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Springle, M. (2023). Beyond the background: exploring the influence of socioeconomic status in asynchronous video interviews (Master's thesis, University of Calgary, Calgary, Canada). Retrieved from https://prism.ucalgary.ca. https://hdl.handle.net/1880/117180 Downloaded from PRISM Repository, University of Calgary

## UNIVERSITY OF CALGARY

## Beyond the Background: Exploring the Influence of Socioeconomic Status in Asynchronous Video Interviews

by

Madeline Springle

## A THESIS

## SUBMITTED TO THE FACULTY OF GRADUATE STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

## GRADUATE PROGRAM IN PSYCHOLOGY

## CALGARY, ALBERTA

SEPTEMBER, 2023

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#### Abstract

Asynchronous Video Interviews (AVIs) have revolutionized the hiring process, offering flexibility, cost-effectiveness, and convenience to both organizations and job applicants. While recent studies have highlighted the potential for background cues in AVIs to inadvertently disclose non-job-related information about job applicants, researchers have yet to explore this with socioeconomic status (SES). This study investigates whether AVIs might reveal cues about an applicant's SES, which might remain concealed during face-to-face interviews, thereby potentially introducing unique biases in the hiring process. We determined if evaluators could discern SES differences based on a job applicant's background and whether these cues influenced the perceived hireability of the job applicant. To enhance the realism of our findings and understand when such biases may be exacerbated, we simulated the conditions a hiring manager might face by inducing cognitive load (CL). In a sample of N = 300 American Cloud Research Connect participants, we used a 2 (low; high SES) by 2 (low; high CL) betweensubjects experimental design. We found that although evaluators could identify differences in SES and did experience a difference in CL, these two factors did not directly influence the perceived hireability of the job applicant. However, contrary to our expectations, evaluators under significant CL took longer to decide on a job applicant's suitability. Furthermore, we also investigated the role of evaluators' characteristics, such as their own SES, attitude towards poverty (ATP), and social dominance orientation (SDO). Although these did not directly influence their ratings of the job applicant, we identified noteworthy correlations: participants' perceptions of the SES from the background correlated with the job applicant's a) perceived hireability, b) perceived SES, and c) perceived competence. These findings emphasize the need for further research into the subtle cues evaluators might use to gauge SES, which could impact a job applicant's AVI evaluation.

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#### Acknowledgments

I would like to express my deep gratitude to my supervisor, Dr. Joshua Bourdage. Your guidance and commitment to helping me develop as a researcher have profoundly impacted my academic journey. Your support has been invaluable, and I am truly grateful for the opportunity to learn from you. I would also like to thank all my committee members, particularly my supervisory committee, Dr. Thomas O'Neill and Dr. Ho Kwan Cheung, for your time and valuable feedback throughout this process. To my family, I have so appreciated your consistent encouragement and motivation over the years. To the graduate students and research assistants at the Organizational Behaviour and Interpersonal Influence lab, thank you; know that your feedback, insights, and assistance were essential in shaping this research. In summary, this thesis reflects our combined efforts, and I am grateful to each of you for your contributions.

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#### **Chapter One: Introduction**

Asynchronous Video Interviews (AVIs) are an emerging technology that allows job applicants to record and submit an interview to an organization without interacting with a live interviewer (Lukacik et al., 2022). The economic value and efficiency of AVIs have led organizations to adopt their usage on a vast and unprecedented scale (Brenner et al., 2016). According to HireVue, a well-established AVI company, their clients have conducted over 30 million AVIs (HireVue, 2023). Furthermore, the exponentiated growth in AVIs, attributable to the flexibility and convenience they offer job applicants, highlights their promising potential as a versatile and practical technology (Lukacik et al., 2022).

Despite the many benefits afforded by AVIs, certain aspects of this technology have generated cause for concern (Lukacik et al., 2022). Specifically, AVIs provide interviewers unrestricted access to informative cues from an applicant's background. These cues may reveal to the interviewer information about the interviewee's personal life, such as the applicant's socioeconomic status (SES); (Lukacik et al., 2022). Consequently, this may negatively impact the interviewer's perception of the applicant (Bjornsdottir & Rule, 2017), which could affect the applicant's likelihood of being offered the job. Therefore, it is vital to understand whether SES is a component that hiring managers can infer from a job applicant's virtual presence (e.g., background, location, noise level, and interruptions). By doing so, we can also determine whether a job applicant's SES negatively impacts a hiring manager's evaluation of that applicant.

SES is a holistic measurement comprising one's material wealth, occupational status, and participation in education and social institutions (Oakes & Rossi, 2003). This measurement typically represents people's general lifestyles, such as their favorite foods, activities, and schools (Manstead, 2018). Psychologists have found that people can accurately predict

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someone's SES after a mere sixty-second interaction, with higher-SES targets displaying more disengagement cues (e.g., more doodling and fewer head nods and laughs) compared to targets with lower SES (Kraus & Keltner, 2009). Furthermore, perceivers have correctly categorized the facial images of higher and lower-SES targets at a significantly greater level than predicted by chance (Bjornsdottir & Rule, 2017). This is concerning, as information from these facial cues might influence a perceiver's evaluation of the target's employability.

Although people can detect indicators of SES in an in-person interview (Bjornsdottir & Rule, 2017), AVIs likely include additional information that makes SES particularly salient (Lukacik et al., 2022). AVIs pose a unique threat to ensuring a fair interview process. On the one hand, AVIs have been lauded for increasing standardization because all job applicants are asked to answer the same set of standardized questions. Also, all interviewees have the same amount of preparation and response time for each question, therefore increasing the fairness of this process. Furthermore, interviewers cannot influence the interview with their personal biases by asking additional prompts or follow-up questions for clarification. Additionally, AVIs restrict hiring managers from providing non-verbal cues that can inform the interviewee about their performance. Lastly, an AVI does not allow the job applicant and the interviewer to build rapport before starting the interview. Rapport is often used at the beginning of an interview to ease the job applicant before the question period begins (Barrick et al., 2012). This lack of rapportbuilding should increase the fairness of this interview process as it ensures that some job applicants who might share similarities with the interviewer, discovered during the rapportbuilding phase, are not perceived as more favorable during the interview.

Although it remains true that AVIs increase the standardization and, thereby, the fairness of interviews, AVIs also introduce other variability (e.g., one's background), which can convey

personal information that should be irrelevant to the hiring decision. Since interviewees usually record an AVI in their home, background cues visible in the AVI can convey an abundance of information that would not otherwise be available. These cues could infer specific demographic information about the applicant (Roulin et al., 2023). This creates the potential for hiring managers to discriminate against applicants based on readily available cues previously unavailable during an in-person interview. This is a threat to the validity of AVIs, as evaluators may be using this information to assess whether an applicant is suitable for a position. Research has yet to determine whether a job applicant's SES is a factor that can be inferred from their AVI background.

Interviewers should evaluate applicants solely on their ability to perform a job instead of external factors irrelevant to the hiring decision. The impact of background cues, such as those related to SES, can be informed by the *dual-process model of interview bias*. In this model, Derous et al. (2016) outline a framework to explain evaluations of and interactions with stigmatized job applicants in interviews. This theory states that interviewers make quick decisions based on their initial impressions of an applicant, typically rooted in stereotypes from observable features. This can affect their judgment of an applicant's interview performance (Derous et al., 2016). These fast decisions, based on first impressions, are known as "type one decisions," which contrast with "type two decisions," which are much more methodical, slow, and carefully planned (Evans, 2008). The *justification-suppression model* is another framework that explains the cognitive processes behind why interviewers engage in biased evaluations of low-SES job applicants (Crandall & Eshleman, 2003). This theory describes why people hold on to their beliefs and attitudes despite being presented with information that challenges their underlying assumptions. One such method is by "suppressing" this information in order to

minimize the impact that this information may have on existing beliefs (Crandall & Eshleman, 2003). This is a concern particularly when interviewers engage in type one decision-making as they will be less likely to override information that counters their initial assumptions about an individual (Evans, 2008).

The role of an interviewer constantly involves balancing type one and type two decisions (Derous et al., 2016) to reach a final evaluation of a job applicant. An example of the difference between these two decision-making processes is that an interviewer engaging in type one processing might make first impressions of the applicant based on visible cues such as one's physical appearance, the culture represented, or stereotypes related to the applicant. This reliance on stereotypes occurs because of the need for quick decisions and the presence of readily available information to the interviewer. On the other hand, an interviewer engaging in type two processing slows down their assumptions and decision-making to find information that counters these first impressions (Derous et al., 2016). Type two decisions draw more heavily on one's working memory, increasing CL (Evans, 2008). By actively seeking disconfirming evidence, the interviewer can create a more accurate representation of the applicant's knowledge, skills, and abilities instead of merely fitting the interviewee into their existing schema. In short, enhanced type two processing should help combat the bias and stereotypes inherent when using type one processing (Derous et al., 2016).

However, engaging in such type one processes and forming an accurate evaluation of an applicant is much more difficult when one is under immense cognitive load (CL); (Hanway et al., 2021). A hiring manager working in the human resources department of a company is often very busy with competing demands and multiple tasks requiring their time and focus. One of their roles typically requires conducting employment interviews, which may impose a high CL.

Interviewers must take notes, recall answers, and evaluate the applicant as efficiently as possible (Kith et al., 2022). CL theory suggests that humans have limited cognitive processing resources (Sweller et al., 2019). When individuals face a high CL, it may be more difficult to avoid engaging in biased reasoning or stereotypes (Hanway et al., 2021). As a result, interviewers may unconsciously depend on various mental heuristics to reduce the challenge of working under a high CL (Luan et al., 2019). It could be argued that AVIs reduce CL on evaluators because they can be viewed at a preferred pace and re-listened if needed. However, it is also plausible that evaluators are multi-tasking while evaluating an AVI and, therefore, are experiencing an increase in CL.

AVIs create a unique opportunity for evaluators to engage in discrimination that differs substantially from an in-person interview. For example, there is no obligation for hiring managers to watch the entire AVI recording (Torres & Mejia, 2017). When evaluating an AVI, CL associated with multi-tasking (e.g., checking work emails or scrolling through LinkedIn) while simultaneously watching the interview may lead to more subtle discrimination (i.e., not directly stating that an applicant should not be hired, but perhaps more subtly giving the job applicant less focused attention). One example of this could be skipping the interview after reviewing only a few minutes. Based on the Derous et al. (2016) dual-process model of interview bias, evaluators may be more susceptible to their initial impressions of an applicant, particularly when balancing multiple tasks and time demands.

The present paper explores whether evaluators can detect SES from a job applicant's AVI background and whether these differences in SES affect the perceived hireability of a job applicant. We also explore whether an increase in evaluators' CL affects the perceived hireability of a job applicant and increases their reliance on biases related to SES. In utilizing CL theory, we

aim to simulate hiring managers' experience in an organization where they are constantly facing competing demands and time restraints. Therefore, we build on the dual-process framework of interview bias (Derous et al., 2016) to explore the role of type one and type two processes in evaluators' ratings of job applicants. We also draw on the stereotype content model (Fiske et al., 2002) to understand how perceptions of both warmth and competence are affected by manipulations of a job applicant's SES. Lastly, we explore the influence of evaluators' own characteristics to understand how these may affect perceived hireability and the use of more subtle forms of discrimination in an employment setting.

#### **Dual-Process Framework of Interview Bias**

One of the core concerns in the hiring process is that interviewers are not basing their decision on purely job-relevant information but are also using available cues to add to their knowledge about the applicant (Derous et al., 2016). The problem is that some of these cues are unrelated to an applicant's ability to perform a job and are often protected grounds for discrimination. This means that under the law, it is illegal for hiring managers to refuse to hire a job applicant based on characteristics such as one's sexual orientation, religion, or family status (Myors et al., 2008). Examples of stigmatizing features (i.e., cues) of a job applicant that an interviewer may utilize could also include obesity, physical unattractiveness, disability, or ethnicity (Derous et al., 2016).

The dual-process framework of interview bias proposes a model for how interviewers process information and make decisions about stigmatized job applicants (Derous et al., 2016). This framework states that although interviewers evaluate an applicant, specifically one with a stigmatized feature, they engage in both type one and type two processes. Type one processes rely on heuristics and biases to make quick decisions. Conversely, type two processes are more systematic and often override false assumptions created using the type one process. In an interview setting, a stigmatizing feature of a job applicant may be utilized in type one processing to infer information about a job applicant. However, as previously stated, these are likely job-irrelevant cues that should not be used to evaluate the applicant. Furthermore, this theory states that high cognitive demands placed on an interviewer can inhibit their ability to correct their initial impressions of an applicant (Derous et al., 2016).

An interviewer's inability to override their initial impressions of the applicant is particularly concerning when tied to the discrimination literature more broadly. Discrimination in an employment setting can manifest in two continuums: subtlety and formality (Jones et al., 2017). The subtlety continuum refers to the ambivalence of the demeanor or treatment towards that minority member, which might not necessarily be conscious (Jones et al., 2016). Conversely, overt discrimination is much more apparent and is a clear form of unfair treatment. Therefore, the extent of the subtlety of the discrimination depends on the apparent nature of the intent of that discrimination towards the target. The formality continuum of discrimination can manifest on a scale from interpersonal to formal discrimination (Jones et al., 2016). Interpersonal discrimination describes the treatment one might receive in the workplace, while formal and overt discrimination might characterize an unfair promotion or the lack of a job offer. Meanwhile, subtle and interpersonal discrimination might entail a coworker feeling that other coworkers are not providing instructions because of a stigmatized feature of this person.

It is essential to recognize that discrimination can manifest subtly in a hiring context (Dovidio & Gaertner, 2000), with research indicating how subtle forms of discrimination in an employment setting can often be conveyed through interpersonal treatment instead of formal

discrimination (Hebl et al., 2002). For example, in one study, homosexual confederates acting as job applicants applying for an employment position did not differ in their formal treatment by employers (i.e., homosexual and heterosexual confederates experienced the same number of job offers). However, there was a significant difference in the amount of adverse interpersonal treatment experienced by homosexual applicants (Hebl et al., 2002). This interpersonal discrimination included fewer spoken words towards stigmatized applicants and shorter interaction time. The employer was also perceived to be more hostile towards the stigmatized applicant and less helpful, standoffish, and generally less interested in the applicant, often ending the conversation prematurely (Hebl et al., 2002). Furthermore, research suggests that experiencing subtle discrimination might have more damaging effects than experiencing overt forms (Jones et al., 2017).

Formal discrimination often manifests in illegal hiring practices such as restricting applicants' access to resources or openly denying job offers to applicants based on specific demographics like age or race (Jones et al., 2017). Many psychology studies have used formal discrimination measures, such as directly asking evaluators whether they would hire an applicant for a particular position. Roulin et al. (2023) found that evaluators were engaging in formal discrimination by rating job applicants with the opposite political orientation as less likely to perform a job well, less warm, and less competent. This was compared to interviewees of the same political party, who received more positive ratings (i.e., higher in competence, warmth, and better future job performance) from the evaluator.

The distinction between interpersonal and formal discrimination is crucial for understanding hiring managers' evaluations of job applicants when applied to AVIs. Unlike an in-person job interview, AVIs reduce the chance of interpersonal discrimination, as there is no interaction between the hiring manager and the interviewee. However, this discrimination may still occur; it might be more challenging to probe precisely how a hiring manager may discriminate when evaluating an AVI. For example, a hiring manager may not spend as much time evaluating job applicants with whom they do not initially like. Researchers and practitioners should be aware that evaluators are likely trained to avoid engaging in overt forms of discrimination. Consequently, evaluators *might* be more hesitant to assert that they would not hire this applicant based on discriminating features. Therefore, although overt forms of discrimination should be measured, it is also important to measure subtle forms.

Hiring managers reviewing AVIs may be prone to displaying subtle forms of discrimination due to the nature and design of the AVI platform. Given that one main benefit of AVIs is that they can speed up the screening process, this technology allows evaluators to quickly determine whether an applicant is a good fit and then move on to the following video. This is a much different format than an in-person interview, where the interviewer must listen through each applicant's complete answer before moving on to the next question. Hiring managers are not forced to watch the duration of the AVI and, therefore, may not have the opportunity to hear information that counters their initial judgments (Roulin et al., 2023). As a result, they likely fail to engage their type two processing to override their initial impressions of the applicant (Derous et al., 2016). This study will address whether hiring managers are engaging in subtle and overt bias enabled via the design of the AVI platform. Specifically, evaluators are not required to watch the entire AVI recording and, therefore, could be creating their assessment of the applicant based on first impressions garnered early on in an AVI.

SES is a prominent background cue that may be highly visible in a job applicant's AVI. Historically, there has been scant literature on measuring SES (Oakes & Rossi, 2003). This has been in part due to unclear definitions surrounding core SES concepts, including social structure, social class, and cultural variations. SES typically comprises one's education level, social status, income, and occupational complexity and is often defined as "differential access, both realized and potential, to desired resources" (Oakes & Rossi, 2003). It is essential to acknowledge that the impact of SES can be compounded with other identities, such as race and gender. However, for the context of this paper, we will solely focus on the role of SES rather than exploring additional influencing factors intersecting with SES.

There is an essential distinction between the definition of "objective" versus "subjective" social class (Tan et al., 2020). Objective social class was traditionally defined as the means of production, with people categorized as either owners or laborers (Manstead, 2018). However, this concept has changed substantially due to shifting work environments, with a rising middle class of managers, professionals, and white-collar workers who do not easily fit into either category. Subsequently, people can be classified based on more quantitative differences in SES, such as their economic position, educational attainment, and income (Manstead, 2018). More recently, occupational complexity has been used to measure objective SES (Darin-Mattsson et al., 2017). Due to the various quantitative measures used to assess objective SES, one omnibus measure of SES does not encompass all its objective components.

Conversely, measuring one's subjective SES is a more comparative approach as this type of SES is determined based on where one perceives that they (or another person, object, or comparison target) belong on the social hierarchy compared to those in their community (Kraus et al., 2013). Even when controlling for objective SES, subjective SES can predict well-being and longevity (Singh-Manoux et al., 2005). This is a significant finding as it indicates that the perception of one's SES has physical consequences beyond the psychological realm. The MacArthur ladder task is often used to assess people's subjective social status (SSS) or their perceived place in the socioeconomic hierarchy (Adler & Stewart, 2007). In this task, people must rank where they view their SES compared to others in their community. This measure is helpful as it allows people to compare themselves to those in their community (as opposed to around the world) and, therefore, is more accurate locally. For instance, although an individual with a low SES in the United States might be viewed as having a high SES from the perspective of someone in another country, the lived experience of an American near the poverty line will profoundly influence how they experience and interact with the world. Therefore, this measurement is more informative than a direct SES comparison with someone from a country with a different economic baseline. However, it is important to distinguish that this description of subjective SES refers to "the eyes of the beholder," as well as the target's own assessment of their standing. For this study, we use the MacArthur Ladder Task to have participants evaluate the SES of certain outcome variables (i.e., measure what they perceive is the SES of certain items), as well as use this task to assess their own SES (i.e., measure target's own assessment of their SES standing).

