation or use a webcam mounted on a computer screen to tape the candidate, thereby providing a more realistic experience for the candidate;
- ask respondents to comment on whether their first impression was positive, neutral or negative to eliminate subjectivity of the researcher in determining the overall candidate assessment;
- use interviews in addition to surveys to capture interviewer reflections on the experience.

The limited data from this small study provides strong evidence regarding the potential effects of the video screenshot frame on first impression formation in a videoconference interview setting. George Herbert Mead's (1934, p. 253) principle that communication involves the ability of people to interpret other's actions and relate to them when communicating, participating in the other, is still an important consideration almost 80 years later in a new

technological age. Using a postmodernist approach to the sociocultural tradition of communications theory, which promotes evolution of knowledge through reflection and context, will allow videoconference interviewers to better understand how the technology, and more specifically the screenshot frame, informs the ability of people to relate to one another, "participation in the other", in videoconference interviews (Mead, 1934, p. 253; Craig & Muller, 2007). Continuing to apply face-to-face or telephone interview practices to videoconference interviews, without considering the context provided by the technology reduces opportunities to improve videoconference interview practices. Equivalence between technologies, and as this research also shows within technologies, cannot be taken for granted. If the goal of interviews is to provide an unbiased, equitable experience, more research into, and consideration of, the context provided by the technology is required to inform videoconference interview best practices.

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Appendix A: First Impressions Survey

Question 1

Are you a Canadian Citizen or Permanent Resident of Canada and at least 18 years of age?

- ○ Yes
- ○ No

Upon Completion of viewing the following video you will be directed to answer a series of questions. The video features an individual applying for a student placement in a health related post secondary educational program. While you view the video, you will be acting as an interviewer and forming a first impression of the candidate. The questions on the survey will relate to your first impressions of the videotaped candidate. Please click on the video below to begin viewing.

- ○ Yes
- ○ No

Question 3: From an interviewer's perspective, please describe, in three or four sentences, your first impression of the interview candidate you observed in the video.

Question 4: With regard to the following first impression determinants, please indicate how easily you feel you were able to form a first impression of the candidate in the video (select one response per impression determinant):

	Very Easy	Easy	Somewhat Difficult	Very Difficult	Unable to Assess
Attentiveness	○	○	○	○	○
Competency	○	○	○	○	○
Confidence	○	○	○	○	○
Dominance	○	○	○	○	○
Empathy	○	○	○	○	○
Enthusiasm	○	○	○	○	○
Honesty	○	○	○	○	○
Likeability	○	○	○	○	○
Optimism	○	○	○	○	○
Professionalism	○	○	○	○	○
Supportiveness	○	○	○	○	○
Warmth	○	○	○	○	○

Question 5: Do you have any further comments about forming a first impression of the videotaped interview candidate?

Question 6: Please indicate your gender (select only one response):

○ Male

○ Female

Question 7: Please indicate your age group:

- ○ 18-30
- ○ 31-40
- ○ 41-50
- ○ 51-60
- ○ 61-70
- ○ Over 70

Question 8

Thank you for participating in this survey. Your involvement has been vitally important in this research to determine the best video frame screenshot for videoconference interviewing. None of your responses have been linked to your identity. The research report will be shared with all study participants via email unless you email hdgray@ualberta.ca and indicate you do not wish to receive the report.

If respondents indicated they were not at least 18 years of age and a Canadian citizen or permanent resident of Canada, they were automatically exited from the survey and the following message appeared:

Unfortunately you are unable to participate in this survey

Thank you for your intentions to participate in this survey. To ensure standardization of responses, this survey is limited in scope to Canadian Citizens or Permanent Residents of Canada who are 18 years of age or older. The research report will be shared with all study participants via your email address unless you email hdgray@ualberta.ca and indicate you do not wish to receive the report.

Respondents were given two chances to view the video, if they indicated they did not view the video after the second opportunity, they were automatically exited from the survey and the following message appeared:

Unfortunately you have not viewed the video and therefore are unable to complete the survey questions. **Thank you for your intentions to participate in this survey.**

Appendix B: Prospective Participant Information Letter

(provided to individuals expressing interest in the project)

Study Title: Videoconference Interviewing: Which Screenshot Frame Best Informs First Impressions?

Principal Investigator:
NAME Heather Gray
ADDRESS Rm 108B
11762 – 106 St. NW
Alberta
Edmonton, AB, T5G 2R1
EMAIL hdgray@ualberta.ca
PHONE NUMBER 780.378.6936

Research Supervisor:
NAME Dr. Ann Curry
ADDRESS Rm 2-365 Enterprise Square
10230 – Jasper Avenue, University of

Edmonton, AB, T5J 4P6
EMAIL ann.curry@ualberta.ca
PHONE NUMBER 780.248.1110

Background

- You are being invited to participate in this study because you emailed Heather Gray to indicate your interest in this project following an email or Tweet you received requesting individuals interested in videoconference research to self identify.
- With the increase in access and decrease in costs of videoconferencing, it is being utilized in interview selection processes more frequently. Little research has been performed to determine whether videoconferencing has an effect on first impressions. Your participation in this project will help determine whether the video screenshot frame of reference – either full body, from the waist up, or shoulders up - affects the first impression formed by the interviewer.
- This study has received University of Alberta Research Ethics Board approval and NAIT Ethics Board Approval. The results will be used to support a research project for the Master of Arts in Communications and Technology through the University of Alberta.

Purpose

- To examine whether the video screenshot frame (full body, waist up, or shoulders up) affects the interviewer's first impression of a candidate being interviewed.

