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Abstract

Testing competing hypotheses based on the Social Identity approach and the outgroup moral authority approach; the present research examined the role of social influence in shaping responses to age-based humor. The Social Identity approach predicted that ingroup member reactions (laughter vs. nonlaughter) to the same humor should have a stronger influence in shaping humor appraisals than the reactions of outgroup members. Conversely, the outgroup moral authority approach predicted that members of the group targeted by the humor—older adults—would exert the strongest social influence, particularly on the responses of younger adults. Hypotheses were tested using an online experiment that exposed older and younger adults to comedic performances in which jokes about older adults were accompanied by the laughing or nonlaughing reactions of either older or younger audiences. Humor type was also varied as it was hypothesized that age-disparaging humor would invite more social influence than nondisparaging humor. Participants were exposed to both a male and female comedian delivering disparaging or nondisparaging humor about older adults. Two hundred and fifty-eight older adults (65-85 years) and 268 younger adults (18–35 years) participated in a 2 (Audience Age) x 2 (Audience Reaction) x 2 (Participant Age Group) x 2 (Humor Type) x 2 (Comedian Sex) mixed-model experiment with the last being a repeated-measures factor. Participants watched two comedians telling age-related jokes, and completed measures of humor funniness/comedian likability, humor offensiveness, humor PCness, and humor repeatability. Participants also completed measures of Age Group Identification, Social Dominance Orientation, and Public Self-Consciousness, which were examined as moderators of experimental effects. Finally, participants responded to a
measure of attitudes toward older adults. Results did not uniformly support either
theoretical perspective, though differential reactions from older audiences had a
somewhat greater influence on older and younger participants’ humor appraisals than did
reactions from younger audiences. Individual difference analyses yielded mixed results.
Moreover, participants exposed to older audiences laughing at the humor reported more
positive post-humor attitudes toward older adults than those who saw the same audiences
not laughing. Findings are discussed in terms of competing motives that are often
inherent in ambiguous intergroup settings.
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Chapter 1: Introduction

Viagra, The Hair Club for Men, and Depends adult diapers: These products not only represent a large industry aimed at older adults, but they also provide a basis on which older adults are disparaged through humor. Forty years ago jokes that stereotyped older adults—here referred to as age-based humor—represented the majority of jokes about elders with the most popular amongst them targeting older adults’ age and longevity, their declining physical ability and appearance, and their lack of sexual interest (Palmore, 1971). Today’s age-based humor is similar, but it has become edgier and perhaps less benign than it once was. Many of today’s popular standup comedians (e.g., Jeffery Ross, Lisa Lampanelli, etc.) seem to “take no prisoners” with their humorous put-downs, and jokes about aging are no exception. However, the way one perceives and reacts to such humor is largely based on the context in which the humor is heard. People might be less likely to find humor in a comedian’s ageist jokes referring to The Hair Club for Men or Depends adult diapers when a balding uncle or grandmother with an incontinence problem are sitting right there with them—not laughing.

Ageism and Age-based Humor

Ageism can be defined as negative attitudes or discriminatory behaviors toward an individual based solely on their age (Greenberg, Schimel, & Martens, 2004). The existence of ageism seems evident despite the fact that more and more Americans are reaching old age, and their share of the population is increasing. On the one hand, old age is seen as an honorable status that is deserving of respect and even admiration (Cuddy, Norton, & Fiske, 2005; Angus & Reeve, 2006). On the other hand, old age is associated...
with incompetence, inflexibility, lack of physical strength, and increasing dependence on others (Cuddy et al., 2005). While both of these perspectives are rooted in stereotypes of older adults, the latter is the one most associated with what we now call “ageism.”

In contrast to sexism and racism, there is relatively little research on ageism as a socio-psychological phenomenon (Nelson, 2004). A respective search of the terms, *racism, sexism, and ageism* on PsycInfo (July 15, 2013) over the past decade provides a revealing, albeit rough, census of the proportion of academic literature devoted to investigating each phenomenon. Whereas 5,280 publications mentioned racism, and 1,353 mentioned sexism over the past 10 years, the parallel search for ageism produces only 571 hits. This highlights the relatively small number of scholars who likely consider ageism a social problem, and reflects the fact ageism does not hold the same degree of public concern as does racism and sexism. However, given that there are 74 million baby boomers (Martini, Garrett, Linquist, & Isham, 2007), and that the older adult share of the general population is steadily increasing, ageism is an area especially worthy of further investigation.

**Systematic stereotyping: Ageism in the media.** Older adults are often absent in the media. When they are represented, they are more likely than other age groups to appear in TV and film as easy-target conduits for comic relief, usually highlighting stereotypes of their being curmudgeonly, despondent, and overall socially rigid (Schmidt & Boland, 1986; Zebrowitz & Montepare, 2000). One need not watch television for very long to find examples of ageism in the media, but positive representations of older adults are rare.
One way in which stereotyping in the media thrives—almost unchecked—is through humor. Humor provides a socially accepted context where people permit the sharing of biases they would otherwise be hesitant to share. As such, age-based humor could be dangerous to the extent that it reinforces a prejudiced norm against older adults (cf. Ford & Ferguson, 2004). Based on stereotypes endorsed by popular humor media, one could assume that nearly all older adults are “doddering, but dear;” lovable individuals with both sensory and cognitive impairments (Cuddy & Fiske, 2004), who are unlikely to appreciate things younger adults commonly enjoy (cf. North & Fiske, 2013).

However, the content of jokes targeting older adults may not be the only factor determining whether ageist stereotypes are strengthened and perpetuated. The context in which the jokes are told may also matter. Television programs—and the way they are produced and edited—can have profound effects on the ways audiences perceive it (Davis, 1999). Indeed, the ways in which age-based humor is produced and edited in the media may promote images of aging that contribute to the formation of age stereotypes. This might be particularly likely to occur if media depict only younger adults enjoying such age-based humor, and presumably at older adults’ expense.

**Context Matters: Ingroup and Outgroup Social Influence**

Group-based disparagement humor gains popularity as standup comedians seem to become ever edgier with their humorous put-downs. When disparagement humor delivered by a younger-to-middle aged comedian targets older adults, however, younger observers may feel uncertain about whether the humor is funny and socially acceptable. Anchoring in the Social Identity and “Outgroup Moral Authority” approaches, this
research investigates whether younger or older audiences’ reactions to age-based humor are more influential in shaping younger and older participants’ humor ratings.

According to the Social Identity approach (Abrams, Wetherell, Cochrane, Hogg, & Turner, 1990; Hogg, 2006; Tajfel & Turner, 1986; Turner & Oakes, 1986), people rely on ingroup others to navigate situations of uncertainty. Arguably, disparaging humor may often present such a situation of uncertainty as people may wonder whether it is still socially acceptable to laugh, or whether making fun of another group would be inappropriate or even cruel. Based on the Social Identity approach, when humor disparages an outgroup member, the reactions of ingroup members should be the most influential clues of how one should perceive the humor. For example, when a younger adult sees fellow younger adults laughing at a joke about older adults, he or she should feel free to find the joke funnier compared to when other younger adults are not laughing. Conversely, the responses of older adults laughing at the same joke should be less influential in shaping the younger observer’s response.

However, recent theorizing gives rise to different predictions. When people are unsure of how to respond to controversial humor, it may be because they believe they lack the psychological license to decide whether it is socially acceptable or not (cf. Miller & Effron, 2010). Especially when disparagement humor targets a historically disadvantaged group, relatively advantaged individuals may not feel they have the moral legitimacy to play along without warrant. Instead, they may seek information from outgroup others if these individuals seem to have greater expertise to assess to the situation at hand (Vorauer, 2006). For example, whites often perceive race-based humor
to be quite controversial. When confronted with a member of their own racial group using such humor in a disparaging way, whites have been shown to cede appraisal of the humor to members of the humor-targeted outgroup—those who are perceived to hold greater “moral authority” to determine whether the humor is offensive or not. Such moral authority is ascribed to African Americans when whites search for social cues of how to react to race-disparaging humor performed by a white comedian (Moulton & Kemmelmeier, 2013). White people seem to take social cues from blacks in that they find black-disparaging humor less funny after brief exposures to a black audience that is visibly distressed by the humor, compared to when they are exposed to brief clips of a laughing black audience—one that is clearly enjoying the humor. Such effects are absent for individuals exposed to not laughing vs. laughing white audiences; and this effect has been replicated with a white comedian of either sex, and with both university and non-university samples (Moulton & Kemmelmeier, 2013). Because intergroup disparagement humor creates situational ambiguity, it might be natural for non-targeted observers to look to members of the targeted outgroup to assess its acceptability.

Project Significance

The present investigation recognizes humor as a common and effective means for sharing prejudicial ideas, but focused primarily on how ingroup versus outgroup emotional cues influence how older and younger adults receive age-based humor. I investigated differential social influence in the context of age-based humor. I explored the relationships between the age group of the studio audiences reacting to the humor, the valence of their reactions, the age group of my participants, and the level of
disparagement or “edginess” inherent in the humor. Of primary interest was determining whether younger and older adults’ responses to humor on aging are influenced more by the reactions of older adults, i.e. the group being targeted by the humor, or by younger adults, that is, the group from which the humor originates. Specifically, I examined how observing the humor reactions of older and younger audiences affected participants’ responses to the humor itself. The purpose of this was to determine whether, and under which circumstances, older or younger adults influence others perceptions of age-based humor.

In addition, I tested a novel hypothesis concerning older adults’ reactions to age-based humor, and whether their laughter versus nonlaughter differentially predicted younger adults’ post-humor attitudes toward older adults. This was to determine whether the reactions of older audiences are particularly consequential on younger adults’ attitudes toward that group. On one hand, observers are less prone to attribute negative stereotypes to older adults when they see younger and older adults behaving similarly, especially in a positive context (Kite, Stockdale & Whitley, 2005). If older audiences laugh at age-based humor younger adults may become aware that older adults can laugh at jokes they also find funny, thereby dispelling ageist stereotypes older people as cold, ineffectual, humorless, and curmudgeonly (cf. Cuddy & Fiske, 2004; Schmidt & Boland, 1986). Therefore, younger people may have more positive attitudes toward older adults after being exposed to older audiences laughing at age-based humor, compared to when the same audiences are not laughing. On the other hand, older adults who behave in ways that are inconsistent with the prescriptive stereotypes of their age group may become subject to punishment from their younger counterparts (North & Fiske, 2013). For
example, younger people might look down at older adults who laugh at humor that targets the older age group because it violates their beliefs about what older adults should enjoy. From this perspective, younger people may have more positive attitudes toward older adults after being exposed to older audiences not laughing at age-based humor, compared to when the same audiences are laughing.

Finally, the present research examined how individual differences moderated experimental effects. I investigated age-based humor through the lens of Social Dominance Theory, which makes a clear distinction between age and other dimensions of social categorization, and for this purpose I assessed differences in Social Dominance Orientation (SDO). Second, responses of older and younger adults to age-based humor might be qualified very much by how relevant age is to the self, and/or by awareness of the self as a social object that has an effect on others. With this in mind, I explored other individual difference factors that influence how age-based humor is received, i.e., Age Group Identification (AgeID), Public Self Consciousness (PSC).

