Group Membership, Content Valence, and Stereotype Agreement: Testing the Effects of Jokes and Asian Stereotypes

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Abstract

Guided by the theories of social identity (Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, Wetherell, 1987) and intergroup contact (Allport, 1954; McIntyre, Paolini, Hewstone, 2016; Pettigrew, 1998; Pettigrew & Tropp, 2006; Williams, 1947), this study examines stereotype jokes about Asian Americans and stereotype agreement from Caucasian Americans' perspectives. Situated in the context of standup comedy, two factors were experimentally manipulated using a 2×2 within-subjects design: the racial group membership of the comedian (Asian/White) and the content valence of the joke (negative/positive stereotype). Four written scripts based on standup comedy routines and mass media messages were used for the experimental manipulations. These scripts are also in line with common stereotypes identified in prior empirical studies about Asian sojourners and immigrants in the United States (i.e., success driven and bad drivers).

Data collection was conducted using Qualtrics online survey system. Following participants exposure to each of the four joke scenarios (randomly ordered), five dependent variables were measured: funniness and offensiveness of the joke, interpersonal anxiety toward the comedian, intergroup anxiety toward Asian Americans as a group, and level of agreement with the stereotype presented in the joke. Responses from 227 Amazon Mechanical Turk participants were collected. Following data screening, the final sample for data analysis was 220 (54 with missing values; 166 with complete responses).

Analysis results from an univariate multilevel modeling approach (Bates, Mächler, Bolker, & Walker, 2015) showed that Caucasian American participants' least preferred (most offensive) scenario was a White comedian telling a negative-stereotype (bad drivers) joke about Asian Americans ($\beta_{marginal} = 4.421, p < .001$). The most positively rated (least offensive) scenario was Asian American comedian telling the positive-stereotype (success driven) joke ($\beta_{marginal} = 2.825, p < .001$). Furthermore, the participants rated Asian comedian telling a negative-stereotype joke to be the

funniest ($\beta_{marginal} = 4.513, p < .001$) comparing to White comedian telling a negative-stereotype joke (least funny; $\beta_{marginal} = 3.596, p < .001$).

Further analyses using a Bayesian multivariate multilevel approach (Bürkner, 2017; Carpenter et al., 2017) were conducted to examine potential mediation processes in between comedian group membership and stereotype agreement and in between content valence and stereotype agreement. Analysis results showed first-stage mediation effects of joke offensiveness (negative) and interpersonal anxiety (positive) between comedian group membership and stereotype agreement. In addition, two two-stage mediation processes were found: 1) from comedian group membership to stereotype agreement through interpersonal anxiety (positive) and intergroup anxiety (positive); and 2) from comedian group membership to stereotype agreement through joke offensiveness (positive) and interpersonal anxiety (positive).

For the potential mediation processes between content valence and stereotype agreement, analysis results showed first-stage partial mediation effect of joke funniness (positive) between the two. A two-stage partial mediation process was found from content valence to stereotype agreement through joke offensiveness (positive) and interpersonal anxiety (positive). While accounting for the mediation paths, content valence still had a direct effect on stereotype agreement that the participants showed a higher level of agreement with the positive stereotype (Asian Americans are success driven) than with the negative stereotype (Asian Americans are bad drivers).

The study findings are discussed in light of social identity, intergroup contact, racial discourse norms, and standup comedy as a means for stereotype agreement reduction. Theoretical implications and contextual interpretations are addressed. Future research directions on stereotype humor in standup comedy and other communicative contexts are offered.

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Chapter 1

Introduction

[I]f the syndrome of the prejudiced personality is correctly defined ..., we can easily believe humor is a missing ingredient; also that it is a present ingredient in the syndrome of tolerance. One who can laugh at oneself is unlikely to feel greatly superior to others.

Allport (1954, p. 409)

In his pioneering work on intergroup prejudice, Allport (1954) theorized a wide range of factors related to this human social phenomenon from various perspectives - political, sociocultural, developmental, cognitive, personality, and historical. In particular, Allport described a few manifestations of what he termed tolerant personality trait - people who are self-aware and self-critical usually have more tolerance for others. Another trait that is closely related to the tolerant personality trait is one's "sense of humor". According to Allport, "a person's sense of humor is closely related to his degree of self-insight. Yet, just what humor is, it is hard to say, and its accurate measurement is beyond the present competence of psychology. But we venture to assert that humor is probably an important variable in relation to prejudice.... One who can laugh at oneself is unlikely to feel greatly superior to others" (p. 437; cf. Cattell & Luborsky, 1947; Luborsky & Cattell, 1947).

Sense of humor as a personality factor, according to Allport (1954), may explain individual variations in tolerance for the differences between social groups. To further expand Allport's theoretical speculation, one direction is to examine humor from a communication perspective. As Lynch (2002) points out that "[a]ll humor is fundamentally a communicative activity. At its most

basic level humor is an intended or unintended message interpreted as funny" (p.423). In recent years, communication scholars have paid an increased attention to the study of humor in various communicative/relational contexts ranging from interpersonal (e.g., Hall, 2013, 2017), intergenerational (e.g., Chen, Joyce, Harwood, & Xiang, 2017), educational (Sidelinger, 2014), to political (e.g., Heiss & Matthes, 2019; Innocenti & Miller, 2016). This line of research on humor and communication by these scholars has been published in top communication journals such as *Communication Research, Journal of Communication*, and *Communication Monographs*.

In the context of intergroup communication, humorous messages targeting outgroups can increase ingroup solidarity and morale (e.g., Czechoslovakians' jokes about Nazis during World War II; Obrdlik, 1942). Humor can also be used to express hatred and prejudice against an outgroup in a way that such messages may get a pass or seem legitimate, because they are "just jokes" (Hodson & MacInnis, 2016; Hodson, Rush, & MacInnis, 2010). Here, the sender's motive, the encoding and decoding of a message (i.e., a joke), the norm(s) governing how to decode and react to the message (Saucier, Strain, Miller, O'Dea, & Till, 2018), the outcomes at individual and group levels are all theoretically meaningful expansions to Allport's (1954) theorizing of the sense of humor.

In the current media environment, with various channels offered by different platforms, the distinction between the traditional/mass and social media becomes blurry. Information consumers are surrounded by persuasive messages packaged with emotional appeals. Many of the messages, profit or non-profit driven, intend to elicit norm-confirming behaviors among their target audience by inducing particular emotions. Humor is one of some commonly used emotion-inducing strategies that can be observed in almost all forms of messages - from a sales pitch in a shoe store to Super Bowl commercials, from regional to national political campaigns, and from YouTube channels providing product reviews to mass media syndicates promoting particular ideologies. Humor can create a perceived common ground and positive affect, thus identification between the target audience and the performer through laughing together, leading to norm-confirming

behaviors, such as purchasing a service or product, voting for a candidate, or appropriately engaging socially (Harris, 2004a; Lee & Mason, 1999; Warren, Barsky, & McGraw, 2018).

One form of humorous communication that has been greatly influenced by the development of the media is standup comedy. This particular language art form is usually performed in theaters and comedy clubs. With the development of media, standup comedy is no longer constrained by physical or temporal limits. Standup comedians can reach a far wider audience through Netflix specials, YouTube channels, podcasts, and Twitter. This level of audience reach was unimaginable back when TV or radio was the dominant media channels. Professional standup comedians dominated the traditional media era (Timberg, 2002). Now, with the development of new media platforms, many talented standup comedians have their opportunities to reach a broad, if not global, audience. This new diverse-audience, diverse-performer dynamic means that humorous communication can play a greater role in intergroup relations (Fitriani & Neneng, 2019).

Like other forms of human interactions, humorous communication can serve a multitude of social functions. Matineau (1972) describes humor as both a "lubricant" and "abrasive" in social interactions (p. 103). For standup comedy, meanings of jokes are co-constructed by the performer and the audience. A fundamental notion in communication is that the meaning, or interpretation, of a message is co-constructed by the sender and the receiver. As such, an audience's perception of a stereotype joke, pro- or antisocial, can be affected by at least the performer's actual motive/intent (e.g., genuinely making fun of a targeting group vs. ridiculing prejudiced individuals), the audience's inferred motive of the performer, the content of the joke (e.g., positive/negative stereotype of the target group), the delivery of the joke, and the immediate context. Hence, a communicative perspective on humor research makes unique contributions to the scientific understanding of this social act/phenomenon complimenting other social scientific paradigms (e.g., psychological and sociological).

Contributing to the existing communication literature on humor research, this dissertation project draws its inspirations from humorous messages composed and performed onstage by standup comedians targeting particular social groups. Two theoretical frameworks provide the

grounding for research hypothesis delineations - social identity theory (Tajfel & Turner, 1979; Turner, 1982; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) and intergroup contact theory (Allport, 1954; McIntyre, Paolini, Hewstone, 2016; Pettigrew, 1998; Pettigrew & Tropp, 2006; Williams, 1947). In addition to answering theoretical questions, this study is situated in a specific intergroup relationship – Caucasian and Asian Americans. Besides the current hostile political rhetoric between U.S. and Asian countries (i.e., China and North Korea), Asian immigrant groups are the second largest in the United States (López, Ruiz, and Patten, 2017; U.S. Census Bureau, 2010).

The earliest appearances of Asians on stage were negative portrayals with biased and exaggerated characteristics (e.g., Fu Manchu). These types of media portrayals has changed over time, but Asian characters are still being marginalized in many ways by the mainstream media (e.g., Asian characters are more likely to die, and their deaths are usually portrayed as insignificant; Kleinen, 2003; Tierney, 2006). These negative portrayals have some negative effects on Asian American viewers (Harris, 2004b; Mok, 1998). However, a new media trend has been emerging, as more Asian comedians started gaining more media attention, such as Bobby Lee, Ali Wong, Steve Byrne, Russell Peters, Joe Wong, Ken Jeong, Margaret Cho, and Aziz Ansari. There are even more starting comedians performing at local comedy clubs. While they may not have a Netflix-Special-level influence yet, their performance posted on YouTube can gain over thousands of views. The effects of these media messages, containing insiders' views about Asian cultures, on intergroup relations have not been fully addressed. The overarching goal of this dissertation project is to understand the communicative conditions under which stereotype jokes can influence audience evaluations of the joke, the performer, the performer's social group, and audience agreement with existing beliefs/stereotypes about Asian Americans. The following chapter reviews two theoretical perspectives, discusses their framings of stereotype jokes, and delineates research hypotheses and research questions correspondingly.

Chapter 2

Review of Literature

2.1 Intergroup Contact and Prejudice Reduction

Intergroup relations refer to "relations between two or more groups and their respective members" (Sherif & Sherif, 1979, p. 9). Based on the assumption that intergroup prejudice is a function of knowledge about outgroups, Allport (1954) specified four conditions under which increased intergroup contact could lead to increased outgroup knowledge which in turn could lead to reduced intergroup prejudice (or improved intergroup relationships). Following Allport, generations of contact researchers devoted to empirically examining the effects of intergroup contact under the optimal conditions (i.e., equal status, common goal, acquaintance potential, and institutional support). The general conclusion is that frequent and meaningful contact leads to improved intergroup attitudes (Abrams & Hogg, 2017; Dovidio, Love, Schellhaas, & Hewstone, 2017; McIntyre, Paolini, & Hewstone, 2016; Pettigrew & Tropp, 2006; Davies, Tropp, Aron, Pettigrew, & Wright, 2011).

Intergroup contact theory, proposed by Pettigrew (1998), provides further explaining mechanisms for the contact-lead-to-reduction process. Specifically, Pettigrew described four interrelated processes that may occur during intergroup contact and lead to improved intergroup attitudes: learning about outgroup, changing behavior, generating affective ties, and ingroup reappraisal. Contact research also showed that these four processes may all occur in cross-group friendships. Furthermore, the affective measures for such relationships showed the strongest moderation effect on the contact-lead-to-reduction process (Davies, Tropp, Aron, Pettigrew, & Wright, 2011; Pettigrew & Tropp, 2006).

Intergroup anxiety has been found to be a key mediator in the contact-lead-to-reduction process (Petigrew & Tropp, 2008; Stephan, 2014; Stephan & Stephan, 1985, 1996, 2000). Intergroup anxiety can be an antecedent to stereotype-driven interactions, which can lead to negative communication outcomes. Intergroup anxiety can also be an outcome of negative intergroup contact, which can lead to negative expectations or avoidance for future intergroup contact (Islam & Hewstone, 1993; Plant & Devine, 2003). Research in various relational contexts has shown that reducing intergroup anxiety can be a key to improving intergroup attitudes (Shim, Zhang, & Harwood, 2012; Tropp, 2003; Van Laar, Levin, Sinclair, & Sidanius, 2005; Wölfer et al., 2019).

Humor research has shown that humor can be used as a stress-coping mechanism in various social contexts – from coping with academic stress (Booth-Butterfield, Booth-Butterfield, & Wanzer, 2007) to workplace stress (Cheng, Amarnani, Le, & Restubog, 2019; Mak, Liu, & Deneen, 2012), from coping with HIV infection (Reeves, Merriam, & Courtenay, 1999) to surviving Vietnam POWs (Henman, 2001). As intergroup anxiety is a form of stress specific to intergroup contexts, humor may also have a significant relationship with intergroup anxiety – in decreasing or increasing the latter. In a survey study of American college students, Miczo and Welter (2006) analyzed affiliative and aggressive humor styles' functions in intercultural communication. They found humor orientation was negatively related to intercultural communication apprehension (or intergroup anxiety in intercultural contexts) and humor aggressiveness was positively related to ethnocentrism (or intergroup prejudice in cultural settings). These findings echo with Martineau's (1972) "lubricant/abrasive" view of humor in an intergroup communication context. To further understand the functions of humor in intergroup anxiety reduction, the current study considers exposure to Asian-stereotype jokes in humorous context as a proxy of intergroup contact.

2.2 Asian Stereotypes

For the most part we do not first see, and then define, we define first and then see. In the great blooming, buzzing confusion of the outer world we pick out what our culture has already defined for us, and we tend to perceive that which we have picked out in the form stereotyped for us by our culture. (Lippmann, 1922, p. 133)

From 2000 to 2010, the total population of Asian Americans grew by 46 percent in the United States which makes Asian Americans the fastest growing racial groups (U.S. Census Bureau, 2010). By the end of 2015, the U.S. Asian population grew by 72 percent from 2000 (López et al., 2017). Yet, "... the history of Asian Americans in the United States is rich, varied, and often troubling" (Liu, Murakami, Eap, & Hall, 2009, p. 1). Since the publication of a New York Times commentary titled, "Success Story, Japanese-American Style" (Pettersen, 1966), Asian Americans have been labeled as a model minority in the United States. This positive-valence belief, held by other groups, implies work ethic and career achievement. However, Asian Americans are also perceived as cold and overly competitive (Kawai, 2005). Empirical studies on Asian stereotypes also support this hard-working-but-cold view held by outgroups about Asian Americans (Jost, Burgess, & Mosso, 2001; Bergsieker, Leslie, Constantine, & Fiske, 2012; Lin, Kwan, Cheung, & Fiske, 2005; Maykovich, 1972; Ruble & Zhang, 2013; Wu, 2002; Zhang, 2010).

