

**A Theoretical Model of Cross-Cultural Impression Management in Employment  
Interviews**

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### **Abstract**

With organizations being increasingly multinational and multicultural, there is a need for understanding the implications of having job applicants and interviewers from various cultural backgrounds interacting in an employment interview. We propose a theoretical model for understanding how cultural values translate into preferences for, and use of, impression management (IM) tactics in employment interviews. Building upon previous cross-cultural IM models and relying on GLOBE cultural framework, we suggest that various cultural dimensions are associated with subsequent differences in applicants' use of both honest and deceptive forms of self-focused, other-focused, and defensive IM tactics in interviews. Our model also predicts that cultural distance, and indirectly difference between applicant IM use and interviewers' expectations, will determine how interviewers evaluate applicant interview performance. We highlight the importance of organizations taking responsibility in developing culturally conscientious selection methods in order to avoid potentially biased hiring decisions.

**Keywords:** impression management; employment interview; culture; GLOBE framework

## Introduction

The job interview is considered to be the most commonly used selection method both by Western organizations (Huffcutt & Culbertson, 2011) and around the world (Steiner, 2012). Research aimed at better understanding the dynamics of the job interview has found that a critically important factor that determines how applicants are evaluated, and their subsequent chances of being hired, is their use of impression management (IM; Barrick et al., 2009; Higgins & Judge, 2004). IM tactics exist in many forms and vary in their effects (Bolino et al., 2008; Levashina & Campion, 2007; Levashina et al., 2014; Bourdage et al., 2018): self-focused IM (i.e. self-promotion, self-enhancements) is the most prevalent tactic and is strongly positively associated with interview evaluations; other-focused IM (i.e. opinion conformity, flattery) is slightly less prevalent and is moderately positively associated with interview outcomes; defensive tactics (i.e. justifications, excuses, image protection) have been less extensively examined and relationships with performance can be both positive and negative. Additionally, there has been also recent efforts to conceptually and empirically distinguish between honest and deceptive forms of various IM tactics (Bourdage et al., 2018; Roulin et al., 2014).

Overall, there is extensive conceptual and empirical work examining individual differences (e.g., personality, attitudes, abilities) associated with job applicants engaging in various honest and deceptive IM tactics (e.g., Kristof Brown et al., 2002; Melchers et al., 2020; Roulin & Bourdage, 2017). In contrast, research exploring cross-cultural differences in interview IM use is more limited (but see Bye et al., 2011; Fell et al., 2016; Sandal et al., 2014 for exceptions). Therefore, the goal of the present research is to expand our understanding of the relationships between cultural differences or values and preferences for, or use of, various IM tactics in an interview context.

Early work on cross-cultural influence tactics (Hirokawa & Miyahara, 1986; Schermerhorn & Bond, 1991) suggested that cultural values can be associated with differences in preferences for IM use. Recent empirical work also showed examples of cultural differences in preferences for certain IM tactics in an interview context (Deros, 2017; König et al., 2011; Sandal et al., 2014). If different preferences exist, then it should be possible to ‘map’ out a cross-cultural IM model that explains which cultural values are associated with which interview IM tactics. To date, cross-cultural impression management (CCIM) models have explored discourse (Bilbow, 1997) and influence (Ward & Ravlin, 2017) in the workplace, the general role played by cultural distance between interviewers and applicants in evaluations (Huffcutt et al., 2011; Manroop et al., 2013), and connected cultural values with general response styles (Lalwani et al., 2006). However, none of these CCIM models offer a comprehensive framework to explain specifically which types of interview IM (i.e., honest or deceptive self-focused, other-focused, and defensive tactics) are more likely to be preferred by applicants or interviewers from different cultures. As such, a model that organizes countries on cultural dimensions and connects such dimensions with the use and expectations of various IM tactics is required to more fully understand why and how applicants from different countries (e.g., U.S., South Korea, Brazil, Norway) might engage in different IM tactics in interviews to ultimately achieve similar outcomes (i.e. job offers).

In this research, we develop such a conceptual model using six categories of IM tactics and GLOBE’s (House et al., 2004) cultural framework to explain how cultural values translate into various IM tactics in an interview context. Our model also integrates elements of previous interview selection frameworks and considers the moderating impact of cultural distance between interviewers and interviewees (see Huffcutt et al., 2011; Manroop et al., 2013). This

research contributes to the personnel selection, international human resource management, and cross-cultural psychology literatures both theoretically and practically. Conceptually, our model helps explain why applicants engage in different IM behaviors depending on their culture of origin, why interviewers expect different behaviors from applicants if they come from a different cultural background (i.e. large cultural distance), and why the use of one type of IM tactics is not always associated with the same positive ratings by interviewers across cultures. From a practical standpoint, our model provides valuable insights and recommendations for individuals in charge of international selection efforts and furthers our understanding of the key role played by cultural differences in today's increasingly globalized and multicultural workforce. For instance, understanding cultural differences in IM tactics use or expectations in an interview context can be essential to surfacing systematic discrimination (Quillian et al., 2019), which can often be unintentional or related to 'discordant' communication (Bilbow, 1997), where cultural misunderstandings lead to negative evaluations.

### **IM Tactics in Interviews**

Although many definitions exist, generally IM can be defined as tactics individuals use in order to manipulate the opinion or affective evaluation others have of them (Rosenfeld et al., 1995). Self-focused tactics include various forms of self-promotion such as exemplifications, entitlements, enhancements, and describing qualities that one possesses (Kacmar et al., 1992). Other-focused tactics such as ingratiation are directed at the target (i.e., interviewer or hiring organization), with the goal of emphasizing similarities or inspiring liking from the target. Ingratiation tactics may include directly or indirectly flattering the interviewer, opinion conformity, favor doing, and even feigned helplessness (Barrick et al., 2009). Defensive IM tactics include excuses and justifications (Schlenker & Weigold, 1992) or any behavior that

repairs one's image when it has been damaged (Tsai et al., 2010). In addition to these three categories, IM research also distinguishes between honest (Bourdage et al., 2018) and deceptive (Levashina & Campion, 2007) forms of IM, meaning that each of the three categories of IM behavior (self-focused, other-focused, defensive) may be employed in an honest or deceptive manner. For example, an applicant highlighting their qualifications like having an MBA or being fluent in Chinese would be engaging in honest self-promotion if they actually completed such a degree and speak the language fluently but would be engaging in deceptive image creation if in fact they never completed an MBA or speak only basic Chinese.

More precisely, we draw on Levashina and Campion's (2007) and Bourdage et al.'s (2018) IM taxonomy for the interview context. Levashina and Campion (2007) defined deceptive IM (or faking) in the employment interview as "the conscious distortions of answers to the interview questions in order to obtain a better score on the interview and/or otherwise create favorable perceptions" (p.1639). Over the course of six studies, they developed and validated an interview faking behavioral scale, which consists of four categories of deceptive IM tactics: deceptive assertive tactics used by the applicants to acquire and promote favorable impressions include slight image creation (embellishing or tailoring one's qualifications, fit enhancing) and extensive image creation (constructing, inventing, or borrowing qualifications), image protection is a deceptive defensive tactics (by masking, distancing, or omitting negative elements in ones' past that could hurt one's candidacy), and deceptive ingratiation is used to create interpersonal liking and attraction between interviewers and the applicant (by conforming and interviewer enhancing). Levashina and Campion (2007) further found that faking was related to interview outcomes, with extensive image creation increasing (but image protection decreasing) the probability of getting another interview or job offer. Bourdage et al. (2018) developed and

validated an honest IM measure, which complements Levashina and Campion's (2007) coverage of deceptive IM, including honest self-promotion, honest defensive IM, and honest ingratiation. The combined work and typologies of Levashina and Campion (2007) and Bourdage et al. (2018) is summarized with the seven types of IM tactics found in Table 1.

[Insert Table 1]

The unique social dynamics and high-stakes nature of the employment interview has generated extensive research about applicants' use of IM (Levashina & Campion, 2007), antecedents of IM use (Melchers et al., 2020), or how IM is interpreted by interviewers (Kristof-Brown et al., 2002; Roulin et al., 2014). For instance, different personality traits are related to applicants' use of honest IM (Bourdage et al., 2018) and deceptive IM (Melchers et al., 2020). Kristof-Brown et al. (2002) showed that applicants' use of IM tactics in interviews affects interviewers' perceptions of person–job fit and applicant–interviewer similarity. Two meta-analyses have examined the relationships between IM use and interview ratings. Barrick et al. (2009) found overall IM to be strongly correlated with interview performance ( $r = .47$ ), also noting that all forms of IM tactics were meaningfully associated with interviewer ratings. Peck and Levashina (2017) found self-focused tactics to be more strongly associated with interview performance ratings ( $r = .24$ ) than other-focused tactics ( $r = .17$ ). However, Roulin et al., (2014) showed that interviewers' perceptions IM tactics used by applicants did not converge with self-reported applicant IM, and argued that what may actually matter in interviews is not the impression applicants think they are making, but interviewers' perceptions of applicant IM. Similarly, Macan's (2009) review of the interview literature highlights the importance of investigating applicant and interviewer factors affecting the interview process and note that the influence of culture is a relatively untapped area in the interview literature.

Importantly, when considering why applicants use various forms of IM or how IM influences interviewers' evaluations, the existing literature has largely been focused on individual differences (e.g., applicant personality) or situational factors (e.g., the type of questions asked). Research examining cultural factors is scarce. The following sections review the few empirical studies examining cross-cultural social desirability, and then IM. We then draw upon GLOBE's (House et al., 2004) cultural framework to build our model describing how cultural values can impact preferences for the IM tactics described above.