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In the chapters that follow I review various streams of research, and propose an experimental study to test ingroup versus outgroup influence in the context of age-based humor, and whether different audience reaction contexts result in different social outcomes. Chapter 2 reviews the existing literature on intergroup humor—particularly disparagement humor. Chapter 3 introduces some current research on social factors that shape people’s reactions to humor. Chapter 4 summarizes the theory and rationale behind the proposed research, and Chapter 5 outlines some basic predictions that follow from the
discussion in preceding chapters. Chapter 6 introduces the research methodology, 
Chapter 7 reports the findings of the present experiment, and Chapter 8 discusses the 
results of the study in light of past research and broader implications for society.
Chapter 2: Humor Preferences, Disparagement, and Social Groups

Humor often pokes fun at existing social circumstances through jokes and teasing. In this sense, popular jokes become a reflection of the social world. However, humor is truly in the eye of the beholder: No rule states that all jokes must be taken in jest, and people are not willing to grant “moral amnesty” for all jokers in all situations (Zillmann & Cantor, 1976). Herein lies the crux of humor. On one hand, its purpose is to provide a much-welcomed off-the-cuff social commentary on the foolish dimensions of the human experience. On the other hand, it can also be perceived as inappropriate, or even as a perpetuation of a prejudiced norm against a social group. Indeed, Ford and Ferguson (2004) argue that disparaging forms of humor are responsible for setting and subtly perpetuating prejudiced norms against societal groups.

Humor Preferences

Prior research reports some key demographic indicators that covary with preferences for different types of humor. Of note, people generally prefer affiliative forms of humor to aggressive ones (Martin, Puhlik-Doris, Gray, & Weir, 2003). However, aggressive individuals do find aggressive humor to be funnier than do non-aggressive individuals (Grziwok & Scodel, 1956; Hetherington & Wray, 1964).

Men tend to have a much greater tendency to engage in aggressive humor than do women (Martin et al., 2003). This is consistent with men, on average, being more accepting of the use verbal aggression (Archer, Kilpatrick, & Bramwell, 1995; Gladue, 1991). Because men are particularly likely to appreciate jokes that ridicule others, men may be more likely to appreciate the humor of male comedians, presumably because
these male comedians also prefer more aggressive humor. The same could also be true for women, but with regard to less aggressive forms of humor. That is, because women prefer less aggressive humor, in general, female comedians are more likely to use less aggressive humor, which may result in females preferring female comedians over male comedians. More simply, it could be that men and women exhibit a general tendency to evaluate same-sex others more favorably compared to opposite-sex others (cf. Varma & Stroh, 2001).

Older adults, compared to their younger counterparts, are less likely to show appreciation for aggressive forms of humor (Martin et al., 2003). However, older men are more inclined to perceive themselves as humorous, tell more jokes, are quicker to “get” jokes, and have greater appreciation for teasing and ridicule than their female counterparts (Solomon, 1996). Perhaps this is because positive jokes about older men are more common than those about older women (Davies, 1977; Palmore, 1971). Whatever the reason may be, it seems that preferences for humor—particularly disparagement humor—can indeed vary as a function of sex and age.

**Group-disparaging Humor Can Perpetuate Prejudiced Norms**

Edgy disparagement humor has gained popularity over the years with new comedians pushing the boundaries of intergroup dialogue. Keeping stride with this trend, researchers have investigated how aggressive forms of group-based humor are used, from individual differences that help justify the use of such humor (Hodson, Rush, & MacInnis, 2010), to the potential social consequences of justifying its use (Ford & Ferguson, 2004). In particular, examining potential consequences of group-based
disparagement humor has been the focus of Prejudiced Norm Theory (Ford & Ferguson, 2004).

According to Prejudiced Norm Theory, humor cues signal a “conversational rule of levity,” which causes observers to switch to a non-critical way of thinking. When comedians and jokers push group boundaries with disparaging humor, for example, audience members are likely to perceive it as “just a joke” and therefore not question the prejudicial content of the communication. This can provide a justification for others’ to express and validate their otherwise repressed prejudices, at least among people who are already high in prejudice (Ford & Ferguson, 2004; Hodson, Rush, & MacInnis, 2010). For example, when a standup comedian tells outgroup disparaging jokes and others laugh at them, this provides evidence to prejudiced individuals that outgroup disparagement is acceptable so as long as it is expressed through humor. When it is known that such humor is socially acceptable, prejudiced individuals—whether consciously or not—continue use humor to expand the bounds of appropriate social conduct (Ford & Ferguson, 2004). Accordingly, laughing at others’ prejudiced humor is like saying it is okay to be prejudiced, as long as that person is “only joking” (cf. Johnson, 1990). Moreover, if edgy or aggressive forms of group-based humor are tolerated at an interpersonal level, then this can lead to an establishment of societal and cultural norms that tolerate prejudice communications that are veiled by humor (Ford & Ferguson, 2004).

On one hand, humor draws on and makes use of stereotypic images of an outgroup. On the other hand, there is a possibility that the very use of such stereotypes and their repetition in a humorous context gives credence to stereotypes, and thus
perpetrates their existence. Humor provides a setting that allows individuals to say almost anything they want by claiming their intention is “only joking,” and this free pass arguably allows people to do so with (relatively) few social consequences (Johnson, 1990; Martin, 2007). To observers, the motives behind aggressive humor remain ambiguous. Potentially benevolent motives (making other people laugh) may not be distinguishable from malevolent motives (hurting others, putting them in their place). Moreover, to the extent that aggressive humor is an act of aggression, its humor serves to deflect any blame because of the deniability of hurtful intention.

There are also potential differences in the use of humor in the context of different intergroup relations, especially gender relations and racial relations. Below I discuss each in turn.

**Sex-based humor.** Acceptance of sexist humor can contribute to the differential status of men and women in society (Sev’er & Ungar, 1997). Males who are exposed to humorous disparagement of women are not likely to tolerate subsequent sexist behaviors of others unless they are primed with a “play” mindset (Ford, 2000; Ford, Wentzel, & Lorion, 2001). For example, Ford (2000) found that, among people high in hostile sexism, exposure to sexist humor increased tolerance of a supervisor’s sexist behavior, but this effect was absent for similar people exposed to neutral humor or non-humorous sexist statements. Likewise, while imagining being the supervisor of a workplace setting, men high in hostile sexism felt less distress after exposure to sexist jokes than similar men exposed to a sexist statement or a neutral statement (Ford et al., 2001). Because the sexist humor contained the same message as the non-humorous sexist statement, it was
the joking context allowed sexist individuals to dismiss the instances of sexism in the workplace as non-serious—something that could not be so easily dismissed in the non-humorous sexist statement condition.

**Race-based humor.** Most everyone in the contemporary United States understands that racist communication is unacceptable in most contexts. However, humor provides a way for racist communications to continue even today (cf. Hodson et al., 2010). For example, white people are more likely to endorse racial stereotypes after watching edgy racial comedy that portrays African Americans in a negative way (Ford, 1997). Moreover, those individuals who are most cavalier about the potential for such humor to harm others are more likely to have anti-black and anti-Mexican sentiments, and are less likely to have tolerant worldviews (Hodson et al., 2010). It seems that the aggressive nature of outgroup disparagement can easily be denied when it occurs in a humor context, and among those with hierarchy-legitimizing views. In fact, Cavalier Humor Beliefs (CHB)—the individual difference measure created and validated by Hodson et. al—has been found to almost fully moderate the relationship between individuals’ endorsements of group-based hierarchy, i.e., SDO, and their appreciation of jokes targeting low-status out-groups (Hodson et al., 2010).

By switching to the non-serious way of thinking the audience may concede to an implicit normative standard and think they need not be critical of the message (Ford & Ferguson, 2004). However, because disparagement humor does transport a negative, stereotypical messages about the target group, the perceived norm of tolerance serves to self-regulate, thus enhancing individuals’ personal tolerance for such discrimination
(Ford & Ferguson, 2004). In other words, the recipients of this type of humor may consider the stereotypes themselves to be socially acceptable, if not socially verified. As a result they might be more likely to rely on these stereotypes in their thinking and acting. Note that, if this is the process, humor merely provides the “cover” for their stereotypes; it is not the humor itself that provides the encouragement to rely on stereotypes. This notion coincides with the justification-suppression model of prejudice, which assumed that intergroup biases are represented by motivational drives that must be regularly suppressed (Crandall & Eshleman, 2003).

**Age-based Humor: Similar to Sex-based, Race-based Humor, or Different?**

As previously mentioned, age-based prejudice—ageism—has been dubbed “the third great -ism,” because it oppresses older adults into a position of social subordination (Butler, 1995; Palmore, 2001). It is therefore useful to consider the similarities and difference between age-based humor and its sexist/racist counterparts.

**Age-based humor as similar to sex-based, race-based humor.** Age-based humor is comparable to both sexist and racist humor in several fundamental ways. Disparaging age humor used by young people can drive divisions between themselves and those who are of older age (Datan, 1986). This implication seems comparable to the potentially negative implications of sexist humor (e.g., Ford & Ferguson, 2004) as well as race-based humor (e.g., Hodson et al., 2010). Palmore (1978, 1986) argued that just as racism and sexism are commonly known to be disguised by humor we should also consider ageism in a similar light. Then again, several factors associated with age discrimination blur the lines between what is offensive and what is not. Hence, most
people probably do not think of ageism as a social problem that will ever rival the concern aroused by sexism and racism (cf. Kite et al., 2005).

**Age-based humor as different from sex-based, race-based humor.** Age-disparaging humor stands in contrast to sexist and racist humor in important ways. For one thing, humor about aging can be especially open and unapologetic—from mildly teasing “over the hill” birthday cards and cartoons, to much more aggressive “You’re so old that if you acted your age you’d die” (Nelson, 2005; Palmore, 1986). Such a range of age disparagement humor does not seem to apply well to sexist and racial humor, which are usually not common themes in greeting cards for women and minorities, but are usually reserved to the latter, more aggressive forms of joking meant to be shared within other groups.

There is also the argument that people do not question that the stereotypes of old age reflect reality. That is, it is often assumed that with age, older adults more or less automatically experience cognitive decline, such as increased forgetfulness. Indeed, many older adults accept these beliefs even when it may be precisely these beliefs that help bring out the apparent symptoms of cognitive decline (Levy, 2009). Older adults might take age stereotypes more lightly because they once made the same ageist assumptions at an earlier time. The very fact that they themselves were once young and susceptible to ageist stereotypes may be precisely what keeps them from discrediting age-based humor once they themselves are older adults. That is, they might find ageist jokes funny because they once laughed about them themselves.

**The Social Dominance approach to aging.** Perhaps what is most indicative of the
difference between ageist and sexist/racist communication can be conceptualized in terms of Social Dominance Theory (Sidanius & Pratto, 1999). A central assumption of Social Dominance Theory is the idea that all societies are group-based hierarchies, such that some groups are relatively dominant and others relatively disadvantaged. That is, one or more groups enjoy more than their share of social power while other groups suffer as a result—(Sidanius & Pratto, 1999). People who endorse the existence of group-based hierarchies in society simply do not perceive any reason to believe that society could (or should) operate in a non-hierarchical manner. They tend to hold that group competition is an inevitable consequence of multiple different groups coexisting in society, and that some groups are just naturally superior to others. To assess individual differences in this general endorsement of group-based hierarchy, social dominance theorists proposed the construct of Social Dominance Orientation (SDO: Pratto, Sidanius, Stallworth, & Malle, 1994). In contemporary social psychology, SDO is presently one of the best-established predictors of outgroup prejudice (e.g., Duckitt & Sibley, 2010; McFarland, 2010; Hodson et al., 2010). However, at present it is unclear if SDO is related to age group demarcations or attitudes toward different age groups.