"Perpetual foreigner" is another prevalent stereotype about Asian Americans. This stereotype is based on the belief that "... the face of America cannot look Asian" (Lee, Wong, Alvarez, 2009, p. 76) and it "... casts Asian Americans as inherently foreign and therefore not truly 'American'" (p. 69). Furthermore, this stereotype has been heavily exploited by mass media and entertainment industries. The exaggerated portrayals of Asian Americans, usually the nonverbal cues (e.g., accents, facial features, and body movement), often appear in comedies and disguised as "just jokes" but are, in fact, a form of disparagement humor (Ferguson & Ford, 2008).

Such disparagement humor can have perpetuating effects on Asian Americans. In his recent systematic analysis, Croom (2018) identified prevalent racial slurs and stereotypes of Asian Americans. Croom further argues that these racial slurs and stereotypes can influence how Asian Americans are perceived by outgroup members and how the outgroup members interact with Asian Americans. Therefore, racial slurs and stereotypes "... can actually harm the individuals that they attack and constrain the range of action-possibilities that they may exercise in society" (p. 502). In line with research on Asian stereotypes (Chow, 2013; Lin et al., 2005; Ruble & Zhang, 2013), the current study features a typical negative (i.e., bad drivers; Siy & Cheryan, 2016; Sue, Bucceri, Lin, Nadal, & Torino, 2007) and a typical positive (i.e., success driven) stereotype. These two stereotypes are prevalent in mass media portrayals about Asian Americans (Chow, 2013).

2.3 A Case for Standup Comedy

Although being targeted with racial slurs and stereotypes seems like a perpetual social burden, the targeted individuals/groups can subvert such derogation through different strategies (e.g., social creativity; Tajfel & Turner, 1979). Given the current diverse-audience, diverse-performer media environment, standup comedy has become a powerful tool of subversion: more standup comedians from minority groups are able to give their emic perspectives (Pike, 1966) on existing stereotypes about their groups. In a humorous communication context, these individualized insider voices can carry a strong force in changing established overly simplified mental images about their groups. Thus, stereotype jokes have more opportunities to act as *shield* than a *sword* in intergroup interactions. As Rapppoport (2005) points out:

[D]epending on their context, jokes and comedy routines involving minorities can have different meanings at different times for different audiences. At the negative extreme, they may be taken as expressions of prejudice encouraging people to accept dehumanizing stereotypes. Yet in contemporary society, one is equally or more likely to encounter various forms of humor that ridicule abusive stereotypes. (p. 2)

Extended from Rappoport's (2005) sword and shield metaphor about stereotype humor, Saucier O'Dea, and Strain (2016) propose three possible social effects of racial humor - antisocial, prosocial, and null effect. Saucier et al. point out that "disparagement humor allows for increased expressions of prejudice toward targeted groups by loosening the social norms that normally inhibit prejudice" (p. 77). On the other hand, humor can be used to subvert or challenge social inequality. Furthermore, humor can also be used by minority group members to cope with adversity and stigma. The null effect occurs when a subversion attempt fails, such as when a racial joke is misunderstood by the audience, or even reinforces their existing racial beliefs. In their closing remark, Saucier et al. suggest that standup comedians should be aware of the potential null or negative effect of their performance when their jokes are misunderstood, and comedians should consider including a "debriefing" to ensure the intended effect of a joke. They conclude:

It may be that racial humor provides a unique method of confrontation that decreases expressions of prejudice and incurs less social costs than more overt forms of confrontation. Due to its inherent levity, racial humor may be a subtler, but effective form of confrontation, providing a safer method of combating prejudice while maintaining positive relationships with the perpetrators of prejudice. (Saucier, Strain, Miller, O'Dea, & Till, 2018, p. 109)

Considering standup comedy's cognitive and affective process offers two major conceptualizations in explaining intergroup contact to prejudice reduction. Stereotype jokes in combination with the group membership of the performer and the audience can elicit group-based emotions. As suggested by Kessler and Hollbach (2005), positive group-based emotions may decrease ingroup identification and negative emotions may enhance ingroup identification because of more precise and less inclusive categorization.

Generally speaking, the goal of standup comedy performance is to elicit an emotional reaction among the audience in the form of laughter. Thus, a comedy routine/joke/bit can be

viewed as a laughter-inducing stimulus. Both laughter and humor serve a multitude social functions (e.g., stress-coping mechanism, maintaining social bonds, enhancing the self at the expense of others or self; Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003b). According to Gervais and Wilson (2005) that "[d]espite the evident biological foundation of laughter and humor, there is little doubt that laughter-evoking contexts and how laughter is interpreted as fundamentally influenced by cultural norms and learning" (p. 399). Thus, the performance and the comprehension of humor are culturally and individually constrained.

From a rhetorical performance perspective, a standup comedian, may be narrating some embarrassing incidents or thoughts occurred in own personal life while attempting to elicit laughter among the audience. However, self-deprecating humor is often included by standup comedians in their performance routines. Some of the routines may describe an awkward or embarrassing moment in the comedian's personal life due to individual flaws. Some may tie, or attribute, the story to the comedian's, or their counterpart's, social group attributes (e.g., gender, racial, age). These group-level narratives usually accentuate certain mental images (positive or negative) held by the public about the target social group. These narratives are not simply positive or negative, they could either increase social differentiation or relational solidarity depending on a variety of contextual factors operating at both macro-intergroup (e.g., stereotypes and group membership) and micro-interpersonal (e.g., audience inferred motive, and humor and valence of the message at the immediate communication moment levels). For instance, comedians like Louis CK and Tom Segura often include White privilege stereotypes in their performance. These acts can be prosocial when the audience see them as mockeries of intergroup prejudice. However, these acts can also be antisocial when the audience take these jokes as some form of endorsement for racial prejudice (Saucier et al., 2016). One of the major reasons that White comedians' anti-prejudice routines could be misunderstood is that the audience perceptions of their act are constrained by the performers' etic perspective (Pike, 1966).

2.4 Humorous Communication Components

In an early treatment for humor in intergroup contexts, Marineau (1972) discussed four major variables for theoretical considerations:

The first is the *actor*; that is, the individual or group that initiates the humor. Second the *audience* is the party that experiences or is exposed to the humor. The third variable is the *subject* or butt of the humor: about whom is the humor? at whom is it aimed? [...] *Judgment* of the humor is the final variable and constitutes the evaluative element. The question posed is how the humor actually is perceived or judged by the audience, apart from the content of the humor or the intentions of the actor. (p. 115)

From a communication research perspective, the interactions between these variables can be considered under a more comprehensive framework. The transactional model of human communication (Barnlund, 1970; Westley & MacLean, 1966) provides a such conceptual framework for the current study to understand humor in intergroup contexts. At the most basic level, intergroup humor involves sender (*actor*), message (*subject*), receiver (*audience*), and interpretation (*judgment*). The characteristics of the sender (e.g., group membership), the message (e.g., stereotype joke target), and the receiver (e.g., group membership) can all have some influence over the outcome (message interpretation) of the process, possibly both main and interaction effects. In addition to the subject of the humor, the content valence of the humor is also an important variable. Specifically, a stereotype joke can be based on a positive- or a negative-valence stereotype about the target group. The content valence, as an important element of a message, may also influence audience judgment about the humor.

Furthermore, the judgment of humor can lead to differential evaluations about the actor. This interpersonal evaluation, together with the judgment of humor, can influence the affective and the cognitive state of the audience (i.e., interpersonal anxiety and attitudinal agreement with the message). From an intergroup contact perspective, audience's affective and cognitive variations

can further influence their perceptions about the actor's group as a whole (i.e., generalized group-level attitudes based on specific individual contact; McIntyre et al., 2016).

Disparagement humor defined by Ferguson and Ford (2008) as "... remarks that (are intended to) elicit amusement through the denigration, derogation, or belittlement of a given target (e.g., individuals. social groups, political ideologies, material possessions)" (p. 283). From the social identity perspective (Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), Ferguson and Ford proposed that "... the appeal of disparagement humor is mediated by its consequences for positive distinctiveness. To the extent that exposure to disparagement humor elicits positive distinctiveness, it should elicit amusement" (p. 299). As such, the amusement/favoring of disparagement humor can be explained by people seeking positive social identity based on group comparisons.

In the context of standup comedians performing stereotype jokes, the performer-audience relationship can be ingroup (from a same social group) or intergroup (from different social groups). The performer-joke relationship can be ingroup (e.g., an Asian American comedian telling a joke based on stereotypes about Asians) or intergroup (e.g., a White American comedian telling a joke based on stereotypes about Asians). The audience-joke relationship can be ingroup (e.g., an Asian audience watching an Asian-stereotype joke being performed) or intergroup (e.g., a White audience watching an Asian-stereotype-base joke being performed). The present study will explore both parts of the first two dynamics, and the audience-joke relationship will be intergroup. Taking into account the key components of intergroup humorous communication, the following sections review relevant empirical research and propose research hypotheses and research questions of the current study.

2.4.1 Group membership of the joke teller - Hypothesis 1 and Research Question 1

Audience evaluation of a stereotype joke can be influenced by the group membership of the joke teller (performer-joke relationship). Audience evaluation of a joke teller can also be influenced by

the group membership of the joke teller (performer-audience relationship). Bourhis, Gadfield, Giles, and Tajfel (1977) experimentally manipulated three factors to examine Welsh participants' evaluations of ethnic humor in the context of Wales-Britain intergroup relations: 1) the butt of the humor (anti-ingroup or anti-outgroup), 2) the source of the humor (ingroup or outgroup source), and 3) group salience (salient or non-salient intergroup context). Bourhis et al. found a significant interaction effect between the source of the humor and group salience on the subjects' evaluations of the ethnic humor. According to Bourhis et al., "[w]hen the intergroup context was made salient for the subjects, they reacted more favorably when the source of the anti-outgroup humor was English rather than Welsh" (p. 263). Pertinent to the present investigation, in group-salient contexts, audience prefer anti-outgroup humor performed by an outgroup performer rather than by an ingroup member. Furthermore, group-salience may lead to a high level of intergroup anxiety which in turn can affect audience evaluation of the humorous message and the performer.

In a content analysis of the film Rush Hour 2, Park, Gabbadon, and Chernin (2006) found that when the character was from a minority group, they were allowed to make fun of the stereotypes about their own group and other minority groups. However, if the joke teller was a member of the majority group (e.g., White Americans), the person would not be perceived in a positive light when s/he was making fun of the stereotypes about a minority group.

In a focus group study, Green and Linders (2016) showed video clips of standup comedy targeting African Americans to African American and Caucasian American audience. The video clips included performance by Black and White comedians. Based on their focus group interviews, Green and Linders delineated three major themes underlying the African American and the Caucasian American audience reactions to the video clips. Theme 1: the tension between funny and offensive. Theme 2: the tension between stereotypes and authentic representations. Theme 3: the extent to which racial comedy can improve racial relations.

For the African American audience (Green & Linders, 2016), they placed less emphasis on a comedian's racial group membership than the intent of the comedian (i.e., whether or not the joke teller was trying to disparage African Americans). The audience emphasized the White

comedians' familiarity with Black experiences (i.e., whether or not the joke teller was a credible source speaking to African American stereotypes). Lastly, some of the African American audience explained their reluctance to joke about African American stereotypes as it may reinforce those established beliefs held by other groups. For the Caucasian American audience, Green and Linders found that they placed a very strong emphasis on the racial group membership of the comedians. From their point of view, "as soon as it comes out of a white person's mouth it's a totally different thing" (p. 253).

Bentley (2017) examined college students' evaluations of standup comedy routines targeting African Americans by manipulating two factors: the race of the comedian (African or Caucasian American) and the topic of the comedy routine (racial or nonracial). Bentley found a significant three-way interaction effect (comedian race, participant race, routine topic). According to Bentley, "White participants rated the Black control clip (M = 3.50, SD = .80) as more funny than the Black racial clip (M = 2.65, SD = .70, p = .025) but just as funny as the clips featuring White comedians (racial clip: M = 2.82, SD = .95; control clip: M = 3.00, SD = 1.12)" (p. 16). These findings are in line with the study findings by Bourhis et al. (1977) and Green and Linders (2016). When the audience-joke relationship is intergroup, audience prefer the performer to be an outgroup member as well. Furthermore, the more favorable ratings for the "Black control clip" (nonracial routine) over the "Black racial clip" can also be explained by different levels of intergroup anxiety experienced by the Caucasian participants. Such that, the Caucasian participants may experience a higher level of anxiety when watching African American comedian performing the racial routine than the nonracial routine.

Attitudes toward outgroup was also measured as an outcome variable by Bentley (2017). However, this outcome variable was not affected by any of the experimental manipulation (i.e., performer race and routine topic). According to Bentley, "[a] single exposure to a stand-up clip may not be enough to influence attitudes and affiliative preferences" (p. 23). Yet, another alternative explanation is the lack of measure for mediators in the study. One such linking

mechanism between the independent variable manipulations and outgroup attitudes can be the intergroup anxiety experienced by the participants.

In another recent study on disparagement humor, Thai, Borgella, and Sanchez (2019; Experiment 2) manipulated the source race of a mock Facebook profile to be Asian ("David Lee"), Black ("Malik Williams"), or White ("Jake Miller"). The participants were randomly assigned to read one of three stereotype jokes about Asian people. Following the experimental treatment, the participants rated the acceptability and the offensiveness of the sources and the humor/funniness of the jokes. Thai et al. found that the Asian source was rated more acceptable and less offensive than the Black and the White source (no difference was found between the Black and the White source). In addition, jokes from the Asian source were rated more humorous than the same jokes from the Black and the White source (again, no difference was found between the Black and the White source).

Based on the studies reviewed, the following research hypotheses are proposed:

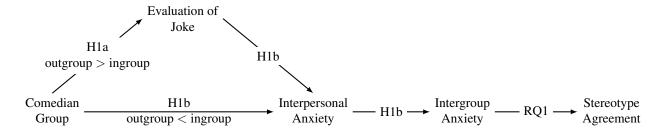


Figure 2.1 A conceptual model for the effects of comedian racial group membership (outgroup = Asian comedian; ingroup = White comedian).

H1a: Joke performer's racial group membership has an effect on participants' evaluation of the stereotype-based jokes that more positive evaluation will be given to the jokes performed by outgroup members (i.e., an Asian comedian) than the jokes performed by ingroup members (i.e., a White comedian).

H1b: Joke performer's racial group membership has an indirect effect on participants' self-reported intergroup anxiety toward Asian Americans through their self-reported interpersonal anxiety toward the comedian, such that their intergroup anxiety will be higher

when a stereotype-based joke is performed by an ingroup member (a White comedian) than by an outgroup member (an Asian comedian).

RQ1: Will stereotype agreement be influenced by joke performer's racial groups membership, evaluation of jokes, and interpersonal/intergroup anxiety?