An important distinction must be made when discussing perceptions of SES. In this study, we mainly focus on how a job applicant's SES, as perceived by others, influences the evaluator's ratings of that job applicant. We also investigate, on an exploratory level, the role of the evaluator's own SES and how this may affect their perceptions of the job candidate. Therefore, within this study, perceptions of the target's SES are of a focal concern. The MacArthur Ladder Task can evaluate this and should still be considered on a relative scale (i.e., comparing the SES of this target to those in their community). In summary, the definition of subjective SES used in this paper pertains to an individual's self-perception, that is, how one perceives their own SES compared to those around them. This study, however, seeks to analyze the role of external perceiver's evaluations of a target's SES.

SES is often an overlooked area of diversity as it is not a protected ground in all Canadian provinces (*Canadian Human Rights Act, RSC 1985 c H-6*, n.d.). This means that although it may be illegal for hiring managers to discriminate against job applicants based on ethnicity, sexual orientation, or parental status, one's SES does not necessarily hold the same protection. This can differ substantially depending on each province's Human Rights Code. For example, in some provinces (e.g., MB, NB, NF, QC, and NWT), "social disadvantage, social condition, and social origin" are protected grounds for discrimination (Canadian Centre for Diversity and Inclusion, 2018). This is defined as "diminished social standing or social regard due to: (a) homelessness or inadequate housing; (b) low levels of education; (c) chronic low income; or (d) chronic unemployment or underemployment." Consequently, in an employment setting in these provinces, hiring managers cannot discriminate against a job applicant based on these factors.

Even though social disadvantage, social condition, and social origin are protected areas of discrimination in some provinces, this is not the case across Canada. This is concerning because applicants might face discrimination based on their SES, potentially denying them employment opportunities. The problem is further intensified, given that, to rise from one's current socioeconomic level, individuals need to secure employment in a more advanced career position, which typically requires being hired for a new role. Upward mobility, particularly in the United

States, is quite limited, with children of working-class parents often becoming working-class adults (Sharps & Anderson, 2021). Employers are effectively the gatekeepers to jobs at different socioeconomic levels; thus, the hiring managers' decisions will inevitably shape an individual's SES trajectory (Rivera & Tilcsik, 2016).

Within elite organizations (e.g., professional services and law firms), individuals categorized as working-class are generally perceived to be less suitable job applicants, regardless of qualifications (Rivera, 2011). They are also less likely to be hired by these firms than those of higher SES. Even more concerning, job applicants from a working-class background are perceived as less intelligent and less emotionally skilled despite often having the same IQ level and being *more* socio-emotionally skilled than those in an upper-class demographic (Sharps & Anderson, 2021). Consequently, organizations are likely to restrict these applicants' capabilities regarding their human capital potential if hiring managers are unwilling to hire or promote those from lower SESs (Sharps & Anderson, 2021). Additionally, these organizations might simultaneously overestimate the ability and talent of employees from an upper-class demographic by providing opportunities and promotions to these individuals who are not the most qualified. (Rivera, 2011, 2012). This study explores the impact of conveying high versus low SES on perceptions of a job applicant in an AVI context.

#### **Background Cues in AVIs**

Within the AVI literature, recent research has highlighted the role of background cues in evaluators' perceptions of a job applicant (Powell et al., 2023; Roulin et al., 2023). Specifically, Roulin et al. (2023) manipulated job applicants' backgrounds in three separate studies to convey informative cues about each job applicant's parental status, sexual orientation, and political orientation. Interestingly, these background cues' effect on the job applicant's evaluation

depended on the stigmatized feature. For example, parents were perceived as higher on warmth and received higher interview performance ratings than non-parents. They were also not evaluated negatively on competence (as expected based on the theory (Fiske et al., 2002)), nor were they perceived as worse on potential work performance. Background cues conveying one's sexual orientation did not appear to affect outcome variables. Interestingly, however, evaluators whose political party was congruent with the job applicant in the AVI rated the person as being warmer and provided higher ratings of both interview performance and potential work performance. In another study, Powell et al. (2023) examined the use of background cues to infer the personality traits of the job applicant in an AVI. Specifically, they researched whether factors such as the messiness of the background, the location of the background (home or office), as well as the gender of the applicant, affected the job applicants' perceived conscientiousness and interview performance ratings. Powell et al. (2023) found that the cleanliness of the background affected the applicant's perceived conscientiousness and interview performance ratings for both the home and office environment. These results convey very informative findings for the role of background cues in AVI evaluations. Roulin et al. (2023) suggest that more research should be conducted in this avenue to explore other existing factors and influences of stigmatizing background cues in AVIs.

While the influence of background cues on perceptions of job applicants in AVIs has been recently explored, there remains a gap in understanding how SES manifests in these evaluations as a background cue. AVIs could create an environment whereby one's SES becomes more visible compared to the applicant being in an in-person interview at the organization. For example, certain features in one's background, such as dim lighting, chipped paint, poor internet connection, and excess noise, may all be factors that differentiate low versus high SES job applicants in an AVI. A job applicant's background has the potential to convey one's SES, which would be a concealable feature if the interview were to be conducted in person. When examining SES in AVIs, evaluators could use cues that signal low SES (e.g., low internet quality, interruptions, grainy video images). These cues might not be inaccurate predictors of SES but should not be used to evaluate a job applicant's fit in an organization. Furthermore, using these background cues could be particularly prominent when evaluators engage in type one processing. This is because these evaluators are typically experiencing higher levels of CL, ultimately reducing their ability to allocate their full attention and mental resources to the task at hand.

Hypothesis 1: There will be a main effect of SES, such that participants will evaluate lower SES AVI applicants as less hireable than higher SES AVI applicants.

#### **Stereotype Content Model and SES**

The stereotype content model is a theory that could describe why evaluators rate applicants with low SES as potentially worse performers than those high in SES. This theory broadly notes that stereotypes of different groups can be viewed through the lens of assessments of two qualities: warmth and competence (Fiske et al., 2002). Warmth comprises traits like tolerable, good-natured, and sincere, while competence comprises traits such as intelligence, confidence, and independence (Fiske et al., 2002). Research applying the stereotype content model to SES has found that people with high SES are perceived to be more competent but less warm, while people with lower SES are perceived to be less competent but more warm (Durante et al., 2017). These perceptions can lead to detrimental stereotypes for both groups of people. Competence is likely a relevant characteristic in the hiring context and one that hiring managers assess among job applicants (Roulin et al., 2023). The concern regarding this is that a job applicant's SES might be conflated with their competence, such that lower SES applicants are perceived as less competent by hiring managers and, therefore, are perceived as less hireable. For example, suppose a hiring manager utilizes SES cues to evaluate an applicant. They could detect what they perceive as low SES cues, which they then interpret as indicative of worse future job performance. Consequently, the hiring manager may be less likely to hire this job applicant as they are perceived as less competent.

To test this assumption, we will include a measure of competence from the stereotype content model (Fiske et al., 2002). Given that previous research has found that "poor" is strongly associated with less competence (Fiske et al., 2002), people may evaluate these job applicants as less competent due to a perception of low SES. We will also include a measure of warmth to assess the job applicant, as warmth is an essential component of the stereotype content model that is positively associated with poor people (Fiske et al., 2002).

*Hypothesis 2: Participants will evaluate low SES job applicants as being a) lower in competence but b) higher in warmth compared to high SES job applicants.* 

#### **Evaluator Characteristics and Evaluations**

Characteristics of the rater themselves can impact the extent to which stigmatizing features, as detected from the background, are used (Derous et al., 2016). Therefore, one factor that could affect an evaluator's ratings of job interviewees is the evaluator's own stigmatizing information based on their history and prejudiced attitudes (Derous et al., 2016). Whether the evaluator holds the stigmatizing feature themselves (e.g., is also of lower SES) and their own personal views towards this variable could determine how the evaluator perceives the applicant. Roulin et al. (2023) implemented this in their AVI background study as they analyzed characteristics of the evaluator, such as the person's parental status and political orientation, to

understand how it impacted key outcomes. Although there was limited evidence that the rater characteristics played a significant moderating role, the congruency of the evaluator's political orientation did affect how the job applicant was perceived. Findings state that most interview research focuses on interview bias rather than interviewer characteristics (Posthuma et al., 2002). Roulin et al. (2023) suggested that future research in this area should recruit raters with more variability, specifically ones with negative attitudes towards certain groups, to understand how this potential bias could manifest in this evaluation context.

Within this study, we examine three factors of the evaluator that may be particularly relevant: a) the participant's own SES, b) the participant's Attitude Towards Poverty (ATP), and c) the participant's Social Dominance Orientation (SDO). If, for example, the evaluator is from a high SES demographic, they may provide higher ratings for applicants also high in SES compared to those low in SES. Conversely, lower SES evaluators may provide more neutral ratings of high versus low SES applicants, perhaps because lower SES evaluators are more aware that one's SES is less indicative of their potential job performance. However, this does not suggest that participants with a lower SES are devoid of this bias. However, this bias will likely manifest more strongly in higher SES evaluators. Furthermore, there could be a similar pattern with both competence and warmth, whereby evaluators with a higher SES might evaluate the high SES job applicant as being more competent (and less warm) than the evaluator with a lower SES who might make more equivalent ratings between the two groups. Lastly, these moderators might also affect the length of time that participants take to evaluate an applicant (i.e., "decision time"). This could indicate more subtle discrimination, whereby participants do not spend as long evaluating lower SES job applicants as they rely on their first impressions of the applicant

to make their evaluation. Refer to hypothesis seven for further elaboration on this justification for including decision time.

Hypothesis 3: The participant's own SES will moderate the relationship between the job applicant's SES and their a) perceived hireability, b) competence, c) warmth, and d) decision time. This means that high SES evaluators will be more likely to rate the high SES job applicant as being a) more hireable, b) more competent, c) warmer, d) and take less time to make their evaluation, compared to an evaluator with low SES who will make more equivalent ratings between the two SES groups.

Furthermore, higher SES evaluators may hold more stigmatizing views about those from "other" SES demographics. The ATP scale measures one's view of poverty and impoverished people. A high ATP score indicates that one believes that social structural determinants primarily cause poverty, while a low ATP score indicates that one believes in individual responsibility for poverty (Yun & Weaver, 2010). Evaluators with low ATP (i.e., negative views towards poverty) might be more likely to weigh the job applicant's SES in their evaluation of the applicant than someone with a high ATP. This is because individuals with a low ATP likely believe in an ideology whereby one should pull themselves up by their bootstraps and that poverty is unrelated to structural determinants in society (Bobbio et al., 2010). Consequently, measuring participants' general ATP is important for understanding the motivation behind their evaluations of job applicant evaluations.

Hypothesis 4: The participant's own ATP will moderate the relationship between the job applicant's SES and their a) perceived hireability, b) competence, c) warmth, and d) decision time. Participants with a low ATP (indicating a negative ATP) will be more likely to rate the high SES job applicant as being a) more hireable, b) more competent, c) warmer d) taking less time to make their evaluation, compared to participants with a high ATP who will make more equivalent ratings between the low and high SES conditions.

Another factor that could affect participants' evaluations of the applicant is their general preference for group hierarchy, one's SDO. The SDO measure reflects an individual's belief about the extent to which inequality should exist in a society (Pratto et al., 1994). Individuals with a high preference for SDO believe that some groups should dominate others in society and are more likely to express prejudice against lower-status groups (Dhont et al., 2014). We will include a measure of the participant's SDO to understand how this might impact their evaluation of the job applicant. We expect evaluators with a high SDO (i.e., strong support for group-based hierarchies) may believe that low SES applicants are naturally inferior and, therefore, rate them as being lower in perceived hireability. Conversely, given that evaluators with a low SDO have stronger support for equality between groups, we expect that there would not be a strong difference in ratings between low and high SES job applicants.

Hypothesis 5: A participant's own SDO will moderate the relationship between the job applicant's SES and their a) perceived hireability, b) competence, c) warmth, and d) decision time. Participants with a high SDO (indicating a strong belief in inequality and a preference for group-based hierarchies) will be more likely to evaluate the high SES job applicant as being a) more hireable, b) more competent, c) warmer, d) and take less time to make their evaluation, compared to participants with a low SDO who will make more equivalent ratings between the low and high SES conditions.

#### **Cognitive Load (CL) Theory**

We previously proposed that evaluators utilize stereotypes involving SES to infer their judgment about a job applicant. However, theory also indicates that one factor that can affect the use of type one and type two decision-making (i.e., the utilization of such stereotypes) is the level of CL that the evaluator is experiencing. CL theory states that our brains have a limited pool of attentional resources to allocate to specific tasks. When individuals have multiple tasks demanding their attention, this increases the CL that one is under (Wang & Hao, 2020). Consequently, theory indicates that this results in a default to type one processing, whereby people resort to heuristics and biases due to the need to increase efficiency and streamline decision-making (Tversky & Kahneman, 1974).

Integrating CL theory with the dual process theory can provide vital information about stigma in interviews, as this theory is foundational in understanding how humans process new information (Paas & van Merriënboer, 2020). CL refers to the amount of information that one can successfully hold in their working or short-term memory at a given time, which research shows to be about seven pieces of information, plus or minus two (Sweller, 2011). The role of one's working memory is to categorize information into schemas (i.e., folders in one's brain containing similar pieces of information). These schemas reduce the toll on one's working memory because as the brain recognizes new information, it can refer to familiar categories stored in long-term memory. As more information is learned and stored, this process becomes automatic and is less strenuous on the working memory, allowing for more information to be processed (Sweller et al., 2019). Overloading one's working memory will inevitably reduce information processing and decision-making effectiveness.

There are three types of CL, each referring to a different component of how information is understood and processed (Sweller, 2011). *Intrinsic CL* refers to the complexity or level of challenge required to understand the information or task. This depends on the complexity of the information presented and the current knowledge of the individual who must process it. *Extraneous CL* focuses on the external environment of the information, such as how the information is presented, the instructions provided, and what the learner must do to understand the material successfully. Finally, *germane CL* takes a meta-cognitive approach whereby the focus is on the capacity to learn and link incoming ideas with information that is already stored in one's long-term memory. This is ultimately about being aware of the thinking process (i.e., understanding how to learn), which could be mapped onto type two processing to override existing information (i.e., assumptions) to determine the most valuable information. Therefore, this study utilizes all three types of CL, as these can all manifest in a hiring managerial context.

CL theory is rooted in the core assumption that people have limited cognitive attentional resources. As one processes information, these resources must be divided among the different tasks (Wang & Hao, 2020). Consequently, since there is a competing need for attention distribution, the CL will increase as more tasks must be completed. This load makes it much more challenging to complete tasks efficiently than when the brain can focus on one task. Additionally, one's ability to make a decision is limited by bounded rationality, which refers to the cognitive limitations of not just one's attention but also one's ability to process information and the time available to make a decision (Wang & Hao, 2020). This is often why people default to using heuristics in stressful decision-making, as they enable limited cognitive resources to be used more efficiently.

In applying the theory of CL to the workplace, there is a concern that many hiring managers are challenged with the pressure of completing numerous tasks in a limited amount of time. This can often lead to multi-tasking, which can be highly taxing on one's CL (Appelbaum et al., 2008). This makes it much more challenging to engage in the less-biased type two processing when making a decision, specifically when evaluating a job applicant (Derous et al., 2016). As a result, it is highly probable that when hiring managers face the challenge of completing a task quickly and efficiently, they will inevitably default to type-one processing. As will be described below, it is possible that given that this process relies on heuristics, schemas, and stereotypes to infer specific characteristics about the applicant, this may often lead to bias and discrimination against job applicants. In an interview, perceptions of SES may activate negative stereotypes because hiring managers hold certain beliefs about those with lower SES (i.e., type one processes). These stereotypes may be used while hiring to provide potential information about the applicant. Since many hiring managers are likely to be under immense CL while evaluating applicants, they could be more likely to engage in type one processing and, therefore, default to utilizing heuristics and stereotypes. As a result, this use of type one processing could result in worse evaluations of applicants with lower SES.

An alternative explanation is that an increase in CL causes hiring managers to miss certain stigmatizing features of the background rather than be more attentive to them. Hiring managers may be unable to notice the background, diminishing any biases that may arise from analyzing background cues. Although this is a viable alternative, based on the theory, it appears more likely that CL requires one to default to the resources at hand (e.g., cues in the AVI background), as they must prioritize their time and resources to complete the task efficiently. Therefore, it is more probable that they will utilize all available resources to create their evaluation of an applicant, as opposed to ignoring easily perceivable cues.

In this study, we will explore the role of CL in affecting evaluators' ratings of job applicants. This is the first study to examine the dual process theory of interview stigma from a CL perspective. When participants are induced under a high level of CL, this will likely result in more type one processing, meaning that they rely on heuristics and stereotypes to arrive at a final evaluation decision. This ties into the justification-suppression model in that individuals may avoid cognitively engaging in conflicting information in order to hold more strongly to their initial beliefs (Crandall & Eshleman, 2003). Consequently, they are not using their type two processing, which would override these initial biased assumptions stemming from the applicant's SES and enable the high CL participants to assess the applicant more carefully.

Hypothesis 6: An interaction will occur in that participants will evaluate low SES job applicants as being lower in a) perceived hireability and b) competence compared to high SES applicants. However, this difference will be exacerbated for participants in the high CL condition compared to the low CL condition.

Another outcome of experiencing CL is that participants might make faster evaluation decisions than those under less CL. This might be because high CL participants cannot allocate their full time and attention to this evaluation process and, therefore, will have to decide about the applicant more quickly. Participants who take less time to evaluate the applicant might engage in more type one processing and utilize background cues to infer stereotypes about the applicant. Similar studies evaluating background cues in AVIs have suggested (but not examined) utilizing measures that detect more subtle discrimination, such as the length of time applicants take to evaluate the job applicant (Roulin et al., 2023). This would be consistent with

the literature examining overt and subtle discrimination indicators (Jones et al., 2016, 2017). Across the selection literature, this is known as the interviewer's tendency to make a "snap decision" within the early stages of an interview, often contributing to information processing errors (Buckley & Eder, 1988). Consequently, we will include a measure that asks participants to report how long it took them to evaluate the job applicant. We will base this measure on how it has been framed in similar interview selection studies. More broadly, this indicates a subtle form of discrimination whereby high CL participants spend less time evaluating the job applicant's verbal responses in the AVI and are likely using other cues to evaluate.

Hypothesis 7: There will be a main effect where participants in the high CL condition will make faster evaluation decisions (i.e., lower decision time) of the job applicant compared to participants in the low CL condition.