Importantly, the social dominance approach distinguishes three types of group systems: age groups, sex groups, and arbitrary set groups such as nationality, race, ethnicity, class, religion, etc. (Pratto, Sidanius, & Levin, 2006). The age system refers to adults’ social dominance over children, and the gender system refer to males’ social dominance over women. Each of these systems is relatively stable across time and place, and for present purposes, represents similar systems. However, arbitrary set groups include all of those that are not invariant across time, place, or biology—those that are
ascribed and socially reified by culture, e.g., race, ethnicity, religion, etc. (Pratto et al., 2006). Age groups, being based on chronological time, are not primarily ascribed by society (Sidanius & Pratto, 1999). Whereas the boundaries of arbitrary set group membership are socially constructed and contextually defined, one’s membership in age groups is tightly linked to chronological age and thus much less variable (Pratto et al., 2006).

Despite the fact that age-based hierarchy does not theoretically belong to the same family as its race- and sex-based counterparts, SDO has been shown to be a predictor of intergroup beliefs regarding all three constructs (Aosved, Long, & Voller, 2009). In addition to SDO being a reliable predictor of ageist beliefs, it also predicts individuals’ propensity to resist changing age-based stereotypes in the face of stereotype-disconfirming information. Specifically, high SDO individuals resist editing their preconceived stereotypes about older adults after being exposed to examples of counterstereotypical older adult behavior (Tausch & Hewstone, 2010).

Social Dominance Theory can be applied to groups marked by age inasmuch as a societal power struggle occurs between age groups (cf. Pratto et al., 2006). For example, to the extent that younger people believe older adults hold more power over them than vice-versa, the younger people could perceive themselves to be engaged in an age-defined power struggle. This belief could be based on the fact that older adults are, on average, more financially secure than younger adults (Hansen et al., 2008), are over represented as voters (Turner, Shields, & Sharp, 2001), and disproportionally occupy political offices when compared to their younger counterparts (Foner, 1974). Conversely,
to the extent that older adults believe younger people hold disproportionate social power over them, the older people could also perceive an age-based competition for power. Such a belief among older adults could be derived from their noticing younger adults’ domination of the mass media and popular culture at the exclusion of older adults (Levy & Banaji, 2004; Zebrowitz & Montepare, 2000), or simply a perception that much of contemporary culture seems to be focused on being “hip” and young.

**Nondisparaging Humor**

Whereas the exploration of group-based disparagement humor and its consequences has received a fair degree of attention (e.g., Ford & Ferguson, 2004; Hodson et al., 2010), much less attention has been paid to nondisparaging forms of group-based humor. There may be multiple reasons why this is the case. First, there may be some disagreement as to whether or not nondisparaging humor even exists, or how to distinguish disparaging humor from nondisparaging humor. Gruner (1999) contends that, like a game, *all* humor involves a winner and a loser and that humor always implies that one party has fun at another person’s expense. From this perspective, it follows that humor is competitive by its very nature, even in its mildest form. Any qualitative distinction between disparaging and nondisparaging would therefore be moot. However, it is difficult to agree with Gruner’s (1999) theory of humor because people are intuitive social beings who are likely to discriminate between openly aggressive or mild undertones of group-based humor. Consequently, people are likely to perceive one as more combative and the other as more affiliative.

Second, past researchers’ concentration on disparagement humor could be based
on the higher likelihood of finding interesting effects with more aggressive forms of humor. Disparaging group-based humor presents a social risk because, depending on the context, this humor can be quite hurtful to others. Indeed, its nature as outright disparagement of a group or person might be perceived as the most prominent message if it is not perceived in the context of humor. It is this type of aggressive humor that is likely to create message ambiguity, which arises from the combination of a playful context (humor) with a hurtful message (disparagement). Needing to disambiguate disparagement humor, observers are likely to interpret this type humor in light of their own values, individual differences, contextual cues, or any combination of these factors (cf. Ford & Ferguson, 2004; Hodson et al., 2010; Moulton & Kemmelmeier, 2013).

By comparison, the lack of research on intergroup nondisparaging humor could simply be based on the presumption that nonaggressive humor is taken at face value—as a playful joke—and even if it is misunderstood or unappreciated, there is little potential for loss other than the teller of the joke not receiving a laugh. Nondisparaging humor might be much more straightforward in that it cannot easily be mistaken for prejudice, thus leaving much less room for interpretation. This lack of joke ambiguity may limit the need for observers to interpret it as either nefarious or harmless. This, in turn, limits the influence of any individual differences or experimental effects (e.g., Higgins, 1996), thus reducing anticipated effect sizes.

Social context may be much more consequential for disparaging humor as it helps encourage others to perceive it as either an attack against a group/person or merely edgy humor. However, because past research has not tested the effects of social context on
nondisparaging humor, there is no empirical basis to assume such effects hinge on the aggressiveness of the humor itself. This highlights an opportunity to investigate whether humor aggressiveness is a necessary precondition for shaping attitudes, or if even nonaggressive forms of group-based humor have similar implications.
Chapter 3: Socially-shaped Perceptions of Humor

As previously discussed, the way humor is received by an audience is often contingent upon the social circumstances under which it is told. Not getting a laugh leads to perceptions of aggressive joking, whereas getting a laugh results in perceptions of more affiliative humor (Derks, Kalland, & Etgen, 1995). People generally react to humor with amusement. However, especially when a message is ambiguous, people may look to others for social cues to an appropriate response, or they seek a validation of their reaction (cf. Moulton & Kemmelmeier, 2013; Crosby, Monin & Richardson, 2008; Vorauer, 2006).

Observers’ Perceptions of Humor: Shaped by Others’ Reactions

An audience’s reaction to a joke ultimately defines it as humorous, not necessarily the joke’s semantic contents or the characteristics of the joke teller. Bachorowski and Owren (2001) found that the acoustics of voiced, song-like laughter can shape listeners’ affective responses to comedic stimuli, whereas laughter including grunts, snorts, and “unvoiced” laughter almost invariably generates a less positive response. Other research reported similar effects. Martin and Gray (1996) videotaped research participants while they were listening to recordings of a radio comedy show that was presented with or without audible audience laughter. Hearing others laugh significantly increased participants’ laughter, though it did not increase their frequency of smiling.

Focusing on visual rather than auditory audience cues Brown, Brown and Ramos (1981) showed that exposure to a laughing model before viewing cartoons led to more laughter than when no laughing model was presented. The authors interpreted this as
evidence of a learning-by-imitation expression of laughter. Others also found that simply mimicking others’ behavior can lead to an increased experience of the associated emotion (Papa & Bonanno, 2008). Imitating the visible laughter of others leads people to feel amused even if they had not previously felt that way.

In a similar line of work focusing on measuring audience influence on humor ratings instead of emotional responses, the dubbing of laugh tracks into humorous and non-humorous material leads people to rate both as more humorous than when no audible laughter was included (Fuller & Sheehy-Skeffington, 1974). Women, in particular, have been shown to be particularly susceptible to having their humor ratings influenced by “canned laughter” (Cupchik & Leventhal, 1974). However, men have also demonstrated that their humor ratings are shaped by others’ laughter when they already believe in the quality of the humor it accompanies whereas women’s ratings are affected regardless of humor quality (Leventhal & Cupchik, 1975). Thus, it appears another person’s laughter not only influences one to mimic the response, but to also differentially rate aspects of the humor itself. These findings suggest there is a convergence in the ways laughter influences emotion- and self-report-based dependent measures.

**Sharing Appraisals of Ambiguous Intergroup Situations**

The robust evidence for emotion contagion (Hatfield, Cacioppo & Rapson, 1993) suggests that, just like other affective responses, laughter and amusement is interpersonally transmitted. Thus, audible and visual laughter is a powerful social cue that induces observers to feel amused when perceiving humorous situations. These emotional cues are arguably quite effective at shaping others’ perceptions when individuals find
themselves in ambiguous situations.

When such emotional cues are provided by similar others, there is usually little concern with the appropriateness of a joke or one's responses to it, or if it is breaking a taboo (Pollio, 1983). A common social identity between a joker and his audience provides some assurance that the audience will laugh at his jokes (Terrion & Ashforth, 2002). For example, a man who interacts with other men is more likely to assume a positive reception of his sexist joke, just as a white person in the presence of other white people is more likely to expect to elicit amusement with his race-based joke. These situations might represent a “status quo environment”: members of a socially advantaged group, e.g., men or white, share jokes with each other at the expense of members of less advantaged groups while anticipating that the amusement will be easily transmitted to members of their own group (cf. Hess, Banse, & Kappas, 1995).

By contrast, it is much less likely that jokes pertaining to outgroups would be told in the presence of members of these very outgroups. Doing so might be perceived as an affront or insult, and joke tellers seeking to avoid embarrassment are often not likely to risk offending others in these situations. However, when this happens, it is likely to create an ambiguous expectation with regard to individual responses. Should an ingroup member laugh at an outgroup joke delivered by a fellow ingroup member, or should he/she condemn their fellow ingroup member for “crossing the line”? The ambiguity likely comes from a propensity to react positively to ingroup humor, coupled with a tacit motivation to avoid or temper open conflicts, and the fact that individuals have respect for others’ social identities (cf. Stephan, 2008).
Low-certainty, high-ambiguity social situations have long been of interest to social psychology. Classic tasks include those used by Sherif (1935) to study the autokinetic effect in which participants judged the alleged movement of a point of light without any objective visual anchors. Another classical task was employed in Asch's (1955) conformity paradigms in which participants had to match the length of a reference line to a comparison line while all other group members disagreed with what seemed objective and self-evident. In these and similar situations, people are compelled to look to others when shaping their own response. In its basic form, such acts of social referencing are simply means to an end: to reduce ambiguity in order to come to a more well-informed conclusion. The social influence that results from such social referencing is even more effective when the other people available for referencing hold some form of prestige with the individual who is doing the referencing (Sherif, 1937). To the extent that another’s perception of ambiguous stimuli is perceived to be somehow superior or better informed, people are significantly more influenced by these people when they form their own response.

Social influence from prestigious others also limits the variability in people’s judgments of ambiguous stimuli. When people believe that norms have been established by high status individuals (Walter, 1955), or those who are otherwise authorities in a relevant domain (Davis, 1999), these norms are more likely to shape others perspectives. In other words, high-status sources of social influence tend to create more homogeneous response on the part of those being influenced.

When it is made known, however, that salient others actually belong to a
different category than the perceiver, the influence of the others is largely diminished and fails to establish invariable norms of how to react (Abrams et al., 1990). This suggests that group membership of salient others truly does matter with regard to social influence and establishing attributional norms. This is not to say, however, that people are only influenced by others who share their group membership. The following sections outline two theoretical perspectives that posit very different social influence processes based on shared and non-shared group memberships with others.