2.4.2 Content valence of the stereotype joke - Hypothesis 2 and Research Question 2

Historically, stereotype humor has been used as an outgroup disparaging tool more often than an outgroup praising device. Understandably, the literature on stereotype humor has primarily focused on negative-valence jokes and their divisive effects on intergroup relations (e.g., Ford & Ferguson, 2004; Parrott, 2016; Romero-Sánchez, Durán, Carretero-Dios, Megías, & Moya, 2010). The effects of positive-valence jokes on audience evaluations for such jokes and joke tellers have not been systematically studied. However, there is a body of literature that can offer some theoretical insights for the current hypothesis delineation: the research on asymmetry negative-/positive-stereotype endorsement.

Stereotypes and their expressions are not static - they evolve along with the changes in a sociocultural environment. For instance, "Nineteenth century Chinese immigrant laborers were stereotyped as dirty, crude, and lazy [...], but as their academic and socioeconomic statuses improved, stereotypes reflecting more positive association with intelligence, diligence, and competitiveness emerged" (Czopp, Kay, & Cheryan, 2015, p. 452). Correspondingly, endorsement/expressions of positive stereotypes about Chinese Americans have become more pervasive than statements based on negative-valence stereotypes directed toward that group.

Turner and Reynolds point out that, "intergroup relations cannot be reduced to individual psychology but emerge from an interaction between psychology and society" (p. 134). For the current racial discourse norms in the U.S. and some other Western countries, "anti-prejudice" has become a major theme, according to Czopp et al. (2015):

Given norms that emphasize and encourage at least superficial attempts to demonstrate inclusiveness, diversity, and multiculturalism at personal and institutional levels, there may be strong motivation to attempt to make positive (though perhaps stereotypic) statements about members of traditionally marginalized social groups. (p. 452)

This discourse norm, functioning as a societal factor, can have a significant influence over social members' expressions on endorsing negative/positive stereotypes of traditionally marginalized groups. In fact, empirical studies have shown some consequences of asymmetry negative-/positive-stereotype endorsement; namely, self-censoring and other-sanctioning effects.

Bergsieker, Leslie, Constantine, and Fiske (2012) examined communicators' negativity omission in describing ambivalent individuals. In Study 1, the researchers manipulated bidimensional ambivalence in four written descriptions about an individual (race unspecified). The target individual was described as 1) uniformly positive (kind and intelligent), or 2) uniformly negative (unkind and unintelligent), or 3) ambivalent (kind but unintelligent), or 4) ambivalent (unkind but intelligent). Participants (N = 134 college students) were randomly assigned to read one of these four descriptions, then they rated the likelihood of them making eight statements about the target person (the eight statements characterizing the target person positively or negatively on warmth and competence). Bergsieker et al. found that "omission was more likely than complete accuracy in both ambivalent conditions" (p. 1217). Thus, when people are asked to describe an ambivalent individual, they prefer omitting the negative information over complete accuracy.

In Study 2, Bergsieker et al. (2012) introduced a racial description for the target person ("a black student of your same age, class year, and gender"; p. 1219). The researchers found that, same as Study 1 results, that "omission was more likely than complete accuracy for the two ambivalent targets" (p. 1219). After pooling the data of Study 1 and 2, Bergsieker et al. found that "participants were less likely to make completely accurate (i.e., partially negative) statements about Black than race-unspecified targets" (p. 1221). The results from Bergsieker et al. study

showed empirical evidence for self-censoring effect that people tend to self-regulate their expressions about negative beliefs for racial minority groups. Empirical research has also shown that people not only self-regulate their own expressions, concerning negative-/positive stereotypes, but also may sanction other people who violate the current "anti-prejudice" norms (i.e., other-sanctioning effect).

Mae and Carlston (2005) conducted three experiments to compare evaluations for remarks containing negative/positive-valence stereotypes and the corresponding speakers. In Study 1, the researchers manipulated three factors: speech exposure (bigotry or no speech), valence (positive or negative speech) and target (ascribed or assumed group). Following experimental exposure, the participants rated the speakers on perceived prejudice. Mar and Carlston found that speakers were perceived as more prejudiced when they made negative generalizations than when they made positive ones. Furthermore, the researchers found that elevated prejudice ratings were due to negative stereotypes. In Study 2, Mar and Carlston manipulated three factors: speech exposure (bigotry, gossip or no speech), valence (positive or negative speech) and target (ascribed or assumed group). Following exposure to the experimental treatment, the participants rated the likeability of the speakers. The researchers found that the bigoted speakers received higher ratings for giving positive-valence speech than the bigoted speakers giving negative-valence speech. The findings of Study 1 and 2 were replicated in Study 3, which simulated a more realistic communicative environment.

For the current investigation, study findings discussed above (Bergsieker et al., 2012; Mae & Carlston; 2005) showed support that positive-valence messages can receive higher ratings than negative-valence messages, and speakers making positive-valence remarks are likely to be rated more likeable than those making negative-valence remarks. As such, the following research hypotheses are proposed.

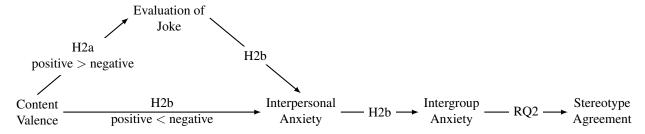


Figure 2.2 A conceptual model for the effects of joke content valence (positive = positive-valence stereotype joke; negative = negative-valence stereotype joke).

H2a: Content valence of the jokes has an effect on participants' evaluation of the stereotype jokes that more positive evaluation will be given to the jokes with the positive stereotype (i.e., success driven) than the jokes with the negative stereotype (i.e., bad drivers).

H2b: Content valence of the joke has an indirect effect on participants' self-reported intergroup anxiety through their judgment of the joke performer, in the way that their intergroup anxiety is higher when a stereotype joke contains a negative stereotype about Asian Americans than does a stereotype joke containing a positive stereotype about Asian Americans.

RQ2: Will stereotype agreement be influenced by the content valence of stereotype joke, evaluation of jokes, and interpersonal/intergroup anxiety?

Chapter 3

Method

3.1 Study Design Overview

A 2×2 within-subjects experimental design was used to test the hypotheses and answer research questions in the current study. The within-subjects design was used for two reasons: 1) in general, within-subjects designs have a stronger statistical power than between-subjects designs; 2) individual participants can serve as their own control, which can rule out any possible alternative explanations for effects detected due to the participants' individual attributes.

The two independent variable manipulations included: the racial group membership of the standup comedian (i.e., Asian/White American), and the content valence of the joke (i.e., positive/negative-valence stereotype). The Qualtrics online survey system was used for data collection.

3.2 Participants and Data Collection

Participants for this study (i.e., Caucasian Americans) were recruited from Amazon Mechanical Turk Worker (MTurk). In addition to self-identified as White/Caucasian, the participants were required to be 18 years and older and native English speaking. Participants were compensated \$2.00. The data were collected using Amazon Mechanical Turk service. To ensure the Qualtrics survey flow was working properly (e.g., treatment randomization, intended information was collected), the data collection was carried out on three separate occasions: 9/03/2019 ($n_1 = 42$),

9/05/2019 ($n_2 = 60$), 10/04/2019 ($n_3 = 125$). The Qualtrics survey flow worked properly throughout the data collection.

Data screening was performed to filter out responses not meeting the participation requirements. Only responses by White Americans, English speaking, over 18 years old, and with verifiable location information (longitude, latitude, and unique IP address) were kept. In addition, the location information recorded by Qualtrics were used to filter out participants who were not in the United States. The final restructured analysis sample consisted of 220 self-reported White Americans, English speaking, and over age of 18 (female = 73, other = 1; range $_{age}$ = 18-69, M_{age} = 36.26, SD_{age} = 10.8; Table 3.1 provides more detailed demographic information).

Table 3.1 Descriptive Summery for the Amazon Mechanical Turk Participants

States	$n(n_{female})$	M_{age}	SD_{age}	States	$n(n_{female})$	M_{age}	SD_{age}
Alabama	5(2)	37.60	6.35	Nevada	2(1)	27.00	4.24
Arizona	5(5)	35.20	8.87	New Hampshire	1(0)	42.00	n/a
Arkansas	3(0)	36.67	16.17	New Jersey	5(1)	38.20	8.11
California	16(7)	37.44	13.10	New York	17(4)	35.82	10.09
Colorado	7(2)	34.86	7.54	North Carolina	10(4)	43.40	11.02
Connecticut	1(0)	32.00	n/a	Ohio	12(4)	36.58	12.08
Florida	18(6)	35.61	12.62	Oklahoma	1(1)	40.00	n/a
Georgia	5(6)	35.60	12.18	Oregon	5(2)	41.00	8.43
Idaho	5(3)	31.80	8.70	Pennsylvania	13(6)	41.38	11.35
Illinois	11(3)	36.18	14.73	South Carolina*	3(0)	23.00	3.61
Indiana	3(0)	31.67	5.51	South Dakota	1(1)	38.00	n/a
Iowa	1(0)	30.00	n/a	Tennessee	8(4)	33.50	6.30
Kansas	1(0)	30.00	n/a	Texas	8(2)	36.63	15.98
Kentucky	5(3)	32.80	3.77	Utah	3(2)	30.00	6.56
Louisiana	3(0)	39.67	14.57	Virginia	13(4)	34.15	11.22
Maine	2(1)	40.50	21.92	Washington	1(1)	60.00	n/a
Maryland	5(0)	35.80	6.46	West Virginia	2(1)	45.00	19.80
Massachusetts	3(0)	40.00	11.36	Wisconsin	3(0)	34.67	2.52
Michigan	4(1)	32.00	4.55	Wyoming	2(1)	43.00	8.49
Missouri	7(2)	30.29	6.42	Total	220(73)	36.26	10.82

Note. * Two of the three South Carolina participants self-reported as "male" and one self-reported as "other".

3.3 Procedure and Materials

Participants completed the following steps. Upon opening the survey link, an online informed consent (Appendix A) explained the purpose and the participation procedures of the study. For participants who chose not to participate, they were redirected to the end of the online survey where a debriefing statement (Appendix B) was presented. For participants who agreed to participate, they were presented with a set of questions about their demographic and background information (see Appendix C). The demographic questions included items about participants' age, sex, race, education, family financial status. Following the demographic and background questions, participants were instructed to read each of the four jokes, which were presented in a random order (see Appendix C).

3.3.1 Independent variable manipulations and checks

3.3.1.1 Comedian racial group membership

For comedian racial group membership manipulation, a description containing the racial background of the comedian (i.e., "a White" or "an Asian") was presented to the participants before the written joke transcript. In addition, at the bottom of each joke transcript, the comedian's name was provided – "Li Lei" and "Bo Jung" for the Asian comedian manipulation, "Jay Larson" and "Thomas Gibson" for the White comedian manipulation.

3.3.1.2 Joke content valence

For the positive stereotype manipulation (i.e., Asian Americans are success driven), two jokes about the academic performance/achievement of Asian Americans (one told by an Asian comedian and one by a White comedian) were presented. For the negative stereotype manipulation (i.e., Asian Americans have bad driving skills), two joke about the driving skills of Asian Americans (one told by an Asian comedian and one by a White comedian) were presented. Given the within-subjects design, these four jokes were written differently, however two were

about the same positive stereotype and two were about the same negative stereotype. To ensure the participants understood each joke, following each joke transcript, three manipulation check questions (Appendix C) were presented to the participants.

3.3.1.3 Manipulation checks

The manipulation check consisted of four questions: 1) "Did you get the joke?" for checking participants' understanding for the nature of the message (i.e., a joke); 2) "What was the ethnicity of the comedian?" for checking comedian racial group membership manipulation; and 3) "What was the stereotype the performer joked about?" for checking the content valence manipulation. These manipulation checks were conducted with false options to decrease the chance participants picked the correct answer by luck alone. If a participant failed anyone of the three manipulation checks, they were not presented with survey questions pertaining to the joke s\he just read. Instead, the participant was redirected to the next joke. Of the total screened sample (N = 220), 166 passed the manipulation checks for all four jokes. Among the remaining 54 participants, 5 failed the manipulation checks for all jokes, 23 failed three, 15 failed two, and 11 failed one.

3.3.2 Dependent variable measures

3.3.2.1 Evaluation of the joke

Two items on a 7-point Likert-type scale (1 = "strongly disagree" and 7 = "strongly agree"; Cronbach's alpha = .70 with the joke funniness item reversed) were used to measure participants' evaluations about the joke's funniness and offensiveness (e.g., "The joke is funny"; "The joke is offensive"). This scale was adapted from Bourhis et al. (1977). Because these two items were conceptualized for reflecting two distinct dimensions of joke evaluation, no further confirmatory-type analysis was conducted.

3.3.2.2 Interpersonal anxiety toward the joke teller

A two-item 7-point Likert-type scale (1 = "extremely unlikely" and 7 = "extremely likely"; Cronbach's alpha = .84) adapted from Stephan and Stephan (1985) was used to measure participants' anxiety level when imaging meeting the comedian in person (e.g., I would feel nervous towards him", "Would you feel uncomfortable around him"). A one-factor two-indicator confirmatory factor analysis (CFA) was conducted for this scale. For model identification purpose, the two factor loadings were equated with the factor variance fixed to one. The equated factor loading estimate was .73. Because the this CFA model was just-identified, no global model fit information was available.

3.3.2.3 Intergroup anxiety toward Asian Americans

A three-item 7-point Likert-type scale (1 = "extremely unlikely" and 7 = "extremely likely"; Cronbach's alpha = .81) adapted from Wölfer et al. (2019) was used to measure participants' group-level anxiety towards Asian Americans. The participants were asked to imagine a situation where they were the only person interacting with Asian Americans (e.g., "I would feel anxious about this situation", "I would feel comfortable in this situation", "I would feel at ease in this situation"). A one-factor three-indicator CFA was conducted for this scale. For model identification purpose, the factor variance was fixed to one. The factor loading estimate was .96 (for the "anxious" item), .66 (for the "comfortable" item reversed), .58 (for the "at ease" item reversed). Because the this CFA model was just-identified, no global model fit information was available.

3.3.2.4 Stereotype agreement

A 3-item 7-point Likert-type scale (1 = "strongly disagree" and 7 = "strongly agree"; Cronbach's alpha = .87) adapted from Lin, Kwan, Cheung, and Ficke (2005) were used to measure participants' agreement with a positive-valence notion that Asians are success driven ("Asian Americans seem to be striving to become number one."; "Most Asian Americans have a mentality

that stresses gain of economic power"; "When it comes to education, Asian Americans aim to achieve too much". These three items were presented following each positive-stereotype joke. Another 3-item 7-point Likert-type scale (1 = "strongly disagree" and 7 = "strongly agree"; Cronbach's alpha = .85) were developed to assess participants' agreement with a negative-valence notion that Asians are bad drivers ("Many Asian Americans are hazard to themselves and others on the road"; "Many Asian Americans are incompetent drivers"; "Many Asian American drivers fail to follow traffic laws and rules"). These driving-specific questions were presented following each negative-stereotype joke. A one-factor three-indicator CFA was conducted for this scale. For model identification purpose, the factor variance was fixed to one. The factor loading estimate was .92 (for SA-1), .94 (for SA-2), and .77 (for SA-3). Because his CFA model was just-identified, no global model fit information was available.