#### Conclusion

AVIs have been heralded as a mechanism to increase the standardization and reliability of interviews (Lukacik et al., 2022). However, there may be potential oversight here as applicants might be forced to share aspects of their personal lives that would be otherwise unavailable during in-person interviews. This study explores whether evaluators use background cues in a job applicant's AVI to discriminate against those low in SES and whether this could lead to these job applicants being denied employment opportunities. Drawing on theories of bias and stigma in interviews and CL, this study seeks to determine whether participants placed under higher CL are more likely to discriminate against job applicants with lower SES. Given the importance of ensuring applicants are hired solely for their ability to perform specific job functions, AVIs must not enable new forms of discrimination that could otherwise be eliminated in an in-person interview. This study will provide theoretical, empirical, and practical contributions to the rapidly expanding research on AVIs as a tool for hiring managers in organizations. We will examine whether evaluators discriminate against job applicants lower in SES, as identified by their background cues. To date, SES has not been studied in the context of AVIs and has received limited attention in the selection literature more broadly. Our research aims to bridge this gap and to determine the significance of these background cues for hiring managers. In doing so, we will offer concrete strategies to address and reduce SES discrimination.

In addition, we utilize CL theory to understand the conditions under which such biases may be ameliorated or exacerbated. We also integrate existing stigma theory by applying it to an interview context to determine if evaluators placed under high CL are more likely to make quicker (and more biased) evaluation decisions. Specifically, we will apply the Derous et al. (2016) dual process framework of interview bias in the context of AVIs to determine if evaluators are more likely to engage in type one processing when under higher CL and, therefore, discriminate against lower SES job applicants. As a practical contribution, we will also explore whether reducing CL is a potential mechanism by which organizations can address this core issue of discrimination from hiring managers and, therefore, provide practical recommendations for reducing hiring discrimination. Finally, consistent with suggestions from existing research (Roulin et al., 2023), we examine both overt (i.e., hireability ratings) and subtle (i.e., decision time) indicators of discrimination.

#### **Chapter Two: Method**

#### **Pilot Study**

#### **Participants**

Before conducting the main study, a pilot test was conducted with a sample of N = 75 participants recruited on the CloudResearch Connect platform. All participants were required to be at least 18 years of age, have six months of work experience (i.e., a working sample), speak English, and be located in the United States. We selected a US population, as perceptions of SES can vary substantially across different countries (e.g., low SES can be very different in Canada and the United Kingdom versus the United States). We specifically targeted the US as it has a less egalitarian perspective than Canada; however, it has a less pronounced class-based system than the UK (Metzgar, 2021). This makes it an important location to further understand SES perceptions across different demographics. Participants were compensated \$1.25 USD for participating in this ten-minute survey.

#### Procedure

The pilot study was used to finalize the materials for the main study, including the manipulations for each condition (i.e., choosing the SES background of the AVI and evaluating the difference in CL induced). Through this process, we finalized the low and high SES background images for the AVI, selected the actor to play the role of the job applicant in the AVI, and determined the CL activity to induce an appropriate level of mental effort and perceived difficulty.

#### Materials

**SES Background Manipulation.** After reading and agreeing to the consent form, participants were asked to evaluate 20 images (selected to be ten high SES and ten low SES

images) in random order. These images were of typical locations in a house where a job applicant might film an AVI (e.g., kitchen or living room). To ensure a distinction between the AVI conducted in a low versus high SES environment, the only difference in these two conditions was the virtual background seen in the job applicant's AVI. We required a background for the low SES condition that signified core low SES indicators, such as chipped paint or old furniture. In contrast, the high SES background subtly conveyed someone from a higher SES, with background objects such as an expensive bookcase, new furniture, and affluent décor and lighting.

Participants were asked to: "Think of a ladder as representing where people stand in our society. At the top of the ladder are the people who are the best off, those who have the most money, the most education, and the best jobs. At the bottom are the people who are the worst off, those who have the least money, the least education, and the worst jobs or no job. Move the slider to the 'ladder rung' that best represents where you think the person who lives in this house stands on the ladder." This SES evaluation is known as the MacArthur Ladder Task and is commonly adjusted to assess the SES of different variables (i.e., people, locations, objects); (Adler & Stewart, 2007). Participants were then asked to describe: "Which cues in the background were you using to make your socioeconomic status evaluations?" This information was used to better understand what information participants were utilizing in these images to make their evaluations.

Each image's mean and standard deviation were then calculated to determine a final SES rating, from 0 (*lowest SES*) to 10 (*highest SES*). In making our final decisions on which high and low SES images to include, we eliminated images from consideration based on certain criteria. First, images containing confounding variables (i.e., religious symbols, guns, too messy, under

construction) were removed. Second, we aimed to have the same room of the house being conveyed in each. We removed those with extremely low SES ratings from consideration because these images could evoke confounding factors such as the perception of drug use or homelessness or conveying a very concerning environment. We also removed those with very high SES ratings, as these could also induce confounding variables, such as questions regarding why a job applicant with such a high SES would be applying for this position. Finally, we analyzed the standard deviations and removed those that were above 1.75 *SD* because we wanted participants to view the SES of the chosen backgrounds in similar ways. Refer to Appendix A for all SES backgrounds evaluated in the pilot study (including means and *SD*s).

Based on the qualitative responses, participants reported using the following cues to determine their SES evaluation of each background image: a) Furniture: the type, quality, and condition; b) Cleanliness: overall cleanliness and tidiness of living space; c) Fullness: the spaciousness and number of possessions and items present; d) View: from the windows; e) Condition: the state of the repair of the walls, flooring, and appliances; f) Décor: decoration and style, including color scheme, furniture layout, and interior design; g) Cost: perceived cost or rent of the living space.

The final two images selected for inclusion in the main study both had a grey/brown theme, and the furniture was arranged similarly. Neither image had extreme SES ratings (i.e., too high SES or too low SES). The rating for the high SES background was M = 7.51, SD = 1.47, and the rating for the low SES background was M = 3.24, SD = 1.31.
## **Final High SES Image**



**Final Low SES Image** 



**CL Manipulation.** The other manipulation in this study was the level of CL (low; high) experienced by the participant while evaluating the AVI. The purpose of inducing CL was to simulate the mental process of a hiring manager in a real-world job setting who would be evaluating an AVI for an organization. Hiring managers face many competing demands and tasks that need to be completed in a short time duration. As such, they must constantly evaluate how much time and mental energy to allocate to specific tasks. Many of these activities may be completed while multi-tasking and, therefore, will restrict a hiring manager's ability to engage in type two systematic and unbiased processing and likely result in them deferring to type one automatic processing. As such, we wanted to better understand how long the tasks would take and, hence, what level of time pressure would be required to induce more cognitive load.

In the pilot study, participants read the following instructions: "Your boss has asked you to read this article on hybrid work and to update them on what you have learned by the end of the day. They will ask you some detailed questions about the article, so you should be able to recall the details of the article. Please read the article now. Once you have finished reading the article, please very briefly describe what this article is about."

This task aimed to determine the average length of time spent reading the article, calculated by the "page submit" time. This was then used to determine how long participants in

the high CL condition of the main study should have to both watch and evaluate the AVI and complete an additional task. The average length of time it took participants to read the article was M = 3.84 minutes. \**Note*. After further contemplation of the study design, the high CL task was slightly adjusted for the main study in that the reading of the article was removed from the timed portion of the high CL condition. This was due to there being too many tasks for the high CL participants to complete in the allotted time. However, reading the article before watching and evaluating the video further increased the CL that participants experienced as they had to hold the information about the article in their minds while simultaneously completing the other tasks. The final length of the article was reduced because the overall study took participants too long to complete. Refer to Appendix B for the final version of the article included in the main study.

Actor for Job Applicant in AVI. To create the AVI video, we selected an actor to play the role of a job applicant applying for a General Sales Representative at PepsiCo. The job we proposed would be average in terms of the SES stereotypes associated with it. Four actors were recruited from physical posters placed around the University of Campus School of Performing Arts and digital advertisements posted on multiple Calgary Acting Facebook Groups. Refer to Appendix C for a sample of the recruitment poster.

The requirement to apply for this position was to be a white male who could pass for mid-twenties. This was to reduce the potential for confounding variables, such as negative biases towards an older adult applying for an entry-level position or race or gender-based confounds. Given that SES can be perceived by one's physical characteristics (Bjornsdottir & Rule, 2017), it was vital to ensure that the actor was rated as having a neutral SES. This is important because this study aims to determine whether the evaluators utilize the SES of the background image in the AVI to evaluate the applicant's interview performance. Given this, we wanted an actor who could fit in either high or low-SES backgrounds. Therefore, the actor's SES could not be a confounding variable in that it would cause the evaluator, regardless of the SES background observed, to rate the applicant as having a particularly high or low job performance. As such, participants viewed facial selfies of the actors, rated his SES, and then listened to short audio clips of each actor in case certain elements of the actor's voice were associated with a particularly high or low SES. Refer to Appendix D for each actor's images and SES ratings of their face and voice.

Participants were first instructed to complete the MacArthur Ladder Task on a scale from 0 (*lowest SES*) to 10 (*highest SES*) and rate the SES of four images of the actor's face: "*Move the slider to the 'ladder rung' that best represents where you think this person stands on the ladder.*" Participants were then instructed to: "*Please listen to each of the audio clips below. Ignore the content that is being said, and only focus on the perceived SES of this person based on their voice.*" These voice clips were ten seconds when the actor answered, "Tell me about yourself."

Of these four actors, one person was removed because he did not pass for being in his twenties, as evaluated by the lead researcher and suggested by a supervisory committee member. The final actor was chosen from the remaining three based on his acting experience and neutral SES ratings (actor's SES face rating: M = 4.79, SD = 1.46; SES voice rating: M = 5.00, SD = 1.79).

Job Description for General Sales Representative at PepsiCo. In the pilot study, participants also evaluated the perceived SES of someone applying for a General Sales Representative at PepsiCo. This position was chosen because it is a general entry position that has a wide range of education, skills, and experience. For example, sales representatives may have an undergraduate degree, or they may have started right out of high school. As such, this makes it an appropriately ambiguous position for this study because participants may be from a high or low SES background. A job description for a General Sales Representative at PepsiCo was created, mirrored job postings found on Indeed.com. After reading through a detailed job description comprising key responsibilities and skills, participants were instructed to: *"Please evaluate the perceived socioeconomic status of someone applying for a general sales representative position at Pepsi."* As well as, *"Which cues from the job description were you using to make your SES evaluation?"* 

This task aimed to ensure that someone applying for this job position would have a fairly neutral SES. This increases the chance that interview evaluations of the job applicant are based on the SES background alone (i.e., controlling for other variables). The SES evaluation of someone applying for this job was scored on a scale from 0 (*lowest SES*) to 10 (*highest SES*), and the results were M = 5.90 and SD = 1.41. Refer to Appendix E for the full job description of this position.

In summary, we conducted a rigorous pilot study to determine the low and high SES background (manipulation) to ascertain that the final images selected did not have too extreme of an SES rating but had a lower *SD* (thus indicating general agreement) and did not contain potentially confounding variables. Furthermore, we determined the best actor to portray the job applicant in the AVI. The selected actor had a perceived neutral SES, as confirmed by SES ratings of both his face and voice. We also ensured that the selected job position (General Sales Representative at PepsiCo) was neutral in SES, meaning that someone applying for this position would not likely be of a particularly high or low SES. Lastly, we determined the time it took participants to read through the article, which was utilized to create the high CL condition.

#### Main Study

#### **Participants**

A G\*Power analysis was conducted for a factorial ANOVA to determine the appropriate sample size for this study. It was calculated to assume an *F* effect size of 0.25 (allowing for a medium effect size), an alpha error probability of 0.05, and a numerator *df* of 2. This calculated a sample size of N = 251 participants to achieve enough power in this study. We recruited a total of N = 300 participants from the CloudResearch Connect platform to account for attrition and failed manipulation checks.

Participants were filtered from the sample if they failed at least one of the four attention checks in the study (N = 18). Participants were removed (N = 26) if they failed at least one of the three survey effort screening questions by responding with "disagree" or "strongly disagree" to questions such as "*I carefully considered each item before responding*" (reverse coded for Survey Effort Question 3). Participants were also removed (N = 4) if they indicated that their data should not be included or were unsure whether their data should be included in the study.

Participants who completed the survey in less than 1.5 *SDs* below the mean survey time of M = 1837.37 seconds (~30 minutes) were also removed. One *SD* was 890.74 seconds (~14 minutes), and two *SDs* were 1781.48 seconds (~29 minutes). Every participant completed the survey within 2 *SDs* of the mean. However, N = 36 participants fell within one to two *SDs* of the mean (i.e., completing the survey in less than 946.63 seconds or ~ 15 minutes). Therefore, 1.5 *SD*, calculated to be 1336.11 seconds, was chosen as the filtering point because it removed participants who completed the survey quite quickly (less than 501.26 seconds or ~8 minutes). Given that the AVI alone was approximately five minutes, it is reasonable to assume that participants completing the entire study in less than eight minutes were not carefully responding to each item. In sum, N = 2 participants were removed for completing the study too quickly. Lastly, N = 1 participant was also removed as they had completed the survey twice (as indicated by the same participant I.D. appearing in the Qualtrics data).

After all data filtering was completed, this resulted in a total of N = 260 participants remaining (i.e., N = 40 participants were removed). Importantly, some participants might have failed both the attention check and low-quality data screening, resulting in the total number of participants removed being less than the sum of each process.

All participants were compensated with \$3.75 USD for completing the study. Participants were incentivized to earn an additional \$3.00 USD for being in the top 25% of performers. This was evaluated by a research assistant who read each email and evaluated it using a BARS measure that assessed the content's quality and accuracy. Participants were evaluated against those in their own condition (i.e., low cognitive load, low SES). We pre-screened participants to be at least 18 years old, living in the United States, and working for the past six months (i.e., working sample). Participants were also screened to work in business management or have past or current hiring experience. We sought this demographic to mirror those evaluating AVIs in a workplace setting. We initially used the business management screener on CloudResearch Connect. We later adjusted this to be a hiring experience screener as CloudResearch Connect added this as a demographic upon our request.

Participants were 57.7% male and 41.5% female, with 5.8% aged 18-24, 29.2% aged 25-34 years old, 30% aged 35-44 years old, 18.1% aged 45-54 years, and 11.9% over 54 years. Participants self-reported as being 71.6% White, 14.4% Black, and 14.0% identifying as either East Asian, Indigenous, Latin American, Middle Eastern, South Asian, Southeast Asian, or another ethnicity. When analyzing the hiring experience of these participants, a demographic question was included to assess participants' past or current hiring experience. Results indicated that 46.2% self-reported having past or current full hiring authority, 45.0% had partial hiring authority, 8.5% had no hiring authority, 6.2% had six months to three years of work experience, 6.5% had three to five years of work experience, 16.5% had five to ten years of work experience, 28.1% had ten to 20 years, and 42.7% had over 20 years of work experience. For education, 7.3% had a high school diploma or GED, 16.5% had some college but no degree, 8.8% had an associate or technical degree, 48.5% had a bachelor's degree, and 18.5% had a graduate or professional degree. For household income, 8.1% reported earning less than \$25,000, 17.3% earned between \$25,000 and \$49,999, 25.4% earned \$50,000 to \$74,999, 17.3% earned \$75,000 to \$99,999, and 30.0% earned \$100,000 or more. Participants evaluated their own SES on a scale from 1 (*worst off in the US*) to 10 (*best off in the US*). They reported that 24.7% identified as being four or less on the SES ladder, 63.9% as being five to ten on the SES ladder, and 11.0% identified as an eight or higher.

## Materials

**Interview Script for AVI.** Participants were asked to watch a recording of an actor portraying a job applicant in an AVI. To generate the interview script for the job applicant in the AVI, five standardized interview questions were created that would typically be asked in an interview for a General Sales Representative position at PepsiCo. To create compelling, realistic, and representative questions, ChatGPT was utilized. The prompt that was inputted to generate these questions was, "*Write five standardized interview questions that would typically be asked* for a General Sales Representative Position at PepsiCo." The lead researcher, a Certified Human Resources Professional with interviewing experience in a mid-sized automotive manufacturing organization, then reviewed these questions.

The next prompt inputted into ChatGPT was, "Write a script for an average interview performance to each of these questions." Refer to Appendix F for the full interview script. The purpose of specifying an "average" interview performance was to allow for ambiguity in the evaluations of the interview performance based on the background image of the interviewee, without floor or ceiling effects. To ensure that these responses indicated average performance, the next prompt into ChatGPT was to "Now write a script for an excellent [terrible] interview performance to these questions." These three scripts were compared to ensure that the average interview performance was recognizably different from the other two scripts.

Next, the "average" performance interview script was read and evaluated by six subject matter experts (SMEs), all industrial-organizational psychology graduate students at the University of Calgary. The SMEs were asked to answer the following questions:

- How realistic was this script? i.e., How likely could you see these answers being said in an actual interview? This was scored on a scale from 0 (*Very Unrealistic*) to 7 (*Very Realistic*), with a final result of *M* = 6.17 and *SD* = 0.75.
- 2) Please rate the interview performance of this applicant in terms of the responses provided in their interview answers. This was scored on a scale from 0 (*Very poor performance*) to 7 (*Very strong performance*), with a final result of *M* = 6.17 and *SD* = 0.75.
- Do you have any other feedback or revisions for this script? This could be general feedback more broadly. Any insight is greatly appreciated. This was an open-ended response.

Based on the SME responses, the interview script was tailored to include more filler words (e.g., ums, ahs, and like) to create a more natural-sounding response instead of appearing overly scripted and rehearsed. Given that the interview performance was rated quite strongly (M = 6.17 out of 7), these filler words were also included to slightly lower the performance and make it appear more average or neutral.

**Creating AVI.** The actor who played the role of a job applicant applying for a General Sales Representative position at PepsiCo was a local Calgary actor recruited from a Calgary Acting Facebook Group. He was paid an hourly rate of \$25/hour, including filming and preparation time (i.e., memorizing the script). Details about the selection of this actor can be found in the description of the Pilot Study above.

To create the AVI in a way that would allow changing of the backgrounds while maintaining perfect consistency in the answers and delivery, the mock interview was filmed using a green screen in the *One Button Studio* at the Taylor Family Digital Library at the University of Calgary. Manipulating the background of the interview, rather than filming two separate interviews in different locations, ensured that various recording factors (e.g., lighting, delivery, slight nuances in the actor's performance) were tightly controlled.

Following the filming of this mock interview, the green screen background of the interview was then edited to contain either the high or low SES image. All four interview questions were edited and compiled in iMovie to create a final low SES AVI and high SES AVI containing the same interview for both videos, with the only difference being the SES of the job applicant's background. These videos were approximately five minutes in length. Refer to Appendix G for links to review the final version of both AVIs.