### **Cross-Cultural Social Desirability**

Cross-cultural IM involves adapting the conveyed self-image to suit a different cultural environment (Gangestad & Snyder, 2000; Snyder & Gangestad, 1986). The success of a given IM strategy depends on the cultural environment because particular strategies are appropriate in some cultures but not others (Kamau, 2009). Exploring how cultural differences translate into differences in influence strategies has peaked the interests of IM scholars since the mid 1980s. For instance, research on cross-cultural influence tactics (Hirokawa & Miyahara, 1986; Schermerhorn & Bond, 1991) showed that cultural values are associated with differences in preferences for the use of different influence tactics or strategies across cultures.

There is also earlier work examining cultural differences in socially desirable behaviors. In the employment interview literature, social desirability and IM are clearly distinct concepts (see Melchers et al., 2020). Yet, the way job applicants act, and thus the IM tactics they use, is likely driven (at least in part) by their general beliefs about what behaviors are considered as appropriate. As such, the literature on cultural differences in social desirability can provide some useful foundations for cross-cultural interview IM research. For instance, Crowne and Marlowe (1964) suggested that socially desirable responding could be motivated by the need to respond in



culturally-sanctioned ways to obtain social approval. Several cross-cultural studies later confirmed that culture can significantly impact socially desirable responding, both when considering self-report measures (Randall et al., 1993; Bernardi, 2006; Lalwani et al., 2009) and social interactions (Triandis, 1995; Smith & Bond, 1998; Fu et al., 2001). For example, Bernardi (2006) found that, on average, individuals from cultures high on collectivism and uncertainty avoidance would respond in a more socially desirable manner. There is also evidence of cultural differences in social desirability with respect to perceptions of the appropriateness of lying in various social contexts (Fu et al. 2001; Lee et al. 2001). Triandis' (1995) extensive work exploring individualism/collectivism suggests that honesty in interactions with strangers is more highly valued in individualistic societies, while concern about maintaining good relationships and face-saving is more prominent (i.e., socially desirable) in collectivistic countries. Further, members of individualistic societies are more inclined to reveal information about themselves both to members of their in-group as well as out-group representatives, while members of collectivistic societies often make a sharp distinction between in-group and out-group members and show less disclosure towards the latter (Smith & Bond, 1998; Johnson & Van de Vijver, 2003). Most recently, Ryan et al. (2021) explored relationships between GLOBE cultural dimensions and the social desirability of various personality traits. They found higher social desirability ratings for cooperativeness, sensitivity, and assertiveness in Confucian Asian, South Asian, and Sub-Saharan contexts compared with Germanic Europe, Eastern Europe, Latin America, and Latin Europe contexts. Our proposed model of cross-cultural differences in interview IM, which also employs the GLOBE framework, will draw insights from the literature on culture and social desirability to ultimately predict how cultural dimensions may be related to applicant IM tactics.

## **Cross-cultural IM in Selection**

In the interview context, some preliminary research has demonstrated how cross-cultural differences may translate into different preferences for specific IM tactics. For example, Bye et al. (2011) found significant differences in intended self-presentation during interviews across four countries, with the highest self-presentation intentions reported by Turks and Ghanaians. Schmid Mast et al. (2011) found that Canadian interviewers preferred hiring self-promoting applicants whereas Swiss interviewers preferred more modest applicants (i.e. high self-promotion versus low self-promotion). Deros (2017) showed that ethnic minorities (i.e. Moroccans in Belgium) and majorities (Belgians in Belgium) differed in their preference for IM tactics (i.e., self-promotion vs. opinion-conformity) and that such differences led to more negative interview outcomes for minorities. Sandal et al. (2014) conducted a 10-country study showing that cultural dimensions were associated with differences in the use of several IM tactics. For instance, cultures high on embeddedness, mastery, and hierarchy assigned a higher importance to self-presentation tactics than those cultures high on autonomy, harmony, and egalitarianism. In a similar manner, Fell et al. (2016) systematically examined differences in attitude towards applicants' faking across 31 countries, finding that attitudes towards faking correlated with four of GLOBE's (House et al., 2004) nine cultural dimensions. Most recently, König et al. (2020) explored the relationship between country-level economic variables and interview faking across 20 countries. They found that inequalities between the rich and poor within a country are positively correlated with faking behavior in interviews.

In sum, several studies suggest that cultural differences can impact preferences for IM tactics employed in interviews (for both the interviewee and interviewer). However, these studies examined different forms of IM or "self-presentation" in general, compared a limited number of

countries or cultures, or examined attitudes and not actual behaviors. This makes it difficult to integrate the existing literature and highlight the overall role played by culture in applicant IM. We propose that an important first step towards that goal is to generate a conceptual model to comprehensively explain or predict how specific cultural values are associated with preferences for, and use of, various IM tactics in employment interviews. Additionally, such a model could assist with understanding the consequences of having an interviewer and interviewee from different cultural backgrounds, where presentation strategies that are intended to be ideal and accepted in one's native culture are misinterpreted and/or negatively evaluated by another. Indirectly, such a model could also be valuable to identify and explain unintentional biases or discrimination in selection decisions.

Unfortunately, existing models of interviewee performance only indirectly discuss the role of cross-cultural IM. For instance, Huffcutt et al. (2011) describe just a couple of examples of how culture and IM could interact to predict interview outcomes, highlighting for instance how applicants from individualistic vs. collectivistic cultures will differ in their ability to self-promote. They call for more research to "build conceptual models with more nuanced views of culture" (p.361). In addition, existing cross-cultural IM models are either focused on communication or workplace IM (e.g., Bilbow, 1997; Ward & Ravlin, 2017) or are narrowly focused (Manroop et al., 2013). More precisely, Manroop et al.'s (2013) model examined the impact of cultural distance on interview evaluations, and thus represents an initial step towards understanding the influence of differences in cultural values on job selection decisions. Their model includes several relevant forms of IM, such as self-promotion or verbal and non-verbal behaviors, and how they can impact interviewers' evaluations. However, it is limited to exploring only one cultural dimension (individualism/collectivism) and only one of the types of

verbal IM tactics described above (i.e., self-promotion). Our proposed model includes a more extensive list of IM tactics, including other-focused and defensive IM tactics (in addition to self-promotion), honest and deceptive IM, and integrates a more comprehensive set of cultural factors for understanding how cultural values impact preferences for specific IM tactics in an interview context.

### **A Cross-Cultural Model of IM Preferences in Interviews**

We propose to build our cross-cultural IM model on GLOBE's framework for two reasons: First, it is the most specific framework (i.e., with the largest number of regions or clusters as compared to other frameworks), which aligns with our overall objective of providing a more comprehensive model for examining how multiple cultural values are associated with various IM behaviors for the interview context. Second, it has been at the center of initial efforts to examine IM and faking across cultures (e.g., Fell & König, 2016, Fell et al., 2016). We believe that the interview context is an excellent medium to develop such a conceptual model where the stakes (and thus applicants' motivation) are high, and IM can be rewarded because successfully influencing one's target can impact the chances of obtaining employment and thus improving one's professional and financial situation. Additionally, in interview settings, organizational members (i.e., interviewers) should theoretically be evaluating candidates based on standards of behaviors that are deemed acceptable within the norms of the interviewer's culture. If culture influences individuals' preferences and use of influence tactics (Kipnis et al., 1984; Schermerhorn & Bond 1991) and IM impacts interview ratings (Barrick et al., 2009), we should expect interviewers' ratings to be associated with IM behaviors that are consistent with the interviewer's cultural orientation. However, the first step is to conceptually map out which cultural values are likely to be associated with which IM behaviors.

## **GLOBE societal cultural dimensions**

We rely on GLOBE's societal cultural dimensions (practices) to predict differences in six IM behaviors across 10 regional clusters within the interview context. GLOBE's societal cultural dimensions are based on data collected from over 17,000 middle level managers spanning more than 70 countries (House et al., 2004), and include uncertainty avoidance, power distance, institutional collectivism, humane orientation, performance orientation, in-group collectivism, assertiveness, gender egalitarianism, and future orientation. The following discusses each of these dimensions in more detail, with examples of cultural regions that were found to be high vs. low in each respective dimension. Our regional examples are based on GLOBE's practices scores (House et al., 2004) but also draws from more recent research (e.g., Dorfman et al., 2012).

*Uncertainty avoidance* is the extent to which a society, organization, or group relies (and should rely) on social norms, rules, and procedures to alleviate unpredictability of future events. The greater the desire to avoid uncertainty, the more people seek orderliness, consistency, structure, formal procedures, and laws to cover situations in their daily lives. Regionally, Eastern Europe and Latin America tend to be lowest on this dimension whereas Germanic Europe and Nordic countries tend to be highest.

*Power distance* is the extent to which the community accepts and endorses authority, power differences, and status privileges. Regionally, Latin America, Confucian Asia, and Sub-Saharan Africa tend to be highest on this dimension whereas Nordic and Anglo/Germanic regions tend to be lowest.

*Institutional collectivism* is the degree to which organizational and societal institutional practices encourage and reward (and should encourage and reward) collective distribution of

resources and collective action. Eastern Europe and Latin America tends to be lowest in this dimension whereas Confucian Asia and Nordic Europe tend to score highest.