Chapter 4

Results

4.1 Descriptive Summaries and Analysis Considerations

Prior to hypothesis testing, descriptive analyses for the measured variables were conducted. The means and standard deviations of the measured variables are reported in Table 4.1 for the four experimental conditions. Given this study used a within-subjects design, intraclass correlation (ICC; a statistic describing data nesting) was computed for each measured variable. The lme4 package (Bates, Maechler, Bolker, & Walker, 2015) in R (R Core Team, 2017) was used to compute the ICCs (Level-1: responses for the measured variables across the four experimental conditions; Level-2: individual participants). The computed ICCs indicated that the measured variables were highly nested within individual participants. As such, hypothesis testing based on this particular data set needs to account for the high nesting data pattern (Snijders & Bosker, 2012).

The second descriptive summary presented here consists of the measured variables' sampling distributions (Figure 4.1, Figure 4.2, Figure 4.3). The aggregated (continuous) responses for the two anxiety variables (interpersonal anxiety toward the comedian and intergroup anxiety toward Asians) showed a highly positively skewed sampling distribution pattern Figure 4.2; the sampling similarity between these two items is a reflection of the highly nested structure of the data set. Statistical tests with normality assumptions would not be able to account for the skewed pattern of these items. A more appropriate treatment would involve using generalized linear modeling frame work that allows continuous responses from distribution families such as the exponential distribution family.

In addition to the sampling characteristics of the measured variables, the hypothesis testing for the current study would involve estimating multiple mediation paths. The statistical software development over the last two decades have made estimating complicated mediation forms more efficient and relatively easy to implement. Nowadays, mediation tests typically have two features: 1) multiple equations are estimated simultaneously and 2) the mediation parameter(s) is estimated with some forms of bootstrapped standard errors. For nested data structures, multilevel mediation tests are becoming more popular with the implementations of multilevel structural equation modeling (MSEM) framework (MacKinnon & Valente, 2014; Preacher, Zyphur, & Zhang, 2010). However, the majority of the estimation methods assume that the responses are from the normal distribution. Therefore, it is challenging to allow the individual outcome components (i.e., mediators and outcomes) to have different distributional assumptions. To meet the analysis demands of the current study, a Bayesian multivariate multilevel approach was implemented to account for the nesting data structure, allow the individual mediation components having appropriate distributional assumptions, and to be able to make direct inferences based on posterior sampling distributions. The following two sections report the univariate and multivariate MLM results.

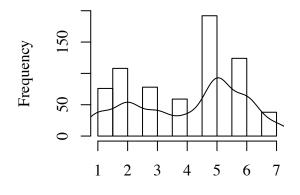
Table 4.1 Descriptive Summery for Measured Variables by Conditions

	Asian Negative	Asian Positive	White Negative	White Positive	Intraclass Correlation
Dependent Variables	M(SD)	M(SD)	M(SD)	M(SD)	$rac{\hat{ au}^2}{\hat{ au}^2+\hat{oldsymbol{\sigma}}^2}$
Joke Evaluation					
Funniness	4.45 (1.68)	4.04 (1.74)	4.13 (1.90)	3.58 (1.85)	.440
Offensiveness	3.36 (1.66)	2.75 (1.58)	4.30 (1.85)	3.72 (1.97)	.537
Interpersonal Ans	xiety				
Nervous	1.66 (1.11)	1.59 (1.13)	1.88 (1.39)	2.04 (1.58)	.749
Uncomfortable	1.88 (1.46)	1.77 (1.40)	2.24 (1.65)	2.39 (1.85)	.604
Group Anxiety					
Anxious	1.73 (1.26)	1.76 (1.32)	1.63 (1.15)	1.80 (1.43)	.846
Comfortable*	2.25 (1.43)	2.13 (1.26)	2.30 (1.55)	2.25 (1.43)	.750
At ease*	2.23 (1.33)	2.15 (1.26)	2.29 (1.44)	2.32 (1.45)	.780
Stereotype Agree	ment				
SA-1	2.55 (1.40)	4.80 (1.21)	2.47 (1.33)	4.75 (1.29)	.100
SA-2	2.59 (1.39)	4.57 (1.35)	2.58 (1.39)	4.48 (1.40)	.191
SA-3	2.69 (1.52)	3.65 (1.67)	2.64 (1.50)	3.61 (1.68)	.506

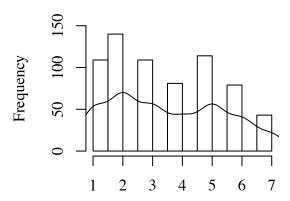
Note. *These two items were reversely worded in the online survey. The reported means and standard deviations for these two items are reversed in this table.

Joke Funniness (Mean = 4.05)

Joke Offensiveness (Mean = 3.53)



Skewness = -0.27; Kurtosis = -1.17

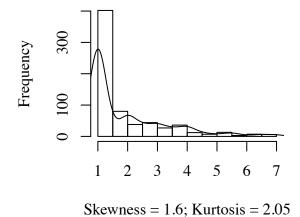


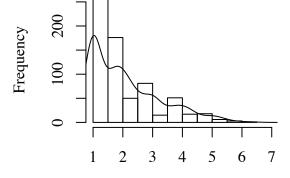
Skewness = 0.24; Kurtosis = -1.13

Figure 4.1 Sampling distributions of the joke valuation variables.

Interpersonal Anxiety (Mean = 1.93)

Intergroup Anxiety (Mean = 2.07)

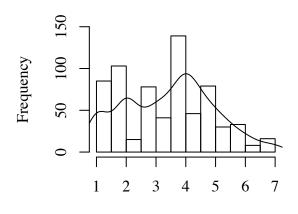




Skewness = 1.07; Kurtosis = 0.43

Figure 4.2 Sampling distributions of the anxiety variables.

Stereotype Agreement (Mean = 3.44)



Skewness = 0.09; Kurtosis = -0.71

Figure 4.3 Sampling distributions of the stereotype agreement.

4.2 Univariate MLM Analysis

Univariate MLM analyses were conducted to obtain bivariate relationship estimates between the experimental manipulations and the measured variables. First, five univariate MLM models were estimated individually for the main effects of comedian racial group membership on the five measured variables (Figure 4.4). The estimation results showed significant main effects of group membership on perceived joke funniness, joke offensiveness, interpersonal anxiety, and intergroup anxiety. Asian comedians were perceived funnier than White comedians; White comedians were perceived more offensive than Asian comedians. The participants also experienced higher levels of interpersonal and intergroup anxiety with the White comedians than with the Asian comedians. Comedian racial group membership did not have a significant main effect on stereotype agreement.

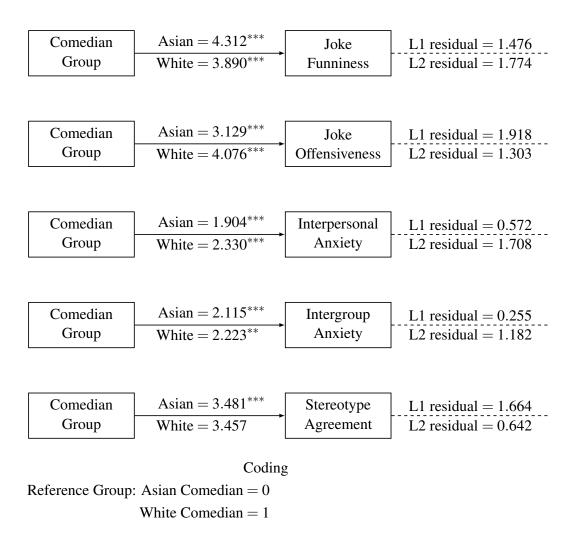


Figure 4.4 Univariate MLM analysis for the main effects of group membership on measured variables.

The second set of univariate MLM analyses were conducted to estimate the main effects of content valence (negative/positive stereotype joke) on the five measured variables (Figure 4.5). The estimation results showed significant main effects of content valence on perceived joke funniness, joke offensiveness, and stereotype agreement. Negative-stereotype jokes were perceived funnier than positive-stereotype jokes. The former was also perceived more offensive than the latter. The participants also reported higher levels of agreement with the positive stereotype than with the negative ones. Joke content valence did not have a significant main effect on interpersonal anxiety or intergroup anxiety.

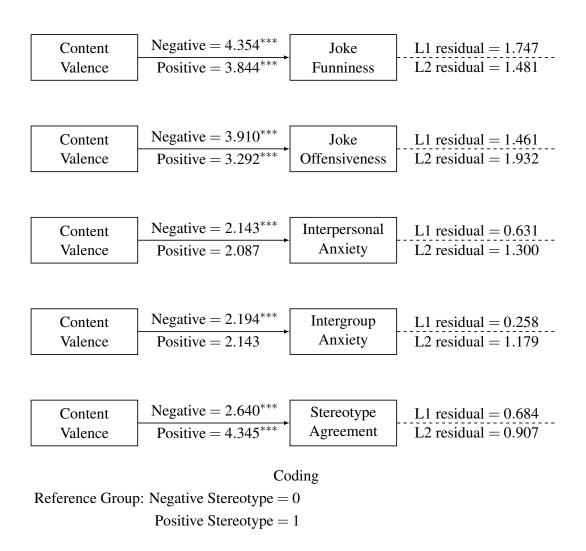


Figure 4.5 Univariate MLM analysis for the main effects of joke content valence on measured variables.

The third set of univariate MLM analyses were conducted to estimate the marginal effects of comedian racial group membership by joke content valence on the five measured variables (Figure 4.6). The estimation results showed that the participants perceived the negative joke told by an Asian comedian to be the funniest, while the positive joke by a White comedian was the least funny joke. The most offensive joke was the negative joke told by the White comedian; the least offensive joke was the positive joke told by the Asian comedian. The participants experienced the highest level of interpersonal and intergroup anxiety with the White comedian telling the negative-stereotype joke about Asian Americans. The lowest level of interpersonal and

intergroup anxiety experienced was with the Asian comedian telling the positive-stereotype joke. The highest level of stereotype agreement was observed with the Asian comedian telling the positive joke (Asians are success driven); the lowest stereotype agreement was observed with the White comedian telling the negative joke (Asians are bad drivers) and the Asian comedian telling the negative joke.

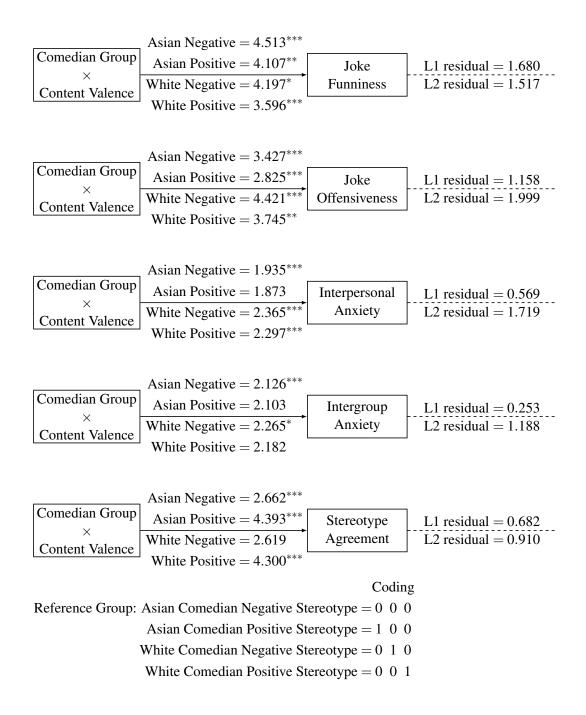


Figure 4.6 Univariate MLM analysis for the marginal effects of comedian group by content valence.

4.3 Hypothesis 1: Comedian Racial Group Membership

For the formal hypothesis tests, a Bayesian multivariate multilevel approach was used with brms package (Bürkner, 2017) in R and Stan software (Carpenter et al., 2017). This Bayesian approach allows response variables from different distribution families and simultaneous estimation for multiple equations. Thus, this approach is well suited for accommodating the high skewness of the interpersonal and intergroup anxiety variables and testing one-stage or multistage mediation models.

4.3.1 Hypothesis 1 Model 1: A direct-effect model for group membership

To test H1a, H1b and to answer RQ1, a bottom-up model building strategy was used - from a simple model with direct predictive paths to more complicated models with multistage mediations. Five Bayesian multivariate multilevel models were specified and estimated. The first model (H1M1) estimated the direct effects of comedian racial group membership on five outcome variables. The second model (H1M2) estimated a one-stage mediation model. Models H1M3, H1M4A, and H1M4B estimated the hypothesized model for the effect of comedian group membership (H1M3) and the mediating role of two alternative mediators (H1M4A for interpersonal anxiety; H1M4B for intergroup anxiety).

4.3.1.1 Model specifications

Comedian racial group membership (Asian = 0, White = 1) was specified as the level-1 predictor; joke funniness, offensiveness, interpersonal, intergroup anxiety, and stereotype agreement were all specified as the level-1 outcome variables. To model the high skewness of the two anxiety variables, this model assumed that these two variables were from the Gamma distribution/family. The rest outcome variables were assumed to be from the Gaussian (normal) distribution/family. The identity link function was used for all the estimations, including the Gamma distributed anxiety variables. Thus the interpretations for all the parameter estimates are the same as

interpreting regular linear regression estimates (Fox & Weisberg, 2011). For the current analysis, there was no data transformation involved, or the observed responses were directly modeled/predicted. Therefore, the magnitudes (or the effect sizes) of the parameter estimates should be judged on a 1-7 scale, given all the responses were measured using 7-point Likert-type items.

4.3.1.2 Model estimation results

The H1M1 model showed that comedian racial group membership had direct effects over joke funniness, offensiveness, and interpersonal anxiety (Figure 4.7). The parameter estimates were consistent with the univariate MLM results (Figure 4.4). The posterior sampling distributions for the parameter estimates and the trace plots are reported in Appendix D (for simplicity purpose, the same output for the remaining models testing H1 were omitted in Appendix D).

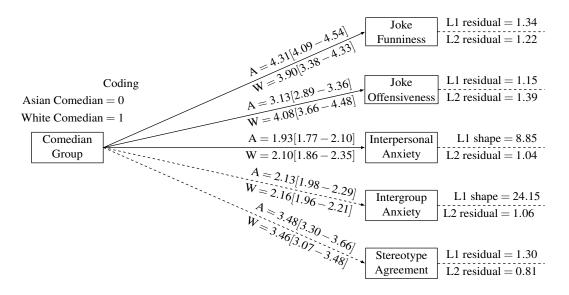


Figure 4.7 Hypothesis 1 Model 1: A direct-effect model for comedian racial group membership

4.3.2 Hypothesis 1 Model 2: A one-stage mediation effect model for group membership

4.3.2.1 Model specifications

Comedian racial group membership (Asian = 0, White = 1) was specified as the level-1 predictor; joke funniness, offensiveness, interpersonal, and intergroup anxiety were specified as level-1 mediators; and stereotype agreement was specified as a level-1 outcome variable. This model also estimates the direct effect between the predictor (comedian racial group membership) and the outcome variable (stereotype agreement).