## Measures

**Perceived Hireability.** Participants evaluated the AVI on a 6-item measure ( $\alpha = .97$ ) of perceived hireability, adapted from Stevens et al. (1995). This scale was referenced in a very similar study on background cues by Powell et al. (2023) and contained the following questions:

- 1) How qualified is this applicant for the job?
- 2) How attractive is this applicant as a potential employee of your organization?
- 3) How highly do you regard this applicant?
- 4) How well did this applicant do in the interview?
- 5) How likely are you or your organization to offer this applicant an on-site visit?
- 6) How likely are you or your organization to offer this applicant a job?

These questions were answered on the following anchors: 1 (*very low*), 2 (*low*), 3 (*somewhat low*), 4 (*neutral*), 5 (*somewhat high*), 6 (*high*), 7 (*very high*). The final interview performance was calculated by taking the mean of these six items to create a perceived hireability score.

**Competence and Warmth.** To assess the job applicant's competence and warmth, participants used the validated and established measure from the stereotype content model (Fiske et al., 2002). To measure competency, a 5-item measure ( $\alpha = .92$ ) was used for the question, "How [*competent, confident, independent, competitive, intelligent*] is this applicant?" To measure warmth, a 4-item measure ( $\alpha = .87$ ) was used [*tolerant, warm, good-natured, sincere*]. Ratings were scored using the following anchors: 1 (*not at all*); 2 (*slightly*); 3 (*moderately*); 4 (*very*); 5 (*extremely*).

*SDO*. To assess the participant's own level of SDO, the Ho et al. (2015) 8-item SDO measure ( $\alpha = .91$ ) was used. Participants were provided the following instructions: "*The following questions allow us to understand more about your beliefs, opinions, and values. Show* 

how much you favor or oppose each idea below by selecting a number from 1 (Strongly Oppose) to 7 (Strongly Favor) on the scale below. You can work quickly; your first feeling is generally best." These eight items included statements such as "An ideal society requires some groups to be on top and others to be on the bottom." And, "Some groups of people are simply inferior to other groups." Statements three, four, seven, and eight were reversed coded such that, for the final score, a high SDO score indicates that the participant strongly supports inequality and believes that some groups should dominate others.

**ATP.** The Yun and Weaver (2010) ATP scale assessed the participant's own ATP. This was a 21-item measure ( $\alpha = .93$ ) broken down into three subfacets: personal deficiency factor (seven items), stigma (eight items), and structural perspective (six items). These 21-items were scored on a 5-point Likert scale from 1 (*strongly agree*) to 5 (*strongly disagree*), with a high score for personal deficiency and stigma indicating that participants had a positive ATP, while a low score for structural perspective indicated a positive ATP. Therefore, structural perspective items were then recoded such that high scores on all three subfacets indicated a positive ATP. Items included statements such as, "*Poor people act differently*," "*Children raised on welfare will never amount to anything*," and "*I believe poor people have a different set of values than do other people*." This is an adapted version of the original 37-item scale by Atherton et al. (1993).

**CL Scale.** The Unidimensional Cognitive Load Scale ( $\alpha = .78$ ), adapted from Paas et al., 1992, was used to assess whether participants experienced a difference in CL. Participants were instructed to: "*Indicate on this scale how much mental effort it cost you to solve the task [rating job applicant & writing an email to your boss]*" and "*Indicate on this scale how difficult you found the task [rating job applicant & writing an email to your boss]*" and "*Indicate on this scale how difficult you found the task [rating job applicant & writing an email to your boss]*." This 2-item measure was scored on a 9-point scale from 1 (*very, very easy*) to 9 (*very, very difficult*).

**MacArthur Ladder Task.** To assess the effectiveness of the SES background manipulation, after evaluating the performance and qualities of the applicant, participants completed the MacArthur Ladder Task (Adler & Stewart, 2007) for a variety of variables, including rating the SES of the background of the AVI, the job applicant himself, and the SES of the job position. Instructions included: "*Think of this ladder [ladder image included] as representing where people stand in the United States. At the top of the ladder are the people who are the best off – those who have the most money, the most education, and the most respected jobs. At the bottom are the people who are the worst off – those who have the least money, the least education, the least respected jobs, or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom.* 

Please ignore the actor for a moment and move the slider to the 'ladder rung' where you think [someone who lives in that house (based on the background image of the living room)], [someone working as a General Sales Rep. at PepsiCo], or the [job applicant in the AVI] stands relative to other people in the United States." This was scored on a scale from 1 (worst off) to 10 (best off). Note. The pilot study scored this on a scale from 0 to 10. However, the actual MacArthur Ladder Task utilizes a 1 to 10 rating; therefore, this correct scoring was incorporated into the main study.

It has also been noted in the literature that individual differences of the evaluator, such as their own SES, can play an important role in one's evaluation of others (Derous et al., 2016). Therefore, to determine if a potential moderator existed, we also measured the participant's own SES via the MacArthur Task, with participants being instructed to: *"Think of this ladder as representing where people stand in the United States. At the top of the ladder are the people who*  are the best off – those who have the most money, the most education, and the most respected jobs. At the bottom are the people who are the worst off – those who have the least money, least education, the least respected jobs, or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom. Think about yourself for a moment, where would you place yourself on this ladder? Please place a large "X" on the rung where you think you stand at this time in your life relative to other people in the United States."

Attention Checks. Four self-report attention checks were inputted throughout this survey to screen out participants who were not paying attention. These questions were created with reference to DeSimone and Harms (2018). Participants were asked to select a certain response to ensure they paid attention and read the survey questions fully. These attention checks included: *"Please mark 'agree' for this item"* (Attention Check 1), *"Please leave this response blank"* (Attention Check 2), *"Please mark 'slightly disagree for this response "* (Attention Check 3), and *"The interview I observed was designed for the following job"* (Attention Check 4).

**Detecting Low-Quality Data (LQD).** To screen out participants who may have provided low quality data, three survey effort self-report items were included to screen out participants who may have provided low-quality data, three survey effort self-report items were included (DeSimone et al., 2015). Participants were provided the following instructions: "*At this point, we would like to ask you some questions about yourself and your experience while completing this survey. Please be sure to reflect on yourself during these questions. Please be aware that these questions are just for our knowledge and will not impact your compensation in any way.*" These questions included: "*I carefully considered each item before responding*" (Survey Effort 1), "*I exerted sufficient effort on this survey*" (Survey Effort 2), and "*I occasionally answered items*  *without reading them*" (Survey Effort 3). Responses were scored on a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). For Survey Efforts 1 and 2, participants were screened out if they selected strongly disagree, disagree, or neutral. For Survey Effort 3, participants were screened out if they selected neutral, agree, or strongly agree.

At the very end of the Qualtrics survey, participants were also prompted with the following data screening question: "*Thank you very much for participating in this study, you are almost finished with this survey. In order for data to be helpful to us, the respondent needs to have paid attention, read the questions correctly, and responded accordingly. Given this, do you think we should include your data in our study? Please answer this question honestly and know that there will be no penalties at all for your answer." This question was answered with "yes," "T'm not sure," or "no," and participants who responded with "I'm not sure" or "no" were also screened out.* 

#### **Procedure**

This study was a 2 (*low vs. high SES*) x 2 (*low vs. high CL*) between-subjects design, whereby participants were randomly assigned to one of four conditions. After reading and agreeing to the consent form, all participants were instructed to: "*Please imagine that you are a Human Resources (HR.) Manager working at the large beverage company, Pepsi Beverage Corporation (PepsiCo). You are tasked with hiring a General Sales Representative for your company. Please read the job description for this role. Following this, you will be prompted to watch an asynchronous video interview (AVI) of a job applicant applying for this position.*"

After reading through the job description, participants were then randomly assigned to either the low or high CL condition.

Low CL. Participants in the low CL condition were first provided with the following instructions: "*Remember that you are a Human Resources Manager at PepsiCo. You are about to watch an asynchronous video interview (AVI) of a job applicant applying for the General Sales Representative position at PepsiCo.*" They were then presented with an approximately five-minute AVI of a job applicant applying for this position. There was no time limit for how long these participants could watch or evaluate the AVI.

Following this, participants were asked six questions about the job applicant's perceived hireability. They were then asked to "*Please indicate the approximate time stamp of the moment while watching the interview that you felt you had enough information about the applicant to make a decision about his hireability for the General Sales Representative position at PepsiCo. For example, if you felt that you had enough information at two minutes and forty-five seconds, then type in: 2:45." This variable has been assessed in other interview decision studies, such as a series of foundational selection studies conducted at McGill in the 1950s and 1960s, which has interviewers place their pen down when they had made their decision about a job applicant signaling to the researcher that their evaluation was complete (Buckley & Eder, 1988). This study included this question to assess whether certain conditions were faster at evaluating the applicant or spent more or less time before making their decision.* 

Participants were then asked to: "*Please justify why you decided on these interview ratings for this job applicant. Explain which factors impacted your decision.*" This question was included to probe if participants were aware that they might have been utilizing the SES of the job applicant's background to determine their evaluation of his AVI performance. They were also asked: "Did you skip through any part of the video interview? Please note that this will not affect your compensation in any way." This question was included to determine if participants in certain conditions were more likely not to watch the entire AVI but rather only watch part of the AVI and then make their evaluations of the applicant based on that information. Skipping through the video could be a strong indicator of covert and subtle forms of discrimination, as it is possible that participants would make their decision quickly and then not seek disconfirming evidence by watching the rest of the AVI.

Following this, the low CL participants were then instructed to: "Imagine that in your role as a Human Resources Manager at PepsiCo, your boss has just asked you to read the following article on hybrid work and then to write them an email containing a detailed summary of the article. After you read the article, you will also be asked some multiple-choice questions about the content, so you should be able to recall the details of the article."

After reading the article (refer to Appendix D), participants were then instructed to: "Now, please write a detailed email to your boss summarizing the article and highlighting key takeaways. Your response will be evaluated for accuracy and quality, and the top 25% of responses will be awarded a \$3 USD bonus compensation. Don't spend too much time on this task, we recommend spending about 5 to 10 minutes." Participants were provided with a large textbox to write an email to their boss. Following this, a research assistant at the University of Calgary read through each email submission and rated it for quality and accuracy, awarding the top 25% in each condition their bonus amount.

**High CL.** For participants in the high CL condition, after reading through the job description, they were then instructed to first read through the article. This was different than those in the low CL condition who first viewed and evaluated the AVI, then read through the article and wrote the email.

After reading the article, participants in the high CL condition were provided the following instructions before watching the AVI: "*Remember that you are a Human Resources Manager at PepsiCo. You are about to watch an asynchronous video interview (AVI) of a job applicant applying for the General Sales Representative position at your company. At the same time, you must also multi-task and write a detailed email to your boss explaining the key takeaways of the article. You will have 12 minutes to complete BOTH of these tasks* (*watching/evaluating an interview and writing an email*). There will be a bonus reward (\$3 USD) given to the top 25% of participants who provide the highest quality and accurate email *response. Please watch the interview below and evaluate the applicant on the following questions. We want you to evaluate the applicant appropriately; however, you are on a time crunch, so please watch as much of the interview video as you need to make your decision. Once the 12 minutes are completed, the survey will automatically proceed to the next question. Make sure to evaluate the job applicant before the time is over.*"

In summary, these participants in the high CL condition had 12 minutes to a) watch the AVI, b) write an email summary of the article to their boss c) evaluate the AVI on the job applicant's perceived hireability. These tasks were part of a timed exercise to induce a higher amount of CL, making it more difficult for participants to allocate all of their attentional resources to each task. As a result, participants must determine how much time and mental energy to spend: 1) evaluating the applicant's AVI and, 2) reading and understanding the article to write a summary email to their boss.

Like those in the low cognitive condition, following these tasks, participants were asked the time stamp at which they decided about the job applicant's hireability, why they decided on these interview ratings, and whether they skipped through any part of the video interview. After completing these tasks, all participants were asked four questions about the article (see end of Appendix B). These questions were also used to determine the top 25% who were awarded the bonus compensation to assess the accuracy and quality of responses. Next, all participants were instructed to complete the MacArthur Ladder Task and evaluate three variables in the study: the SES of someone who lives in that house (based on the background image of the living room), the SES of someone working as a General Sales Representative at PepsiCo, and the SES of the job applicant in the AVI.

Following this, all participants rated the job applicant on his perceived competence and warmth. Participants then answered 8-items pertaining to their own SDO, 21-items determining their ATP, as well as the perceived mental effort and difficulty of rating the job applicant and writing the email to their boss (CL). Then, participants were asked: "*To what extent do you think that the background of the job applicant's video interview might have influenced your ratings of the applicant?*" with responses anchored on the following scale: 1 (*I'm not sure*); 2 (*Did not influence at all*); 3 (*Slightly influenced*); 4 (*Moderately influenced*); 5 (*Strongly influenced*). Participants were asked to assess the realism of the AVI with the following question: "*How realistic did this AVI appear to you? i.e., were there factors about the video that appeared unrealistic*) to 10 (*Extremely realistic*). Following this, all participants were asked to provide a written text response to the following question: "*If you felt that the AVI was not compelling, what factors would have made it more realistic?*"

After these series of questions, participants were asked the three survey effort questions to screen out low-quality data. Participants then completed demographic questions, including items inquiring about their gender, age, total work experience, hiring experience (e.g., *Do you* 

have current or past experience making final hiring decisions (i.e., full hiring authority) or being involved in hiring decisions (i.e., partial hiring authority)?), the participant's own perceived SES, highest education level, cultural identity, and total household income. Before completing the debriefing form, the final question asked participants whether their data should be included in this study.

## Analysis

To analyze the data collected in this study, we first cleaned and recoded our dataset after downloading the raw scores from Qualtrics. Participants who failed attention checks and low survey effort questions and those who completed the survey too quickly were removed. Following this, descriptive statistics were run to understand patterns in each variable and to determine if there were any inconsistencies among certain items or errors in data coding. Then, new variables for the final scales were computed using the average of each scale item. Reliabilities for each scale were calculated, and correlations were conducted to assess any unusual patterns across the data and if variables related in expected ways.

Two-way ANOVAs were conducted in SPSS to examine the main effects and two-way interactions to test our hypotheses. Then, moderation analyses were conducted in SPSS Process Macro to examine for two-way interaction effects. Additional ANOVAs were run with other measures collected in this study to test exploratory findings. To test for three-way interactions as part of further exploratory findings, a multiple linear regression was conducted in SPSS with various measures such as ATP and SDO on outcome variables such as hireability, competence, warmth, and decision time.

## **Chapter Three: Results**

Correlations were conducted between all main variables (refer to *Table 1*) to examine basic relationships of interest. As would be predicted, warmth and competence were positively correlated (r = .78, p < .001), SDO and ATP were negatively correlated (r = .57, p < .001), the participant's SES and their household income were positively correlated (r = .52, p < .001), and competence and hireability were positively correlated (r = .84, p < .001). Upon further inspection of the correlations across this study, there were interesting patterns that will be further expanded on in the discussion section. Most notably, the participant's perceived SES of the background and hireability were positively correlated (r = .31, p < .001), the perceived SES of the background and the job applicant's SES was positively correlated (r = .57, p < .001), and the job applicant's perceived SES and perceived hireability were positively correlated (r = .40, p < .001). These indicate that there is a relationship between how the participant perceives the SES of the background, the perceived SES of the applicant, and how that applicant is evaluated.

Other notable correlations include a positive correlation between the job applicant's SES and his competence (r = .40, p < .001). Moreover, the time it took participants to make an evaluation decision ("decision time") was positively correlated with hireability (r = .30, p < .001), and the perceived realism of the AVI were positively correlated with hireability (r = .35, p < .001).

# Table 1

Descriptive statistics and correlations between main variables.

		М	SD	1	2	3	4	5	6	7	8	9	10	11
1	SES	-	-											
2	CL	-	-	.11										
3	Perceived Hireability	4.62	1.40	.08	.10	(.97)								
4	Participant's SES	5.65	1.67	03	02	.05								
5	SDO	2.47	1.45	.06	08	10	.18**	(.91)						
6	ATP	3.56	.76	07	.04	.06	12	57**	(.93)					
7	Competence	3.29	.87	.05	.09	.84**	.09	06	01	(.92)				
8	Warmth	3.75	.73	00	02	.71**	.04	15*	.05	.78**	(.87)			
9	SES of Job Candidate	5.51	1.35	.16*	03	.40**	.39**	.10	08	.40**	.30**			
10	SES of Background	5.79	1.65	.48**	.04	.31**	.32**	.04	04	.28**	.17*	.57**		
11	Decision Time	184.42	74.53	.05	.17*	.30**	.05	11	.10	.22**	.21**	.08	.11	
12	Realism of AVI	7.43	1.94	08	.13	.35**	01	21**	.06	.38**	.42**	.13*	.12	.09

### **Manipulation Check**

## SES of Background

A manipulation check was included to determine whether participants noticed a difference in the background of the AVI, depending on their condition. A two-way ANOVA was conducted to examine the effect of SES background and CL on the perceived SES of the AVI background. The assumption of homogeneity of variances was not violated, as assessed by Levene's test for equality of variances, p = .360. An analysis of the SES condition on perceived SES indicated that the main effect was statistically significant, F(1, 255) = 76.87, p < .001,  $\eta_p^2 = .232$ . The unweighted marginal means of SES condition were (M = 4.90, SE = .14) for the low SES condition and (M = 6.53, SE = .13) for the high SES condition. This indicates that the manipulation of the SES condition was successful as participants reported noticing a difference in the SES of the backgrounds, where participants in the low SES condition rated the background as being of lower SES, compared to those in the high SES condition. An analysis of CL on perceived SES indicated that the main effect was not statistically significant, F(1, 255) = 0.49, p = .483,  $\eta_p^2 = .002$ . The interaction effect between SES and CL on perceived SES was not significant, F(1, 255) = 0.70, p = .404,  $\eta_p^2 = .003$ .

# CL

A manipulation check was also included to determine whether participants experienced a difference in perceived CL, depending on which condition they were in. A two-way ANOVA was conducted to examine the effect of CL and SES background on the perceived CL participants reported experiencing. The assumption of homogeneity of variances was not violated, as assessed by Levene's test for equality of variances, p = .581. An analysis of CL on participants' perceived CL indicated that the main effect of the CL condition was significant,

 $F(1, 256) = 8.13, p = .005, \eta_p^2 = .031$ . The unweighted marginal means of CL condition were (*M* = 4.26, *SE* = .01) for the low CL condition and (*M* = 4.68, *SE* = .11) for the high CL condition. This indicates that the manipulation of the CL was successful, as participants reported experiencing more CL when in the high CL condition compared to the low CL condition. However, although the difference between these two means was significant, they were quite close in the average reported cognitive load between the two conditions. Therefore, this may have impacted the study results and future research should explore additional methods to further increase cognitive load. An analysis of the SES background on participants' perceived CL indicated that the main effect was not statistically significant, *F*(1, 256) = 1.76, *p* = .186,  $\eta_p^2$  = .007. The interaction effect between CL and SES on perceived CL was not significant, *F*(1, 256) = 1.64, *p* = .201,  $\eta_p^2$  = .006.