*Humane orientation* is the degree to which a collective encourages and rewards (and should encourage and reward) individuals for being fair, altruistic, generous, caring, and kind to others. Eastern and Germanic Europe tend to score lowest on this dimension whereas Southeast Asia and Sub-Saharan Africa score the highest.

*Performance orientation* is the degree to which a collective encourages and rewards (and should encourage and reward) group members for performance improvement and excellence. Eastern Europe and Latin regions score lowest on this dimension whereas Confucian Asia and Anglo regions score highest.

*In-group collectivism* is the degree to which individuals express (and should express) pride, loyalty, and cohesiveness in their organizations or families. Nordic and Germanic Europe score lowest on this dimension whereas Southeast Asia and Middle East score highest.

*Assertiveness* is the degree to which individuals are (and should be) assertive, confrontational, and aggressive in their relationship with others. Regionally, countries within Germanic Europe score low on this dimension whereas Asian regions score high.

*Gender egalitarianism* is the degree to which a collective minimizes (and should minimize) gender inequality. Middle East and Asian regions are lowest whereas Eastern and Nordic Europe regions are highest.

*Future Orientation* is the extent to which individuals engage (and should engage) in future-oriented behaviors such as planning, investing in the future, and delaying gratification. Regionally, Eastern Europe and Latin regions score lowest on this dimension whereas Germanic

Europe and Asian regions score highest. Next, we present our new cross-cultural IM model, and discuss our specific predictions as to which regions are more vs. less likely to engage in various IM behaviors in an interview context.

### **Country Grouping: Regional Clusters**

In addition to examining cultural dimensions, one commonality found within most major cross-cultural frameworks is the tendency to develop regional ‘groupings’ of countries that share similar cultural values (or similar scores on key dimensions). For example, Hofstede’s (1980) framework consisted of seven cultural groupings, Schwartz’s (2006) framework six, Inglehart & Baker’s (2000) eight, and GLOBE’s (House et al., 2004) framework the highest with 10 groupings<sup>1</sup>. Several regions have significant overlap, and most regions reflect some geographical proximity. Hence, some of the cultural similarity within regions is due to diffusion of values, norms, practices, and institutions across national borders (Naroll, 1973). In addition to geographic proximity, shared histories, language, religion, and other factors also contribute to this diffusion of common values. In sum, both theoretical arguments and empirical analyses suggest that there are culturally distinct world regions (Hofstede, 2001; Huntington, 1993; Inglehart, 1997; Schwartz, 1999). Conceptually, these regions share similarities that could be used to make predictions about differences in the use of IM tactics between cultural clusters. For example, countries in the Confucian Asia cluster share values associated with collectivism, high power distance and performance orientation. These values are often associated with behaviors allowing individuals to ‘save face’, which could include deceptive defensive IM in interviews. In contrast, the Nordic region (i.e. Norway, Sweden) places high value on individualism, gender

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<sup>1</sup> For a visual overview of GLOBE regional clusters, see: <https://globeproject.com/results#cluster>

egalitarianism, and humane orientation. These values would be associated with justice or transparency, and thus possibly higher levels of honest IM.

However, there are several disadvantages associated with making predictions at the regional cluster level. For instance, working at the cluster level involves generalizing (i.e., culturally profiling based on geographic proximity) and thus ignoring potentially important differences between countries within the same cluster exist. As an example, within the Confucian Asian region, South Korea would have significantly lower levels of gender egalitarianism than both China and Taiwan. In addition, making predictions at the regional level would require conceptually integrating the unique influence of a large number of dimensions (e.g., high in-group collectivism, high power distance, or low gender-egalitarianism for Confucian Asia) and estimating their combined effect on each relevant IM behavior (e.g., honest self-focused IM). As such, our model proposes more specific predictions at the cultural dimension level, developed in the next section.

### **A GLOBE-based Model of Cross-Cultural IM**

Our model builds on the IM tactics found within Levashina and Campion's (2007) and Bourdage et al.'s (2018) typologies listed in Table 1 and explain how each IM tactic can be associated with various societal cultural dimensions from GLOBE's framework. We thus propose to predict how various IM tactics are preferred and employed by members of various cultural regions in an interview context. It captures the relationships between GLOBE's cultural value dimensions and applicants' and interviewers' preferences for six types of IM tactics described above (Levashina & Campion, 2007; Bourdage et al., 2018). We formulated a total of four propositions. The first three capture the impact of GLOBE's cultural value dimensions on both honest and deceptive forms of three broad IM tactics (self-focused, other-focused,



defensive), and are summarized in Table 2. The last proposition illustrates how cultural distance can influence interviewers' ratings of applicant performance. More precisely, we propose that a larger cultural distance between the interviewer and applicant leads to larger differences in an applicant's IM behavior from that of the interviewer's expectations. Such differences lead to unfamiliarity, which inevitably should lead to poorer performance evaluations.

### **Honest Self-focused IM**

We believe there are several dimensions that would be associated with honest self-focused IM tactics. For example, research has found that individuals from cultures higher in individualism focus more on their uniqueness or independence, and less on satisfying their in-groups (e.g., Lalwani et al., 2006; Triandis & Suh, 2002), making them more likely to engage in self-focused IM. There is also meta-analytical evidence that individualism is positively associated (albeit with small effects) with self-promotion in communication (Merkin et al., 2014). In the context of job interviews, a 10-country study by Sandal et al. (2014) reported mixed results for the relationship between autonomy (i.e., individualism) and the tactic of *individual excellence* (i.e., a form of self-promotion). Specifically, while participants from some individualistic countries (e.g., the USA) engaged extensively in such behaviors, lower values were observed for some other individualistic countries (e.g., Germany, Italy, Norway) than more collectivistic countries (i.e., Ghana, Malaysia, Russia). Performance orientation appears to be positively associated with self-focused IM tactics. Sandal et al. (2014) found that countries high in performance orientation such as Malaysia, USA, and Ghana reported higher levels of individual excellence tactics than did countries low on that dimension, such as Germany, Norway, and Italy. Other research also found Americans self-enhanced considerably more than individuals from Denmark, Iceland, and Switzerland (Thomsen et al., 2007; König et al., 2011).

Scandinavians highly value and practice equality of outcome in social relationships and thus “you must not see yourself as outstanding: an outstanding person stands out above others, and such stand-outs may be outcasts” (Thomsen et al., 2007, p.450). According to Hofstede (2001), job applicants in feminine countries tend to “undersell themselves”, suggesting a negative association between gender egalitarianism and self-promoting tactics. Therefore, we would expect a negative association between gender egalitarianism and honest self-focused IM use. Finally, humane orientation involves altruism, kindness, and generosity and less concerns about one’s own well-being over others’ well-being. Moreover, human orientation is conceptually related to modesty (House et al., 2004). All this suggests that behaviors focused on promoting one’s qualifications or accomplishments might be less valued in cultures high in this dimension. For example, modesty can be used as an IM tactic (Cialdini & de Nicholas, 1989; Blickle et al., 2008) and individuals from Scandinavian countries, which are high on humane orientation, tend to strongly endorse this tactic (Silvera & Seger, 2004; Thomsen et al., 2007). As such, applicants from cultures that are placing a higher value on the well-being of others (i.e. higher humane orientation) might engage in less honest self-focused tactics in interviews. In sum, we predict:

*Proposition 1a: Honest self-focused IM will be used more by applicants from cultures high in performance orientation and power distance but low in in-group collectivism, humane orientation, and gender egalitarianism.*

### **Deceptive Self-focused IM**

Using GLOBE’s societal cultural dimensions as predictors, Fell and König (2016) examined applicants’ faking on personality tests across 43 countries. They found positive associations between faking and uncertainty avoidance, future orientation, and assertiveness, but negative associations with in-group collectivism and humane orientation. Personality test faking

is conceptually similar to deceptive self-focused IM in interviews, because they both involve embellishing or exaggerating one's traits or qualifications to appear like a better fit for the job or organization. While we acknowledge that faking on a personality test lacks the interpersonal component found in interviews, we propose that some key positive/negative associations between the cultural dimensions and personality test faking highlighted by Fell and König (2016) should also translate to deceptive self-focused IM behaviors in employment interviews. In addition, Fell et al. (2016) investigated the relationships between several GLOBE dimensions and attitudes towards faking in job interviews (i.e., focusing on the deceptive self-focused IM components from Levashina and Campion's measure) across 31 countries. They pointed out that hierarchical (high power distance) societies have been found to be more corrupt, probably because they know that "rank and position in the hierarchy have special privileges" (see GLOBE, 2006: p. 8) and that fairness principles are commonly violated. The inequalities inherent in hierarchical societies likely motivate its members to take calculated 'risks' (i.e., lying) to get ahead. Fell et al. (2016) indeed found more positive attitudes toward faking in countries with high power distance. We therefore propose that power distance is also positively associated with deceptive forms of self-focused IM. They also found more positive attitudes toward faking in countries high in-group collectivism, but low gender-egalitarianism.