4.3.2.2 Model estimation results

The H1M2 model showed that comedian racial group membership had direct effects over joke funniness, offensiveness, and interpersonal anxiety (Figure 4.7). The parameter estimates were consistent with the univariate MLM results (Figure 4.4). The model estimation results showed that comedian racial group membership had mediation effects on stereotype agreement through joke offensiveness $(3.13 \times -0.27 = -0.8451$ for Asian comedian; $4.08 \times -0.27 = -1.106$ for White comedian) and interpersonal anxiety $(1.93 \times 0.21 = 0.4053$ for Asian comedian; $2.19 \times 0.31 = 0.441$ for White comedian). Joke offensiveness negatively mediated the relationship between the predictor and the outcome; interpersonal anxiety positively mediated the predictor-outcome relationship.

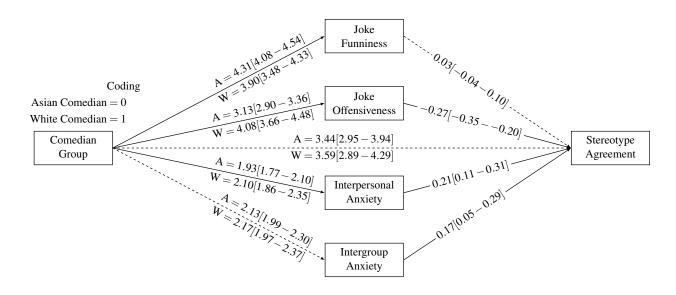


Figure 4.8 Hypothesis 1 Model 2: A one-stage mediation effect model for group membership

4.3.3 Hypothesis 1 Model 3: A two-stage mediation effect model for group membership

4.3.3.1 Model specifications

Comedian racial group membership (Asian = 0, White = 1) was specified as the level-1 predictor; joke funniness, offensiveness, and interpersonal anxiety were specified as level-1 first-stage mediators; intergroup anxiety was specified as a level-1 second-stage mediator for interpersonal anxiety; and stereotype agreement was specified as a level-1 outcome variable.

4.3.3.2 Model estimation results

The H1M3 model estimated three mediated paths from comedian racial group membership to stereotype agreement.

(Figure 4.9). The model estimation results showed that comedian racial group membership had mediation effects on stereotype agreement through joke offensiveness

$$(3.12 \times -0.20 = -0.624 \text{ for Asian comedian}; 4.07 \times -0.20 = -0.814 \text{ for White comedian}).$$

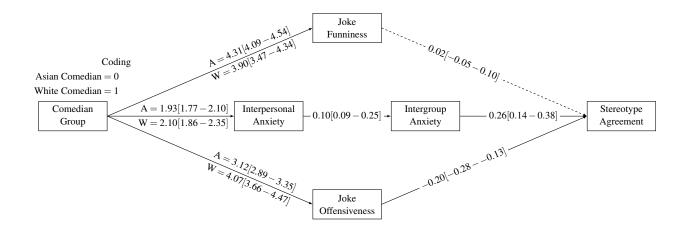


Figure 4.9 Hypothesis 1 Model 3: A two-stage mediation effect model for group membership

4.3.4 Hypothesis 1 Model 4A: A two-stage mediation effect model for testing the mediation role of interpersonal anxiety

4.3.4.1 Model specifications

Comedian racial group membership (Asian = 0, White = 1) was specified as the level-1 predictor; joke funniness, offensiveness, and interpersonal anxiety were specified as level-1 first-stage mediators; interpersonal anxiety was specified as a level-1 second-stage mediator; and stereotype agreement was specified as a level-1 outcome variable.

4.3.4.2 Model estimation results

The H1M4A model estimated three mediated paths from comedian group membership to stereotype agreement (Figure 4.10). The model estimation results showed that comedian racial group membership had mediation effects on stereotype agreement through joke offensiveness $(3.12 \times -0.20 = -0.624 \text{ for Asian comedian; } 4.07 \times -0.20 = -0.814 \text{ for White comedian)}$. In addition, there was a second mediating path from joke offensiveness to stereotype agreement through interpersonal anxiety.

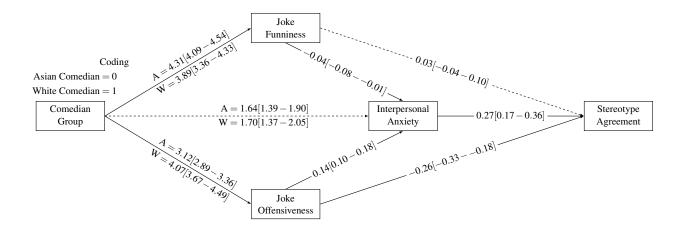


Figure 4.10 Hypothesis 1 Model 4A: A two-stage mediation model for testing the mediating role of interpersonal anxiety

4.3.5 Hypothesis 1 Model 4B: A two-stage mediation effect model for testing the mediation role of intergroup anxiety

4.3.5.1 Model specifications

Comedian racial group membership (Asian = 0, White = 1) was specified as the level-1 predictor; joke funniness, offensiveness, and interpersonal anxiety were specified as level-1 first-stage mediators; interpersonal anxiety was specified as a level-1 second-stage mediator; and stereotype agreement was specified as a level-1 outcome variable.

4.3.5.2 Model estimation results

The H1M4A model estimated three mediated paths from comedian racial group membership to stereotype agreement (fig. 4.11). The model estimation results showed that comedian racial group membership had mediation effects on stereotype agreement through joke offensiveness $(3.12 \times -0.20 = -0.624 \text{ for Asian comedian; } 4.07 \times -0.20 = -0.814 \text{ for White comedian)}$. Because the estimated for the direct path from joke offensiveness to intergroup anxiety was close to zero (0.04 [0.02-0.06]), intergroup anxiety is not a second stage mediator in this model.

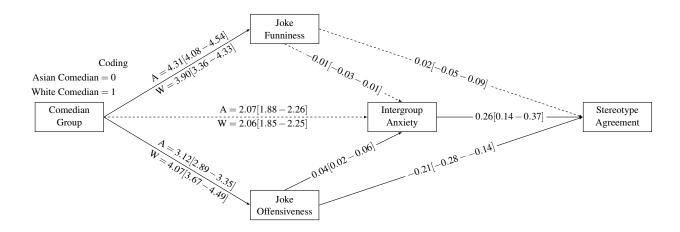


Figure 4.11 Hypothesis 1 Model 4B: A two-stage mediation model for testing the mediating role of intergroup anxiety

4.3.6 Hypothesis 1a, 1b and RQ 1: Result summary

Based on the analysis results, H1a and H1b were partially supported that comedian racial group membership did influence evaluations of stereotype jokes which in turn influenced interpersonal anxiety and intergroup anxiety. Specifically, one of the joke evaluation variables was found to be a mediator - joke offensiveness. For RQ1, the analysis results indicated that both interpersonal and intergroup anxiety had positive association with stereotype agreement, and joke offensiveness had a negative association with stereotype agreement.

4.4 Hypothesis 2: Joke Content Valence

Following the same modeling strategy, four models were specified and estimated treating joke content valence as the predictor. Model H2M1 estimated the direct predictive paths from content valence to the five outcome variables. The posterior sampling distributions for the parameter estimates and the trace plots are reported in Appendix D (for simplicity purpose, the same output for the remaining models testing H2 were omitted in Appendix D). The model estimation results of H2M1 and H2M2 showed that interpersonal and intergroup anxiety were not first-stage

mediator. As such, the analysis moved to testing the second-stage mediating effects of interpersonal and intergroup anxiety (H2M3A and H2M3B).

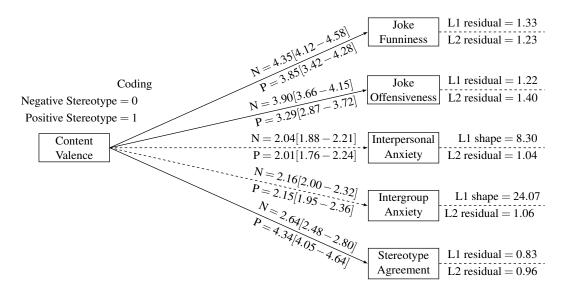


Figure 4.12 Hypothesis 2 Model 1: A direct-effects model for content valence

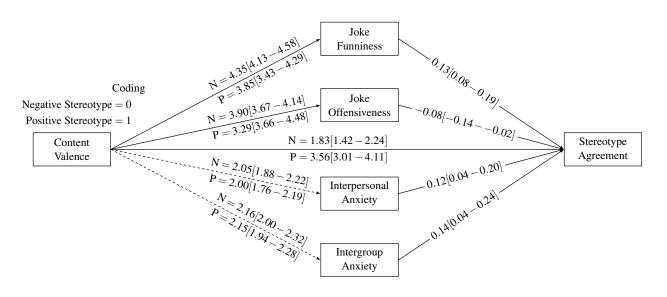


Figure 4.13 Hypothesis 2 Model 2: A one-stage mediation model for content valence

The H2M3A model (Figure 4.14) showed that joke content valence had a direct effect on stereotype agreement, which indicated the participants endorsed the positive stereotype more than the negative stereotype. This direct effect could be interpreted as a statistical control for the asymmetry negative-/positive-stereotype endorsement (Mae & Carlston, 2005). This model also

showed a first-stage mediation effect from joke content valence to stereotype agreement through joke funniness. Specifically, negative-stereotype jokes were rated funnier than the positive ones, and the negative-stereotype jokes had a slightly stronger $(4.35 \times 0.13 = 0.5655)$ mediation effect on stereotype agreement than did the positive-stereotype jokes $(3.85 \times 0.13 = 0.5005)$ through joke funniness.

The H2M3A model also showed a two-stage mediation effect from joke content valence on stereotype agreement through joke offensiveness and interpersonal anxiety. Specifically, the participants rated the negative-stereotype jokes more offensive than the positive-stereotype jokes. This estimate is a more accurate approximation of participants' offensiveness ratings for the jokes, as the asymmetry negative-/positive-stereotype endorsement was controlled by the direct effect estimate. As negative-stereotype jokes led to a higher level of joke offensiveness, which in turn increased participants' interpersonal anxiety toward the comedians performing negative-stereotype jokes. Then, the increased interpersonal anxiety led to a higher level of stereotype agreement. The estimated two-stage mediation effect for the negative-stereotype jokes $(3.91 \times 0.16 \times 0.15 = 0.09384)$ is slightly higher than the positive-stereotype jokes $(3.30 \times 0.16 \times 0.15 = 0.0792)$.

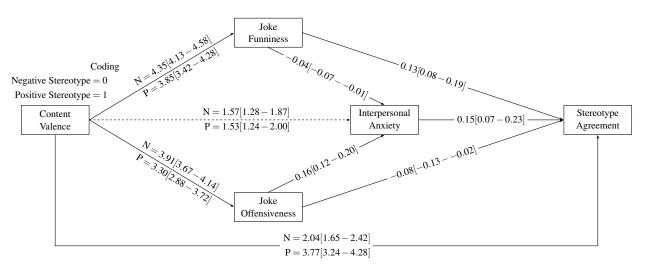


Figure 4.14 Hypothesis 2 Model 3A: A two-stage mediation model for testing the mediator role of interpersonal anxiety

The H2M3B model (Figure 4.15) showed, consistent with The H2M3A model, a direct effect of joke content valence on stereotype agreement and a one-stage mediation effect through joke funniness. However, intergroup anxiety did not act as a second-stage mediator in this model. Specifically, intergroup anxiety was not directly associated with joke funniness or joke offensiveness. Furthermore, participants' intergroup anxiety was not explained by joke content valence. However, the positive direct effect from intergroup anxiety to stereotype agreement showed evidence for the construct and discriminant validity of intergroup anxiety in the current study (i.e., ruling out operationalization or measurement errors).

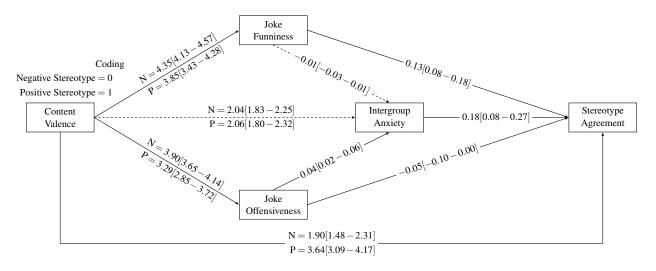


Figure 4.15 Hypothesis 2 Model 3B: A two-stage mediation model for testing the mediator role of intergroup anxiety

4.4.1 Hypothesis 2a, 2b and RQ 2: Result summary

Based on the analysis results, H2a and H2b were partially supported that joke content valence of stereotype jokes did influence the evaluations of the joke which in turn influenced interpersonal anxiety and intergroup anxiety. Specifically, one of the joke evaluation variable was found to be a significant mediator - joke offensiveness. Joke offensiveness was found to be a significant mediator between content valence and interpersonal anxiety (H2M3A). For RQ2, the analysis results indicated that both interpersonal and intergroup anxiety had positive association with

stereotype agreement (H2M2, H2M3A, H2M3B), and joke funniness had a positive association with stereotype agreement. Furthermore, joke funniness was found to be a mediator in between joke content valence and stereotype agreement (H2M2, H2M3A, H2M3B).

Chapter 5

Discussion

5.1 Result Summary

Situated in the context of standup comedy, the current study examined the effects of comedian racial group membership (Asian/White) and joke content valence (negative/positive-stereotype) on Caucasian American participants' evaluations for stereotype jokes about Asian Americans and the comedians performing such jokes. Comedian racial group membership showed direct main effects on joke funniness, joke offensiveness, and interpersonal anxiety toward the performer (Figure 4.4 & Figure 4.7). Regardless of the content valence of a joke, the participants rated Asian standup comedians to be funnier and less offensive compared to White standup comedians. Also, the participants experienced a lower level of interpersonal anxiety toward Asian than White standup comedians. In addition to its direct main effects, one-stage mediation analysis (Figure 4.8) showed that comedian group membership had mediated effects on stereotype agreement through joke offensiveness (negative) and interpersonal anxiety (positive). Further analysis (Figure 4.10) indicated the a two-stage mediation process from comedian racial group membership to stereotype agreement through joke offensiveness (first stage) then interpersonal anxiety (second stage).

For content valence of stereotype joke, the current study found its direct main effects on joke funniness, offensiveness, and stereotype agreement (Figure 4.6 & Figure 4.12). Regardless of comedian racial group membership, the negative-stereotype jokes were rated funnier but more offensive than the positive-stereotype jokes. The participants also showed a higher level of endorsement for the positive-stereotype jokes than the negative-stereotype jokes. One-stage

mediation analysis (Figure 4.13) showed mediation effect from joke content valence on stereotype agreement through joke funniness (positive) while accounting for the direct effect of joke content valence. Further analysis (Figure 4.14) indicated a two-stage mediation process from joke content valence to stereotype agreement through joke offensiveness (first stage) them interpersonal anxiety (second stage).

5.2 Theoretical Implications

5.2.1 Joke funniness and offensiveness - Discourse norms

In Bourhis et al. (1977) study on Welsh participants' reactions to ethnic humor in the context of English-Welsh relation, the researchers manipulated three factors: butt of joke (ingroup vs. outgroup), source of humor (ingroup vs. outgroup), and salience of intergroup context (salience vs. neutral). The three ethnic jokes used for that experiment were all "disparaging and derogatory" (p. 263). One of the outcomes they measured was Welsh participants' ratings on joke funniness.