## **Hypothesized Results**

Hypothesis one predicted that participants would evaluate the job applicant with a low SES background as being less hireable than the job applicant with a high SES background. Furthermore, hypothesis six predicted that an interaction would occur such that this difference would be particularly exacerbated for participants who were under high CL, as compared to low CL.

A two-way ANOVA was conducted to examine the effects of SES background and CL on hireability, and the interaction between them. The assumption of homogeneity of variances was not violated, as assessed by Levene's test for equality of variances, p = .316. Results indicated no main effect of SES background, as there was no significant difference in hireability for the job applicant with a low SES background (M = 4.65, SE = .13) versus high SES background (M = 4.72, SE = .12), F(1,248) = 0.17, p = .684,  $\eta_p^2 = .001$ . There was also no main

effect of CL, as indicated by no significant difference in hireability for participants who were placed under low CL (M = 4.57, SE = .12) versus high CL (M = 4.81, SE = .14), F(1,248) = 1.83, p = .178,  $\eta_p^2 = .007$ . Finally, the interaction effect between the SES of the job applicant's background and CL was not statistically significant, F(1,248) = .12, p = 0.750,  $\eta_p^2 = .000$ . These results indicate that participants were not evaluating the low SES job applicant as being less hireable compared to the high SES job applicant, regardless of whether they experienced CL while evaluating the applicant (Figure 1).

#### Figure 1





*Note*. Figure describing two-way ANOVA results for hypotheses one and six testing the SES condition and CL condition on perceived hireability ratings of the job applicant.

We then tested two-way interactions between SES condition and three separate moderator variables (H3: participant's SES, H4: participant's ATP, and H5: participant's SDO) in predicting the dependent variables of perceived hireability, competence, warmth, and decision time. We did not find evidence of any significant interactions involving these variables, except for a single interaction between the participant's ATP and the job applicant's SES in predicting decision time. However, given this was the only significant interaction we found among the many tested, we would advise caution against over-interpreting this significant finding. We report the significant two-way interactions for the dependent variables of interest below. All other non-significant two-way interactions are reported in Appendix H.

Hypothesis two predicted that participants would evaluate the job applicant with a low SES background as also being lower in competence compared to the job applicant with a high SES background. A factorial ANOVA was conducted to examine the job applicant's competency scores. The assumption of homogeneity of variances was not violated, as assessed by Levene's test for equality of variances, p = .252. Results indicated that there was no main effect of SES background, as there was no significant difference in competency scores for the job applicant with a low SES background (M = 3.32, SE = .08) versus high SES background (M = 3.34, SE = .08) conditions, F(1, 256) = 0.042, p = .837,  $\eta_p^2 = .000$ . There was no main effect of CL on competency scores, as indicated by no significant difference between competence ratings for the low CL condition (M = 3.25, SE = .07) compared to the high CL condition (M = 3.42, SE = .08), F(1, 256) = 2.31, p = .130,  $\eta_p^2 = .009$ . There was no interaction of the SES background and CL on competency scores, F(1, 256) = 1.76, p = .186,  $\eta_p^2 = .007$ . These results indicate that participants were not evaluating the job applicant as being lower in competence when evaluating him with a low SES background, compared to a high SES background. The job applicant's

competency ratings did not differ, regardless of whether the evaluator experienced CL (Figure

2).

# Figure 2





*Note*. Figure describing results for hypothesis two, which analyzed the impact of SES and CL on the job applicant's competence score.

Hypothesis three predicted that the participant's own SES would serve as a moderator variable, affecting the participant's evaluation of the job applicant's a) perceived hireability b) competence c) warmth, and d) decision time. Specifically, it was predicted that higher SES participants would be more likely to rate the job applicant with a high SES background as being more hireable compared to lower SES participants who would make more equivalent hireability

between the two SES backgrounds. A moderation analysis was conducted using Hayes' PROCESS Macro (Model 1) in SPSS to examine the effect of the job applicant's SES background (high SES; low SES) on perceived hireability (DV), and whether this effect was moderated by the participant's own SES (W). The overall model was not significant,  $R^2 = .01$ , F(3, 243) = 0.68, p = .568, indicating that the model only explained 0.1% of the variance in perceived hireability (Table 2). There was no significant main effect of the job applicant's SES background on perceived hireability,  $\beta = -0.32$ , t(243) = -0.49, p = .621, suggesting that there was no difference in perceived hireability between the job applicant with a high versus low SES background (consistent with the ANOVA results above). The participant's own SES was also not a significant overall predictor of perceived hireability,  $\beta = 0.01$ , t(243) = 0.07, p = .947, indicating that there was no direct effect of the participant's SES on perceived hireability. There was also no significant interaction effect between the job applicant's SES and the participant's own SES on perceived hireability,  $\beta = 0.08$ , t(243) = 0.71, p = .476. This indicates that the job applicant's SES on perceived hireability does not depend on the participant's own SES.

# Table 2

Results of Two-way Interaction Effects for SES and Participant's SES on DVs

Moderator		β	t	р			
Perceived Hireability	Intercept	4.56	8.96	<.001			
	SES	-0.32	-0.49	.621			
	SEP_P	0.01	0.07	.947			
	Interaction	0.08	0.71	.476			
	Model Summary: $F(3, 243) = 0.68, p = .567, R^2 = .01$						
Competence	Intercept	3.04	9.61	<.001			
	SES	11	-0.28	.783			
	SEP_P	.04	0.82	.411			
	Interaction	.03	0.41	.680			
	Model Summary:	$R^2 = .01, F(3, 251)$	= 1.27, p = .280	5			
Warmth	Intercept	3.73	14.15	<.001			
	SES	14	-0.41	.679			
	SEP_P	.01	0.14	.888			
	Interaction	.02	0.37	.710			
	Model Summary: $R^2 = .00, F(3, 251) = 0.23, p = .879$						
Decision Time	Intercept	480.14	27.64	<.001			
	SES	-10.47	-0.30	.768			
	SEP_P	24	-0.05	.959			
	Interaction	3.60	0.60	.600			
	Model Summary: $R^2 = .01$ , $F(3, 229) = 0.60$ , $p = .614$						

Hypothesis four predicted that the participant's own ATP would serve as a moderator variable, affecting the participant's evaluation of the job applicant's a) perceived hireability b) competence c) warmth, and d) decision time. Specifically, it was predicted that participants with lower ATP (i.e., hold a negative ATP) would be more likely to rate the job applicant with a high SES background as being more hireability compared to lower SES participants who would make more equivalent hireability ratings between the two SES backgrounds. A moderation analysis

was conducted using Hayes' PROCESS Macro (Model 1) in SPSS to examine the effect of the job applicant's SES background (high SES; low SES) on perceived hireability (DV), and whether this effect was moderated by the participant's own ATP (W). The overall model was not significant,  $R^2 = .01$ , F(3, 248) = 0.68, p = .492, indicating that the model only explained 0.1% of the variance in perceived hireability (Table 3). There was no significant main effect of the job applicant's SES background on perceived hireability,  $\beta = 1.22$ , t(248) = 1.45, p = .148, suggesting that there was no difference in perceived hireability between the job applicant with a high versus low SES background. The participant's own ATP was also not a significant overall predictor of perceived hireability,  $\beta = 0.23$ , t(248) = -1.35, p = .177, indicating that there was no direct effect of the participant's SES and the participant's own ATP on perceived hireability,  $\beta = -0.32$ , t(248) = -1.37, p = .173. This indicates that the job applicant's SES on perceived hireability does not depend on the participant's own ATP.

A moderation analysis was conducted using Hayes' PROCESS Macro (Model 1) in SPSS to examine the effect of the job applicant's SES background (high SES; low SES) on the time it took participants to evaluate the applicant (i.e., decision time); (DV) and whether this effect was moderated by the participant's ATP (W). The overall model was significant,  $R^2 = .04$ , F(3, 234) = 3.40, p = .018; however, it is important to note that the model only explained 4% of the variance in decision time. There was a significant main effect of the job applicant's SES background on decision time,  $\beta = -102.18$ , t(234) = -2.29, p = .023, 95% CI [-189.98, -14.39], indicating that an increase in SES of the job applicant correlated with a decrease in decision time for the evaluator. The participant's ATP was not a significant predictor of decision time,  $\beta = -7.25$ , t(234) = -0.82, p = .412, 95% CI [-24.65, 10.15], indicating that there was no direct effect

of the participant's ATP on decision time. There was, however, a significant interaction effect between the job applicant's SES and the participant's ATP on decision time,  $\beta = 31.72$ , t(234) = 2.60, p = .010, 95% CI [7.65, 55.80]

The conditional effect of SES on decision time was probed at three levels of ATP: the mean and one *SD* above and below the mean. At the highest level of ATP (one *SD* above the mean), the job applicant's SES had a significant effect on decision time,  $\beta = 35.24$ , t(234) = 2.65, p = .009, 95% CI [9.03, 61.44]. However, the job applicant's SES did not significantly predict decision time at the mean of ATP,  $\beta = 10.74$ , t(234) = 1.14, p = .256, 95% CI [-7.84, 29.31], or one SD below the mean,  $\beta = -13.77$ , t(234) = -1.03, p = .305, 95% CI [-40.12, 12.59]. In summary, ATP was found to moderate the relationship between the job applicant's SES and decision time, meaning that for participants with a positive ATP (one *SD* above the mean), as the applicant's SES increases, these individuals take longer to evaluate that individual. However, it is important to interpret these results with caution as this was the only significant interaction among the many that were tested in our exploratory analyses.

Ta	ıble	3
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Results of Two-way Interaction Effects for SES and Participant's ATP on DVs

Moderator		β	t	р			
Perceived Hireability	Intercept	3.81	6.19	<.001			
	SES	1.22	1.45	.149			
	SEP_P	0.23	1.35	.177			
	Interaction	-0.32	-1.37	.173			
	Model Summary:	F(3, 248) = 0.81, p	$=.492, R^2 = .0$	1			
Competence	Intercept	3.28	8.43	<.001			
	SES	.51	0.96	.340			
	SEP_P	.01	0.08	.933			
	Interaction	14	-0.94	.349			
	Model Summary:	$R^2 = .01, F(3, 256)$	p = 0.56, p = .64	14			
Warmth	Intercept	3.43	10.63	<.001			
	SES	.44	0.99	.321			
	SEP_P	.09	1.10	.273			
	Interaction	13	-1.07	.288			
	Model Summary: $R^2 = .01$ , $F(3, 256) = 0.47$ , $p = .700$						
Decision Time	Intercept	204.26	6.27	<.001			
	SES	-102.18	-2.29	.023			
	SEP_P	-7.25	-0.82	.412			
	Interaction	31.72	2.60	.010			
	Model Summary: $R^2 = .04$ , $F(3, 234) = 3.40$ , $p = .018$						

Hypothesis five predicted that the participant's own SDO would serve as a moderator variable, affecting the participant's evaluation of the job applicant's a) perceived hireability, b) competence c) warmth, and d) decision time. Specifically, it was predicted that participants with higher SDO (i.e., hold a strong belief of inequality and group hierarchy) would be more likely to rate the job applicant with a high SES background as being more hireability compared to lower SES participants who would make more equivalent perceived hireability ratings between the two

SES backgrounds. A moderation analysis was conducted using Hayes' PROCESS Macro (Model 1) in SPSS to examine the effect of the job applicant's SES background (high SES; low SES) on perceived hireability (DV), and whether this effect was moderated by the participant's own SDO (W). The overall model was not significant,  $R^2 = .01$ , F(3, 248) = 0.65, p = .586, indicating that the model only explained 0.1% of the variance in perceived hireability (Table 4). There was no significant main effect of the job applicant's SES background on perceived hireability,  $\beta = -0.07$ , t(248) = -0.20, p = .843, suggesting that there was no difference in perceived hireability between the job applicant with a high versus low SES background. The participant's own SDO was also not a significant overall predictor of perceived hireability,  $\beta = -0.11$ , t(248) = -1.18, p = .241, indicating that there was no direct effect of the participant's SES and the participant's own SDO on perceived hireability,  $\beta = 0.07$ , t(248) = 0.54, p = .591. This indicates that the job applicant's SES on perceived hireability, does not depend on the participant's own SDO.

# Table 4

Results of Two-way Interaction Effects for SES and Participant's SDO on DVs

Moderator		β	t	р			
Perceived Hireability	Intercept	4.90	18.55	<.001			
	SES	-0.07	-0.20	.843			
	SEP_P	-0.11	-1.18	0.24			
	Interaction	0.07	0.54	.591			
	Model Summary: $F(3, 248) = 0.65 p = .586, R^2 = .01$						
Competence	Intercept	3.37	20.17	< .001			
	SES	03	-1.5	.878			
	SEP_P	02	-0.40	.692			
	Interaction	.02	0.30	.763			
	Model Summary: $R^2 = .00, F(3, 256) = 0.07, p = .977$						
Warmth	Intercept	3.94	28.65	< .001			
	SES	00	0.02	.985			
	SEP_P	06	-1.30	.195			
	Interaction	01	-0.13	.897			
	0						
Decision Time	Intercept	188.05	13.20	<.001			
	SES	19.80	1.03	.302			
	SEP_P	-4.13	-0.80	.426			
	Interaction	-3.65	-0.54	.591			
	Model Summary: $R^2 = .02$ , $F(3, 234) = 1.65$ , $p = .180$						

Hypothesis seven predicted that participants in the high CL condition would be faster in evaluating the job applicant compared to participants in the low CL condition. A factorial ANOVA was conducted to examine the length of time it took for participants to report having made an evaluation of the applicant. The assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances, p = .004. However, since the group sample sizes were approximately equal (N = 112, 126, 141, 97) and the ratio of the largest group variance to the smallest group variance was less than three, we continued running the two-way

ANOVA. As suggested in Jaccard (1998), it is feasible to still run the two-way ANOVA because it is somewhat robust to the heterogeneity of variance in this situation. Interestingly, the results indicated the opposite of what we had predicted in that there was a main effect of CL on decision time, however, participants in the low CL condition (M = 173.91, SE = 6.13) reported taking less time to evaluate the applicant compared to those in the high CL condition (M = 194.06, SE =7.53), F(1, 234) = 4.74, p = .030,  $\eta_{p}^{2} = .0120$ . There was no main effect of SES background condition on decision time, as there was no significant difference for those in the low SES background condition (M = 179.41, SE = 7.22) compared to the high SES background condition  $(M = 189.56, SE = 6.50), F(1, 234) = 1.09, p = .297, \eta_p^2 = .005$ . There was no interaction of the SES background and CL on decision time, F(1, 234) = 1.72, p = .191,  $\eta_p^2 = .007$ . In summary, we found that participants who experienced low CL actually took longer to evaluate the applicant compared to those who were under a high level of CL (Figure 3). This could be because evaluators were trying to simultaneously complete all of the tasks, perhaps attending to the video in chunks, thus taking longer to make their decision. Meanwhile, there was no difference in decision time for participants evaluating the job applicant with a low or high SES background.

# Figure 3



Two-Way ANOVA Results for SES and CL on Decision time



*Note*. Results for hypothesis seven which analyzed mean differences in the time it took participants to evaluate the job applicant (decision time).

# **Exploratory Analyses**

## ANOVAs

In addition to the primary hypothesized relationships explored above, we collected additional variables for exploratory analyses to inform future research. Although we did not make specific hypotheses, we did explore whether the condition type influenced the dependent variables of skipping through the video. This is important because it could potentially indicate that a subtle form of discrimination is occurring in that participants might be utilizing discriminatory cues from the AVI background to inform their evaluation of the applicant. Skipping through the video could indicate that participants are not fully listening to the job applicant's interview responses. A two-way ANOVA did not reveal any significant findings for participants' reports of the extent that they skipped through the video. Interestingly, 90.8% of participants reported that they did not skip any part of the interview, and only 6.9% of participants reported skipping about 25% of the video.

We also explored the reported influence of the background on the participants' evaluation of the job applicant. This could indicate whether participants are aware that they might have been using cues from the job applicant's background to create their evaluation, although it is important to be aware of potential socially desirable responses. However, a two-way ANOVA also did not reveal any significant findings for this variable. Furthermore, 51.9% of participants reported that the background "did not at all influence" their rating of the job applicant, while 21.5% reported that it "slightly influenced," and 18.1% reported that it "moderately influenced." It would be interesting to explore whether 'real' evaluators might be more invested in examining these cues, particularly if they are hiring an individual that they themselves would be working with. Future research should examine whether these proportions are consistent with hiring managers working in an actual organization and examining a real job applicant.

## **Three-way Interactions**

In addition to running the predicted two-way interactions, we also tested the three-way interactions as an exploratory analysis between the SES condition, CL condition, and three separate moderator variables (participant's SES, participant's ATP, and participant's SDO) on predicting the dependent variables of interview performance, competence, warmth, and decision time. In the analysis with SES, CL, and participant's SES on decision time, the only significant
finding was the main effect of CL on decision time,  $\beta = 0.44$ , t(229) = 2.10, p = .039, 95% CI [3.51, 129.60], indicating that participants in the low CL condition were quicker to make their evaluation of the applicant compared to participants in the high CL condition. In the analysis with SES, CL, and ATP on decision time, the only significant finding was the interaction effect between SES and the participant's ATP,  $\beta = 0.46$ , t(232) = 1.90, p = .059, 95% CI [-.72, 37.14]. Due to the number of analyses run in this study, it is important to not over-interpret the findings of these results. We report the three-way interaction results for the moderators of participants' SES, ATP, and SDO on perceived hireability in Appendix VIII.

#### **Chapter Four: Discussion**

AVIs have recently soared in popularity, primarily due to the convenience and flexibility they offer both job applicants and organizations (Brenner et al., 2016; Lukacik et al., 2022). AVIs have changed the hiring landscape in that organizations can now "interview" a much broader pool of applicants. Furthermore, applicants can more easily complete these interviews in a convenient location and on a schedule that works best for them. However, despite the abundance of benefits that AVIs offer, this technology must be carefully evaluated to ensure that it provides job applicants with a fair interview assessment. Recent research has highlighted that there could be bias inherent in AVIs in that evaluators might use cues from the AVI background to determine their assessment of the applicant (Powell et al., 2023; Roulin et al., 2023). However, more investigation needs to occur to understand how evaluators perceive and utilize these cues to infer their final hiring decision.