Interestingly, Fell and König (2016) and Fell et al. (2016) found contradictory relationships regarding in-group collectivism and faking. We therefore incorporate additional cross-cultural research on deceptive behaviors in collectivistic vs. individualistic countries to clarify this element. Overall, evidence indicates that collectivism (vs. individualism) is positively associated with deceptive behaviors in negotiation scenarios (Triandis et al., 2001), scores on lie scales (Triandis & Suh, 2002), or deceptive behaviors to meet interpersonal goals (Lallwani et

al., 2006). Yet, we note that most of that research is based on measures more akin to social desirability than deceptive IM. For instance, Lallwani et al. (2006) explored deceptive answering styles across American (more individualistic) and Asian (more collectivistic) samples and found more self-deceptive enhancement (tendency to see oneself in a positive light and to give inflated assessment of one's skills and abilities) in the Asian sample. Overall, we thus propose the following:

*Proposition 1b: Deceptive self-focused IM will be used more by applicants from cultures high in performance orientation, uncertainty avoidance, future orientation, assertiveness, in-group collectivism, and power distance but low in humane orientation and gender egalitarianism.*

### **Honest Defensive IM**

Honest defensive IM includes attempts to repair one's image when it is being threatened, by taking responsibility or truthfully explaining the causes of problematic behaviors or outcomes in the past (i.e., apologies, justifications, excuses; Bourdage et al., 2018). The cross-cultural literature includes some empirical research that surfaces differences in these behaviors, but generally does not distinguish between its honest and deceptive forms. A consequence of this is conflicting reports, in terms of understanding which cultures are more likely to engage in which behaviors. For example, some research has found that Americans (higher individualism, lower power distance) offer more explanations and justifications than Japanese (higher collectivism, higher power distance), but other research comparing these two groups found that Japanese exhibit more readiness to offer (and receive) apologies (Barnlund & Yoshioka, 1990; Sugimoto, 1997). Additionally, Guan et al. (2009) explored whether individualism vs. collectivism can be useful for explaining differences in apologies across Americans, Chinese and Korean participants. They found that Americans had the highest propensity to apologize, further

suggesting a potential individualism - apology association. Despite the limited empirical research in this area, we believe that conceptually, members of societies higher in individualism, and lower in power distance (i.e. Anglo, Germanic, Nordic regions) are less concerned about saving face when their identities are threatened in an interview context, and thus more likely to engage in honest defensive behavior, where they fear less the consequences / repercussions of truthfully acknowledging their faults. The GLOBE research also suggests gender egalitarianism is positively associated with honesty/sincerity values, and negatively associated with face-saving values (House et al., 2004). We therefore believe that gender egalitarian values will be positively associated with the use of honest defensive IM.

*Proposition 2a: Honest defensive IM will be used more by applicants from cultures high in gender egalitarianism, but low in power distance and in-group collectivism.*

### **Deceptive Defensive IM**

Deceptive defensive IM includes behaviors that aim to protect one's image, for instance by omitting elements that might hurt one's candidacy, denying one's actual responsibility or distancing oneself from negative past events (Levashina & Campion, 2007). GLOBE (2004) researchers have pointed out the tendency for cultures higher in power distance and collectivism to engage in more corruptive behaviors, including lying and deceit to 'get ahead'. Therefore, in competitive situations (i.e. job interviews) where the stakes are high (i.e. securing a job and thus a salary to support one's family) and one's identity is being threatened (triggering self-defensive behaviors), one should expect a greater tendency for applicants from these societies to engage in more deceptive defensive IM. Empirically, Fell et al.'s (2016) found that attitudes towards "mild" form of faking in interviews, which included defensive deceptive tactics, such as omitting, distancing, and masking, were more positive in cultures high on the GLOBE

dimensions of power distance, uncertainty avoidance, or in-group collectivism. In addition, cross-cultural research suggests that applicants from more collectivistic cultures show stronger tendencies to attribute their failures to external causes to meet role expectations (Kim & Nam, 1998). For example, (North and South) Asians who score high in self-protective values fear being judged and 'losing face' and losing group membership in their respective collectivity. As a result, they are more likely to engage in protective behaviors such as lying, to maintain their social status. Similarly, Kim et al. (2010) found that East Asian students were particularly likely to boost self-evaluations by denying possession of negative traits. And, Merkin et al.'s (2014) meta-analysis found a (small) negative relationship between individualism and face-saving concerns in communication.

Additionally, the GLOBE's self-protective leadership dimension focuses on ensuring the safety and security of the individual and/or group through status enhancement and 'face saving'. GLOBE conducted a correlation analysis between this dimension and their nine societal cultural dimensions finding strong positive associations between self-protective leadership and uncertainty avoidance and power distance (House et al., 2004). Merkin et al.'s (2014) meta-analysis also reported (small) positive relationships between both uncertainty avoidance and power distance and face-saving concerns in communication. The uncertainty of not knowing how negative image 'discoveries' are likely to affect interviewers' evaluations should particularly stimulate defensive behaviors of interviewees concerned about reducing such evaluation uncertainty. Gender egalitarianism was also found to have a strong negative association with self-protective leadership (House et al., 2004). In the interview context, this suggests that members from societies within the Nordic European region, for example, would be expected to engage in the least amount of deceptive protective IM behaviors. It appears that the

higher value societies place on ‘equality’, the less motivated they may feel to engage in deceptive behavior (i.e. hiding negative elements from one’s past) to protect an image that is being threatened. Therefore, we predict:

*Proposition 2b: Deceptive defensive IM will be used more by applicants from cultures high in power distance, uncertainty avoidance and in-group collectivism but low in gender egalitarianism.*

### **Honest Other-focused IM**

Very little cross-cultural IM research exists examining the relationship between culture and other-focused IM tactics in an interview context. Part of the issue is that unlike self-focused tactics, other-focused tactics can manifest into more varied behaviors with different cultural underpinnings. For example, a meta-analysis by Bond and Smith (1996) found that collectivistic countries tended to show higher levels of conformity than individualistic countries, possibly suggesting that collectivistic values are positively associated with other-focused tactics (in this case opinion conformity). In contrast, other studies have found individualism to be positively associated with ingratiation tactics (Schermerhorn & Bond 1991; Vohra, 1992; Branzei, 2002). Within an interview context, Bilbow (1998) reported that Chinese interviewers (high collectivism) expected Western interviewees (low collectivism) to maintain considerable distance (i.e., avoid directly flattering/ingratiating the interviewer), whereas the indirect discourse of Chinese applicants was interpreted by Western interviewers as symptomatic of lack of comprehension or lack of ideas. More recently, Deros (2017) found that Belgians interviewers and applicants (i.e., low collectivism, but also low power distance and assertiveness, but high gender egalitarianism) preferred or used more other-focused IM as compared to Moroccans (i.e., high in-group collectivism, power distance, and assertiveness, but low gender

egalitarianism). Therefore, and based on this initial empirical research, there are two takeaways. First, members of all societies are likely to engage in some form of other-focused IM, but the specific type of other-focused IM that interviewees are likely to engage in (i.e. opinion conformity vs ingratiation) is culturally dependent. Secondly, interviewees from cultures lower on power distance and in-group collectivism are more likely to view themselves as ‘equal’ societal members to the interviewer, and thus more likely to engage in direct forms of communication (ingratiation, flattery) with that person.

Conceptually, additional GLOBE societal cultural dimensions could be associated with honest other-focused IM. For example, assertiveness (i.e., acting confrontational) could be negatively associated with honest forms of other-focused IM (i.e., opinion conformity, ingratiation) because such tactics aim to ‘get along’ with the target, as oppose to being confrontational with them. Further, GLOBE defines humane orientation as including behaviors that are generous, caring, and kind to others. Individuals from such cultures are more likely to seize opportunities to honestly ingratiate themselves with others, highlight values they share with them, or praise their true qualities they find impressive. As such, interviewees from cultures high in humane orientation should be more likely to engage in honest other-focused IM (i.e., honest flattery or other-enhancement) towards interviewers. In sum, we predict that:

*Proposition 3a: Honest other-focused IM will be used more by applicants from cultures high in humane orientation and gender egalitarianism but low in assertiveness, in-group collectivism, and power distance.*

### **Deceptive Other-focused IM**



All the cross-cultural IM research described above did not specifically distinguish honest from deceptive other-focused attempts. We argue that most of the same cultural dimensions identified above will also be associated with deceptive other focused tactics, although arguably in a different direction. In line with this argument, Fell et al.'s (2016) "mild" form of faking in interviews also included other-focused tactics, such as opinion-conforming or fit enhancing. And, attitudes towards such tactics were more positive in cultures high on power distance or in-group collectivism, but low on gender egalitarianism. In addition, Branzei (2002) compared influence tactics used by American, Romanian, and Japanese MBA students, and found that Romanians (highest in power distance, but also collectivism and masculinity) relied more on ingratiation than other forms of influence (e.g., consultation or inspirational appeal). Although not clear from the study design, it could be that the ingratiation tactics were more deceptive in nature. Deceptive other-focused IM tactics from high power distance / collectivist societal members can also be seen as behaviors that represent a strategic approach to moving up the hierarchical ladder. Similarly, and perhaps to compensate for societal inequalities, empirical research has found that female workers use ingratiation more in high power distance, low gender-egalitarianism cultures (Aguinis & Adams, 1998). However, these studies found no relationships for performance orientation or humane orientation.

*Proposition 3b: Deceptive other-focused IM will be used more by applicants from cultures high in in-group collectivism and power distance but low in gender egalitarianism.*

A summary of our main Propositions related to cross-cultural IM use can be found in Table 2.