In the current study, the butt of a joke and the salience of intergroup context were constant: all of the four stereotype jokes were about Asian Americans and the current study design mirrored a high-salient intergroup situation. Two conditions in the current study are close to Bourhis et al. (1977) design: Asian comedian telling a negative-stereotype joke and White comedian telling a negative-stereotype joke. Bourhis et al. found that "[i]n the salience intergroup categorization condition anti-outgroup humor was perceived to be more funny and clever when the source was the English speaker" (p. 263). In the current study, Caucasian American participants rated Asian comedians ($\beta_{marginal} = 4.513$, p < .001) funnier than White comedians ($\beta_{marginal} = 4.197$, p < .05) when telling negative-stereotype jokes.

Bourhis et al. (1977) offered two explanations for "[w]hen the intergroup context was made salient for the subjects, they reacted more favorably when the source of the anti-outgroup humour was English rather than Welsh" (p. 263). First, "[i]t may well be that under such circumstances,

blatant anti-outgroup humour may have been considered too obvious and transparent a way of attacking the outgroup, and as such may have been an ineffective way of boosting ingroup morale, pride and distinctiveness" (p. 264). Second, this joke scenario (i.e., outgroup joking about themselves) may "be particular pleasing to ingroup members since it may give them the impression that the outgroup is in a state of confusion or demoralization" (p. 264).

For the current study, these explanations may not be applicable as the Asian-White relation in the United States is different than the Welsh-English relation. More specifically, the social norms governing the interracial discourse in the U.S. may possess more explaining power for the findings here. As Rappopport (2005) comments:

Humor based racial, ethnic, and gender stereotypes has always been a touchy subject, particularly in our current era of political correctness when even hinting at it can be the kiss of death for any public figure. In colleges and universities, faculty tempted to crack wise at the expense of any national, religious, sexual, or handicapped group risk the loss of their jobs and reputations. (p. xi)

The racial dynamics in the U.S. is particularly complex compared to the majority of the other countries in the world - as other countries are more homogenous in regards to race or ethnicity. As such, a critical component of the U.S. culture is a set of norms that governs race or ethnicity related discourse. Specifically, joking about a group's stereotypes is more permissible for members of that group than for any outsiders. This is in line with Park et al. (2006) focus-group study on audience reactions to the racial humor in Rush Hour 2 - making fun of stereotypes of one's own group is more allowed than making fun of others' groups. In a more recent study, Thai et al. (2019) found that the permission to joke about a group's stereotype is indeed only granted to individuals from the target group. In the second experiment of their study, Thai et al. manipulated the source of a disparaging joke targeting Asian Americans to have three levels: Asian, African American, and Caucasian American. The results showed that both African American and Caucasian American sources were rated less acceptable and more offensive than Asian sources.

As discourse norms reflect group values and beliefs, social identity perspectives can provide further insights for the findings of the current study.

5.2.2 Joke funniness and offensiveness - Social identity perspective

One of the consequences of group identification is ingroup favoritism that "[...] the mere perception of belonging to two distinct groups - that is, social categorization per se - is sufficient to trigger intergroup discrimination favoring the in-group" (Tajfel & Turner, 1979, p. 38). However, the Caucasian American participants did not grant ingroup favoritism to the White comedians in the current study - they (ingroup) were rated less funny and more offensive than Asian (outgroup) comedians. In addition, the participants reported a higher level of interpersonal anxiety toward the White comedians in contrast to the Asian comedians. One explanation resides in a key concept of social identity perspective - prototypes. According to Hogg and Reid (2006):

Individuals cognitively represent social categories as prototypes. These are fuzzy sets, not checklists, of attributes (e.g., attitudes and behaviors) that define one group and distinguish it from other groups. These category representations capture similarities among people within the same group and differences between groups. In other words, they accentuate intragroup similarities (assimilation) and intergroup differences (contrast) [...]. (p. 10)

Thus, a prototypical Caucasian American needs to follow the racial discourse norms of the group (i.e., should not make fun of stereotypes about other social groups). White standup comedians who do not follow such norms would be considered, at least by other ingroup members, as deviants. One of the consequences of deviating from one's ingroup norms has been well documented in the *Black Sheep Effect* literature (an extension of the SIT literature).

The *black sheep hypothesis* states that "judgments about likeable and unlikeable ingroup members should yield more extreme positive and negative evaluations than judgments about similarly likeable and unlikeable outgroup members" (Marques, Yzerbyt, & Leyens, 1988, p. 4).

Thus, an ingroup member who deviates from the ingroup norms could receive more extreme negative evaluations than an outgroup member violating the same norms. For discourse norms, the black sheep effect research has been extended to the *intergroup sensitivity effect* (Hornsey, Oppes, and Svensson, 2002). Specifically, criticisms from ingroup members are perceived as more legitimate and more constructive than same messages from outgroup members.

The current study findings pertaining to the differential evaluations for the comedians and the jokes can be understood from the black sheep effect and the intergroup sensitivity perspective. If stereotype jokes are considered as a form of rhetorical criticism, Asian comedians can possess more legitimacy than White comedians telling Asian-stereotype jokes. When White comedians attempt to tell such jokes, they may not be perceived as a legitimate source (Green & Linders, 2016). In addition to receiving backlash from outgroup audience, they can encounter ingroup bias or more extreme negative evaluations for being deviated from their ingroup norms.

5.2.3 Interpersonal and intergroup anxiety - Mediator considerations

In intergroup contact literature, intergroup anxiety has been shown to be a critical mediator between contact and intergroup attitudes (Pattigrew, 1998; Pettigrew & Tropp 2008).

Furthermore, it also has been shown to be a significant positive correlate with stereotype agreement (Stephan, Ybarra, Martinez, Schwarzwald, & Tur-Kaspa, 1998). The current study shows intergroup anxiety toward Asian Americans is a significant predictor for stereotype agreement, in the way that a higher level of intergroup anxiety leads to a higher level of stereotype agreement. According to Stephan et al. (1998), intergroup anxiety and negative stereotyping are basic threats that lead to groups to be prejudiced toward one another (in addition to realistic and symbolic threats).

Situated in the context of standup comedy, the current study found interpersonal anxiety to be a significant predecessor for the mediating function of intergroup anxiety. Specifically, jokes told by the White comedians led to a higher level of interpersonal anxiety which increased the level of intergroup anxiety, and then a higher level of stereotype agreement (Figure 4.9). The

results from the univariate MLM analyses (Figure 4.6) also showed that White comedian telling a negative joke caused the highest level of interpersonal and intergroup anxiety. Furthermore, based on the alternative model comparisons (model H1M4A vs. H1M4B; model H1M3A vs. H1M3B), the current study found interpersonal anxiety toward the comedian to be a more crucial mediator than intergroup anxiety.

First, the other-sanctioning effect (Mae et al., 2005) and the black sheep effect (Marques et al., 1988) can be used to explain why participants reported the highest level of interpersonal anxiety for the White comedian who told the negative-Asian joke. In other words, the interpersonal anxiety experienced by the White audience was a norm-based affective reaction (e.g., emotions felt when witnessing others breaking rules). As following racial discourse norms (verbal expression rules) is not necessarily an accurate reflection of one's attitudinal agreement, the White audience might still implicitly agree with the White comedian who was saying "Asians are bad drivers", to some degree (0.10 [0.09 - 0.25]; Figure 4.9). In other words, the intergroup anxiety experience by the White audience was an implicit-attitudinal based response. In contrast, participants reported a lower level of interpersonal anxiety toward the Asian comedians, which corresponded to a lower level of stereotype agreement. This finding suggests that regardless of the content-valence of stereotype jokes, an insider's (Asian comedians) voice carries a stronger force for changing outgroup (White) audience's established beliefs about the target group (Asian Americans).

Second, joke offensiveness was found to be a predictor for interpersonal anxiety (and a mediator between the manipulation variables and interpersonal anxiety; Figure 4.9 & Figure 4.14). However, joke offensiveness did not appear to be a predictor for intergroup anxiety (Figure 4.11 & Figure 4.15). Specifically, White audience was offended most by the White comedian who told the negative joke and least by the Asian comedian who told the positive joke (Figure 4.6). Again, this finding can be explained by the other-sanctioning and the black sheep effect. These explanations can also be applied to the positive association between offensiveness and interpersonal anxiety. The lack of association between offensiveness and intergroup anxiety

may indicate an important theoretical implication for standup comedy research. Specific to the context of standup comedy, the joke offensiveness experienced by an audience may resides more at interpersonal level than intergroup level. The audience was offended by the individual comedian, not by the comedian's group. As such, it is less likely for the audience to pass on their negative judgment about a comedian to the comedian's group.

Jokes offensiveness was also found to be a mediator in between comedian racial group membership and stereotype agreement. White comedians led to a higher level of offensiveness which in turn led to a lower level of stereotype agreement (Figure 4.10 & Figure 4.11). This may seem unintuitive - stereotype reduction being achieved by White comedians offending White audience. This can be explained from a view point of speaker credibility (Green & Linders, 2016). In addition to feeling offended, White audience may also perceive the White comedians having a low credibility in commenting on Asian stereotypes. Therefore, the audience showed a lower level of stereotype agreement with the jokes told by the White comedians. This finding also carries a practical implication that for White comedians who wish to reinforce stereotypes actually may fail to do so when those jokes are seen as offensive (e.g., some of Ralphie May's jokes).

5.2.4 Stereotype agreement - The subversion paradox

The end outcome variable of the current study, stereotype agreement, is an operationalization based on a joint of two theoretical frameworks: Allport's (1954) assumption that intergroup prejudice is a result of the lack of knowledge about outgroups, and Tajfel and Turner's (1979) conceptualization of individual-intergroup interaction continuum (perceiving individuals as unique human beings vs. relying on mental images about their groups). Current study found multiple paths, direct and indirect, from the two manipulation variables (comedian racial group membership and joke content valence) to stereotype agreement.

For comedian racial group membership, this study found a two-stage mediation path to stereotype agreement through interpersonal and intergroup anxiety. This path suggests White comedians, comparing to Asian comedians, can cause a higher level of stereotype agreement

through the two anxiety variables. However, there is another, stronger, mediation path through joke offensiveness suggesting White comedians can cause higher level of joke offensiveness which lead to lower level of stereotype agreement.

For joke content valence, negative-stereotype jokes were found to be funnier than positive stereotype jokes, and the former was found to be more offensive than the latter. This may indicate two distinct mental processes. The funniness judgment may be a reaction to the incongruity of humor and the offensiveness judgment may be a reaction based on social norms. Furthermore, the current study shows that joke funniness has a positive relationship with stereotype agreement, but joke offensiveness has negative relationship with stereotype agreement.

Rappoport (2005) uses the "sword and shield" metaphor to conceptualize racial humor. Such humor can be used to hurt outgroups and reinforce hierarchy and stereotypes, or it can be used to challenge prejudice and established beliefs. Based on the "sword and shield" metaphor and organized by the intention of a racial humor, Saucier et al. (2016) propose three possible outcomes of racial humor: antisocial (as a sword), prosocial (as a shield), or intended to be prosocial but failed.

The current study extended the "sword and shield" metaphor by examining stereotype joke from an audience perspective. From Caucasian Americans' perspective, Asian comedian telling a negative joke was rated the funniest, however that led to a higher level of stereotype agreement. On the other hand, White comedian telling a negative-stereotype joke was rated most offensive, yet led to a lower level of stereotype agreement. Both scenarios can be explained by the ethos of a speaker. For the former case, outgroup members may be more likely to agree with a stereotype if it was endorsed by members from that group. The latter case can be viewed as an outsider with no credibility making negative claims about a group.

If the end goal is to reduce stereotype agreement, then, what is the best case scenario? The current study revealed distinct challenges for White and Asian comedians. For White comedians whose performance intent is to subvert the stereotypes of a target group, the critical element is to establish legitimacy. One approach for achieving such goal is to increase and demonstrate

familiarity/connection with the target group (Thai, Hornsey, & Barlow, 2016). In fact, the strategy has been used by many White comedians in their acts (e.g., Bill Burr's connection to African American culture; Tom Segura's familiarity with Latino culture). For Asian comedians, who possess the permission to criticize their ingroup, need to take this advantage and offer more diverse individualized insider's views/interpretations about the established beliefs about Asian groups. However, the challenge for Asian comedians is to make this process funny. As Rappoport (2005) points out that "becoming a comedian: ethnicity helps but is not enough" (p. 129).

5.2.5 Stereotype agreement - Humor styles and speaker character

The current study attempted to understand White audience perceptions of Asian stereotype jokes as a function of the joke teller's racial group membership (Asian/White) and the content valence of the stereotype joke about Asian Americans (negative/positive). From a humor style perspective, two of the four scenarios in the current study can be linked to the interpersonal humor styles proposed by Martin, Puhlik-Doris, Larsen, Gray, and Weir (2003a). Specifically, 1) Asian comedians telling negative-valence jokes is a form of self-defeating humor; and 2) White comedians telling negative-valence joke is a form of aggressive humor. According to Martin et al.:

[Self-defeating humor style] involves excessively self-disparaging humor, attempts to amuse others by doing or saying funny things at one's own expense as a means of ingratiating oneself or gaining approval, allowing oneself to be the "butt" of others' humor, and laughing along with others when being ridiculed or disparaged. (p. 54)

Thus, this description fits the scenario in which Asian comedians telling negative-valence joke about own group to White audience. Furthermore, White comedians telling negative-valence jokes about Asian Americans to White audience fits Martin et al. description of aggressive humor that:

In general, it relates to the tendency to express humor without regard for its potential impact on others (e.g., sexist or racist humor), and includes compulsive expressions

of humor in which one finds it difficult to resist the impulse to say funny things that are likely to hurt or alienate others. (p. 54)

Empirical studies on audience perceptions of public speaker's use of self/other-disparaging humor have shown other-disparaging (i.e., aggressive humor style) speakers were perceived lower on character dimensions. On the other hand, self-disparaging speakers were perceived higher on character dimensions.

Hackman (1988) manipulated the humor use in a speech script about "Effective Listening" to have three levels: 1) no examples of humor; 2) examples of self-disparaging humor; and 3) examples of other-disparaging humor. Undergraduate students (N = 126) were randomly assigned to one the three conditions. Following exposure to the experimental treatment (i.e., reading one version of the three scripts), the participants rated the sense of humor of the speaker, level of interest in the presentation, and character of the speaker. Hackman found that the no-humor speaker received higher ratings for speaker credibility than the self- and other-disparaging speaker. Furthermore, the other-disparaging speaker received significantly lower ratings on character than the no-humor speaker. The findings of Hackman study may provide some support for an alternative explanation that White comedians telling negative-valence jokes about Asians Americans could receive a low rating on their personal character from White audience.