The current study focused on a specific area of discrimination often overlooked in the selection literature: SES. We investigated the impact of SES on evaluators' perceptions of a job applicant in an AVI. We first sought to understand whether evaluators noticed these discrepancies in SES, as detected solely from the job applicant's background (low or high SES), through a carefully controlled manipulation. Past research has indicated that background cues in AVIs waver a fine line between being too subtle, such that the evaluator cannot detect them, versus being too overt, such that an evaluator is likely aware that this is a manipulation of the AVI (Roulin et al., 2023). This is compounded by the complexity that hiring managers in an organization are likely trained to avoid formally discriminating against job applicants (i.e., recognizing that it would be both inappropriate and illegal not to extend a job offer solely

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because an applicant is a parent). However, this does not overlook the more subtle forms of discrimination that might occur when evaluating AVIs.

Interestingly, we did not find that participants evaluated the job applicant's hireability differently based on manipulating the SES of his background. This is particularly intriguing as participants did, however, report noticing a difference in the SES of the background, indicating that the manipulation of the SES condition was effective. Consequently, our findings imply that although evaluators noticed the job applicant's SES, garnered specifically from his AVI background, it does not appear to be impacting their evaluation of the job applicant.

#### **Alternative Explanations for Study Results**

There are various reasons why evaluators may have rated both the low and high SES job applicants as having a similar level of perceived hireability. One explanation could be due to the interview itself. The job applicants' performance was intentionally targeted as an "average" interview. This interview performance level was chosen to reduce the potential for ceiling effects of perceived hireability if the interview was outstanding or floor effects if the interview was terrible. By having an average interview performance, the goal was to allow for more variability in the ratings of the applicant and for the SES background to have a more substantial influence on the final ratings. However, what could have occurred here is that participants evaluating the applicant did not feel that this job applicant's interview performance was very strong (total M = 4.37, SD = 1.38, across all four conditions for perceived hireability). Therefore, regardless of the SES of his background, they did not perceive him as having performed well in the interview.

Suppose we were to have altered the interview performance such that the job applicant was to have a very strong interview. In that case, the lower SES background may have detracted more from his perceived hireability rating, creating more variability in the final evaluations.

Conversely, if the job applicant had an abysmal interview performance, having a higher SES background might have boosted his perceived hireability. This could be because the evaluator could have excused his poor performance for situational reasons. In one study, Roulin et al. (2023) found that congruency of the evaluator's political affiliation with that of the job applicant corresponded with the evaluator being more "forgiving" towards lower competent individuals. It should be explored whether high SES has a bonus effect on job applicants' scores, where evaluators might conflate the job applicant's SES with their perceived competency and give this person the benefit of the doubt, i.e., be more forgiving towards the job applicant.

This outcome would align well with attribution theory, which describes how people explain the causes of behaviors and events (Weiner, 2008). According to this theory, people attempt to attribute a cause to a behavior to understand the motivation behind why it might have occurred (Reisenzein & Rudolph, 2008). For example, if an applicant had a weak interview performance but had a high SES background, an evaluator might perceive them as having an "off day" due to external circumstances. Therefore, the evaluator might be less punitive for this poor performance because competence aligns with natural stereotypes of higher SES individuals (Durante et al., 2017). The attribution theory states that the evaluator conflates the job applicant's SES (a dispositional trait) with his interview performance (situational trait). However, suppose an individual with a lower SES performs poorly. Since this aligns with stereotypes of lower SES individuals, the evaluator might base their judgment more on individual factors (e.g., believing the person is unqualified). The concern here is that the evaluator is using different measures (situational vs. dispositional traits) to create their assessment of the job applicant. This depends on their likeability towards him, potentially resulting in an unfair evaluation process.

The job position itself could also explain why participants did not rate the job applicant differently depending on his SES. The position was a General Sales Representative at PepsiCo, rated in our pilot study as a neutral SES position (M = 5.90, SD = 1.41). This means that someone applying for this job would not likely have an exceptionally high or low SES. Therefore, the purpose of selecting a neutral SES position was to ensure that either a low or high-SES individual would be considered an appropriate job applicant for the position. For example, if the job position was rated as being a very low SES, and someone with a very high SES were to apply for this position, this could have implications on their perceived fit for the role. Future research should explore how the SES of the job position (i.e., higher or lower SES) interacts with the job applicant's SES to affect their perceived hireability. This could indicate whether a lower SES is a particular barrier to attaining positions stereotyped as being more aligned with a higher SES.

Another explanation for these study findings pertains to the complicated nature of SES. There may have been a fit mismatch between low and high SES backgrounds. Specifically, there are multiple reasons why one might film their AVI in a specific location that is not indicative of their SES. This commonly occurs with younger job applicants who may have a low SES because they are just starting their careers. For instance, they may be filming in their parents' home, which indicates a high SES. In contrast, perhaps a job candidate lives in a very nice house but chooses to film their AVI in an unfinished part of their home. Therefore, participants might not directly infer the job candidate's SES from their background, which might explain why the SES manipulation did not appear to affect ratings such as perceived hireability, competence, or warmth. Finally, the intersection of social mobility and age is important when analyzing these study findings. Evaluators may extend leniency towards younger job candidates perceived to be lower in SES than older job candidates of the same SES level. This could be due to the assumption that individuals will naturally increase their SES as they age (i.e., experience SES mobility). Therefore, it is more acceptable to be "poor while younger." This concerns older job applicants who might already experience ageism in the hiring process. Given that the job applicant in this study was perceived as being in his mid-twenties, this might explain why the SES condition did not directly affect evaluators' perceptions of his perceived hireability. Perhaps if the job applicant were in his mid-fifties and still applying for the same position, the lower SES background could have had a stronger impact on his perceived hireability. The intersection of SES and ageism is an important area for future research, particularly when applied to AVIs.

## **Patterns of Correlation**

Even though the *manipulation* of SES (although successful based on the manipulation check data) did not impact our dependent variables, it is critical to note that a deeper examination of the data indicates that participants' *perceptions* of the applicant's SES and background did seem to be associated with their evaluation of the applicant. Although our analyses indicated that evaluators were not using SES manipulation to differ in their hireability or competence ratings of the job applicant, further inspection of correlations unveiled very interesting relationships. Specifically, there was a positive correlation between the participant's rating of the SES of the background and their rating of the perceived hireability of the job applicant (r = .31). This indicates an interesting phenomenon whereby the SES manipulation did impact the evaluator's perceptions of SES; however, it did not impact the perceived hireability of the job applicant. This is a noteworthy finding as it indicates that evaluators' perceptions of the background (i.e., based

on their own opinion of what they perceive as the SES of the living room) were related to how they evaluated the job applicant. This implies that these evaluators are utilizing their *perceptions of the SES* of the background in evaluating the applicant. There is an important distinction here; this is not the actual SES condition affecting the ratings but rather how participants perceive the SES of the living room.

Furthermore, the job applicant's SES, as rated by the participant, was correlated with his perceived hireability (r = .40). This is also particularly noteworthy because participants were instructed to rate the SES of the job applicant while specifically *ignoring* his AVI background. This relationship emphasizes that the evaluator's perceptions of the job applicant's SES are indeed impactful despite not directly influencing the perceived hireability of the applicant. Interestingly, the relationship between the perceived SES of the job applicant and the perceived SES of his background was positively correlated (r = .57). This correlation informs us that evaluators are likely using the job applicant's background to infer different perceptions of the job applicant's SES.

There were another series of interesting correlations concerning the participant's SES. The participant's SES was positively correlated with the perceptions of SES of the background (r = .32) and the SES of the job applicant (r = .39). Although we did not find that the participant's SES moderated any of the dependent variables, this correlation informs us that there is a relationship here that should be further explored. Therefore, future research should examine other indicators to determine why an evaluator might perceive an individual as high or low SES. It would also be interesting to explore how similar the evaluator perceives themselves to the job applicant and how this might affect the applicant's perceived hireability. This aligns well with recent AVI research finding that political congruence can lead to positive evaluations of applicants, likely due to perceived similarity (Roulin et al., 2023).

Another series of noteworthy correlations indicated interesting patterns amongst the examined variables. Specifically, the perceived SES of the job applicant (r = .40) and the perceived SES of the background (r = .28) correlated with his perceived competence. This indicates that there is indirect support for hypothesis two (i.e., lower SES job applicants will be rated as less competent), as evaluators might be utilizing the job applicant's SES to determine the applicant's competence. These findings highlight a paramount concern regarding using AVIs as a selection tool; hiring managers might perceive the job applicant differently based on the AVI background. Future research should probe this finding to understand to what extent the background might influence the perception of the job applicant and how that ultimately influences his perceived hireability.

## **Impact of CL**

Although many studies are conducted in settings where participants can maintain complete attentional resources on evaluating an applicant, managers are often on a strict time crunch in a real hiring setting. They must be as efficient as possible with their many competing demands. CL theory states that an increase in mental effort and difficulty can result in fewer cognitive resources available to allocate to task completion (Wang & Hao, 2020). Furthermore, multi-tasking can add to one's CL in that one's attention is being re-directed to multiple places. According to the CL theory, these conditions should exacerbate the utilization of potential stigma (Derous et al., 2016). Given this, we investigated the impact of CL on the perceived hireability of the job applicant. Specifically, we analyzed whether participants placed under high CL might be more likely to perceive the lower SES job applicant as less hireable than the higher SES job applicant. In the context of AVIs, this could impact how hiring managers evaluate the applicant, specifically whether they are utilizing job-irrelevant information (i.e., background cues) to determine the hireability of the applicant. Therefore, one explanation for why and when hiring managers engage in discrimination when evaluating AVIs could be due to CL.

When placed under a high CL, participants have much less time and attentional resources to allocate to a task (Paas & van Merriënboer, 2020). Derous et al. (2016) propose that stressors such as time pressure might influence an interviewer's ability to both collect and use additional information. Within this study, participants in the high CL condition had 12 minutes to watch the AVI, write a summary email of the article to their boss, and rate the job applicant on his perceived hireability. In comparison, participants in the low CL condition had unlimited time to watch the AVI and evaluate the applicant. We found that CL did not impact participants' evaluations of the perceived hireability of the applicant. However, we did find that the manipulation was successful insofar as participants did report experiencing a difference in CL, as we asked participants to report on the mental effort and perceived difficulty of completing these tasks. This indicates that although participants were experiencing a difference in CL, this did not appear to impact how they evaluated the job applicant of the AVI. One explanation for these findings could be that participants did not experience enough CL for them to utilize discriminatory background features in their assessment (i.e., low SES background cues). Although the CL means were significantly different, they did not have a very large effect size (low CL: M = 4.26, SE = .10; high CL: M = 4.68, SE = .11,  $\eta_p^2 = .031$ ) in comparison to the SES manipulation.

To better understand the underlying causes for the perceived hireability ratings, we explored whether participants differed in their self-report of how much the background influenced their job applicant evaluations. An evaluator placed under a higher CL may be more likely to allow the job applicant's background to influence their performance ratings. It could also be the case that someone evaluating a low SES background might be more likely to allow this to influence their perceptions of the applicant. However, participants did not report a difference in the influence of the background depending on the CL or the SES condition, as can be seen in Appendix H. Interestingly, 51.9% of participants reported that the background "did not at all influence" their rating of the job applicant, while 21.5% reported that it "slightly influenced," and 18.1% reported that it "moderately influenced." It is possible that participants did not want to admit to letting the background influence their performance ratings of the job applicant. It is also feasible that participants were distinctly aware that the background should not influence their evaluations of the applicant. Therefore, they ensured they attempted to solely evaluate the job applicant's interview performance.

In this study, we utilized CL to implement suggestions from previous work in this area, highlighting the need to tap into more subtle forms of discrimination (Roulin et al., 2023). By investigating the length of time that it took participants to evaluate an applicant, we sought to understand whether more subtle discrimination could have occurred. For example, participants might not be willing to overtly indicate that they would not hire this job applicant; however, if they were spending less time evaluating the low SES job applicant, this could imply that they were not providing him with the same level of attention and consideration as the high SES applicant. We found that low CL evaluators spent *less* time evaluating the applicant (i.e., reached their evaluation decision quicker) than high CL evaluators. This is very interesting as the high CL evaluators had 12 minutes to complete the tasks, while the low CL evaluators had unlimited time. It is possible that the high CL evaluators were not completing the tasks serially (i.e.,

watching the AVI, writing the email task, and evaluating the AVI) but were trying to complete all three tasks simultaneously. Therefore, the high CL group may not have been making their decisions as quickly while not attending intently to the AVI.

To further probe the effect of CL, we also examined whether participants reported watching the entire duration of the AVI (i.e., reported skipping through the AVI). This was recommended by Roulin et al. (2023) as a potential mechanism to evaluate the use of first impressions in an interview, specifically whether biases might occur more subtly. Overall, we did not find that participants differed in how much they skipped through the AVI for the SES background condition or the CL condition. Interestingly, 90.8% of participants reported not skipping any part of the interview, and only 6.9% reported skipping about 25% of the video. This is quite surprising, as one could presume that participants in the high CL condition would be more likely to report skipping through the video (as they have a limited time to complete the tasks) than those in the low CL condition. One explanation for this could be that participants did not want to self-report skipping through the video, and despite being informed that their response did not affect their pay, they felt that it would be better to report watching most of the video. If participants had made their decision quickly for the low SES condition and then skipped through the rest of the video, therefore not seeking disconfirming evidence, this would be a strong indicator that subtle forms of discrimination were likely occurring. Another explanation is that although participants did not skip through the AVI, they may have stopped paying focal attention to the video. However, it is also possible that participants were watching the AVI to its completion and seeking disconfirming evidence to evaluate the applicant fairly.

Although perceived hireability was the main variable of interest in this study, we were also curious to examine the job applicant's competence and warmth ratings, as these two constructs are often used in the literature to underlie stereotypes of different groups. A common stereotype is that poorer people are viewed as lower in competence but higher in warmth (Durante et al., 2017; Fiske et al., 2002). This is particularly concerning when viewed through a hiring lens, as competency is a primary indicator used in assessing applicants (Charbonneau et al., 2021). This implies that hiring managers are likely searching for indicators of this quality when evaluating job applicants. We examined whether the SES of the job applicant's AVI background might affect perceptions of his competence or warmth. Consistent with previous research, competence was positively correlated with perceived hireability (Durante et al., 2017) but did not differ based on condition. Interestingly, competence was also correlated with the participant's SES (r = .40) and the perception of the SES of the background (r = .28).

### **Characteristics of the Evaluator**

Consistent with stigma theory, we wanted to understand whether the characteristics of the evaluator (e.g., their own SES, ATP, and belief in an SDO) might impact the perceptions of the job applicant (Derous et al., 2016). In general, we did not find that these moderators affected the hireability of the applicant, as gleaned from both the two-way interaction of the SES condition and the three-way interaction (which included CL). We further examined these moderators and looked at additional outcomes such as competence, warmth, and decision time. Multiple analyses were carried out; therefore, it is careful not to overinterpret any significant findings as these could be due to chance. We did not find evidence of any significant interactions involving these variables, except between the participant's ATP and the job applicant's SES, which significantly predicted decision time. There was also a significant interaction between the SES condition, CL condition, and the participant's ATP in that participants in the low CL condition were quicker to

evaluate the applicant than participants in the high CL condition. Refer to Appendix H for all non-significant results. Interestingly, Derous et al. (2016) suggest looking at the speed of initial impressions (i.e., decision time) to understand the impact of stigma in the interview process. Given that there appears to be a pattern of CL on decision time, this warrants future research regarding how quickly evaluators make decisions.

In summary, although participants reported noticing a difference in the background and experiencing a difference in CL, this did not appear to affect how they evaluated the job applicant's perceived hireability. However, further exploration of these findings indicated that there may be other underlying factors here, such as the participant's own SES. This factor may affect both their SES perceptions of the background and the job applicant. Given that these two variables were then correlated with perceived hireability, there is a vast area of future research to explore regarding the role of SES in AVI evaluations.

#### **Theoretical Implications**

Our findings offer multiple theoretical contributions, significantly enriching our understanding of various psychological frameworks. This is the first design to effectively induce CL amongst evaluators to understand its effect on AVI hiring decisions. In doing so, we utilize Derous et al. (2016) dual-process framework of interview bias to understand whether CL impacts the use of type one and type two processing. Although CL itself does not directly impact hiring decisions, it may impact how attentive evaluators are to certain cues in the background. This has positive and negative consequences, as it could make evaluators less prone to utilizing jobirrelevant cues. However, it could simultaneously indicate that evaluators are not attending to all components of the AVI. Furthermore, in utilizing a multi-tasking paradigm, this research mirrors a real organizational setting whereby hiring managers constantly face competing demands and tight deadlines. Research shows that multi-tasking can decrease task performance (Howard et al., 2020). However, it is unclear from this study's findings whether multi-tasking affected evaluators' hiring perceptions. Therefore, this study adds to the nuances of this literature by exemplifying that the effects of CL and multi-tasking are not strictly linear.

This study also uses the dual-process framework of interview bias (Derous et al., 2016) to provide vital information about the use of stigma in interviews, specifically cues indicating one's SES. This framework is highly informative for describing how hiring managers process new information. We effectively manipulated the background of the AVI such that evaluators could perceive a difference in the SES of the job applicant. However, evaluators did not use stigmatizing SES cues to perceive the applicant negatively. This is informative as it conveys that evaluators are not necessarily overtly discriminating against applicants but rather appear to fairly evaluate applicants based on their verbal responses. However, within our study findings, we also demonstrate that *perceptions* of the SES of the applicant and their background are indeed associated with ratings. This is in line with theory stating that evaluators are utilizing cues in the AVI background to infer their ratings of the job applicant (Powell et al., 2023; Roulin et al., 2023)

We also theoretically contribute to the broader understanding of the complexities of subtle versus overt discrimination made in an AVI context. We included unique measures to tap into both types of discrimination. For example, we assessed overt discrimination, which directly targeted the perceived hireability and competence of the applicant, while subtle discrimination tapped into other outcomes, such as whether participants reported skipping through the video or the length of time it took participants to evaluate the applicant. This is informative as it appears that more subtle forms of discrimination could occur, which would have been overlooked had we just focused on overt measures. Past research has indicated that subtle forms of discrimination are also important to examine (Hebl et al., 2002) but have not yet been investigated in the AVI context.

This study also broadly contributes to the assessment and selection literature by focusing on the evaluators. We measured various components of the participants, such as their own SES, ATP, and SDO. Interestingly, however, these factors did not appear to affect evaluations. This informs our broader understanding of biases amongst evaluators and how this might influence their perceptions of job applicants.