[Insert Table 2]

### **Impact on Interview Performance Evaluation**

Our proposed model suggests that the amount of cultural differences between interviewers and applicants will impact interview performance evaluations. Previous research has already emphasized the role of culture in explaining interview performance evaluations, with lower evaluations when applicants and interviews do not share a similar cultural background. For instance, Huffcutt et al.'s (2011) theoretical model of interview performance suggests that personal characteristics such as differences in cultural background between interviewer and interviewee could affect how interviewee performance is perceived, and thus how interviewer ratings are attributed. Huffcutt et al. (2011) specifically proposed that applicants from a culture different from that of the interviewer could be evaluated more negatively, in part because culture may be conceptually associated with perceptions of person–organizational fit (Kristof-Brown & Jansen, 2007). Similarly, Ward and Ravlin's (2017) CCIM model points to the need for considering cultural distance or the “magnitude” of value difference between applicants and interviewers. And finally, Manroop et al.'s (2013) model of cross-cultural differences about interview outcomes also proposes that “interviewers are more likely to make negative judgment about the job candidates who respond to questions contrary to cultural expectations than candidates who respond to questions according to cultural expectations” (p. 3522). Such models propose direct relationships between cultural differences and interviewers' ratings, which are aligned with the principles of social identity theory (Tajfel & Turner, 1986) or its related cousin self-categorization theory (Turner & Oakes, 1986), and describe how certain individual / intergroup behaviours and status differences are perceived as legitimate and either similar or foreign to oneself. Such processes lead to in-group favoritism where people give preferential treatment (i.e., better evaluations) to others when they are perceived to belong to the same ingroup.

In contrast, our model proposes that IM plays an intermediary role. That is, we suggest that cultural differences between interviewers and applicants leads to lower interview performance evaluations, partly because it creates potential discrepancies between IM tactics used by applicants and those expected by interviewers. Jansen et al. (2012) argue that personnel selection represents a *strong* situation, with both applicants and interviewers following the same script and having the same clear expectations about the kind of IM behaviors that should be used. In a study with Swiss participants, applicants actually engaged in those IM behaviors that were expected or perceived as more appropriate by interviewers (Jansen et al., 2012). Importantly, we argue that honest and deceptive IM tactics should be treated differently. Indeed, interviewers generally expect and value honest IM, but do not expect or want applicants to use deceptive IM (Jansen et al., 2012). And interviewers provide higher interview ratings when they perceive applicants to use honest IM, but lower ratings when they perceive them to use deceptive IM (Roulin et al., 2014). Yet, this research was limited to Western Europe, and did not examine cultural differences between applicants and interviews.

We argue that culture represents an important boundary condition to Jansen et al.'s (2012) argument about applicants' and interviewers' shared script/expectations about IM. More precisely, interviewers should generally expect (and prefer) the same honest IM tactics as those applicants use given their culture, but not necessarily the same tactics as those applicants from other cultures. In other words, interviewers' views regarding the type and amount of honest IM tactics applicants are expected to use should largely align with Propositions 1-3a. If applicants and interviewers share the same (or a similar) cultural background, applicants will engage in honest IM behaviors that align with interviewers' expectations, leading to a positive performance evaluation. For example, a Spanish applicant might use little honest self-focused IM, which

aligns with the IM expectations and preferences of a Spanish interviewer, or even an Italian interviewer (since those two countries belong to the same Latin Europe GLOBE cluster), with practice scores relatively *low* on performance orientation, in-group collectivism, and power distance). In contrast, if there is a large cultural difference between applicants and interviewers, their behaviors could be derived from different interview scripts. That is, applicants might engage in IM behaviors that do not align with interviewers' expectations, leading to a more negative evaluation. For instance, a Chinese applicant (Confucian Asia GLOBE cluster, with practice scores relatively *high* on performance orientation, in-group collectivism, and power distance) might engage in more extensive honest self-focused IM, which would differ from the expectations of the same Spanish interviewer. We propose that the interview performance ratings will be lower in the latter (vs. the former) situation. All this might indirectly explain why interviewers, hiring managers, or selection committees may at times unknowingly engage in systematic discrimination. That is, they will assign lower interview performance evaluations to applicants who come from a different cultural background because they employ honest IM tactics that are inconsistent with their own culture norms, interview script, and thus IM expectations.

*Proposition 4: The bigger the cultural distance between the applicant and the interviewer, the larger the discrepancy between the applicant's use and the interviewer's expectations of honest (a) self-focused IM, (b) other-focused IM, and (c) defensive IM, and indirectly the lower the performance evaluation by the interviewer.*

While, theoretically, the argument presented above could also apply to the three forms of deceptive IM, practically there are reasons to believe that deceptive IM tactics might always be considered inadequate by interviewers, whether the applicant using them is from their own or

from a different culture. For instance, in line with Proposition 1b, interviewers from cultures high in performance orientation, uncertainty avoidance, future orientation, assertiveness, in-group collectivism, or power distance but low in humane orientation or gender egalitarianism might anticipate higher levels of deceptive self-focused IM by applicants from their culture. Yet, they might still generally disapprove of such deceptive behaviors<sup>2</sup>. Indeed, deceptive IM can be considered as hindering interviewers' ability to properly assess applicants' qualifications (Bourdage et al., 2018), as a threat to interview validity (Levashina & Campion, 2007), and applicants who use deceptive IM might end up being a poor fit with the job or organization (Charbonneau et al., 2021). In other words, interviewers' negative views of deceptive IM behaviors (Jansen et al., 2012) and negative evaluations of applicants perceived to use deceptive IM (Roulin et al., 2014; 2015) might be observed independently of the cultural distance between applicants and interviewers. That said, research suggests that interviewers are largely unable to distinguish honest from deceptive forms of IM used by applicants (Roulin et al., 2015). And, overall deceptive IM use and ratings are effectively unrelated (e.g., Ho et al., 2021). Thus, even though we would expect *perceived* deceptive IM to be systematically evaluated negatively by interviewers across cultures, the actual relationship between deceptive IM use and performance evaluations is likely to be inconsistent and unrelated to cultural discrepancies.

### **Discussion**

We proposed a comprehensive CCIM model for understanding how cultural differences influence IM use and preferences in an interview context. Previous CCIM models of discourse (Bilbow, 1997) and influence (Ward & Ravlin, 2017) were designed for an organizational context, and others included only single tactics or cultural dimensions for the interview context

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<sup>2</sup> We thank an anonymous reviewer for pointing us in that direction.

(i.e., Manroop et al., 2013). By integrating GLOBE's (House et al., 2004) cultural framework with Levashina and Campion (2007) and Bourdage et al.'s (2018) IM typology, we developed four propositions that predict how several cultural values may influence various IM tactic use in an interview context. Our model also highlights how the larger the discrepancy between applicants' IM use and interviewers' honest IM expectations, the more negative the performance evaluation of the applicant will be. Yet, deceptive IM tactics should be viewed negatively by interviewers across cultures. Our model has several implications which are relevant for both cross-cultural/international personnel selection research and practice.

### **Theoretical Implications and Directions for IM Research**

Our model contributes to the cross-cultural personnel selection and IM literature in several ways. First, it represents the foundations to further explore how cultural values translate into applicants' preferences for, and use of, IM tactics in an interview context. Initial empirical CCIM work has already begun to examine how some cultural values translate into applicants' preferences for IM tactics in interviews (Bye et al., 2011; König et al., 2011; Sandal et al., 2014; Fell et al., 2016; Derous, 2017). However, this research is limited to a few cultural elements, a limited number of countries/cultures, or examines attitudes towards IM and not actual use. Given that our world comprises upwards of 227 countries (and even various cultures within), there is still a wealth of potential for additional empirical research to examine how cross-cultural differences translate into IM use and, even more so, how IM use impacts interview performance ratings. The present conceptual model will help advance this line of research and can generate new studies to better understand IM use across cultures. More specifically, each of our propositions can be tested empirically to explore how cultural values translate into preferences for IM, and use of, tactics. If enough empirical studies are accumulated, a 'mapping' of IM tactic

preferences for cultures around the globe could be created, similar to how cultural psychologists have mapped the Big Five personality framework cross-culturally (McCrae et al., 2005; Schmitt et al., 2007).

Secondly, our model can advance personnel selection research to better understand how performance ratings are affected by cultural distance between interviewers and interviewees. Our model thus expands Huffcutt et al.'s (2011) theoretical model of interviewee performance in selection interviews by specifically investigating one of the six demographic/personal characteristics that can affect the impact of interviewee performance on interviewer ratings: cultural background. We thus respond to these authors' call that assessing the influence of culture could be one of the most important directions for future interview research. Such knowledge may inform why members of certain cultural groups receive poorer evaluations (and subsequently struggle to find employment despite having strong qualifications) when interviewing in culturally distant contexts. For example, Proposition 4 could be tested by selecting applicant-interviewer pairs from culturally-similar nations (i.e. Sweden vs. Finland) and then culturally-distant nations (i.e. Germany vs. Philippines), to examine whether cultural distance between applicants and interviewers (and indirectly discrepancies in IM use vs. expectations) negatively impacts performance evaluation.

It would be further interesting to investigate the complexity of multiple interviewers, such as typically found in a panel interview, where panel members can come from varying cultural backgrounds. Such a research design would require access to the individual evaluation scores of each panel member and include applicants (from various cultural backgrounds) both culturally similar and dissimilar to the panel members. For example, if an interview panel with members from Japan, Brazil, and Canada collectively interviewed various applicants from each

of their respective countries (or culturally-similar countries), individual panel member evaluation scores could offer insights into whether cultural preferences for certain IM tactics exist. This could be empirically examined by experimentally manipulating the cultural background of applicants or the composition of interview panels in the lab or by conducting quasi-experiments in the field, for instance with large multinational organizations or companies with very diverse groups of interviewers and applicant pools.