In a more recent study situated in a corporate public speaking context, Hoption, Barling, and Turner (2013) manipulated a manager's new staff introduction speech (the last sentence) to have four levels: 1) self-deprecating, "I am so glad that Pat took this job despite knowing all about me!"; 2) aggressive humor, "I am so glad that Pat took this job despite knowing all about you!"; 3) in-group-deprecating, "I am so glad that Pat took this job despite knowing all about us!"; and 4) no humor, "I am so glad that Pat took this job!" (p. 9). Undergraduate students (N = 155) were randomly assigned to one of the four conditions. Following exposure to the experimental treatment, the participants rated the manager on likeability, trust, humorousness, and transformational leadership. Hoption et al. found that individualized consideration (one dimension of transformational leadership) was rated significantly higher in the self-deprecating

condition than in the aggressive-humor condition. According to Hoption et al., "individualized consideration entails leaders being attentive and sensitive to followers' individual needs and skills" (p. 5). This finding, along with Hackman's (1988) findings, seems suggest that in public speaking contexts, self-disparaging speakers can receive higher ratings on their personal character compared to other-disparaging speakers. Serving as a post hoc explanation for the current study, it is reasonable to speculate that Asian comedians telling negative-valence jokes about Asian Americans may receive higher ratings on personal character than White comedians telling negative-valence jokes about Asian Americans.

5.2.6 Stereotype humor - Interpersonal consequences

The literature on stereotype threat has shown the negative consequences of being a target of negative stereotyping in various social contexts, such as physical health (Armstead, Lawler, Gorden, Cross, & Gibbons, 1989; Blascovich, Spencer, Quinn, & Steele, 2001), academic performance (Aronson, Quinn, & Spencer, 1998; Shih, Pittinsky, & Ambady, 1999), and organizational behaviors (Roberson & Kulik, 2007; Walton, Murphy, & Ryan, 2015). Also, there are studies showing that being a target of positive stereotyping can lead to positive consequences (Levy, 1996; Shih, Ambady, Rickeson, Fujita, & Gray, 2002). The theoretical underpinning for the these studies is an assumption of the social identity theory (Tajfel & Turner, 1979). The negative/positive consequences from negative/positive stereotyping are in fact the negative/positive outcomes from social group comparisons. Specifically, negative social group comparisons can lead to negative evaluations about self-concept.

Yet there is an emerging body of literature arguing that positive-stereotyping can also lead to negative influence over the stereotype target (Czopp et al., 2015). Recent studies have shown that "[o]n their surface, positive stereotypes may seem like praise, but they may signal to targets an underlying negativity toward their group" (Siy & Cheryan, 2016). The theoretical underpinning for this line of research is the social categorization theory or SCT (Turner, 1985). This theory explains contextual factors that can lead to group salience and the consequences of group salience

(e.g., individuals being categorized to a particular social category). When an individual becomes a target of positive stereotyping, a sense of being depersonalized can occur, which can lead to negative consequences (Siy & Cheryan, 2013). For instance, joking with an Asian student that she is (or should be) good at mathematics can make this person feeling depersonalized (suppose the joke teller is not an Asian person) - all of her attributes of an unique human being are stripped away. This creates an interpersonal communication dilemma in intergroup contact - if joking about positive stereotypes can also lead to negative consequences, should individuals ever bring up or joke about stereotypes?

In the current study, stereotype humor was conceptualized as an exogenous factor. As such, to some degree it determined other variables' behaviors. However, in interpersonal contexts, stereotype humor can be an outcome of relational development. Intergroup contact theory suggested that generating affective ties showed the strongest moderation effect on the contact-lead-to-reduction process (Davies et al., 2011; Pettigrew & Tropp, 2006). As such, as the intimacy level increases in a given cross-group relationship and both parties perceive each other as unique human beings, the negative consequences of stereotype humor might be attenuated.

5.3 Limitations and Future Directions

One limitation of the current study is that there might be an inherent difference in the funniness of the jokes themselves (success driven vs. bad driving). The results do not discern whether a difference in funniness has to do with the valence itself. Specially, the participants in this study may found jokes about Asian drivers are inherently funnier than jokes about Asian Americans being success driven. In fact, the success-driven stereotype may pose a higher level of identity threat to the participants than does Asians being bad drivers. Therefore, future research efforts should be devoted to collecting/developing more Asian-stereotype jokes with different levels of funniness and content valence.

The second limitation of this study is its lack of measure for stereotype change. Although the statistical inferences were made based on within-subjects variations. More convincing causal

claims can be made by using some forms of a longitudinal design. In this way, stereotype agreement can be measured repeatedly with longer temporal lags in between. As such, inferences about within-individual stereotype agreement changes can be made. In addition, the current study used written scripts for internal validity purpose. Future studies need to incorporate manipulations with a higher level of external validity, such as video recordings of standup comedians performing stereotype jokes. In a study of standup comedy, Franklin and Adams (2011) suggested that the dynamic display of humorous messages is vital to the observation of the rewarding center activation as it resembles a naturalistic social interaction, compared to a static cartoon or written jokes. Franklin and Adams's experiment used 32 recorded 24s routines performed by different comedians. Future research can adopt a similar design to simulate a more naturalistic standup environment.

The third future direction is to include Asian Americans participants. The findings of the current study are specific to Caucasian Americans. It will be theoretically meaningful to test the current study findings with samples from Asian Americans. Green and Linders (2016) study with African American audience have shown that Black audience evaluation criteria for stereotype humor are different than White audience. It will be meaningful to see if Asian Americans also share similar evaluation criteria as African Americans, given both groups have been historically negatively stereotyped and now being positively stereotyped. In addition, it would also be theoretically meaningful to examine White audience reactions to an Asian or other ethnic group comedian telling stereotype jokes about White Americans. In addition, the MTurk sample used this study may also limits the generalization of the study results. Future studies may consider collecting data through different channels.

Finally, the current study focused on examining the direct and the mediated effects of the manipulation variables. Future studies can consider examining possible moderator variables. One of the candidates is comedian familiarity with the target group (Thai et al., 2016). By demonstrating knowledge of or connections with the target group, a White comedian can

establish criticism legitimacy which may buffer/moderate the black sheep effect from the ingroup and the intergroup sensitivity effect from the outgroup.

5.4 Conclusion

Inspired by Asian American standup comedians' performance, this study was set out to understand the effects of such performance on White audience. Through manipulating comedian racial group membership and joke content valence, differential evaluations by White audience were observed. White audience perceived stereotype jokes to be funnier and less offensive when the joke teller was Asian than White. White audience also rated negative-stereotype jokes were more offensive than positive-stereotype jokes. However, they rated the former funnier than the latter. In addition, funnier jokes reinforced White audience stereotypes about Asian Americans. Yet, offensive jokes appeared to subvert stereotypes held by White audience. Speaker credibility and black sheep effect provided explanations for the observed subversion paradox.

Both interpersonal and intergroup anxiety were positively related to White audience stereotype agreement. It is reasonable to assume that anxiety can lead people to rely more on established schema about social categories. Interpersonal anxiety carried more explaining power than intergroup anxiety in the context of standup comedy. White audience may not perceive the four standup comedians as representative of their racial groups. Intergroup anxiety may not be as relevant as assumed in the context of standup comedy. Imagine a White audience being called out by an Asian comedian, the immediate anxiety experienced by the audience should be toward the comedian, not the comedian's racial group.

This study also experienced the current anti-prejudice norm. White participants demonstrated the asymmetry of negative-/positive-stereotype endorsement. With statistical controls, this internal validity threat was guarded out from the processes of interest. By using a more flexible statistical framework, this study was also able to estimate path models with highly skewed mediators.

Situated in the context of standup comedy, the current study explored possible theoretical linkages between three bodies of literature; namely, social identity (Tajfel & Turner, 1979; Turner et al., 1987), intergroup contact (Allport, 1954; McIntyre et al., 2016; Pettigrew, 1998; Pettigrew & Tropp, 2006; Williams, 1947), and stereotype humor (Ford & Ferguson, 2004; Rappoport, 2005; Saucier et al., 2016). The major findings of the study showed alignment with these theoretical frameworks. In addition, those findings also showed some practical implications. For White comedians intending to including stereotype subverting routines, establish speaker credibility should be part of the performance. For Asian and comedians from other ethnic groups, offering an insider voice and individualized interpretations of stereotypes could be a reasonable strategy. Yet the challenge is to also make those routines relatable and funny for outgroup audience.

This study has achieved its research goals. It concludes with a remark from Rappoport (2005), "To the comedians who run all the risks of trying to be funny; To the scholars of humor who try to explain why it is so important" (p. v).

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Appendix A

Information Statement

The Department of Communication Studies at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in this study. You may refuse to participate in this study. You should be aware that even if you agree to participate, you are free to withdraw at any time. If you do withdraw from this study, it will not affect your relationship with this unit, the services it may provide to you, or the University of Kansas.

Participation Compensation

Participants of this study will be compensated by 10 points extra course credit for KU students and will be compensated by \$2.00 for MTurk participants.

Participation Eligibility

If you are Caucasian/White American, over 18-years old, and English speaking, you are eligible to participate in this study.

Purpose of the Study

This study aims to understand the relationship between humorous messages and judgment of specific individuals and their social groups.

Procedure of the Study

To participate in this study, you will be asked to provide some demographic and background information first. Then, you will read through four jokes that have been performed onstage by a comedian. Following the reading of each joke, you will be asked to provide feedback/evaluation about the comedian, the joke itself, and the target group in the joke.

Benefits, Confidentiality, and Potential Risks Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of how humorous communication affects intergroup relations. Your participation is solicited, although strictly voluntary. Your name will not be associated in any way with the research findings. Your identifiable information will not be shared unless (a) it is required by law or university policy, or (b) you give written permission. The content of this survey should cause no more discomfort than you would experience in your everyday life. However, if you did experience discomfort during your participation, please contact the KU Counseling and Psychological Service and/or the KU Institutional Review Board. *It is possible, however, with

internet communications, that through intent or accident someone other than the intended recipient may see your response.

Institutional Review Board (IRB) Contact Information

Completion of the survey indicates your willingness to take part in this study and that you are at least 18 years old. If you have any additional questions about your rights as a research participant, you may call (785) 864-7429 or write the Human Research Protection Program (HRPP), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email irb@ku.edu.

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Department of Communication Studies

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Appendix B

Debriefing Statement

Purpose of this Study

Your participation in this study is greatly appreciated. The intent of this research is to understand how stereotype-based jokes are perceived given the racial group membership of a joke teller, the content valence of a joke, and the evaluation mindset of an audience.

Deceptions Used in this Study

Necessary of the deception. In order to create experimental conditions for this study, fake comedian names and modified jokes were used in this study. These manipulations were necessary for assessing two variables' effects on how Caucasian/White Americans' evaluate Asian stereotype jokes: the racial group membership of the joke teller (Asian vs. White comedian) and the valence of the joke (negative vs. positive stereotype).

Deception details. The Asian comedian name "Li Lei" and the Caucasian comedian name "Jay Larson" are fake names. These names were introduced as a part of the joke-teller group membership manipulation. And the four jokes were not all real jokes that have been performed by standup comedians. Specifically, Joke One (Asian drive-by shooting) is a real joke performed by an Asian American comedian, Paul Ogata. Because this name might be mistaken by Caucasian participants for some other non-Asian racial groups, a common Chinese male name, Li Lei, was used. This name was also used describing the comedian in Joke Two (Asian Mom bedtime story). Joke Two is not a real joke performed by a standup comedian – this joke was developed/modified based on a scene in a Hong Kong animated movie "My Life as McDull". Joke Three (Asian exchange student driving) is not a real joke performed by a standup comedian. Joke Three was modified based on a joke posted on reddit (originally posted November 14, 2016), and Jay Larson was used for the joke teller's name. Joke Four (Asian kid's first day of school) is a real joke performed by a White standup comedian, Josh Wolfe. This joke was shortened and modified – the parts that may create identity threat to you (a potential experimental confound), comparing American parenting to Asian parenting style, were removed. Because there are many video clips of Josh Wolfe on YouTube and he has a personal YouTube channel, to prevent you from searching for this comedian when taking the online survey (possibly finding the original joke), "Jay Larson" was used as the joke teller's name for Joke Three and Four.

Withdraw from the Study

Because deceptions were used in this study, if you felt any discomfort at this point, you are free to withdraw from this study and your responses will be discarded and not used in this study.

Obtaining a Result Summery of the Study

We truly appreciate your participation in this study. Your participation will help us to understand the ways people judge humorous messages used in intergroup contexts. If you are interested in

learning more about this study, please feel free to contact the primary investigator, Chong Xing (cxing@ku.edu), for a result summary.

We truly appreciate your participation in this study. Your participation will help us to understand the ways people judge humorous messages used in intergroup contexts. If you are interested in learning more about this study, please feel free to contact the primary investigator, Chong Xing (cxing@ku.edu), for a result summary.

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Jeffrey A. Hall (Faculty Supervisor)

Professor

Department of Communication Studies

Email: hallj@ku.edu

Possible Psychological Stress

If, for any reason, you experienced stress during and/or after your participation, please contact the KU Counseling and Psychological Services (CAPS).

CAPS Contact Information

Watkins Health Services 1200 Schwegler Dr., Room 2100 Lawrence, KS 66045-7538

Office Hours: 8am-5pm M-F Office Phone: 875-864-2277

Appendix C

Online Survey

Demographic and Background Measures

Demographic Questions	Response Options
How old are your?	years old
What is your sex?	(1) Female(2) Male(3) Other
Are you a U.S. citizen?	(1) Yes (2) No
What do you consider your race to be? (Mark all that apply)	 Black or African American White or Caucasian American Hispanic or Latino Asian American Indian or Alaska Native Native Hawaiian or Other Pacific Islander Other
Please tell us the years of education you have received (e.g., 12 years for about high school graduate, 13 years for about college freshman).	(years old)
How well off do you think your family is?	 (1) Very well off (2) Quite well off (3) Average (4) Not very well off (5) Not at all well off

Experimental Manipulations: Asian Comedian Negative Stereotype

The following joke has been performed onstage by a male Asian American standup comedian, Li Lei.

Please read this joke first, then provide your responses to the questions after.

"I'm originally from China. So, living in L.A. is a kind of culture shock to me. Before I came, I consulted with some of my L.A. friends. They told me to watch out, because L.A. got gangs. They got so many, and even Asian gangs. I think you can relax about the Asian ones. Asian drive by shootings, the driving is the most dangerous part."

- Li Lei

Experimental Manipulations: Asian Comedian Positive Stereotype

The following joke has been performed onstage by a male Asian American standup comedian, **Bo Jung.**

Please read this joke first, then provide your responses to the questions after.

"I moved to the U.S. with my parents when I was 5 years old. Like all Asian parents, my mom and dad cared a lot about my future success. So, every night, my mom told me a story before sleep. The stories are like: Once upon a time, a boy studied hard. He grew up and got rich. Once upon a time, a boy was lazy and did not want to study. One day... he died."

- Bo Jung

Experimental Manipulations: White Comedian Negative Stereotype

Instructions: The following joke has been performed by a **male White American** standup comedian, **Jay Larson**.

Please read this joke first, then provide your responses to the questions after.

"There were a lot of exchange students from Asia at my school. One gave me a ride to school one day. It was the most terrifying experience of my life. It got me thinking... Pearl Harbor might be an accident."

- Jay Larson

Experimental Manipulations: White Comedian Positive Stereotype

Instructions: The following joke has been performed by a **male White American** standup comedian, **Thomas Gibson**.