**Ingroup influence and the social identity approach.** When it becomes difficult to determine whether something is funny, people look to others for cues; and others’ group memberships should be powerful for helping individuals navigate such uncertainty (cf. Abrams et al., 1990). This is supported by the insight that people often look to others whom they perceive to be similar to them to help inform their own responses to novel situations (Festinger, 1954). People tend to view ingroup others in a positive light (Tajfel & Turner, 1986) and perceive more likenesses between themselves and ingroup members (Brown, Bradley, & Lang, 2006). They even experience less anxiety in the presence of ingroup members (Stephan & Stephan, 1985), thus making ingroup others seem more like superior sources of information than those who belong to other groups. This ingroup influence propensity is one phenomenon that drives the Social Identity approach (cf. Turner & Oakes, 1986).

Social identity dynamics should influence people’s perceptions of group-based humor. To ‘get’ a joke—to both understand and appreciate the intended humor—it helps if the audience shares certain values and beliefs with the joker. A common social identity
acts as a marker of this solidarity, providing some assurance that the audience will laugh at a joke (Terrion & Ashforth, 2002). Individuals are sensitive to idea of “sharing common ground” with others who are like them, with common ground being defined as mutual knowledge, assumptions, beliefs, and suppositions with another person in a given situation (Clark, 1996; Gerrig & Littman, 1990). For instance, consider an individual who you know well and with whom you share a similar sense of humor. Knowing that person and his or her sense of humor allows you to make certain assumptions about how the person will react to a particular joke without having to witness their actual reaction to the joke (cf. Clark, 1996).

Based on the Social Identity approach (Abrams et al., 1990) it should be ingroup others who help shape people’s attributions of ambiguous humor. Shared group membership implies shared knowledge, shared assumptions, shared stereotypes, and shared sensibilities, all of which are reasons why people are more likely to be influenced by ingroup members' responses when responding to an ambiguous joke. However, when outgroup members are present for the telling of a joke that ridicules their group they might challenge the ingroup’s common ground assumption that a joke is funny and appropriate. In addition, when such assumptions are challenged, ingroup members may realize their group’s perspective on the humor is actually subject to alternative inferences (Gerrig & Littman, 1990).

**Outgroup Influence**

Jokers sometimes cross a line in intergroup settings by putting-down outgroups in the name of humor, and this may create ambiguity as to how other people should
respond. Should observers laugh at a joke about an outgroup told by an ingroup comedian, or should they not laugh out of protest for the joker having crossed the line into prejudice? Whereas audible laughter and smiling faces accompanying a joke are often enough to prompt positive reactions toward humor, such cues from presumably like-minded ingroup individuals may not always shape people’s humor perceptions. Indeed, people’s reactions to humor that targets an outgroup may be more contingent on social cues originating from members of the group being disparaged than by those of the individual’s ingroup. Presumably, a joker who makes fun of an outgroup is perceived as inappropriate by fellow ingroup members if members of the outgroup react unfavorably to the humor. Conversely, the same humor has a good chance of being perceived as humorous and apt if members of the outgroup react with laughter and smiles (Moulton & Kemmelmeier, 2013). Taken together, group-based humor is contingent upon the subsequent reactions of the targeted group.

**Moral authority.** Moral authority refers to a status ascribed to individuals based on their group membership and the uniquely informed perspective that others assume they have. For instance, black Americans could be argued to hold moral authority in racially ambiguous situations, especially when there is possibility of prejudice. Having been historically victimized and still being subject to prejudice, they are assumed to be more sensitive to, and knowledgeable about, such matters, compared to most non-black Americans. Therefore, when communications turn ambiguous and could be considered borderline prejudicial against blacks, non-blacks may determine that they themselves do not hold the psychological standing needed to define it, and thus seek information from any available black witnesses. The idea of psychological standing helps explain why
individuals do or do not perceive themselves to have license to take action on an issue. People feel that, despite holding views similar to those held by members of a particular group, they do not have as much of a right to express their own views about the group. This is because they themselves are not a member of the group, and do not feel they are not personally affected by an issue, as is the case for the actual group members (Miller & Effron, 2010). Therefore, when people feel they lack psychological standing, they tend to seek information from those whom they consider to have psychological standing.

People are not always compelled to share their personal attitudes or feelings about issues perceived to be more relevant to other groups, and they may feel they lack the license to even have and share their own views (Miller & Effron, 2010). The concept of moral authority speaks to much the same phenomenon. However, whereas psychological standing refers to the process by which individuals perceive others to have more or less a “right” to weigh in on particular ambiguous social situations, moral authority refers to the more pragmatic process of ascribing that privileged status to others as a means of disambiguating unfamiliar social circumstances. In this way, psychological standing and moral authority are inextricably linked; but an individual’s awareness of his or her own and others’ psychological standing must necessarily precede the act of ascribing moral authority to others. Of course, the concept of moral authority is not reserved for only minority groups. Rather, moral authority can be ascribed to any individuals who are a member of a group with presumably privileged insights on a particular social matter.

**When outgroups influence.** Outgroup views matter in cases that involve intergroup communications. Being in the mere presence of outgroup members can cause
people to view themselves and others more in terms of their own and others’ group memberships rather than their individuating identities (Frey & Tropp, 2006). Individuals are particularly aware of their own and others group memberships when contact with outgroup members is perceived as negative (Paolini, Harwood, & Rubin, 2010).

Sensitivity to the views of outgroup members is enhanced when anxieties are associated with intergroup contact (Stephan & Stephan, 1985). People in intergroup situations often have concerns of appearing prejudiced or simply insensitive to the plight of the outgroup. Meta-stereotypes—the feeling that others might think a person holds negative stereotypes about an outgroup—further enhances people’s vigilance to seek outgroup cues on the appropriateness of some attitude or behavior (Frey & Tropp, 2006; Vorauer, 2006). Both anxiety and meta-stereotypes associated with intergroup contact should cause observers to seek cues from the outgroup, especially when the interaction pertains more to outgroups and takes a turn toward controversy and potential conflict.

According to Vorauer’s (2006) information search model, higher status individuals tend to have evaluative concerns when they perceive exaggerated differences in group status, have little experience interacting with outgroup members, or when they do not know how to respond to ambiguous situations. These extra social concerns may cause members of dominant groups, e.g., whites, men, younger-to-middle-age adults, to seek the reactions or opinions of lower status outgroups in one of the above-noted situations. The information search model also predicts specific conditions under which lower status groups look to higher status members’ reactions as a way to diagnose social situations. If individuals belonging to lower status groups perceive differences in group
status to be legitimate, then they tend bequeath more credence to the opinions of the higher status outgroup (Vorauer & Sakamoto, 2008).

The justification-suppression model assumes that individuals are aware of the social norms to which they are expected to adhere; therefore, they are unwilling to express their true feelings of prejudice against outgroups (Crandall & Eshleman, 2003). Instead, they will suppress their feelings and try not expressing them at all, or they will express them only when doing so is avoids the impression of prejudice. That is, prejudicial feelings may be expressed when there appears to be a non-prejudicial justification for why such feelings are justified. Applied to group-stereotyping humor, the justification-suppression perspective would argue that the production of group-based disparagement humor is a classic form of justification (see “only joking” defense; Johnson, 1990).

Outgroup members’ opinions also matter when outgroups are perceived to hold a certain expertise to diagnose a situation (Vorauer, 2006). It is simply impractical to look to a fellow ingroup member for information when the situation calls for the presumed expertise of an outgroup, or when the ingroup members’ perspectives are assumed illegitimate. When an observer is unsure about the intergroup civility of a situation, little is gained from referencing the views of ingroup members. For example, younger adults value older adults’ information about other older adults more than information from ingroup younger adults (Duval, Ruscher, Welsh, & Catanese, 2000).

**How outgroups influence.** Research by Crosby et al. (2008) has demonstrated that in intergroup situations majority individual tend to physically orient their gaze
toward outgroup minorities immediately following a racially insensitive or politically incorrect comment of fellow ingroup members. When a white confederate made derogatory comments about affirmative action, white participants spent more time looking at the facial reactions of a lone black participant (also a confederate) than those of fellow white participants (Crosby et al., 2008). This targeted social referencing behavior reveals that white participants were attentive to the responses of outgroup members when the comments could be understood as a challenge to the outgroup. However, Crosby et al.'s (2008) work does not speak to the actual influence exerted on the white participants by the black confederate.

The question of outgroup social influence was at the heart of research by Moulton and Kemmelmeier (2013). Focusing on disparaging racial humor, these authors hypothesized that outgroup members are sometimes seen as experts or moral superiors, compared to ingroup members. Moulton and Kemmelmeier (2013) had white participants watch two video segments in which well-known comedians made racial jokes about blacks. As is typical for the TV broadcasts of standup comedy, occasionally the camera showed the response of audience members. Taking advantage of this, the authors edited the videos such that all participants saw the identical comedic performance. However, half of all participants saw the reactions of white audience members whereas the other half saw the reactions of black audience members. Crossed with this manipulation, half of all participants saw the very same audience members either laugh or not laugh in response to the racial humor. Results demonstrated that, when white participants watched and listened to racial jokes about blacks, their responses to the jokes were more likely to be influenced by the responses of a black audience than the responses of a white
audience. In other words, whether white participants found the racial humor funny or offensive, was not contingent on whether white TV audiences reacted; instead, is was significantly influenced by whether black TV audiences laughed or not at the racial humor. Notably, their results did not support the prediction derived from the Social Identity approach that ingroup others should be more influential than outgroups when it comes to shaping perceptions of ambiguous situations (cf. Abrams et al., 1990).

**Outgroup Reactions May Predict Post-humor Attitudes toward Targeted Group**

Humor is generally considered to be a positive tool of social interaction. It gives people a reason to smile and laugh, which relieves tension (Bippus, 2002), improves health (McCreaddie, 2010), and strengthens interpersonal bonds (Damianakis & Marziali, 2011). However, disparagement humor presents a challenge in that it may not result in positive outcomes for everyone involved—especially those who are the target of the humor.

Disparagement humor that targets historically oppressed social groups can have negative implications for the individuals involved and society as a whole. Observers of the humor are apt to be uncomfortable after observing an ingroup comedian derogates lower status outgroups. In addition, to the extent that other people laugh at the humor, prejudiced social norms may be established, which allow for the disparagement of disadvantaged groups (Ford & Ferguson, 2004). That is, when disparagement of social outgroups is tolerated, it has the potential to set a precedent to accept the stereotyping of that group—even in subsequent non-humor settings. In this way, humor can act as a socially accepted conduit to share prejudicial ideas.
Based on this notion, researchers have made recommendations meant to quell the spread of prejudice through humor. First, according to Ford et al. (2001) people who are part of the disparagement humor interaction and hear the joke should recognize when it is inappropriate to switch to a non-critical “play” mindset. Then, once they witness another person using put-down humor in that context, they should not laugh—or even protest its use—to make the offending joker feel uncomfortable, and to signal to others that such forms of humor are not to be tolerated (Davies, 1977; Ford & Ferguson, 2004).

Humor is considered positive if it leads to the emotional expression of mirth (Martin, 2007). Similarly, laughing together can improve group solidarity by providing a shared experience and by highlighting one's shared common ground (cf. Terrion & Ashforth, 2002). However, humor must be both funny and apt for it to mitigate tensions (Bippus, 2002). Humor that transcends group boundaries is indeed risky, as discussed above. However, when members of group who are being ridiculed by intergroup humor take this challenge “in good humor,” they may communicate a great deal about themselves, and even gain status. Not taking offense to a jocular put-down may signal that a person is easy to get along with, that they can “take a joke,” and that they are not taking themselves too seriously. In some cases—particularly those in which the jokers are not truly prejudiced—an outgroup individual’s act of taking the joke might even bridge intergroup divisions and foster a sense of cohesion, (cf. Terrion & Ashforth, 2002). For example, to the extent that the target of a joke is stereotyped to be socially rigid or a despondent curmudgeon, mere exposure to members of that group behaving counterstereotypically—laughing at humor that targets their group—may effectively reduce other people’s belief in that stereotype (cf. Hewstone, 1994).
Is Disparagement Necessary for Outgroup Influence to Occur?