In addition, our model proposes that a large cultural distance between the applicant and the interviewer(s) might be associated with lower interview performance ratings by the interviewer, because of differences in the honest IM tactics used vs. expected. Yet, this effect might also depend on interviewers' individual differences. That is, the same applicant using IM tactics from culture A could be evaluated somewhat differently by two different interviewers from the same culture B. While there might be a multitude of potentially-relevant individual differences, we propose a few examples here: According to the dual process motivational model of ideology and prejudice (Duckitt & Sibley, 2017) social dominance orientation (SDO) and right-wing authoritarianism (RWA) are two major social attitudinal predictors of prejudice. Extensive research shows that SDO and RWA are associated with in-group favoritism but negative attitudes or behaviors towards out-group members, including immigrants (e.g., Proch, 2013; Sibley & Duckitt, 2008). Similarly, individuals high on ethnocentrism view their culture as the 'center' of the world or as a role model for other cultures, and thus generally dislike interacting with members of foreign cultures (Neuliep & McCroskey, 2013). As such, an interviewer high on SDO, RWA, or ethnocentrism might be particularly likely to negatively evaluate an applicant from a different cultural background, and who is using (honest) IM tactics that not aligned with their expectations. In contrast, an interviewer low on those traits could have



more tolerance and openness to IM differing from their own expectations or norm. Other individual differences like some personality traits (e.g., openness, agreeableness) or experiences (e.g., time spent abroad or interacting with people from different cultures) could play a similar role. Although it is worth mentioning these potentially impactful variables, we decided not to include them as formal moderators in our model due to issues related to congruence measurement. For research involving dyadic relationships (i.e. interviewer / interviewee), it is essential to examine normative and distinctive components separately to completely understand how similarity and perception agreement could potentially be related to other variables. For instance, simple profile correlations have been found to be associated with confounds leading to erroneous and/or incomplete data interpretations (see Rogers et al., 2018). Thus, researchers might be best advised to focus their efforts in understanding how cultural differences influence IM use by applicants or performance ratings by interviewers before trying to integrate individual difference moderators.

Finally, and related to the previous element, our model is built on actual, objective country- or regional-level differences in the GLOBE dimensions. For instance, our Proposition 4 argues that the larger the *objective* cultural distance between applicants and interviewers, the more likely the applicant's honest IM behaviors might be negatively evaluated by the interviewer. While this is the approach used in most cross-cultural research, it might not fully capture potential differences in interviewers' *perceptions* of that cultural distance. For instance, while Italians and Germans *objectively* differ in several key cultural dimensions according to the GLOBE framework (i.e., and belong to the Latin European vs. Germanic clusters, respectively), two Italian interviewers might differ in how much they generally *perceive* Germans to differ from Italians, and thus evaluate the IM behaviors from the same German applicant differently. In

the same way, the two Italian interviewers might differ in how they generally *perceive* the French to differ from Italians (although they objectively belong to the same cluster), and thus differently evaluate the IM tactics used by a French applicant.

### **Practical Implications**

As globalization continues to progress and workers from around the world with various cultural background migrate to new environments in search of employment and a better life, such theoretical models are necessary in helping to understand the cultural adaptational challenges that they face. This is particularly relevant in multicultural societies (e.g., within North America and Western Europe) where it is highly likely to have interviewers and interviewees from various cultural backgrounds. Interviewers in such contexts would benefit from better understanding why and how applicants from different cultures engage in different IM behaviors. They could then incorporate this information in their performance evaluations, which could potentially help reduce risks associated with bias and hiring discrimination. For example, our theoretical model could be used as the foundation for developing cross-cultural training programs aimed at reducing biased hiring decisions. Scholars have proposed IM training prior to sending employees on expatriate assignments (e.g., Giacalone & Beard 1994). Research demonstrates that organizations have an important responsibility to provide cross-cultural training to their interviewers regarding how to appropriately manage interactions with culturally diverse job candidates (Peretz & Rosenblatt, 2011). As such, our model is also applicable in the training of professional human resource managers or line managers in charge of interviewing applicants, selection committees (in businesses, universities, etc.), as well as government immigration departments to assist with immigrant cultural adaptation.

Our CCIM model could also be used to develop training content for applicants applying for jobs in a new/different culture and provide them with job interview skills that go beyond professional attire and language proficiency by adding a cultural element of instruction. This might be particularly relevant for government immigration agencies seeking to assist immigrants with their intercultural adaptation process. Longitudinal research designs could also be applied to assess whether CCIM training can help immigrants in their job search, as well as their overall intercultural adjustment.

Finally, our model is highly relevant following the COVID-19 pandemic which has forced many organizations to conduct interviews virtually. Huffcutt et al.'s (2011) model includes the factor 'Interview Design Considerations – Interview Medium' (i.e. virtual hiring due to COVID pandemic) which has implications for how interview performance ratings are attributed. Some of the predictions we make in this manuscript may apply differently to different mediums such as video-conference interviews or asynchronous video interviews (see Lukacik et al., 2021). Recent empirical research has found that IM tactics interviewees employ can change due to technological barriers (Basch et al., 2020). Organizations should thus consider what IM tactics they should expect from an applicant in an interview depending on a combination of their culture and the technology medium used.

## **Conclusion**

In this paper, we propose a comprehensive CCIM model applicable to the interview context. Our new model offers insights into how various cultural values impact job applicants' preferences for several IM tactics, and thus lays the foundation for future empirical work investigating how interview performance (and subsequently employment offers) may be affected by cultural differences. A better understanding of cultural preferences for specific IM tactics can

also be used to develop more effective cross-cultural training programs for applicants, interviewers, and government immigration bodies, to ensure a more inclusive hiring process and help with the intercultural adjustment of expatriates and immigrants. Such efforts are needed to adapt to the changes in our ever increasingly globalized world.

## References

- Aguinis, H., & Adams, S. K. (1998). Social-role versus structural models of gender and influence use in organizations: A strong inference approach. *Group & Organization Management, 23*(4), 414-446.
- Allport, G. W. (1954). (1979). *The nature of prejudice*. Reading, MA: Addison-Wesley.
- Altemeyer, B. (1988). *Enemies of freedom: Understanding right-wing authoritarianism*. Jossey-Bass.
- Barnlund, D. C., & Yoshioka, M. (1990). Apologies: Japanese and American styles. *International Journal of Intercultural Relations, 14*(2), 193-206.  
[https://doi.org/10.1016/0147-1767\(90\)90005-H](https://doi.org/10.1016/0147-1767(90)90005-H)
- Barrick, M. R., Shaffer, J. A., & DeGrassi, S. W. (2009). What you see may not be what you get: Relationships among self-presentation tactics and ratings of interview and job performance. *Journal of Applied Psychology, 94*(6), 1394–1411.  
<https://doi.org/10.1037/a0016532>
- Basch, J. M., Melchers, K. G., Kegelmann, J., & Lieb, L. (2020). Smile for the camera! The role of social presence and impression management in perceptions of technology-mediated interviews. *Journal of Managerial Psychology*.
- Bilbow, G. T. (1997). Cross-cultural impression management in the multicultural workplace: The special case of Hong Kong. *Journal of Pragmatics, 28*(4), 461–487.  
[https://doi.org/10.1016/S0378-2166\(97\)00036-2](https://doi.org/10.1016/S0378-2166(97)00036-2)
- Bilbow, G. T. (1998). Look who's talking: An analysis of “Chair-Talk” in business meetings. *Journal of Business and Technical Communication, 12*(2), 157-197. <https://doi-org.library.smu.ca/10.1177/1050651998012002001>

- Blickle, G., Schneider, P. B., Perrewé, P. L., Blass, F. R., & Ferris, G. R. (2008). The roles of self-disclosure, modesty, and self-monitoring in the mentoring relationship: A longitudinal multi-source investigation. *Career Development International*, 13(3), 224-240. <https://doi.org/10.1108/13620430810870485>
- Bolino, M., Kacmar, K., Turnley, W., & Gilstrap, J. (2008). A multilevel review of impression management motives and behaviors. *Journal of Management*, 34, 1080–1109. <https://doi.org/10.1177/0149206308324325>
- Bond, R., & Smith, P. B. (1996). Culture and conformity: A meta-analysis of studies using Asch's (1952b, 1956) line judgment task. *Psychological Bulletin*, 119(1), 111–137. <https://doi.org/10.1037/0033-2909.119.1.111>
- Bourdage, J. S., Roulin, N., & Tarraf, R. (2018). “I (might be) just that good”: Honest and deceptive impression management in employment interviews. *Personnel Psychology*, 71(4), 597–632. <https://doi.org/10.1111/peps.12285>
- Branzei, O. (2002). Cultural explanations of individual preferences for influence tactics in cross-cultural encounters. *International Journal of Cross Cultural Management*, 2(2), 203-218. DOI: 10.1177/14795802002002873
- Bye, H. H., Sandal, G. M., Vijver, F. J. R. van de, Sam, D. L., Çakar, N. D., & Franke, G. H. (2011). Personal values and intended self-presentation during job interviews: A cross-cultural comparison. *Applied Psychology*, 60(1), 160–182. <https://doi.org/10.1111/j.1464-0597.2010.00432.x>
- Charbonneau, B. D., Powell, D. M.; Spence, J. R., & Lyons, S. T. (2021). Unintended consequences of interview faking: Impact on perceived fit and affective