Please read this joke first, then provide your responses to the questions after.

"People like to say the American school system sucks. No, it doesn't. If the school system sucks, why are Asians doing so well? Do you want me to tell you why? Honestly, it's the Asian parents. When sending their kids to school, the Asian parents are like, "This is the first day of school. The most important day of your life. If you come home with a report card with one B on it, I will kill you."

- Thomas Gibson

Manipulation Check Questions

Instructions: Based on the paragraph you just read, please answer the following questions about the joke and the comedian.

Manipulation Check Questions

Response options

Did you "get" the joke?	(1) Yes, I "got" the joke (2) No, I did not "get" the joke
What was the ethnicity of the comedian?	 (1) African American (2) Asian American (3) White American (4) Other
What was the stereotype the performer joked about?	 (1) Asians are good at academics (2) Asians are bad drivers (3) Asians are socially awkward

Evaluation of the Joke

A. Evaluation of the Joke

Instructions: The following statements are about the joke you just read. Please read through each statement and choose a number from 1 to 7 (1 = strongly disagree; 2 = disagree; 3 = somewhat disagree; 4 = neither agree nor disagree; 5 = somewhat agree; 6 = agree; 7 = strongly agree) to indicate your level of agreement or disagreement. There are absolutely no right or wrong answers. Higher number indicates more agreement with the statement. Thank you.

		Strongly Disagree		Neither Agree Nor Disagree			Strongly Agree		
The joke is funny.	1	2	3	4	5	6	7		
The joke is offensive.	1	2	3	4	5	6	7		

Interpersonal Anxiety toward the Comedian

Instructions: Now think of a situation where you might meet this comedian in person, please indicate your agreement with the following statements about your feelings toward this person (1 = extremely unlikely, 2 = very unlikely, 3 = unlikely, 4 = likely, 5 = very likely, 6 = extremely likely). There are absolutely no right or wrong answers. Thank you.

	Extrer Unlike	•	Not Likely Nor Unlikely			Extremely Likely		
I would feel nervous towards him.	1	2	3	4	5	6	7	
I would feel uncomfortable around him.	1	2	3	4	5	6	7	

Intergroup Anxiety toward Asian Americans

Instructions: Now think of a situation where you were the only person interacting with Asian Americans, please indicate your agreement with the following statements about your possible reactions to this situation (1 = strongly disagree; 2 = disagree; 3 = somewhat disagree; 4 = neither agree nor disagree; 5 = somewhat agree; 6 = agree; 7 = strongly agree).

	Extremely Unlikely		Not Likely Nor Unlikely			Extremely Likely		
I would feel anxious in this situation.	1	2	3	4	5	6	7	
I would feel comfortable in this situation.	1	2	3	4	5	6	7	
I would feel at ease in this situation.	1	2	3	4	5	6	7	

Stereotype Agreement for the Negative Stereotype

Instructions: Please indicate your agreement with the following statements about your attitudes toward Asian immigrants (1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = neither agree nor disagree, 5 = somewhat agree, 6 = agree, 7 = strongly agree).

	Strongly Disagree		Neither Agree Nor Disagree			Strongly Agree		
Many Asian Americans are hazard to themselves and others on the road	1	2	3	4	5	6	7	
Many Asian Americans are incompetent drivers.	1	2	3	4	5	6	7	
Many Asian American drivers fail to follow traffic laws and rules	1	2	3	4	5	6	7	

Stereotype Agreement for the Positive Stereotype

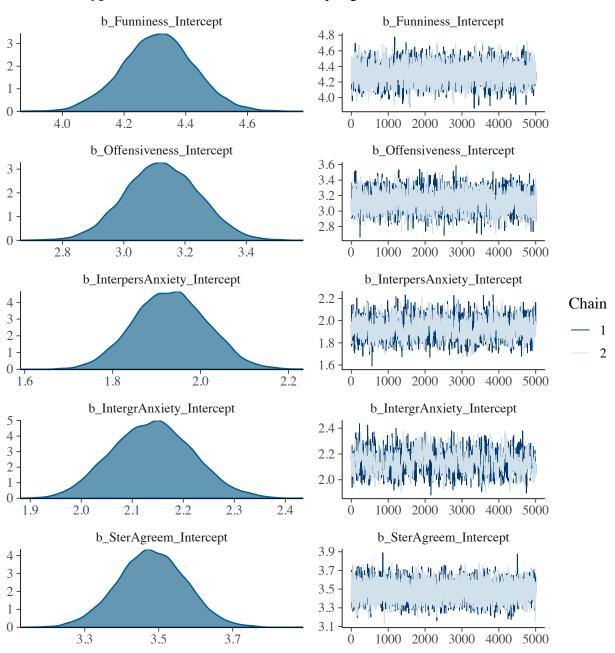
Instructions: Please indicate your agreement with the following statements about your attitudes toward Asian immigrants (1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = neither agree nor disagree, 5 = somewhat agree, 6 = agree, 7 = strongly agree).

	Strongly Disagree		Neither Agree Nor Disagree			Strongly Agree		
Asian Americans seem to be striving to become number one	1	2	3	4	5	6	7	
Most Asian Americans have a mentality that stresses gain of economic power	1	2	3	4	5	6	7	
When it comes to education, Asian Americans aim to achieve too much	1	2	3	4	5	6	7	

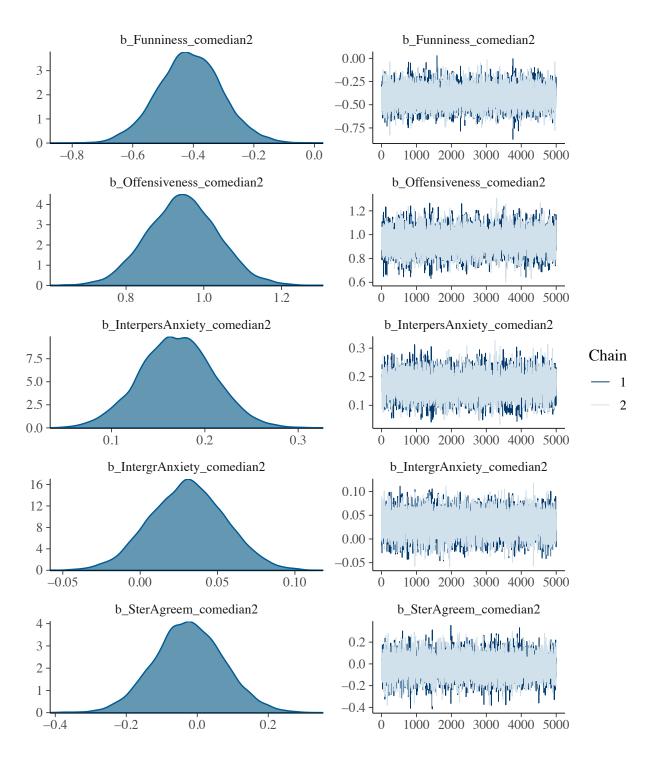
Appendix D

MCMC Simulation Results

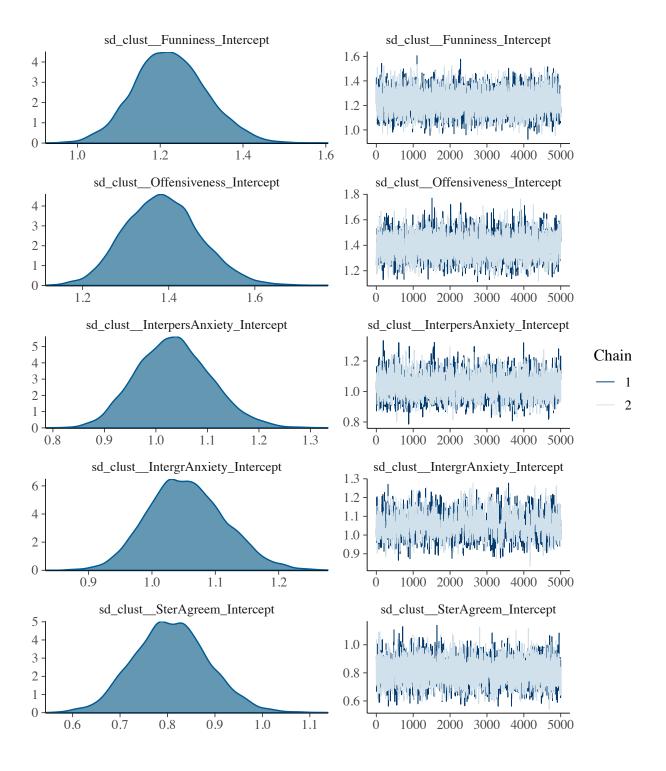
Hypothesis 1 Model 1: Posterior Sampling Distributions and Trace Plots



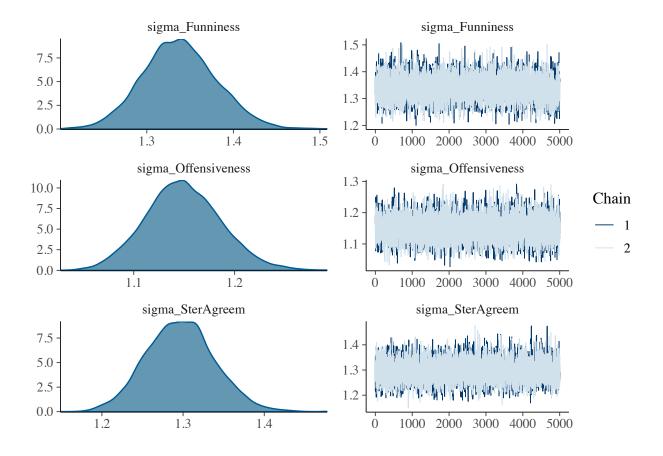
Hypothesis 1 Model 1: Posterior Sampling Distributions and Trace Plots



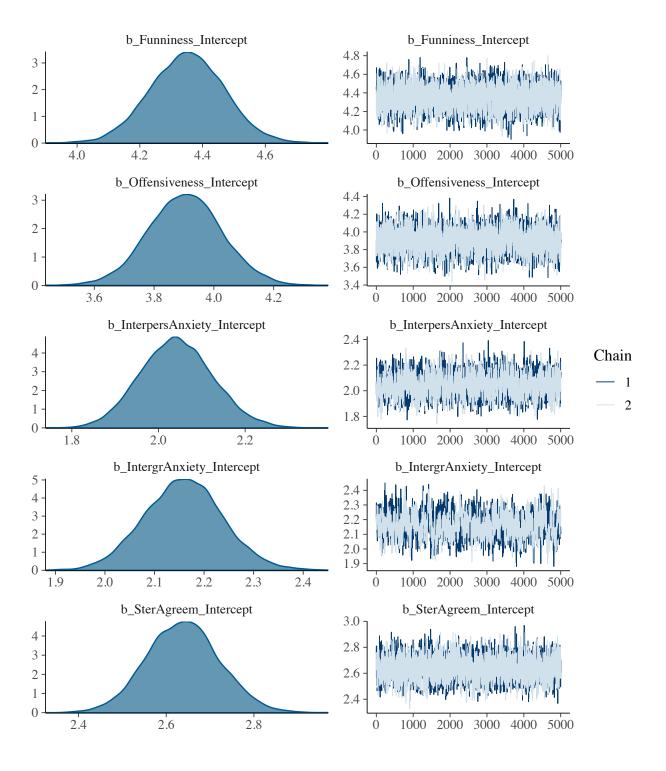
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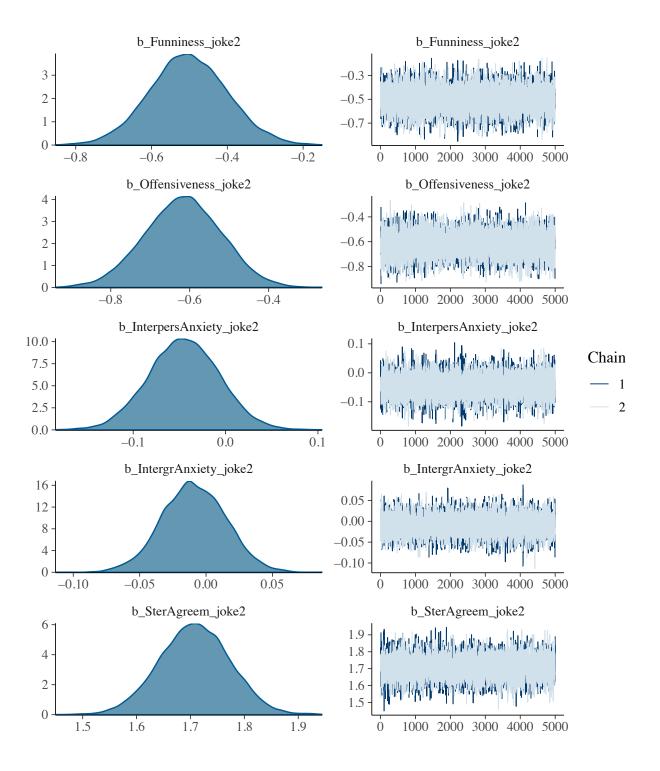
Hypothesis 1 Model 1: Posterior Sampling Distributions and Trace Plots



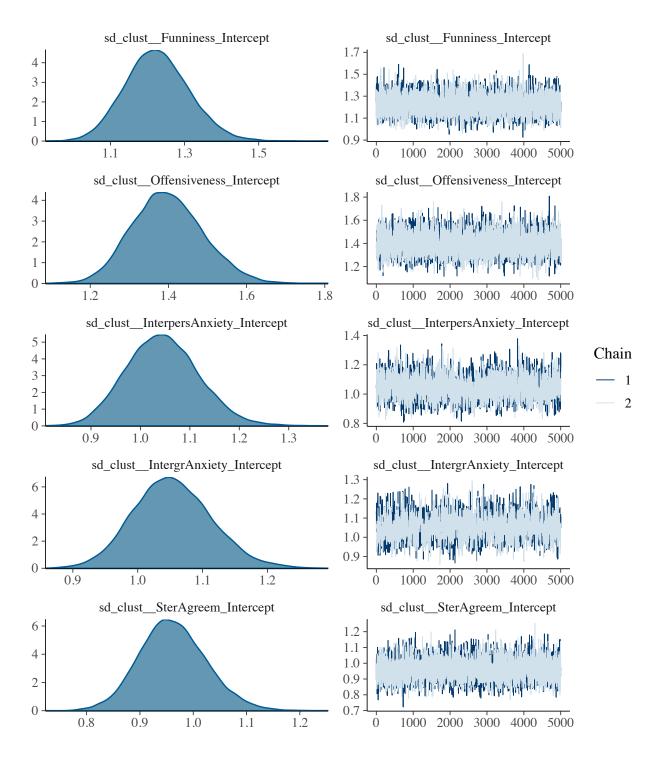
Hypothesis 2 Model 1: Posterior Sampling Distributions and Trace Plots



Hypothesis 2 Model 1: Posterior Sampling Distributions and Trace Plots



Hypothesis 2 Model 1: Posterior Sampling Distributions and Trace Plots



Hypothesis 2 Model 1: Posterior Sampling Distributions and Trace Plots