Whether overtly acknowledging it or not, past investigators have assumed that ambiguously offensive situations are necessary for people to have a greater propensity to reference the reactions of outgroups rather than ingroups (e.g., Crosby et al., 2008; Moulton & Kemmelmeier, 2013). Crosby et al. (2008) did this with a white confederate’s off-color comment about affirmative action, but only focused on the behavioral element of gaze orientation (as measured by eye trackers). Moulton and Kemmelmeier (2013) also assumed at least the possibility of intergroup animosity by employing stimuli of white comedians’ put-down humor about black targets. However, instead of focusing on the social referencing aspect (i.e., who looks to whom?), these researchers investigated the social influence aspect (i.e., whose reactions most effectively shape others perceptions?). Both studies created intergroup ambiguity by exposing whites to other whites who were pushing the bounds of political correctness. Crosby et al. (2008) found support for outgroup information seeking; and Moulton and Kemmelmeier (2013) found support for strong outgroup social influence.

Other work suggests, however, that ambiguous group disparagement may not be necessary for people to turn to outgroup members for cues on how to judge ambiguous situations. It may be that an outgroup’s perceived expertise on a particular topic is sufficient to command members of other groups’ attention (Vorauer, 2006; Vorauer & Sakamoto, 2008)—at least for those who do not hold prejudices against the outgroup (Vorauer & Sakamoto, 2008). For example, when a young adult pokes fun at their elder relative in a not-so-disparaging way, the reactions of other older adults—be they
approving or not—could still shape how others receive the younger relative’s ribbing. Older adult observers smiling upon the interaction could signal appropriateness and good natured fun between kin. By contrast, older observers frowning could signal disapproval, perhaps due to a perceived disrespect of the younger for his elder. The fact that the humor is age-based may be enough to make it fall under the moral authority of older adults regardless of whether it is particularly disparaging or not. Although it is more likely that outgroup influence occurs when an intergroup communication is disparaging, this may not be a necessary condition for it to occur. Mere situational ambiguity should be all that is required, and it is surely possible for such ambiguity to arise even when humor is not overtly disparaging.

The case of ageism highlights a new domain through which to explore how people negotiate disparagement humor in intergroup contexts. Do younger adults attribute greater moral authority to older adults than to ingroup younger adults when it comes to anchoring their judgments about age-based humor? In other words, are younger adults’ perceptions of age-based humor shaped more by positive versus negative cues from outgroup older adults just as whites’ perceptions of racial humor are shaped more by the cues of outgroup blacks? Alternatively, are their perceptions shaped more by fellow young adults as predicted by the Social Identity approach? Moreover, is older adult disparagement by a younger comedian necessary for outgroup social influence to occur more prominently than ingroup influence, or are younger adults more compelled to be influenced by older adults even if there is little concern the age-based humor could potentially be hurtful to them? These general questions were developed into testable hypotheses and are further expanded upon in Chapter 5.
The present research tested whether disparagement is necessary for outgroup social influence to occur in the context of age-based humor. On one hand, disparaging jokes about older adults may be necessary to compel younger adults to reference older adult reactions more than those of members of their own group. On the other hand, it may be that even age-based humor that avoids disparagement (at least especially crude disparagement) induces younger adults to be influenced by the reactions of outgroup members over those of their ingroup.
Chapter 4: The Present Research

There is little agreement that ageism or ageist humor, in particular, is a serious social problem or that it truly affects the lives of older adults on a daily basis (cf. Kite et al., 2005). When compared to the first two great -isms (racism and sexism), ageism appears to lack a generalized social imperative to eliminate it, or even disguise it. The present investigation provided a novel look into the phenomenon of intergroup humor based on age, the social norms for its reception in varying social contexts, and the degree to which it influences younger adults’ subsequent attitudes toward older adults.

Age Group Demarcations are Unique, but also Similar to Other Groups

Unlike sex and race, age group membership continually changes throughout the life course. If younger adults live long enough, they will eventually become ingroups of other older adults (Greenberg et al., 2004). Perhaps because of this fact, ingroup/outgroup distinctions between the young and old may not be reified to the extent as those between black and white, or male and female.

Age categories themselves are often malleable, and people tend to shift their perspectives given different contexts (Giles & Reid, 2005). The status “retired” can no longer be assumed to be synonymous with “old,” for example, just as “student” can no longer be assumed to be synonymous with “young” (e.g., Bradley & Longino, 2001). This makes the ingroup/outgroup distinctions of young and old less intrinsically meaningful than other social categories such as race or sex, and therefore poses a challenge for identifying the problems ageism creates in contemporary society. That is, one cannot necessarily assume analogous group dynamics between older and younger
adults and women and men, or between older and younger adults and whites and blacks.

Despite the fact that older and younger age groups are not as clearly distinguished and do not signify status differences as is the case for other social categories, there are nevertheless commonalities in the ways ingroup/outgroup dynamics play out. Similar to how men hold more hostile beliefs about women than women do (Glick & Fiske, 2001), and that whites tend to be more susceptible to racial stereotypes than minorities (Shih, Bonam, Sanchez, & Peck, 2007), younger people reify the idea of old age more than their older counterparts (Bradley & Longino, 2001). Similar to the perspectives of women and minorities who put little stock in stereotypes about their own groups, older people have more complex representations of older people compared to middle aged and younger adults (Chasteen, Schwarz, & Park, 2002). Whereas younger adults are apt to view older adults as a more or less homogeneous group and ascribe stereotypes to them, older adults themselves are more inclined to view other older adults as unique individuals who do not necessarily fit stereotypical idea of “older adult.” This outgroup homogeneity effect (Judd, Ryan, & Park, 1991) is one important way group dynamics based on age are like those based on other ingroup/outgroup contexts (e.g., men and women, blacks and whites, etc.).

Citing analogies between age groups and other social groupings is not to meant to imply that the perspectives of, say, black people and older adults and those of white people and younger adults are truly comparable. However, the overall pattern of seeing ingroups as complexly varied and outgroups as simply defined does imply at least some parity between older and younger adults’ perceptions of ingroups versus outgroup and
those of other groups in society.

Similarly, one could argue that there is an ongoing competition for symbolic resources, such as social status and respect, with youth and young people typically drawing more of these than older adults (cf. Branco & Williamson, 1982). Even when older adults may seem to hold more of the political and economic power, youth and youthful appearance is associated with attractiveness. Being young garners more attention, more liking and is socially with, e.g., more favorable portrayals in the media, or a world that on the whole seems to be much more geared toward younger individuals. This symbolic struggle is roughly analogous to that which is endured between the sexes, and common arbitrary set group distinctions such as race or ethnicity (cf. Pratto et al., 2006). An important difference, of course, is that older adults are not categorically oppressed as women and minorities are. For instance, they arguably hold more wealth and voting power than their younger counterparts (Foner, 1974; Turner et al., 2001). This counterexample, however, does not negate the status oppression older adults often face in other realms of social life (cf. Zebrowitz & Montepare, 2000), and it is in this way that age groups can be conceptualized similarly to sex- and race-based groups.

The present research approached younger and older adults as two distinct groups, and had members of both groups participate in the present study. However, because individuals can vary a great deal with regard to the extent that their membership in a particular age group is subjectively meaningful to them, the present research administered the Age Group Identity Scale as an individual difference measure (Garstka, Branscombe & Hummert, 1997 as reported in Garstka et al., 2004). The purpose of assessing age
group identity was to let participants express how psychologically close they felt to their ingroups.

**Was That Funny?: Ambiguous Humor and Group-based Social Influence**

Facial displays from others—such as those associated with laughter—are used as communicatory signals (Devereux & Ginsberg, 2001). When an audience laughs at a joke, one can assume the joke is acceptable—and even openly welcomed—by the observers in that context. This sends the message that the joke is funny and perhaps that the observers have a sense of humor. Yet, in cases when putting down an outgroup is met with frowning or vocalized protest, this constitutes negative feedback from observers that again sets the tone for how others appraise the humor. As demonstrated by Moulton and Kemmelmeier (2013), nonlaughter on the part of black audiences—those belonging to the racial group being humorously disparaged—is associated with lesser appreciation of the humor among whites, just as laughing black audiences have been shown to lead to greater appreciation. However, it is currently unclear whether individuals who witness a younger comedian disparaging older adults are similarly swayed by the reactions of outgroup older adults.

After seeing older adults laughing at age-based humor younger adults may consider the humor to be funny and not very offensive, whereas after witnessing older adults *not* laughing at the humor, they may consider it not funny and offensive. That is, responses to age-based humor may be shaped in much the same way as perceptions of racial humor (e.g. Moulton & Kemmelmeier, 2013).

Note that if this dynamic applies to age-based humor, it puts a great deal of power
with older adults. On one hand, if older adults laugh in response to ageist jokes, they might encourage precisely the types of prejudices and stereotypes that have are considered to be ageist (cf. Ford & Ferguson, 2004). On the other hand, older adults are commonly stereotyped to be cold, ineffectual, humorless, and curmudgeonly (Cuddy & Fiske, 2004; Schmidt & Boland, 1986). Therefore, if younger adults observe older adults laughing at age-based humor, this might disconfirm the older adult stereotype and prevent such stereotypes from being endorsed in the future. Seeing older adults laugh at something that younger adults also find funny creates a sense of similarity (Cann, 1997). It communicates that older adults can take a joke, and do not take themselves or the situation too seriously (cf. Götz, 2002).

With regard to older adults who witness a younger comedian joke about older adults, there is less reason to assume any particular group-based influence simply because the domain of the humor is already relevant to the older adult lived experience (cf. Vescio et al., 2003; Vorauer, 2006). This is not to say, however, that older adults would be immune to group-based influence. They could still consider the situation to be ambiguous and worthy of information seeking efforts if they are personally unsure as to whether a younger comedian’s humor has “crossed a line.” In such a case, fellow ingroup older adults may present the most attractive source of information simply because they too have lived the experiences of older adulthood, and should therefore have a reasonable idea as to the offensiveness of age-based humor. Indeed, younger adults regard older adults as valuable sources of social information when the situation seems to call for the expertise of an older adult (Duval et al., 2000).
There also remains the possibility that at least some older adults might be motivated to accord authority to younger adults. This may seem counterintuitive as the content of age-based humor aligns more with the experiences of older rather than younger adults, and therefore should not elicit information seeking behavior (cf. Vescio et al., 2003; Vorauer, 2006). However, other research points to the importance of attractiveness of the people providing informational cues, with attractive person being defined as one whom an observer strongly identifies (Davis, 1999; Landy, 1972; Wiegman, 1987). With this in mind, some older individuals may be more likely to be influenced by outgroup youth possibly because they do not want to be considered a “stick in the mud” (cf. Guerin, 2003), or because they want to be considered "hip" or "modern" by others. Not only would such a pattern coincide with the outgroup moral authority approach, but it could be taken as evidence of ageism such that older adults themselves tend to look toward members of the outgroup when responding to jokes about themselves, rather than responding based on their own and their own ingroup members' authentic reactions.