- outcomes," *Personnel Assessment and Decisions*, 7 (1), 60-71.  
<https://doi.org/10.25035/pad.2021.01.006>
- Cialdini, R. B., & De Nicholas, M. E. (1989). Self-presentation by association. *Journal of personality and social psychology*, 57(4), 626. <https://doi.org/10.1037/00223514.57.4.626>
- Derous, E. (2017). Ethnic minorities' impression management in the interview: Helping or hindering? *Frontiers in Psychology*, 8, 86. <https://doi.org/10.3389/fpsyg.2017.00086>
- Dorfman, P., Javidan, M., Hanges, P., Dastmalchian, A., & House, R. (2012). GLOBE: A twenty year journey into the intriguing world of culture and leadership. *Journal of World Business*, 47(4), 504-518. <https://doi.org/10.1016/j.jwb.2012.01.004>
- Duckitt, J., & Sibley, C. G. (2017). *The dual process motivational model of prejudice*. The Cambridge handbook of the psychology of prejudice, 188-221. Cambridge University Press. <https://doi.org/10.1017/9781316161579.009>
- Fell, C. B., & König, C. J. (2016). Cross-Cultural Differences in Applicant Faking on Personality Tests: A 43-Nation Study. *Applied Psychology*, 65(4), 671–717.  
<https://doi.org/10.1111/apps.12078>
- Fell, C. B., König, C. J., & Kammerhoff, J. (2016). Cross-cultural differences in the attitude toward applicants' faking in job interviews. *Journal of Business and Psychology*, 31(1), 65-85. <https://doi-org.library.smu.ca/10.1007/s10869-015-9407-8>
- Gangestad, S. W., & Snyder, M. (2000). Self-monitoring: Appraisal and reappraisal. *Psychological Bulletin*, 126(4), 530–555. <https://doi.org/10.1037/0033-2909.126.4.530>
- Giocalone, R. A., & Beard, J. W. (1994). Impression management, diversity, and international management. *American Behavioral Scientist*, 37(5), 621-636. <https://doi-org.library.smu.ca/10.1177/0002764294037005004>

- GLOBE Project Team. (2006). *Research survey: GLOBE Project* (Global leadership and organizational behavior effectiveness project) (Research survey). The Globe Foundation.
- Guan, X., Park, H. S., & Lee, H. E. (2009). Cross-cultural differences in apology. *International Journal of Intercultural Relations*, 33(1), 32-45.  
<https://doi.org/10.1016/j.ijintrel.2008.10.001>
- Higgins, C. A., & Judge, T. A. (2004). The effect of applicant influence tactics on recruiter perceptions of fit and hiring recommendations: A field study. *Journal of Applied Psychology*, 89(4), 622–632. <https://doi.org/10.1037/0021-9010.89.4.622>
- Hirokawa, R. Y., & Miyahara, A. (1986). A comparison of influence strategies utilized by managers in American and Japanese organizations. *Communication Quarterly*, 34(3), 250–265. <https://doi.org/10.1080/01463378609369639>
- Ho, J. L., Powell, D. M., & Stanley, D. J. (2021). The relation between deceptive impression management and employment interview ratings: A meta-analysis. *Canadian Journal of Behavioural Science*, 53(2), 164–174. <https://doi.org/10.1037/cbs0000223>
- Hofstede, G. (1980). Culture and Organizations. *International Studies of Management & Organization*, 10(4), 15–41. <https://doi.org/10.1080/00208825.1980.11656300>
- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (2004). *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*. SAGE Publications.
- Huffcutt, A. I., & Culbertson, S. S. (2011). Interviews APA Handbook of Industrial and Organizational Psychology (Vol. 2: Selecting and Developing Members for the Organization). Washington, DC: American Psychological Association.
- Huffcutt, A. I., Van Iddekinge, C. H., & Roth, P. L. (2011). Understanding applicant behavior in employment interviews: A theoretical model of interviewee performance. *Human*



*Resource Management Review*, 21(4), 353-367.

<https://doi.org/10.1016/j.hrmr.2011.05.003>

Huntington, S. P. (1993). *The third wave: Democratization in the late twentieth century* (Vol. 4).

University of Oklahoma press.

Inglehart, R. (1997). Modernization, postmodernization and changing perceptions of risk. *International Review of Sociology*, 7(3), 449-459.

<https://doiorg.library.smu.ca/10.1080/03906701.1997.9971250>

Inglehart, R., & Baker, W. E. (2000). Modernization, cultural change, and the persistence of traditional values. *American sociological review*, 19-51. Retrieved February 15, 2021, from <http://www.jstor.org/stable/2657288>

Jansen, A., König, C. J., Stadelmann, E. H., & Kleinmann, M. (2012). Applicants' self-presentational behavior: What do recruiters expect and what do they get? *Journal of Personnel Psychology*, 11(2), 77-85. DOI:10.1027/1866-5888/A000046

Javidan, M., House, R. J., Dorfman, P. W., Hanges, P. J., & De Luque, M. S. (2006).

Conceptualizing and measuring cultures and their consequences: a comparative review of GLOBE's and Hofstede's approaches. *Journal of international business studies*, 37(6), 897-914.

Kacmar, K. M., Delery, J. E., & Ferris, G. R. (1992). Differential effectiveness of applicant impression management tactics on employment interview decisions. *Journal of Applied Social Psychology*, 22(16), 1250–1272. <https://doi.org/10.1111/j.1559-1816.1992.tb00949.x>

- Kamau, C. (2009). Severe initiation into a group and ingroup loyalty: Cognitive dissonance or culture? In: 4th Africa Region Conference of the International Association for Cross-Cultural Psychology (IACCP), 2nd to 6th August, Buea, Cameroon.
- Kim, D., Ma, K., Sellaro, R., Hommel, B., & Hommel, B. Conformity and collectivism: A cross-cultural comparison (unpublished manuscript).
- Kim, J. Y., & Nam, S. H. (1998). The concept and dynamics of face: Implications for organizational behavior in Asia. *Organization Science*, 9(4), 522–534.  
<https://doi.org/10.1287/orsc.9.4.522>
- Kim, Y.-H., Chiu, C.-Y., Peng, S., Cai, H., & Tov, W. (2010). Explaining east-west differences in the likelihood of making favorable self-evaluations: The role of evaluation apprehension and directness of expression. *Journal of Cross-Cultural Psychology*, 41(1), 62–75. <https://doi.org/10.1177/0022022109348921>
- Kipnis, D., Schmidt, S. M., Swaffin-Smith, C., & Wilkinson, I. (1984). Patterns of managerial influence: Shotgun managers, tacticians, and bystanders. *Organizational Dynamics*, 12(3), 58-67. [https://doi.org/10.1016/0090-2616\(84\)90025-1](https://doi.org/10.1016/0090-2616(84)90025-1)
- König, C. J., Hafsteinsson, L. G., Jansen, A., & Stadelmann, E. H. (2011). Applicants' self-presentational behavior across cultures: Less self-presentation in Switzerland and Iceland than in the United States. *International Journal of Selection and Assessment*, 19(4), 331–339. <https://doi.org/10.1111/j.1468-2389.2011.00562.x>
- König, C. J., Langer, M., Fell, C. B., Pathak, R. D., Bajwa, N. U. H., Deros, E., ... & Ziem, M. (2020). Economic predictors of differences in interview faking between countries: Economic inequality matters, not the state of economy. *Applied Psychology*.  
<https://doi.org/10.1111/apps.12278>

- Kristof-Brown, Jansen, K., & Colbert, A. E. (2002). A policy-capturing study of the simultaneous effects of fit with jobs, groups, and organizations. *Journal of Applied Psychology, 87*(5), 985–993. doi:10.1037/0021-9010.87.5.985
- Kristof-Brown, A. L., & Jansen, K. (2007). Issues of person–organization fit. In C. Ostroff, & T. A. Judge (Eds.), *Perspectives on organizational fit* (pp. 123–153). Mahwah, NJ: Lawrence Erlbaum Associates.
- Lalwani AK, Shavitt S, Johnson T. (2006). What is the relation between cultural orientation and socially desirable responding? *Journal of Personality and Social Psychology, Jan; 90*(1), 165-78. DOI: 10.1037/0022-3514.90.1.165
- Levashina, J., & Campion, M. A. (2007). Measuring faking in the employment interview: Development and validation of an interview faking behavior scale. *Journal of Applied Psychology, 92*(6), 1638–1656. <https://doi.org/10.1037/0021-9010.92.6.1638>
- Lukacik, E. R., Bourdage, J. S., & Roulin, N. (2020). Into the void: A conceptual model and research agenda for the design and use of asynchronous video interviews. *Human Resource Management Review, 100789*. <https://doi.org/10.1016/j.hrmr.2020.100789>
- Macan, T. (2009). The employment interview: A review of current studies and directions for future research. *Human Resource Management Review, 19*(3), 203-218. <https://doi.org/10.1016/j.hrmr.2009.03.006>
- Manroop, L., Boekhorst, J. A., & Harrison, J. A. (2013). The influence of cross-cultural differences on job interview selection decisions. *The International Journal of Human Resource Management, 24*(18), 3512-3533. <https://doi.org/10.1080/09585192.2013.777675>