Lastly, this research contributes to our understanding of perceptions of AVI backgrounds, which is a vital area to study to assess the broader implications of this selection process. Although previous studies have analyzed the effect of background cues to understand how this may negatively affect applicants' perception (Powell et al., 2023; Roulin et al., 2023), researchers have yet to focus specifically on SES cues. We established that SES is a stigma that evaluators can detect from a job applicant's AVI and that the SES of one's background is related to the perceived SES of the job applicant. Together, this burgeoning body of research demonstrates that AVI backgrounds can impact evaluations. However, this impact does not happen for all characteristics. For example, Roulin et al. (2023) found that parental status was detectable from one's background, but one's sexual orientation was harder to determine. Powell et al. (2023) found that the personality trait of conscientiousness was detectable via the examination of the cleanliness of the job applicant's room (i.e., background). We found that a job applicant's SES was detectable from their background and that inducing the evaluator to experience CL affected how long they spent evaluating participants. In sum, this current work furthers our understanding of AVIs and unveils new research areas to explore.

#### **Practical Implications and Contributions**

Although AVIs are a recent advancement in the hiring landscape, they are undoubtedly here to stay (Lukacik et al., 2022). Researchers must understand best practices for using and implementing AVIs to ensure that all job applicants are treated fairly in the hiring process. Mitigating any form of evaluator bias in AVIs is extremely important. This research suggests that certain components of the hiring manager's own life experience (e.g., their ATP) could impact how they perceive an AVI applicant. Therefore, organizations should be aware of this bias when implementing AVIs to hire job applicants. We recommend conducting training to raise awareness of how hiring managers' own perceptions of the world could impact their evaluations of others. In doing so, this would further standardize the assessment of AVIs. Powell et al. (2023) propose that interviewers should be made aware that backgrounds may affect perceptions of job applicants, and this study further supports those findings. Throughout this paper, it is implied that evaluators intentionally make use of these background cues. However, more research must be conducted to determine the extent to which such cue utilization is intentional or subconscious. Such a distinction is important in terms of the role of this research when making recommendations to practitioners. For example, if background cues are intentional, then specific training to mitigate such cues in AVI evaluation is vital. However, if such cue utilization is unintentional, then this warrants further discussion and reflection as to best practices for increasing awareness of the use of job-irrelevant background in inferring hiring decisions about a job applicant.

Lastly, this study utilized green screen technology (akin to a virtual background) that provides insight into a potential method of reducing SES bias in AVIs. Roulin et al. (2023) stated that creating a comparable stimulus on all cues except the background would be difficult. However, we effectively created this stimulus using green screen technology. Using a virtual background could be a mechanism by which low SES job applicants can reduce the impact their SES might have on their AVI evaluation by appearing to have a higher SES. Consequently, organizations should consider providing all job applicants with a standardized virtual background integrated into the AVI. This would ensure that job-irrelevant cues visible in the background are eliminated and not used to evaluate the applicant.

#### Limitations

Although this is a rigorously controlled and manipulated experiment, as with all study designs, there are limitations to this research that could have impacted our study findings. The first is our sample: participants recruited from the CloudResearch Connect platform. In an ideal research design, real hiring managers would evaluate real job applicants' AVIs, and these applicants would have actual SES differences perceivable from their homes. However, given the obvious ethical implications of such a study, this is neither a practical nor legal study. Regardless, we did select participants on CloudResearch Connect to have a background in business management and administration (N = 92). Upon request, CloudResearch Connect added an additional demographic of past or current hiring experience, which we utilized for the remaining sample (N = 208). However, this is a self-report demographic and, therefore, cannot be verified.

Another limitation of this study design is that participants only evaluated one job applicant's AVI. If we had evaluators rating multiple rates, we could have parsed out the rater main effects (i.e., rater bias) from potential rater interaction effects (i.e., rater-specific ratings of rates). However, given that this would have created a much more complicated study design, having evaluators rate just one job applicant would allow us to effectively control for both SES and CL.

Although we intentionally and carefully designed multiple aspects of the AVI, using both a mock interview and a green screen could have impacted the study findings. We chose to use a mock interview because it allowed us to ensure that an average interview performance was used (to allow for the background to influence the ratings). We also required an interview for a General Sales Representative at PepsiCo, which would have been extremely difficult to attain. In choosing to create our AVI with a green screen background, we sought input from psychology researchers who had experience with this process to seek best practices. Using a green screen would allow more control of our study design rather than filming the same interview in different locations. Not only did this ensure that we could use the same mock interview (vital for ensuring control of the study), but this allowed us to have consistency and control over other AVI factors, such as the lighting, camera angle, and background noise.

In summary, we carefully considered multiple elements of our study design and AVI creation to ensure we controlled for any potential confounds that could impact the findings. However, future research should consider using an actual sample of job applicants, have information about those applicants' SES, and determine whether this results in increased differences in hireability ratings garnered from AVIs.

#### **Future Directions**

Research into AVIs is gaining momentum, presenting numerous important directions for future exploration (Lukacik et al., 2022; Powell et al., 2023; Roulin et al., 2023). In addition to the above ideas regarding examining stereotypically high versus low SES backgrounds, researchers should consider various avenues of follow-up studies when seeking to advance AVI

research. Although participants did report noticing a difference in the SES of the job applicant, the SES condition could impact hireability if the low SES background detracted more from the overall AVI performance. For example, if the job applicant had low-quality Wi-Fi that kept cutting in and out while recording the AVI, this could have resulted in worse interview evaluations as the SES now affects the participant's experience and frustration of watching the AVI. This contrasts with only manipulating the background of the AVI, which is more of a passive experience for the evaluator. It would also be interesting to manipulate the job applicant's clothing to match the low and high SES conditions. In this current study, the job applicant wore the same interview attire (white collared shirt) for both SES conditions to control confounding variables and ensure that only the background was manipulated. However, it would also be interesting to alter the job applicant's interview attire to present the higher SES applicant as more polished, while the lower SES applicant could be more disheveled. One must be careful to ensure that these changes in interview attire are still indicative of SES and would not conflate with other characteristics outside of SES, such as attractiveness or conscientiousness.

Although the core tenant of this study was to understand the impacts of SES in AVIs, it is essential to recognize that both gender and race could potentially play a role in negatively impacting the hiring experience of low SES job applicants. Previous research on AVIs has explored the effect of gender, specifically looking at biases of sexual orientation and parental status (Roulin et al., 2023). The combined effects of gender, race, and SES on AVIs have not been studied yet, making it a significant topic for future research. This helps determine if AVIs unfairly assess certain groups of applicants.

This study was among the first to integrate CL into the hiring literature. Although we had limited findings here, the CL theory indicates that this could impact some settings (Derous et al.,

2016). Furthermore, it is crucial to investigate further the impact of hiring managers subjected to high levels of CL and the consequences of this outcome. Extending this research on CL would apply a practical lens to this AVI research by understanding how hiring managers might be influenced by external factors when evaluating AVIs.

In general, this study design could easily be adapted in various ways to further understand the impact of certain AVI background elements. For example, conditions could be altered to have a low, middle, and high SES background. This study design used a green screen function to effectively manipulate how participants perceived the job applicant's SES. This finding alone advances AVI research because it tightly controls all study conditions (i.e., interview performance, tone lighting, speed) while ensuring that the only manipulation being altered between conditions was the background.

In summary, AVIs are an exciting area to research as they hold vast opportunities for impacting the hiring process in real organizations. We encourage researchers to understand the impact of SES to look at alternative ways to manipulate this variable. This could include utilizing SES factors that interrupt the AVI (poor Wi-Fi) or changing the interview attire of the job applicant. We also recommend further exploring the influence of race, gender, and SES on perceptions of hireability. The role of CL in impacting perceived hireability should also be examined by understanding the extent to which CL may have a bell-curve effect on attentiveness towards the AVI. Lastly, our study effectively used a green screen to record the AVI and manipulate the background, which provides a practical method for applying this study design to explore other background cues.

## Conclusion

We investigated the impact of SES and CL on the perceived hireability of a job applicant's AVI. We found that although both SES and CL were effectively manipulated, these two factors did not appear to impact evaluations of the applicant. However, the perceived SES of the applicant and the perceived SES of the background, both of which were positively correlated with the participant's own SES, were related to the hireability of the applicant. This indicates that SES does appear to impact the hiring process in AVIs. Although AVIs offer various advantages for both organizations and job applicants, it is essential to understand potential biases that may arise due to the nature of this technology. This research sheds new light on the utilization of background cues in AVIs and was the first to utilize CL in an AVI evaluation setting to mirror how hiring managers are likely to evaluate AVIs in their organization. AVIs may enable new forms of discrimination that are more subtle but still impactful on job applicants. Continued research on AVIs will enhance our understanding of best practices to ensure that all job applicants experience a fair evaluation process.

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# Appendices

# Appendix A: Pilot Study Ratings of SES Backgrounds

Note. Final selection indicated by \*

Image	Rating (0) = Lowest SES, (10) = Highest SES
<pre>{"QID19_1"}</pre>	<i>M</i> = 7.15, <i>SD</i> = 1.80
<pre>ival for the set of the set</pre>	<i>M</i> = 3.24, <i>SD</i> = 1.31 *

{"QID19_3"}	<i>M</i> = 7.93, <i>SD</i> = 1.72
<pre>{"QID19_4"}</pre>	<i>M</i> = 3.41, SD = 1.59
{"QID19_5"}	<i>M</i> = 8.23, SD = 1.73

{"QID19_6"}	<i>M</i> = 1.28, SD = 1.35
{"QID19_7"}	<i>M</i> = 8.15, <i>SD</i> = 1.52
{"QID19_8"}	<i>M</i> = 6.66, <i>SD</i> = 1.53

<pre>("QID19_9")</pre>	<i>M</i> = 4.85, <i>SD</i> = 1.73
"QID19_10"}	<i>M</i> = 1.38, <i>SD</i> = 1.36
<pre>interface interface i</pre>	<i>M</i> = 7.51, <i>SD</i> = 1.47 *

<pre>{"QID20_2"}</pre>	<i>M</i> = 1.04, <i>SD</i> = 1.24
<pre>{"QID20_3"}</pre>	<i>M</i> = 7.34, <i>SD</i> = 1.37
{"QID20_4"}	<i>M</i> = 2.56, <i>SD</i> = 1.47

{"QID20_5"}	<i>M</i> = 6.25, <i>SD</i> = 1.53
<pre>{"QID20_6"}</pre>	<i>M</i> = 0.87, <i>SD</i> = 1.06
<pre>{"QID20_7"}</pre>	<i>M</i> = 7.11, <i>SD</i> = 1.58

<image/>	<i>M</i> = 1.52, <i>SD</i> = 1.17
"QID20_9"}	M = 8.15, SD = 1.5
"QID20_10"	<i>M</i> = 1.79, <i>SD</i> = 1.3

## Appendix B: LinkedIn Article (CL Manipulation)

## Hybrid work environments: Friend or foe?

Two years ago, "hybrid" to most people meant an energy-saving vehicle. Now, it's the word on everyone's lips as employees and employers navigate the future of the workplace in a post-COVID-19 world. "Nobody cared about this until the pandemic...now everyone does," says University of Calgary researcher and psychology professor Dr. Thomas O'Neill, BA'05, PhD, who has had a nearly 20-year head start on understanding remote and hybrid work environments — his undergraduate honours thesis in psychology centred around personality and virtual teamwork.

Since completing his undergrad at UCalgary, O'Neill has worked in research and with industry to assess hybrid and remote working environments. A faculty member in UCalgary's Department of Psychology since 2011, he is also an adjunct professor with the Future of Work Institute at Curtin University in Western Australia. This work intersects at the Individual and Team Performance Lab, where O'Neill supervises seven students in research to further knowledge in industrial/organizational psychology. The lab's vision: to create a world where all teams reach their full potential. In addition to research, mentorship, and consultation, the team has also put together a suite of open-access tools to address topics such as team health and conflict management. For O'Neill, there is strong evidence to suggest that hybrid, flexible work environments benefit individuals and teams, but there's more to it.

## Make data-informed decisions

Survey data has found workers generally in support of a hybrid work model. A Statistics Canada survey found 80 per cent of "new" remote workers (those who previously worked outside of the home prior to COVID, but switched to remote work during the pandemic) in favour of working at least half-time from home once the pandemic is over. But O'Neill says work needs to be done up front by employers in order to make this new paradigm successful. "Employees can sniff out really quickly if you're doing it because you want to enrich their work and life, or if you're doing it for the 'bottom line' or fears of mass resignation," he says. "This isn't about relenting — that's the wrong motivation. This is about improving work and life." Organizations need to consult employees (surveys, regular pulse checks), strategize (set business goals and visioning), plan (address organizational policies and practices) and support (ready the workforce with knowledge, skills and abilities needed to function in a hybrid working environment), so the workplace can be set up for long-term success. "It can be easy to get overwhelmed with a lot of new logistical details, maybe even abandon it all together. I think that would be a big mistake," O'Neill says. "It's in an organization's best interest to treat this opportunity as a competitive advantage — retaining and competing for talent."

## Set a team charter

In addition to organizational considerations, O'Neill suggests each individual team create a team charter. Also known as a set of agreements or standard operating procedures for a team, a
charter's aim is to address key issues around group communication, co-ordination and logistics. O'Neill also suggests defining as a group what makes a day in the office "worth it." "Meetings can be huge source of inefficiency and a suck on engagement, especially in certain environments or at busy times," he says. As a general rule of thumb, O'Neill suggests meetings happen either wholly remotely or wholly in-office. In meetings that happen primarily in-office, "remote attendees don't get engaged as well," says O'Neill. "They're a good backup if, say, your kid is sick, but have them as backups, not as defaults."

Intention-setting, O'Neill stresses, can be a useful exercise in determining what a day in the office should be. Collaborative activities and carving out time to build relationships may happen more easily in person. O'Neill suggests reintroducing planning to eat lunch together, going for a coffee, talking a walk, even grabbing a drink after work as meaningful ways of deepening connections.

#### LinkedIn Article Review Questions:

- 1) In the article, what percentage of "new" remote workers favor working at least halftime from home once the pandemic was predicted to be over?
  - a) 5% b) 20% c) 30% d) 80%
- 2) What does the article describe as being the aim of a team charter?
  - a) To determine who is responsible for planning office birthdays
  - b) To determine where the office should go for Friday lunches
  - c) To address critical issues around group communication, coordination, and logistics
  - d) To only create social bonding and camaraderie among team members
- 3) According to the article, what is an example of an activity that can deepen connections in a hybrid work environment?
  - a) Avoiding any non-work-related interactions
  - b) Keeping conversations strictly professional
  - c) Planning to eat lunch together or going for a coffee
  - d) Maintaining strict boundaries between work and personal life
- 4) The article suggests that organizations should regularly consult employees via the use of which method?
  - a) Very strict performance evaluations and disciplinary hearings
  - b) Catching them for a very long chat in the elevator
  - c) Emailing employees after hours
  - d) Surveys and regular pulse checks

Note. Correct answers are in bold.

#### Appendix C: Recruitment Advertisement for AVI Actor

# IN SEARCH OF:

WHITE, MALE ACTOR WHO CAN PASS FOR MID-TWENTIES TO PARTICIPATE IN A MS.C. THESIS STUDY.



# IF INTERESTED IN PARTICIPATING, PLEASE <u>FIRST</u> CONTACT: MADELINE.SPRINGLE@UCALGARY.CA

#### First 10 participants to respond will be asked to:

- Provide a selfie (no headshot please)
- Film a 30 second video introducing yourself
- For this, you'll be compensated with a \$10 gift card

#### Then, one of these actors will be asked to:

- Join the researcher at the U of C Library
- Film scripted answers to four interview questions
- Compensated \$25/hour for approximately 3 hours.

## THANK YOU FOR YOUR INTEREST!

## **Appendix D: Pilot Study Ratings of Actor's Face and Voice**

Note. Final selection indicated by \*\*

Actor ID	Picture	Face Rating	Voice Rating
{"QID5_1"}		<i>M</i> = 4.92, <i>SD</i> = 1.39	<i>M</i> = 6.46, <i>SD</i> = 1.73
{"QID5_2"} **		<i>M</i> = 4.79, <i>SD</i> = 1.46	<i>M</i> = 5.00, <i>SD</i> = 1.79
{"QID5_3"}		<i>M</i> = 4.56, <i>SD</i> = 1.57	<i>M</i> = 4.82, <i>SD</i> = 1.54
{"QID5_4"}		<i>M</i> = 6.13, <i>SD</i> = 1.63	<i>M</i> = 5.28, <i>SD</i> = 1.36

#### Appendix E: Job Description for General Sales Representative at PepsiCo.

Job Title: General Sales Representative Company: Pepsi Beverage Company (PepsiCo) Location: Calgary, Alberta

**Job Description**: We are seeking a highly motivated and results-driven Sales Representative to join our team at PepsiCo. The Sales Representative will be responsible for promoting and selling PepsiCo products to new and existing customers within the assigned territory. This role requires a strong understanding of sales strategies and techniques and the ability to build and maintain relationships with customers. The Sales Representative will work closely with the sales management team to develop and implement strategies to increase sales and achieve company goals.

#### Key Responsibilities:

- Develop and maintain relationships with new and existing customers within the assigned territory
- Achieve sales targets and objectives set by the company through effective sales techniques and strategies
- Promote and sell PepsiCo products to customers, including product demonstrations and presentations
- Identify and capitalize on new sales opportunities through market research and analysis
- Provide customer service and support to ensure customer satisfaction, addressing and resolving any issues or concerns in a timely manner
- Keep accurate records of sales and customer information using CRM tools
- Attend sales meetings and training sessions as required to stay current with new products, promotions, and industry trends
- Collaborate with the sales team to develop and implement marketing plans and promotions
- Work closely with the sales management team to provide regular updates on sales activities and progress

#### **Qualifications**:

- Proven sales experience, with a minimum of 2 years in the sales field
- Strong communication and interpersonal skills, with the ability to build and maintain relationships with customers
- Self-motivated and results-driven, with a proven track record of achieving sales targets
- Ability to work independently and as part of a team
- Strong analytical and problem-solving skills
- Valid driver's license and reliable transportation
- Experience in the food and beverage industry is a plus
- Bachelor's degree in Marketing, Business Administration or a related field is preferred
- PepsiCo offers a competitive salary, benefits package, and a dynamic and fast-paced work environment. If you are a driven and self-motivated individual with a passion for sales, we encourage you to apply for this exciting opportunity.

#### Appendix F: Standardized Questions and AVI Script for an "Average Interview"

# 1. Please tell us about your previous sales experience and how it has prepared you for this role at Pepsico.

**Answer**: I have been working in sales for about 5 years now. I started as a sales representative for a small company that sold office equipment. I was responsible for cold calling, scheduling appointments, and visiting clients to make sales. Through this experience, I learned how to effectively communicate with customers, handle objections, and close deals. I also learned how to use a CRM system to keep track of my sales and customer information. I was able to achieve my targets consistently, and I was able to increase the sales of my team members as well. **Summary:** 

- As a sales representative, I gained valuable skills in effective communication, objection handling, and closing deals. These skills have been critical in all my sales roles since then.
- Learning how to use a CRM system was a key takeaway from my early sales experience. Being able to manage and organize my sales and customer information efficiently has saved me a lot of time and made me more effective.
- Overall, my time in sales has taught me the importance of persistence and resilience. Sales can be tough, but it's important to stay positive and keep pushing through the rejections to achieve success.