**Individual differences.** Individual differences may also play an important role in determining whether older adults are granted moral authority to shape others’ reactions toward age-based humor. Several individual difference measures are appropriate for exploring how people may respond to age-based humor differently. I focused on the following individual difference measures as potential moderators of audience-based shaping effects on older and younger adults’ perceptions of such humor: Social Dominance Orientation, Cavalier Humor Beliefs, Age Group Identification, Public Self-Consciousness, and two subscales of the Humor Styles Questionnaire: Affiliative and
Aggressive.

Social Dominance Orientation (SDO) is a measure of individuals’ beliefs regarding social hierarchy—that some social groups are inherently better than or superior to others. This scale is reported to have high internal validity averaged over multiple samples, and has been shown to be a useful proxy of individual differences in group superiority motives (Pratto et al., 1994). Although Pratto et al. specify that SDO is most appropriately applied to arbitrary set traits, it may still provide valuable information for the purposes of investigating humorous disparagement of the aged.

Cavalier Humor Beliefs (CHB) was developed to assess how humor justifies the expression of group dominance motives. Cavalier Humor Beliefs is a six-item measure of individuals’ nonchalance toward humor that disparages. This scale has been shown to have internal consistency, convergent validity with social dominance measures, as well as preferences for affiliative and aggressive humor styles (Hodson et al., 2010).

The Age Group Identity Scale (Garstka, Branscombe & Hummert, 1997 as reported in Garstka et al., 2004) was employed as a measure of participants’ identification with their own age group, whether they are older or younger adults. This measure was suitable for the present research because it accessed participants’ subjective identification with their respective age groups—a potential moderator of humor preferences. People usually do not find humor that targets their own group to be funny; however, there are people who do not strongly identify with their own groups (Nahemow, 1986). In other words, the more one identifies with their group, the less they should appreciate put-down humor that targets their group (La Fave, 1970; Nahemow, 1986).
Public Self-Consciousness (PSC) refers to the tendency to be aware of and interested in how one presents oneself to others, i.e. one's appearance or social behavior (Fenigstein, Scheier, & Buss, 1975; Fenigstein, 2009). This measure was employed in the current study to determine if the degree to which they monitor their own behaviors qualifies other effects. The extent to which individuals are self-conscious with regard to their self-presentation was expected to moderate the degree to which they are subject to the influence by others in ambiguous situations. Public Self-Consciousness was hypothesized to be particularly important in situations in which the failure to heed others' responses would prompt potentially socially unacceptable behavior, such as laughing at an inappropriate joke.

The subscales of the Humor Styles Questionnaire (Martin et al., 2003) are not only interesting for the sake of collecting individual difference information on people’s humor style preferences. Two of them, measuring preference for affiliative and aggressive humor, have been found to correlate with CHB and SDO in past research (Hodson et al., 2010).

**Humor type.** Finally, as discussed earlier, it may be that a reliance on disparagement humor is even necessary for outgroup social influence to occur. Moulton and Kemmelmeier (2013), the only known research on group-based social influence in humor contexts, followed the assumptions of prior research, and did not manipulate disparagement as an experimental factor (e.g., Ford & Ferguson, 2004; Janes & Olson, 2000; Terrion & Ashforth, 2002). The present study, however, manipulated the type of humor to which participants are exposed in order to determine whether or not
disparagement is a necessary ingredient for differential group-based social influence to occur in humor contexts is an empirical question.

The notion that disparagement may not be a necessary condition comes from two lines of research. First, Olson et al. (1999) found no reliable differences between the attitudinal outcomes resulting from exposure to more and less aggressive forms of humor. Second, Vorauer (2006) demonstrated that lower status outgroup information need not include an element of disparagement, but only that outgroups are seen as relative experts and/or that higher status group members do not perceive group status differences to be legitimate. The present research investigates similar differences in the realm of age-based humor. However, whereas it is possible that nondisparaging humor will produce similar responses as disparaging humor, the existing research suggests that intergroup disparagement through humor is more likely to lead to the kind of situational ambiguity that will invite outgroup social influence.

**Attitudinal Aftereffects of Humor on Aging**

Leading humor theorists in psychology (e.g., Ford & Ferguson, 2004; Hodson et al., 2010; Davies, 1977) argued that laughing at disparagement humor directed toward outgroups signals tolerance for outgroup oppression. To the extent that such laughter is shared or perceived to be shared, it may establish that prejudice against an outgroup is socially acceptable. This, in turn, can help establish a prejudiced norm, which allows people to assume that the expression of prejudice against this group is generally accepted. Individuals who are high in SDO often hold cavalier beliefs about disparagement humor, thus legitimizing the idea that such humor is harmless (Hodson et al., 2010). Research
shows, however, that group-based disparagement humor may not be so harmless (cf. Ford, 2000, 2001). Accordingly, researchers recommend that the establishment of a prejudiced norm through disparagement humor can be averted by protesting such humor or simply not laughing when others joke in that manner (cf. Ford & Ferguson, 2004; Davies, 1977). The idea is that edgy group-based joking cannot be trivialized when it is taken seriously, i.e., not as a joke; and that by directing attention to the seriousness of the issue others will not be so quick to trivialize it when it comes up in the future. In other words, to prevent disparagement humorous from being dangerous, people need to draw the proverbial line in the sand.

The prejudiced norm approach, however, does not take into consideration that group-based humor might sometimes have positive social outcomes, such as relieving situational tensions, strengthening social bonds, and supporting a positive sense of self (Bippus, 2002; Damianakis & Marziali, 2011). In fact, even the most disparaging intergroup humor can lead to positive outcomes for the individuals involved if, through laughter, it is shown to be acceptable to members of the group it targets. In other words, members of the targeted group laughing at the humor may not only disambiguate the situation for others who are not sure how to receive it. Instead, the laughter of members of the targeted group humanizes the group as a whole, which in turn, may serve to improve others’ attitudes toward the group. In this light, taking a bold stance against such humor in an effort to quash potentially negative outcomes, e.g., a spread of the prejudiced norm, may preclude the possibility of realizing positive social outcomes.

Taking into consideration the true complexity of intergroup humor situations, I
maintain that group-based humor does not lead to categorically negative or positive outcomes, and I do not presume to make general recommendations for how one should receive such humor. Rather, I propose that the aftereffects of group-based humor are highly contingent on social context, and that individuals’ attitudes toward the target group may vary as a function of how exemplars of the target group react to it.

Younger adults hold stereotypes that older adults are cold, ineffectual, humorless, and curmudgeonly (Cuddy & Fiske, 2004; Schmidt & Boland, 1986). However, after being exposed to age-targeted humor in which older audiences are shown laughing, younger adults may have more positive attitudes toward older adults than if they were exposed to older audiences not laughing. When they see that older adults are able to laugh at age-based jokes told by a younger comedian, younger adults may feel they have more in common with their older counterparts than they had previously assumed, and consequently relinquish some of their preconceived age stereotypes.

**The Paradigm**

Adapting the experimental paradigm employed by Moulton and Kemmelmeier (2013), I presented older and younger adults with short videos of either disparaging or nondisparaging standup comedy depicting popular male and female comedians. Such comedy specials as they are broadcast on TV often include footage of the audience as it responds to the comedic performance. Unbeknownst to the participants, I manipulated the studio audience reactions so that participants were exposed to one of the following combinations of experimental conditions: older adults laughing, older adults not laughing, younger adults laughing, or younger adults not laughing.
After watching each video, participants evaluated the humor according to four different dimensions of humor acceptability: *humor funniness/comedian likability, humor offensiveness*, *humor PCness*, and *humor repeatability*. Next, they completed a series of individual difference measures and demographic questions. Finally, as a measure of post-humor “aftereffects,” participants reported their attitudes toward older adults via the Aging Semantic Differential—an inventory that assesses individuals’ positive versus negative attitudes toward older adults.
Chapter 5: Hypotheses

Group-based disparagement humor represents a complex social-psychological phenomenon. In most contexts it is clearly taboo to share prejudicial sentiments, but humor is one way such sentiments can be shared without much fear of repercussion. Humor allows people to say almost anything they want because they can claim that they are “only joking,” and the rule of levity associated with humor compels others to accept this defense. However, there remains the possibility that others will perceive the joker’s words not as light-hearted banter but as an expression of prejudice. If the light-hearted nature of the jokes is in question, then reactions of others may have a particularly strong impact on shaping one’s reactions toward the humor. Moreover, as shown by Moulton and Kemmelmeier (2013), in the context of interracial humor the group being disparaged is afforded the moral authority to decide whether a joke is serious or not. Here, I outline several hypotheses that apply to these phenomena in the context of age-targeted disparagement humor.

Some of the hypotheses posed below are general in form, but are based on the theory and empirical research reviewed thus far. Hypothesis 1 is the only predicted main effect and posed as a basic replication of past research on the social facilitation of humor enjoyment. Hypotheses 2a through 3 pose competing predictions about the group-based origins of social influence with regard to participants’ appraisals of age-based humor; whereas Hypothesis 4 simply posits that any forms of group-based influence will be moderated by individual differences. Hypotheses 5 and 6 build upon the previous predictions, but focus on humor type (disparaging versus nondisparaging) and individual
differences among participants, respectively. The following three hypotheses, Hypotheses 7 through 9, pertain to differences expected by Audience Age Group and Sex. Finally, Hypotheses 8 and 9 offer specific predictions about differences in younger participants attitudes toward older adults based on an audience’s laughter versus nonlaughter; and older adults’ laughter versus nonlaughter, respectively.

**Hypothesis 1:** Participants will have more favorable responses to the age-based humor when exposed to laughing audiences as opposed to audiences who are not laughing. That is, they will find it funnier, less offensive, more PC and more repeatable.

This hypothesis predicts the replication of a “canned laughter” main effect for people’s responses to age-based humor (cf. Bachorowski & Owren, 2001; Martin & Gray, 1996; Fuller & Sheehy-Skeffington, 1974; Brown, Brown, & Ramos, 1981). Thus, participants who are exposed to a laughing audience will find the humor funnier than those exposed to an audience who is not laughing.

**Hypothesis 2a:** Participants of a particular age will be more likely to be influenced by the reactions of ingroup audiences than by the reactions of outgroup audiences.

Based on the Social Identity approach, this hypothesis assumes that ingroup members are generally the most influential source of social information when uncertainty arises (Abrams et al., 1990; cf. Tajfel & Turner, 1986). For example, younger adults responding to age-based disparagement humor might weigh the positive versus negative audience reactions of fellow younger adults more than the reactions of older adults when determining its funniness, offensiveness, etc. Note that support for Hypothesis 2a is necessarily incompatible with support for Hypothesis 2b.

**Hypothesis 2b:** Participants of a particular age will be more likely to be influenced by the reactions of outgroup audiences than by the reactions of ingroup audiences.

In the case of ambiguous intergroup situations, people often afford moral
authority to those whose social standing seems to make them most equipped to define the situation (cf. Miller & Effron, 2010). Based on this, Hypothesis 2b predicts that individuals’ appraisals of age-based humor will be shaped more by the reactions of outgroups. Younger adults will be more influenced by the reactions of older individuals, primarily because older adults are being targeted by the humor, than by the reactions of fellow ingroup members. Conversely, older adults might be more influenced by the reactions of younger individuals than older individuals, primarily because they might not want to appear stodgy. Note support for Hypothesis 2b is necessarily incompatible with support for Hypothesis 2a.