- McCrae, R. R., & Terracciano, A. (2005). Personality profiles of cultures: aggregate personality traits. *Journal of Personality and Social Psychology, 89*(3), 407.  
<https://doi.org/10.1037/0022-3514.89.3.407>
- Melchers, K. G., Roulin, N., & Buehl, A. K. (2020). A review of applicant faking in selection interviews. *International Journal of Selection and Assessment, 28*(2), 123-142.  
<https://doi.org/10.1111/ijsa.12280>
- Naroll, R., & Sipes, R. G. (1973). A standard ethnographic sample. *Current Anthropology, 14*(1/2), 111-140. Retrieved February 15, 2021, from <http://www.jstor.org/stable/2741105>
- Neuliep, J. W., & McCroskey, J. C. (2013). Ethnocentrism Scale. Measurement Instrument. Database for the Social Science.
- Peck, J. A., & Levashina, J. (2017). Impression management and interview and job performance ratings: A meta-analysis of research design with tactics in mind. *Frontiers in psychology, 8*, 201. doi:10.3389/fpsyg.2017.00201
- Peretz, H., & Rosenblatt, Z. (2011). The role of societal cultural practices in organizational investment in training: A comparative study in 21 countries. *Journal of Cross-Cultural Psychology, 42*(5), 817-831. <https://doi-org.library.smu.ca/10.1177/0022022111406786>
- Pettigrew, T. F. (1958). Personality and sociocultural factors in intergroup attitudes: A cross-national comparison. *Journal of conflict resolution, 2*(1), 29-42.
- Pratto, F., Sidanius, J., Stallworth, L., & Malle, B. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology, 67*, 741–763. <https://doi.org/10.1037/0022-3514.67.4.741>

- Proch, J. (2013). More than half a century of research on personality and prejudice: Where are we now and where do we go from here? (Doctoral dissertation).
- Quillian, L., Heath, A., Pager, D., Midtbøen, A. H., Fleischmann, F., & Hexel, O. (2019). Do some countries discriminate more than others? Evidence from 97 field experiments of racial discrimination in hiring. *Sociological Science*, 6, 467-496.
- Rogers, K. H., Wood, D., & Furr, R. M. (2018). Assessment of similarity and self-other agreement in dyadic relationships: A guide to best practices. *Journal of Social and Personal Relationships*, 35(1), 112-134.
- Rosenfeldt, P., Giacolone, R. A., & Riordan, C. A. (1995). *Impression Management in Organizations: theory, measurement, practice*. London: Routledge.
- Roulin, N., Bangerter, A., & Levashina, J. (2014). Interviewers' perceptions of impression management in employment interviews. *Journal of Managerial Psychology*, 29 (2), 141-163. <https://doi.org/10.1108/JMP-10-2012-0295>
- Roulin, N., Bangerter, A., & Levashina, J. (2015). Honest and deceptive impression management in the employment interview: Can it be detected and how does it impact evaluations? *Personnel Psychology*, 68(2), 395–444. <https://doiorg.library.smu.ca/10.1111/peps.12079>
- Roulin, N., & Bourdage, J. S. (2017). Once an impression manager, always an impression manager? Antecedents of honest and deceptive impression management use and variability across multiple job interviews. *Frontiers in Psychology*, 8, 29. [doi:10.3389/fpsyg.2017.00029](https://doi.org/10.3389/fpsyg.2017.00029)
- Ryan, A. M., Bradburn, J., Bhatia, S., Beals, E., Boyce, A. S., Martin, N., & Conway, J. (2021). In the eye of the beholder: Considering culture in assessing the social desirability of personality. *Journal of Applied Psychology*, 106(3), 452-466.

<https://doi.org/10.1037/apl0000514>

Sandal, G. M., van de Vijver, F., Bye, H. H., Sam, D. L., Amponsah, B., Cakar, N., Tien-Lun Sun, C. (2014). Intended Self-Presentation Tactics in Job Interviews: A 10-Country Study. *Journal of Cross-Cultural Psychology, 45*(6), 939–958.

<https://doi.org/10.1177/0022022114532353>

Schermerhorn, J. R., & Bond, M. H. (1991). Upward and downward influence tactics in managerial networks: A comparative study of Hong Kong Chinese and Americans. *Asia Pacific Journal of Management, 8*(2), 147–158. <https://doi.org/10.1007/BF01731937>

Schlenker, B. R., & Weigold, M. F. (1992). Interpersonal processes involving impression regulation and management. *Annual review of psychology, 43*(1), 133-168.

<https://doi.org/10.1146/annurev.ps.43.020192.001025>

Schmid Mast, M., Frauendorfer, D., & Popovic, L. (2011). Self-promoting and modest job applicants in different cultures. *Journal of Personnel Psychology, 10*(2), 70–77.

<https://doi.org/10.1027/1866-5888/a000034>

Schmitt, D. P., Allik, J., McCrae, R. R., & Benet-Martínez, V. (2007). The geographic distribution of Big Five personality traits: Patterns and profiles of human self-description across 56 nations. *Journal of Cross-Cultural Psychology, 38*(2), 173–212.

<https://doi.org/10.1177/0022022106297299>

Schwartz, S. (2006). A theory of cultural value orientations: Explication and applications. *Comparative sociology, 5*(2-3), 137-182.

<https://doi.org/10.1163/156913306778667357>

- Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review*, 12(3), 248-279. <https://doi-org.library.smu.ca/10.1177/1088868308319226>
- Silvera, D. H., & Seger, C. R. (2004). Feeling good about ourselves: Unrealistic self-evaluations and their relation to self-esteem in the United States and Norway. *Journal of Cross-Cultural Psychology*, 35(5), 571-585. <https://doi.org/10.1177/0022022104268389>
- Snyder, M., & Gangestad, S. (1986). On the nature of self-monitoring: Matters of assessment, matters of validity. *Journal of Personality and Social Psychology*, 51(1), 125. DOI: 10.1037/0022-3514.51.1.125
- Steiner, D. D. (2012). Personnel selection across the globe. In N. Schmitt (Ed.), *The Oxford Handbook of Personnel Assessment and Selection* (pp. 740-767). Oxford University Press. DOI:10.1093/oxfordhb/9780199732579.001.0001
- Sugimoto, N. (1997). A Japan-US comparison of apology styles. *Communication Research*, 24(4), 349-369. <https://doi-org.library.smu.ca/10.1177/009365097024004002>
- Tajfel, H., & Turner, J. (1986). The Social Identity Theory of Inter-group Behavior, in S. Worchel and LW Austin (eds) *Psychology of Intergroup Relations*. Chicago: Nelson-Hall.
- Thomsen, L., Sidanius, J., & Fiske, A. P. (2007). Interpersonal leveling, independence, and self-enhancement: A comparison between Denmark and the US, and a relational practice framework for cultural psychology. *European Journal of Social Psychology*, 37(3), 445–469. <https://doi.org/10.1002/ejsp.366>

- Triandis, H. C. (2001). The study of cross cultural management and organization: The future. *International Journal of Cross Cultural Management*, 1(1), 17-20. <https://doi-org.library.smu.ca/10.1177/1470595801111003>
- Triandis, H. C., & Suh, E. M. (2002). Cultural influences on personality. *Annual Review of Psychology*, 53(1), 133-160. <https://doi.org/10.1146/annurev.psych.53.100901.135200>
- Tsai, W.-C., Huang, T.-C., Wu, C.-Y., & Lo, I.-H. (2010). Disentangling the Effects of Applicant Defensive Impression Management Tactics in Job Interviews. *International Journal of Selection and Assessment*, 18(2), 131–140. <https://doi.org/10.1111/j.1468-2389.2010.00495.x>
- Turner, J. C., & Oakes, P. J. (1986). The significance of the social identity concept for social psychology with reference to individualism, interactionism and social influence. *British Journal of Social Psychology*, 25(3), 237-252. <https://doi.org/10.1111/j.2044-8309.1986.tb00732.x>
- Ward, A.-K., & Ravlin, E. C. (2017). Building influence as an outsider: A theoretical approach to cross-cultural impression management. *Human Resource Management Review*, 27(3), 491–506. <https://doi.org/10.1016/j.hrmr.2016.12.013>



**Table 1.****Interview IM typology (adapted from Levashina & Campion, 2007 and Bourdage et al., 2018)**

	<b>Honest IM</b>	<b>Deceptive IM</b>
<b>Self-focused IM</b>	Honest self-promotion (highlighting true qualifications, skills, or experiences)	Slight image creation (embellishing, tailoring, or fit enhancing)  Extensive image creation (constructing, inventing or borrowing)
<b>Defensive IM</b>	Honest defensive IM - Image repair (apologies, excuses, justifications)	Image protection (Distancing, masking, omitting)
<b>Other-focused IM</b>	Honest ingratiation (honestly opinion conforming, truthful flattery or other enhancement)	Deceptive ingratiation (falsely opinion conforming, interviewer or organization enhancing)

**Table 2. Proposed associations between GLOBE dimensions and IM tactic**

GLOBE dimension	Honest Self- Focused	Honest Other- focused	Honest Defensive	Deceptive Self- Focused	Deceptive Other- focused	Deceptive Defensive
Performance Orientation	+			+		
Assertiveness		-		+		
Future Orientation				+		
Humane Orientation	-	+		-		
In-Group Collectivism	-	-	-	+	+	+
Gender Egalitarianism	-	+	+	-	-	-
Power Distance	+	-	-	+	+	+
Uncertainty Avoidance				+		+

*Note:* + / - indicate(s) positive and negative predicted associations, respectively