Study Procedures

- If you are interested in participating, please email Heather Gray at hdgray@ualberta.ca. Equal numbers of male and female participants are needed for this study with a maximum number of participants capped at 90. If you are chosen to participate, you will receive via email a link to an online survey in which you will watch a short video of a fictional interview candidate and answer questions from the point of view of an interviewer. (estimated survey completion time 10 minutes). If you do not receive the survey, please know that your interest is much appreciated, however, the number of male or female respondents or the maximum number of respondents may limit the release of surveys to all parties who have expressed an interest.
- Upon completing the survey, results will automatically be tabulated and returned confidentially (all personal identifiable information will not be attached to individual responses) to the principal investigator.

Benefits

- There may not be a direct benefit to you for participating in the study, but you will be provided with the report from this study to inform you of the findings.
- You will not be paid, nor will there be any financial costs, for your participation in this study.

Risk

- There are no reasonable foreseeable risks that may arise from your participation in this study.

Voluntary Participation

- You are under no obligation to participate in this study. Your participation is completely voluntary and you may change your mind and withdraw at any time up to submitting your completed survey responses. Once the survey has been submitted, it will not be possible to withdraw the data.

Confidentiality

- The research paper resulting from this study will be shared with all participants and may be shared through journal articles, presentations, blogs and other communications media to inform best practices in videoconference interviewing. No individuals will be identified in reporting any of the research findings.
- The raw data will be kept confidential. Only the principal investigator and the research supervisor will have access to the raw data which will not be linked to individual responses. The study data will be securely stored for five years after the study is complete, after which it will be destroyed.
- Confidentiality is guaranteed. The survey has been set up to ensure responses are not linked to individual respondent identifying information, including IP addresses.
- All participants will receive a copy of the final report.
- If you have any further questions regarding this study, please do not hesitate to contact the principal investigator or research supervisor listed at the top of this information letter.
- The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta and the NAIT Ethics Board. For questions regarding participant rights and ethical conduct of research, contact the University of Alberta Research Ethics Office at (780) 492-2615.

Appendix C: Survey Information Letter

Study Title:
Videoconference Interviewing: Which Screenshot Frame Best Informs First Impressions?

Principal Investigator:
NAMEHeather Gray
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11762 – 106 St. NW
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Research Supervisor:
NAME Dr. Ann Curry
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PHONE NUMBER 780.248.1110

Background

You are being asked to participate in this study because you emailed Heather Gray to indicate your interest in participating in this project following an email or broadcast message you received requesting interested individuals to self identify.

This survey is being performed as part of a research project required in the Master of Arts in Communications and Technology program.

Purpose

The purpose of this study is to examine whether the video screenshot frame (full body, waist up, or shoulders up) affects the interviewer's first impression of a candidate being interviewed.

Determining whether the screenshot frame affects first impressions is a step toward better practices and standardization of videoconferencing frames used for interview purposes.

Study Procedures

You have received a link to an online survey through an email accompanying this information letter.

You are requested to watch a one minute video embedded in the survey and then answer questions about the first impressions you form of the candidate in the video along with some non-identifying demographic questions about yourself.

Upon completing the survey, results will automatically be tabulated and returned confidentially to the researcher. There will be no connection between your responses and your identity, including your IP Address.

The questions will be free text, rating and basic (non-identifiable) demographic.

Although you may take as much time as you need to complete the survey, the estimated completion time, including watching the video, is ten minutes or less.

The survey questions must be answered immediately after watching the video and the video must only be viewed once. Viewing of the video and the survey must be completed in one sitting. Please ensure you have at least ten minutes to complete the task before beginning.

The FluidSurveys™ tool will be utilized to administer and collect survey data. The software for this tool and its collected data are hosted securely in Canada.

Benefits

There may not be a direct benefit to you for participating in the study, but you will be provided with the report from this study to inform you of the findings.

Information obtained from this study will help society utilize videoconferencing for interview purposes more effectively and potentially help create best practices in this field.

You will not be paid, nor will there be any financial costs, for your participation in this study.

Risk

There are no reasonable foreseeable risks that may arise from your participation in this study.

Voluntary Participation

You are under no obligation to participate in this study. Your participation is completely voluntary.

Even if you agree to be in the study you can change your mind and withdraw at any time. If you do not wish to answer questions on the survey, the survey can be terminated at that point by closing the browser. If you decide to opt out before submitting your survey responses, any data collected will be not be used in tabulation. Once the survey has been submitted, it will not be possible to withdraw the data. You are completing this survey confidentially and therefore data cannot be linked to you and removed should you decide to withdraw from the survey after you have submitted your survey responses.

Confidentiality

The intention of this research is to share results through a Master of Arts in Communications and Technology research paper. This research paper will be shared with all participants. There may also be potential to share this research through journal articles, presentations, blogs and other communications media. The intent is for this research to be shared with all interested parties to inform best practices in videoconference interviewing. No individuals will be identified in reporting any of the research communications.

The raw data will be kept confidential. Only the principal investigator and the research supervisor will have access to the raw data which will not be linked to individual responses.

Confidentiality is guaranteed. The survey has been set up to ensure responses are not linked to individual respondents.

Survey data from FluidSurveys™ will be downloaded to a jump drive and all files encrypted to safeguard data. The jump drive containing the data and any hard copies of the data will be stored safely in a locked cabinet for 5 years from the completion of the project. At this time the jump drive file will be deleted and all paper copies shredded.

All participants will receive a copy of the final report.

The data from this study may be used in future research, but if it is used, it must be approved by a Research Ethics Board.

Further Information

If you have any further questions regarding this study, please do not hesitate to contact the principal investigator or research supervisor listed at the top of this information letter.

The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta and NAIT. For questions regarding participant rights and ethical conduct of research, contact the UofA Research Ethics Office at (780) 492-2615.

Consent

By completing the survey you are consenting to using your responses in the data collection and analysis for this research study. Participation also indicates that you understand the nature of this study.