**Hypothesis 3: Participants of a particular age will be more influenced by group-based reactions when the humor is disparaging, compared to when it is not.**

Based on prior research, it seems that social referencing/influence may occur most readily when aggressive or disparaging undertones are part of an intergroup communication (cf. Crosby et al., 2008; Moulton & Kemmelmeier, 2013). Therefore, Hypothesis 3 predicts that group-based influence effects will be evidenced only when the humor is especially age-disparaging.

**Hypothesis 4: Individual differences will moderate differential ingroup/outgroup influence among participants.**

Regardless of whether differential group-based social influence favors the older or younger audience reactions, individual differences in key traits are expected to qualify these effects. More specifically, individual differences that refer to one’s identification with one’s own group, i.e., Age Group Identification, likely play a role in the attention that one attributes to social cues in their environment, i.e., Public Self-Consciousness, and that reflect hierarchical beliefs regarding societal groups, i.e., Social Dominance.
Orientation. Each of these individual difference measures is expected to qualify the extent to which ingroup or outgroup members influence one’s own appraisals of age-based humor.

**Hypothesis 5: Male participants will be more appreciative of the disparaging humor, compared to their female counterparts.**

On average, men tend to have greater appreciation for aggressive humor than do women (Martin et al., 2003). Male participants will consider the disparaging humor more amusing, less offensive, more PC, and more repeatable than females. No such difference is predicted for the nondisparaging humor.

**Hypothesis 6: Participants will demonstrate a significant tendency to “gender match” by favoring the comedian with whom they share gender group membership.**

Despite the aggressive versus nonaggressive nature of the humor to which they are exposed, male participants are expected to favor the male comedians’ humor over that of the female comedians while female participants will show the opposite trend. That is, male participants will find the male comedian more amusing, less offensive, more PC, and more repeatable than the female comedian. Along these same lines, female participants will favor the female comedian over the male comedian.

**Hypothesis 7: Younger adults will be more appreciative of “edgy” disparagement humor than older adults.**

Older adults, compared to their younger counterparts, are less likely to show appreciation for disparagement humor (Martin et al., 2003). I therefore expect younger adults to show greater appreciation for the age-disparaging humor than older adults will. In other words, younger participants will find the disparaging humor more amusing, less offensive, more PC, and more repeatable than older participants.
Hypothesis 8: Younger adults exposed to audiences laughing at age-based disparagement humor will subsequently endorse negative stereotypes of older adults more than those who see audiences not laughing.

Consistent with the idea that well received humor that disparages a person or group ultimately justifies and perpetuates negative views toward that group (Ford & Ferguson, 2004), younger adults who see audiences laughing at age-based humor will endorse older adult stereotypes more than if the audiences are not laughing.

Hypothesis 9: Younger adults exposed to older adult audiences laughing at age-based disparagement humor will subsequently endorse negative stereotypes of older adults less than those who see older adults not laughing.

In partial contradiction to Hypothesis 8, this hypothesis is based on the idea that positive outcomes of intergroup disparagement humor are possible, which has yet to be addressed in the extant literature. Some common stereotypes about older adults are that they are curmudgeonly, despondent, and overall socially rigid (Schmidt & Boland, 1986; Zebrowitz & Montepare, 2000); and younger adults who see older adult audiences reacting negatively (i.e., not laughing) at age-based disparagement humor are likely to continue to hold these stereotypes. However, younger adults who see older adults laughing at the same humor are less likely to subsequently endorse the curmudgeonly despondent stereotype. It is important to note that this hypothesis is inconsistent with Hypothesis 8, which assumes exposure to laughing audiences will cause participants to endorse negative stereotypes regardless of the audiences’ group membership.
Chapter 6: Method

Purpose and Rationale

The present study was conducted as an online experiment. The primary purpose of the experiment was to determine if older and younger adults’ perceptions of age-based humor are differentially shaped by audience reactions within the performance. A secondary goal was to examine whether the reactions of older audiences within a performance of age-based humor lead to differences in participants’ subsequent endorsement of older adult stereotypes. I also manipulated humor type as a between-subjects factor in order to determine whether disparagement is necessary for younger adults to reference older adults more than their own ingroup.

Experimental Design

The present study consisted of a 2 (Humor Type) x 2 (Audience Age) x 2 (Audience Reaction) x 2 (Comedian Sex) x 2 (Participant Age Group) x 2 (Participant Sex) experimental design. The first three factors were manipulated between-groups, and all involved characteristics of the humor stimuli. The fourth was manipulated within-participants; and the fifth and sixth factor compared different subgroups of the sample.

First, I manipulated the type of humor to which participants were exposed. Half of the participants were exposed to disparaging humor in which the comedians used harsh, aggressive, “ageist” humor. The other half was exposed to a much milder form of age-based humor in which the comedians poked fun at their elder relatives in a playful manner. The purpose of this manipulation was to determine if age-based disparagement humor is necessary for social referencing/influence processes to manifest for participants,
or if they also emerge when the humor is nondisparaging.

For the second and third factors—Audience Age and Audience Reaction—I manipulated the samples of audience footage shown within each standup comedy video. Following the punch line of each comedian’s jokes, participants saw either older or younger adults either laughing or not laughing. These manipulations were employed to determine if age-based humor would be perceived differently as a function of the laughing versus nonlaughing reactions of others with particular group memberships.

The fourth factor—Comedian Sex—was manipulated within-subjects. That is, all participants saw both a female and male comedian. This was done in order to observe potential differences regarding participants’ perceptions of female and male comedians telling jokes about older adults.1

Finally, the fifth and sixth factors were based on characteristics of the individuals sampled—Participant Sex and Participant Age Group. Upon recruitment, I did not strictly control the proportion of women to men who participated, but the sexes proved to be represented roughly equally in the overall sample, thus allowing for Participant Sex to be considered a viable factor to model. In contrast, Participant Age Group was strictly controlled such that only younger adults (age 18-35) and older adults (age 65+) were allowed to participate. Participant Sex and Age Group were included in order to test for basic differences according to these factors, but to also to allow for these factors to interact with the others explained above.

1 The order in which the female and male comedians was presented was also taken account, thus allowing for statistical control of a potential experimental artifact—Stimuli Order. Although not a focal factor in the present study, counterbalancing Stimuli Order allowed to test for a constellation of potential experimental artifacts, e.g., task fatigue, boredom, and/or demand characteristics.
Participants

I recruited a total of 258 older adults (age 65+) and 268 younger adults (age 18–35). The total enrollment for the experiment was 526. The most complex anticipated effect was a four-way interaction, e.g., Hypothesis 3, so I needed to recruit a minimum of 512 in order to achieve Cohen’s (1988) recommended 80% power to find a medium sized effect (i.e., $d \approx 0.5$) for a $2 \times 2 \times 2 \times 2$ interaction. My sample size exceeded Cohen’s recommendation by a total of 14 participants, thus providing the statistical power needed for conducting meaningful analyses.

Recruitment. Following IRB approval, I recruited participants in a number of ways, mostly owing to the projected difficulties associated with acquiring an adequately sized sample of older adult participants. Recruitment Method A consisted of collecting participants through the Social Research Sign-up System at UNR. This yielded a total of two older adults and 77 younger adults.

I also targeted older and younger adults through Method B, Amazon’s Mechanical Turk (MTurk) system. MTurk is an online human workforce coordinated by Amazon.com, which involves two central players: requesters and workers. Requesters—who have online tasks to be done that require human intelligence—simply post their task on the MTurk system and offer a small monetary incentive for completing their task. The monetary incentive for participating in this study was $1. For younger adults, my only

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2 Defining participant age groups in this way, i.e., 18-35 years and 65+ years, is consistent with operational definitions of “younger adult” and “older adult” used in prior research (e.g., Kensinger, 2008; Mata, Josef, Samanez-Larkin, & Hertwig, 2011).
criterion was that participants be residents of the United States between the age of 18 and 35 years; and this yielded 119 participants. I set up a separate task on MTurk, which targeted older adult participants. The task itself was no different from the one posted for younger adults except for the qualification criteria. For older adults, the age criterion was set at age 65+; and this source yielded 237 participants.

Through Method C, I sent a request for participants through the professional organizational listserv of the Society for Personality and Social Psychology (SPSP). The SPSP listserv is an online public forum where social and personality researchers share ideas, stories, research participation requests, conference information, and teaching resources. The forum yielded three older and 20 younger adult participants.

Method D recruited participants through various Facebook groups. This method simply involved posting recruitment solicitations on several pre-identified Facebook groups that a) included older and younger adults and b) were open to public access. Method D yielded a total of one older and 24 younger participants.

Finally, Method E involved an older adult-targeted approach for recruitment of seniors involved with a local volunteering program through the Sanford Center for Aging (SCA) at UNR. On my behalf, the director of SCA sent a recruitment email to members of the volunteer program asking for voluntary participants. In response to this solicitation, I gathered an additional 13 qualified participants: 11 older and two younger adults.

**Sample characteristics.** On the whole, 44.7% of participants were female; and 81.1% were white. Of the remaining races represented in the sample, 7.1% identified as Asian, 5.3% as black, 4.7% as multiracial, 1% as Hawaiian Native or other Pacific
Islander, and 0.8% as American Indian/Alaska Native. The average participant held the equivalent of a two year college degree, and politically aligned just left of center ($M = 3.5, SD = 1.7$ on a seven-point scale with 1 very liberal and 7 very conservative).

With regard to the older participants in particular, 43.0% were female with 79.8% identifying as white. In addition, 7.4% were Asian, 5.8% were black, 2.3% were multiracial, and 1.2% were Hawaiian Native or Other Pacific Islander, whereas another 1.2% were American Indian/Alaska Native. The average older participant was 69.1 years old ($SD = 4.0$), had the equivalent of a two year college education, and had political views just left of center ($M = 3.8, SD = 1.8$).

The younger participants, as a group, were 46.2% female and 77.2% white. Of the remaining races represented in the younger sample, 6.7% were multiracial, 6.3% were Asian, 4.5% were black, 0.7% were Hawaiian Native or Other Pacific Islander, and 0.4% identified as American Indian/Alaska Native. Younger participants reported an average age of 23.6 years ($SD = 4.8$), had the equivalent of a two year college education, and had political views just left of center ($M = 3.3, SD = 1.5$).

**Materials**

This experiment employed a novel humor video paradigm first introduced by Moulton and Kemmelmeier (2013). It consisted of a series of one-minute video clips created from actual standup comedy performances of younger adult comedians (ages 25-41). The group membership (older adult versus younger adult) and reaction (laughing versus not laughing) of audiences shown in the videos represented experimental manipulations, between-groups. Representing the third experimental factor, disparaging
age-based humor was presented to half of the participants, and nondisparaging humor was shown to the other half of participants. Two different videos per participant—one of a female comedian and one of a male—was used to test particular sex-dependent hypotheses, and to provide potential within-participant stimulus replication, i.e., evidence that any effects found will generalize to the experimental manipulations, and not just the idiosyncrasies of a sole comedian.