#### 2. How do you approach building and maintaining relationships with customers?

**Answer**: I approach building and maintaining relationships with customers by being friendly and professional with them. I always ask for their needs and try to address them. I follow up with customers after the sale to make sure they are satisfied and if they need any further assistance. I also try to stay in touch with them through emails or phone calls to keep them updated on new products or promotions. I keep notes of their preferences and purchase history, so I can personalize my communication and offer them relevant products and promotions. Additionally, I always try to resolve any issues they might have in a timely and efficient manner to ensure their satisfaction.

#### **Summary:**

- When building and maintaining customer relationships, I prioritize being friendly and professional, ensuring a positive and approachable demeanor.
- I actively engage with customers by asking about their needs and actively working towards addressing them, ensuring their satisfaction.
- Following a sale, I make it a point to reach out to customers to ensure their satisfaction and offer any further assistance they may require.
- I maintain regular contact with customers through emails or phone calls, keeping them informed about new products and promotions to enhance their shopping experience.

• By keeping detailed notes on their preferences and purchase history, I am able to personalize my communication, tailoring offers and recommendations to their specific needs and interests. Additionally, I prioritize prompt and efficient resolution of any issues they may encounter, further enhancing their satisfaction.

# 3. Please provide an example of a time when you successfully met or exceeded a sales target. Answer: One time, I was able to exceed my sales target by 10%. I did this by identifying the needs of my customers and proposing additional products that would complement their purchase. I also offered a special promotion to close the sale. For example, a customer was buying a new computer, I asked about their needs and found out they were looking for a printer as well. I offered them a package deal, where they could purchase a computer and a printer at a discounted price. Additionally, I offered them a free scanner if they purchased that day. This strategy helped me to boost my sales, as it provided value to the customer and made it more convenient for them to purchase everything they needed in one place.

#### Summary:

- I was able to exceed my sales target by 10% by identifying the needs of my customers and offering additional products that complemented their purchase.
- To close the sale, I provided a special promotion that offered value to the customer.
- For example, when a customer was buying a computer, I offered a package deal that included a printer at a discounted price and a free scanner if they purchased that day.
- This strategy made it more convenient for the customer to purchase everything they needed in one place, which helped to boost sales.
- By focusing on the customer's needs and providing value through promotions, I was able to exceed my sales target and achieve great results.

#### 4. How do you stay current with industry trends and new products?

**Answer**: I try to attend trade shows and events to see new products and learn about the latest trends in the industry. Additionally, I keep in touch with other sales representatives and industry professionals through networking events and social media to stay informed about industry developments.

#### Summary:

- To stay current with industry trends and new products, I actively read industry-related news and articles online.
- Attending trade shows and events allows me to see new products firsthand and gain insights into the latest industry trends.
- Networking events and social media help me stay connected with other sales representatives and industry professionals, enabling me to stay informed about industry developments.

## Appendix G: Asynchronous Video Interviews

Link to Low SES AVI Video: <u>https://www.youtube.com/watch?v=KajNms8UyK8</u>

Link to High SES AVI Video: <u>https://www.youtube.com/watch?v=1C-k9IksZ8k</u>

#### **Appendix H: Additional Exploratory Results**

#### Exploratory ANOVAs

**Influence of Background.** We conducted an ANOVA to examine whether condition type affected the influence of the background in evaluating the AVI. Participants were asked to report on the extent that the background of the job applicant's AVI might have influenced their ratings of the applicant. Responses were anchored on the following scale: 1 (*I'm not sure*); 2 (*Did not influence at all*); 3 (*Slightly influenced*); 4 (*Moderately influenced*); 5 (*Strongly influenced*). There was no main effect for SES condition on the influence of the background in perceived hireability for the low SES (M = 2.83, SE = .09) or high SES background (M = 2.66, SE = .08), F(1, 256) = 2.03, p = .155,  $\eta_p^2 = .009$ . There was also no main effect for CL for the low CL (M = 2.76, SE = .08) or high CL condition (M = 2.73, SE = .09), F(1, 256) = .07, p = .790,  $\eta_p^2 = .000$ . There was also no significant interaction effect, F(1, 256) = .35, p = .552,  $\eta_p^2 = .002$ .

Watching Entirety of AVI (Skipping AVI). We conducted an ANOVA to analyze if condition type influenced whether participants reported skipping through the AVI. Participants were asked to report whether they skipped through any part of the AVI, on the following anchors: 1 (*I did not skip any part of the interview; 0%*); 2 (*I skipped some parts of the interview; skipped about 25%*); 3 (*I skipped about half of the interview; skipped about 50%*); 4 (*I skipped most of the interview; skipped about 75%*); 5 (*I skipped almost all of the interview; skipped about 95%*). The assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances, p = .004. However, since the group sample sizes were approximately equal (N = 124, 137, 143, 118) and the ratio of the largest group variance to the smallest group variance was less than 3, we continued running the two-way ANOVA (Jaccard, 1998). Results indicated that there was no main effect for SES condition as the marginal means did not significantly differ for the low SES background (M = 1.14, SE = .04) or high SES background (M = 1.11, SE = .04), F(1, 257) = .40, p = .527,  $\eta_p^2 = .002$ . There was also no main effect for the CL condition as the marginal means did not significantly differ for the low CL (M = 1.11, SE = .03) nor the high CL condition (M = 1.15, SE = .04), F(1, 257) = .59, p = .443,  $\eta_p^2 = .002$ . There was no significant interaction effect, F(1, 257) = 2.74, p = .099,  $\eta_p^2 = .011$ .

#### Exploratory Two-Way Interaction Results (all non-significant)

**Competence.** A moderation analysis was conducted using Hayes' PROCESS Macro (Model 1) in SPSS to examine the effect of the job applicant's SES background (high SES; low SES) on the perceived competency of the job applicant (DV) and whether this effect was moderated by the participant's own SES; (W). The overall model was not significant,  $R^2 = .01$ , F(3, 251) = 1.27, p = .286, indicating that the model only explained 1% of the variance in perceived competency. There was no significant main effect of the job applicant's SES background on perceived competency,  $\beta = -.11$ , t(251) = -0.28, p = .783, suggesting that there was no difference in perceived competency between the job applicant with a high versus low SES background. The participant's SES was not a significant predictor of perceived competency,  $\beta = .04$ , t(251) = 0.82, p = .411, indicating that there was no direct effect of the participant's SES on perceived competency. There was also no significant interaction effect between the job applicant's SES on perceived competency. There was also no significant interaction effect between the job applicant's SES on perceived competency,  $\beta = .03$ , t(251) = 0.41, p = .680. This indicates that the job applicant's SES on perceived competency does not depend on the participant's own SES.

A moderation analysis was conducted using Hayes' PROCESS Macro (Model 1) in SPSS to examine the effect of the job applicant's SES background (high SES; low SES) on the

perceived competency of the job applicant (DV) and whether this effect was moderated by the participant's ATP; (W). The overall model was not significant,  $R^2 = .01$ , F(3, 256) = 0.56, p = .644, indicating that the model explained 1% of the variance in perceived competency. There was no significant main effect of the job applicant's SES background on perceived competency,  $\beta = .51$ , t(256) = 0.96, p = .340, suggesting that there was no difference in perceived competency between the job applicant with a high versus low SES background. The participant's ATP was not a significant predictor of perceived competency,  $\beta = .01$ , t(256) = 0.08, p = .933, indicating that there was no direct effect of the participant's ATP on perceived competency. There was also no significant interaction effect between the job applicant's SES and the participant's ATP on perceived competency,  $\beta = .14$ , t(256) = -0.94, p = .349. This indicates that the job applicant's SES on perceived competency does not depend on the participant's ATP.

A moderation analysis was conducted using Hayes' PROCESS Macro (Model 1) in SPSS to examine the effect of the job applicant's SES background (high SES; low SES) on the perceived competency of the job applicant (DV) and whether this effect was moderated by the participant's own SDO; (W). The overall model was not significant,  $R^2 = .00$ , F(3, 256) = 0.07, p = .977, indicating that the model explained 0% of the variance in perceived competency. There was no significant main effect of the job applicant's SES background on perceived competency,  $\beta = -.03$ , t(256) = -1.5, p = .878, suggesting that there was no difference in perceived competency between the job applicant with a high versus low SES background. The participant's SDO was not a significant predictor of perceived competency,  $\beta = -.02$ , t(256) = -0.40, p = .692, indicating that there was no direct effect of the participant's SES on perceived competency. There was also no significant interaction effect between the job applicant's SES and the participant's SDO on

perceived competency,  $\beta = .02$ , t(256) = 0.30, p = .763. This indicates that the job applicant's SES on perceived competency does not depend on the participant's own SDO.

**Warmth.** A moderation analysis was conducted using Hayes' PROCESS Macro (Model 1) in SPSS to examine the effect of the job applicant's SES background (high SES; low SES) on the perceived warmth of the job applicant (DV) and whether this effect was moderated by the participant's own SES; (W). The overall model was not significant,  $R^2 = .00$ , F(3, 251) = 0.23, p = .879, indicating that the model explained 0% of the variance in perceived warmth. There was no significant main effect of the job applicant's SES background on perceived warmth,  $\beta = -.14$ , t(251) = -0.41, p = .679, suggesting that there was no difference in perceived warmth between the job applicant with a high versus low SES background. The participant's SES was not a significant predictor of perceived warmth,  $\beta = .01$ , t(251) = 0.14, p = .888, indicating that there was no direct effect of the participant's SES on perceived warmth. There was also no significant interaction effect between the job applicant's SES and the participant's SES on perceived warmth,  $\beta = .02$ , t(251) = 0.37, p = .710. This indicates that the job applicant's SES on perceived warmth does not depend on the participant's SES.

A moderation analysis was conducted using Hayes' PROCESS Macro (Model 1) in SPSS to examine the effect of the job applicant's SES background (high SES; low SES) on the perceived warmth of the job applicant (DV) and whether this effect was moderated by the participant's ATP; (W). The overall model was not significant,  $R^2 = .01$ , F(3, 256) = 0.47, p = .700, indicating that the model explained 1% of the variance in perceived warmth. There was no significant main effect of the job applicant's SES background on perceived warmth,  $\beta = .44$ , t(256) = 0.99, p = .321, suggesting that there was no difference in perceived warmth between the job applicant with a high versus low SES background. The participant's ATP was not a

significant predictor of perceived warmth,  $\beta = .09$ , t(256) = 1.10, p = .273, indicating that there was no direct effect of the participant's ATP on perceived warmth. There was also no significant interaction effect between the job applicant's SES and the participant's ATP on perceived warmth,  $\beta = -.13$ , t(256) = -1.07, p = .288. This indicates that the job applicant's SES on perceived warmth does not depend on the participant's ATP.

A moderation analysis was conducted using Hayes' PROCESS Macro (Model 1) in SPSS to examine the effect of the job applicant's SES background (high SES; low SES) on the perceived warmth of the job applicant (DV) and whether this effect was moderated by the participant's SDO; (W). The overall model was not significant,  $R^2 = .02$ , F(3, 256) = 1.56, p = .200, indicating that the model explained 2% of the variance in perceived warmth. There was no significant main effect of the job applicant's SES background on perceived warmth,  $\beta = -.00$ , t(256) = 0.02, p = .985, suggesting that there was no difference in perceived warmth between the job applicant with a high versus low SES background. The participant's SDO was not a significant predictor of perceived warmth,  $\beta = -.06$ , t(256) = -1.30, p = .195, indicating that there was no direct effect of the participant's SDO on perceived warmth. There was also no significant interaction effect between the job applicant's SES and the participant's SDO on perceived warmth,  $\beta = -.01$ , t(256) = -0.13, p = .897. This indicates that the job applicant's SES on perceived warmth does not depend on the participant's SDO.

**Decision Time.** A moderation analysis was conducted using Hayes' PROCESS Macro (Model 1) in SPSS to examine the effect of the job applicant's SES background (high SES; low SES) on the time it took participants to evaluate the applicant (i.e., decision time); (DV) and whether this effect was moderated by the participant's own SES; (W). The overall model was not significant,  $R^2 = .01$ , F(3, 229) = 0.60, p = .614, indicating that the model explained 1% of the

variance in decision time. There was no significant main effect of the job applicant's SES background on decision time,  $\beta = -10.47$ , t(229) = -0.30, p = .768, suggesting that there was no difference in decision time between the job applicant with a high versus low SES background. The participant's SES was not a significant predictor of decision time,  $\beta = -.24$ , t(229) = -0.05, p = .959, indicating that there was no direct effect of the participant's SES on decision time. There was also no significant interaction effect between the job applicant's SES and the participant's SES on decision time,  $\beta = 3.60$ , t(229) = 0.60, p = .600. This indicates that the job applicant's SES on decision time does not depend on the participant's SES.

A moderation analysis was conducted using Hayes' PROCESS Macro (Model 1) in SPSS to examine the effect of the job applicant's SES background (high SES; low SES) on the time it took participants to evaluate the applicant (i.e., decision time); (DV) and whether this effect was moderated by the participant's SDO; (W). The overall model was not significant,  $R^2 = .02$ , F(3, 234) = 1.65, p = .180, indicating that the model explained 2% of the variance in decision time. There was no significant main effect of the job applicant's SES background on decision time,  $\beta = 19.80$ , t(234) = 1.03, p = .302, suggesting that there was no difference in decision time between the job applicant with a high versus low SES background. The participant's SDO was not a significant predictor of decision time,  $\beta = -4.13$ , t(234) = -0.80, p = .426, indicating that there was no direct effect of the participant's SDO on decision time. There was also no significant interaction effect between the job applicant's SES and the participant's SDO on decision time,  $\beta = -3.65$ , t(234) = -0.54, p = .591. This indicates that the job applicant's SES on decision time does not depend on the participant's SDO.

#### **Exploratory Three-Way Interaction Results for Perceived Hireability**

A multiple linear regression analysis was conducted to examine the potential interaction effects between SES, CL, and participants' socioeconomic status on perceived hireability. The overall model was not statistically significant,  $R^2 = .02$ , F(5,243) = 0.73, p = .601, indicating that the combined effects of SES, CL, and participant's SES did not significantly predict perceived hireability. The main effect of SES on perceived hireability was not statistically significant,  $\beta = -$ .13, t(243) = -0.77, p = .462, 95% CI [-1.30, 0.59]. Similarly, the main effect of CL on perceived hireability was not statistically significant,  $\beta = 0.03$ , t(243) = 0.13, p = .893, 95% CI [-1.07, 1.23]. The two-way interaction effects were examined by including the interaction terms of SES by Participant's SES and CL by Participant's SES in the regression model. The interaction effect between SES and the participant's SES was not statistically significant,  $\beta = .16$ , t(243) = 0.93, p = .355, 95% CI [-0.08, 0.23]. Likewise, the interaction effect between CL and participant's SES was not statistically significant,  $\beta = 0.06$ , t(243) = 0.25, p = .800, 95% CI [-0.18, 0.23]. Lastly, the three-way interaction between SES, CL, and participant's SES was not significant,  $\beta = .01$ , t(243) = 0.06, p = .950, 95% CI [-0.12, 0.12]. Overall, the results suggest that both SES and CL did not independently contribute to perceived hireability. There were no significant interaction effects observed between SES and participant's SES, as well as between CL and participant's SES. Furthermore, there were no three-way interaction effects between SES, CL, and participant's SES.

A multiple linear regression analysis was conducted to examine the potential interaction effects between SES, CL, and participants' ATP on perceived hireability. The overall model was not statistically significant,  $R^2 = .01$ , F(5,246) = 0.70, p = .627, indicating that the combined effects of SES, CL, and participant's ATP did not significantly predict perceived hireability. The main effect of SES on perceived hireability was not statistically significant,  $\beta = .08$ , t(246) = 0.34, p = .734, 95% CI [-1.06, 1.50]. Similarly, the main effect of CL on perceived hireability was not statistically significant,  $\beta = 0.33$ , t(246) = 1.19, p = .237, 95% CI [-0.61, 2.50]. The interaction effects were examined by including the interaction terms of SES by Participant's ATP and CL by Participant's ATP in the regression model. The interaction effect between SES and the participant's ATP was not statistically significant,  $\beta = -0.06$ , t(246) = -0.26, p = .799, 95% CI [-0.41, 0.31]. Likewise, the interaction effect between CL and the participant's ATP was not statistically significant,  $\beta = -0.30$ , t(246) = -0.89, p = .377, 95% CI [-0.63, 0.24]. Lastly, the three-way interaction between SES, CL, and participant's ATP was not significant,  $\beta = .02$ , t(246) = 0.13, p = .898, 95% CI [-0.18, 0.21]. Overall, the results suggest that both SES and CL did not independently contribute to perceived hireability. There were no significant interaction effects observed between SES and participant's ATP, as well as between CL and participant's ATP. Furthermore, there were no three-way interaction effects between SES, CL, and participant's ATP.

A multiple linear regression analysis was conducted to examine the potential interaction effects between SES, CL, and participants' SDO on perceived hireability. The overall model was not statistically significant,  $R^2 = .01$ , F(5,246) = 0.56, p = .731, indicating that the combined effects of SES, CL, and participant's SDO did not significantly predict perceived hireability. The main effect of SES on perceived hireability was not statistically significant,  $\beta = 0.07$ , t(246) =0.61, p = .540, 95% CI [-0.43, 0.81]. Similarly, the main effect of CL on perceived hireability was not statistically significant,  $\beta = 0.02$ , t(246) = 0.15, p = .881, 95% CI [-0.63, 0.73]. The interaction effects were examined by including the interaction terms of SES by Participant's SDO and CL by Participant's SDO in the regression model. The interaction effect between SES and the participant's SDO was not statistically significant,  $\beta = -0.08$ , t(246) = -0.66, p = .507, 95% CI [-0.25 0.13]. Likewise, the interaction effect between CL and participant's SDO was not statistically significant,  $\beta = 0.05$ , t(246) = 0.40, p = .686, 95% CI [-0.20, 0.30]. Lastly, the three-way interaction between SES, CL, and participant's SDO was not significant,  $\beta = .04$ , t(246) = 0.36, p = .721, 95% CI [-0.20, 0.28]. Overall, the results suggest that both SES and CL did not independently contribute to perceived hireability. There were no significant interaction effects observed between SES and participant's SDO, as well as between CL and participant's SDO. Furthermore, there were no three-way interaction effects between SES, CL, and participant's SDO.