**Stimuli.** For the purposes of creating the age-disparaging stimuli, four one-minute standup comedy videos performed by popular younger adult comedians were used—two for the disparaging condition and two for the nondisparaging condition. Because the nature of the humor was self-evident, no formal pretesting was conducted in order to choose humor samples that were categorically disparaging and nondisparaging.³

For the disparaging comedians, popular comedienne Lisa Lampanelli and comedian Chad Daniels were chosen. Lampanelli’s routine focused on lampooning an older man in the audience about his assumed issues with incontinence and impotence. Daniels’ humor was based on the satirical argument that younger adults “should be able to kill old people [because] they don’t do anything.”

For the nondisparaging humor samples, I used videos of popular comedians telling relatively innocuous jokes about aging. The nondisparaging female comedian was popular comedienne Kathleen Madigan and her male counterpart was Nick Swardson. Madigan’s humor centered on a discussion of her parents, the humorous banter between

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³ Results confirmed that the participants indeed made clear distinctions between the disparaging comedians and nondisparaging comedians.
them while driving, and the witty political logic of her father, which culminates in his arriving at a punch line as-told-through-daughter. Swardson’s humor was similarly based on his family, but this nondisparaging comedian focused on recounting his various interactions with his grandmother, ultimately arriving at reverence for her having lived a more difficult life than he has.

Using FinalCut Pro video editing software, segments of the disparaging and nondisparaging humor performances were spliced together to create video stimuli. In the process, I also captured footage of audience reactions from the same (and other) videos that feature appropriate shots of older and younger audiences laughing and not laughing.\(^4\) These materials allowed for the creation of experimental manipulations based on audience group membership (older versus younger adults) and reaction (laughter versus nonlaughter).\(^5\) This process yielded four videos ranging from 40 seconds to 1 minute 47 seconds in length—each of which included two shots of audiences reacting for about 1 second. This resulted in each participant watching a total of approximately two-to-three minutes of video footage with about four seconds of exposure to the experimental manipulations. The decision to use two one-to-two minute stimuli per participant—each of which was punctuated by two one-second exposures to experimental manipulations—was based on the successful employment of this technique by Moulton and Kemmelmeier (2013).

\(^4\) The actual reactions of those people shown not laughing ranged from blank, confused-looking expressions to those that were more hurt and disappointed-looking. The term “not laughing” is meant to subsume all of these somewhat varied nonlaughing reactions.

\(^5\) The approximate age of the audiences chosen to represent the younger audiences was 25-40; the approximate age of the audiences to represent the older audience condition was 70-85.
In an attempt to control for potential confounding due to differences in audiences shown, between-groups, audience footage was chosen based on the availability of material featuring the same audience members reacting both positively and negatively. In other words, audience reaction footage of given older/younger audience members was not chosen unless there was available footage of the same individual(s) laughing and not laughing. In this way, the specific audience members, which participants saw across the manipulation of Audience Reaction, were kept constant.

The manipulated audience shots were carefully spliced into each standup comedy video to give the impression that the audiences shown were actually at the comedy show, and were reacting to the comedian’s jokes at the time of the show’s taping. These manipulations represented the primary conceptual focus of the present study.

**Dependent measures.** With the exception of the last measure discussed in this section—the Aging Semantic Differential—each of the following measures were successfully employed in the three prior studies by Moulton and Kemmelmeier (2013). After each video, participants’ were asked about their overall evaluations of the humor, as well as to how offensive, how PC, and how repeatable they found it. Overall humor evaluation was assessed using two items: “How funny or not funny were the comedian’s jokes” and “How much did you like or dislike the comedian,” with responses ranging from 1 not at all funny (dislike very much) to 7 extremely funny (like very much). These measures were internally consistent for the disparaging female and male comedians (α = .92 and .94, respectively), as well as for their nondisparaging comedian counterparts (α = .85 and .87, respectively).
As previous research has found offensiveness and funniness to be independent constructs (cf. Bippus & Young, 2002; Hodson et al., 2010), perceived offensiveness of the humor was assessed on a separate, single-item measure: “How offensive or not offensive was the comedian’s jokes?” with responses ranging from 1 not at all offensive at all to 7 extremely offensive.

As a measure of the social acceptability of the humor to, I used a single-item measure of political correctness (PCness): "How politically correct or politically incorrect was the comedian’s jokes?” with responses ranging from 1 very politically incorrect to 7 very politically correct.

Repeatability refers to the degree to which participants find the humor appropriate enough for it to be repeated to others. One’s propensity to repeat a group-disparaging joke has linked to reinforcing negative group stereotypes (Thomas & Esses, 2004). Using separate items, I asked participants: “How likely would you be to repeat these jokes to a close friend… a family member… a complete stranger?” with response options ranging from 1 not at all likely to 7 extremely likely. These measures were internally consistent for the disparaging female and male comedians (α = .89 and .87, respectively), as well as for their nondisparaging comedian counterparts (α = .93 and .89, respectively).

For the purposes of the present research, the refined Aging Semantic Differential (ASD) was used as a dependent variable. The ASD is comprised of a total of 24 bipolar positive-negative stereotype pairings that concern aging (Polizzi, 2003). Participants’ responses to this scale were combined to create a measure of participants’ attitudes toward older adults (α = .94) following older adult audiences’ laughing versus not
laughing responses to age-based humor.

**Individual difference measures.** Several individual difference measures were appropriate for exploring how people may respond to age-based humor differently. All individual difference were measured on a Likert scale from 1 *Strongly disagree* to 7 *Strongly agree*.

**Social Dominance Orientation (SDO).** This 16-item scale measures individuals’ beliefs regarding social hierarchy—that some social groups are inherently better than others. The SDO scale asks participants to rate their agreement with prompts such as “Some groups of people are simply inferior to other groups” and “Group equality should be our ideal.” This scale was reported to have high internal validity averaged over multiple samples, and has been shown to be a useful proxy of individual differences in group superiority motives (Pratto et al., 1994). The SDO scale was found to have excellent internal consistency in the present study ($\alpha = .95$).

**Cavalier Humor Beliefs (CHB).** This six-item scale by Hodson et al. (2001) assesses how humor justifies the expression of group dominance motives with items such as “People get too easily offended by jokes” and “It is okay to laugh at the differences between people.” Cavalier Humor Beliefs is a six-item measure of individuals’ nonchalance toward humor that disparages. This scale has been shown to have internal consistency, convergent validity with social dominance measures, as well as preferences for affiliative and aggressive humor styles (Hodson et al., 2010). The CHB scale was found to have good internal consistency in the present study ($\alpha = .80$).

**Age Group Identity Scale (AgeID).** This five-item scale (Garstka, Branscombe &
Hummert, 1997 as reported in Garstka et al., 2004) was employed as a measure of participants’ identification with their own age group. The measure asks participants to rate their agreement with prompts like “I am proud to be a member of my age group” and “My age group membership is central to who I am.” The AgeID scale was found to have good internal consistency in the present study ($\alpha = .88$).

**Public Self-Consciousness (PSC).** This construct refers to the tendency to think about those aspects of the self that are matters of public display; for example, one’s overt behavior, mannerisms, and emotional qualities. The seven-item PSC scale (Fenigstein, Scheier, & Buss, 1975) asks participants to rate their agreement with statements such as “I’m self-conscious about the way I look” and “I’m concerned about what other people think of me.” The PSC scale was found to have good internal consistency in the present study ($\alpha = .85$).

**Humor Styles Questionnaire (HSQ).** The HSQ refers to a series of four subscales developed by Martin et al. (2003) to measure individuals’ humor preferences. In the present research only two of the subscales were used—Affiliative and Aggressive. The Affiliative and Aggressive subscales of the HSQ were found to have good internal consistency in the present study ($\alpha = .76$ and .83, respectively).

**Participant demographics.** Participants were asked to provide demographic information about themselves, including age, sex, race/ethnicity, geographic location, educational achievement, and political orientation. These demographic indicators were analyzed as potential moderators of the experimental manipulations, and ones that

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6 Middle-aged individuals, i.e., those age 36-64, were allowed to participate, but it was made very clear in the recruitment materials that the target population was those who were ages 18-35 and 65+. 
accounted for significant variance were retained in the resulting model.

**Audience recall.** Two audience recall measures were used to help determine whether or not participants were aware of the audience in each of the videos they watched. These questions assessed the participants’ perceptions of the two central aspects of the audiences depicted in the video: *age* of the audience members, and *reaction* of the audience members. Similar to other measures used in this study, both audience recall variables were assessed by prompting participants to indicate their reactions on a seven-point semantic differential scale. For example, the Audience Age Recall measure asked “Regarding age, the audiences shown in Video 1 (Video 2) were mostly in their…,” but here participants were provided with seven discrete response options: 20s, 30s, 40s, 50s, 60s, 70s, and 80s. There was also an eighth response option for this measure—*Other*—that included an open-ended response line allowing participants to indicate an age outside the range of those provided. Finally, the Audience Reaction Recall measure asked “Regarding their reactions to the jokes, the audiences in Video 1 (Video 2) were mostly…,” and participants responded on a seven-point continuum from 1 *not laughing* to 7 *laughing*. Again, there was also the eighth response option, *Other*. As denoted by (Video 2) in the above examples, each of these questions appeared twice—once for each video they watch.

Note that, rather than measuring audience recall using dichotomous measures

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7 A third measure focused on the level of humor offensiveness that participants recalled with regard to each video. However, it was later realized that this measure was confounded with the offensiveness dependent measure. That is, the offensiveness recall item likely tapped participants’ recall of their own post-humor offensiveness ratings rather than any objective characteristic of the video itself. This variable was not included in subsequent analyses and is therefore not introduced.

8 No participants chose the *Other* option.
(identified correctly or not), the present research employed continuous measures. This decision was based on the realization that dichotomous measures lack variability and can be easily skewed or otherwise confounded by demand characteristics of the experiment, e.g., participant guessing. In addition, research points to the advantages continuously-scaled variables offer that their dichotomously-scored measures do not—from increased reliability to enhanced convergent validity with homologically-relevant constructs (cf. Stöber, Dette, & Musch, 2002). In summary, seven-point scales representing bipolar continuums not only provide better statistical properties, i.e., greater variation, but are also likely to limit unnecessary threats to internal validity.

**Procedure**

After reading the study instructions, participants were shown two video clips, one including a male comedian and one including a female comedian, with the order of comedian presentation counterbalanced across participants. The experimental conditions were consistent between the two videos such that both showed either older or younger audiences, which were either laughing or not laughing. After each video clip, participants completed self-report measures of humor funniness/comedian likability, humor offensiveness, humor PCness, and humor repeatability.

After viewing and rating both video clips, participants provided responses to the individual differences measures in the order in which they are described in *Materials*, followed by demographic questions, and audience manipulation awareness checks, respectively. Finally, they were asked to provide their attitudes toward older adult by completing the ASD, thanked for their time, and directed to a debriefing screen, which
divulged the full purpose of the research.
Chapter 7: Results

I first describe some key findings from preliminary analyses, which included tests of statistical assumptions and identification of problem variables. I then report the main findings—those based on participants’ humor ratings—followed by the results of the follow-up analysis based on participants’ post-humor attitudes toward older adults. Following each dependent measure reported in the main analyses section there appears a summary section, which highlights key findings as they relate to the basic hypotheses.

Preliminary Analyses

Initially, I tested whether each of the continuous predictors themselves varied as a function of the Audience Age x Audience Reaction x Humor Type design. Because these variables were assessed after the experimental manipulation, it was critical to ensure that they were not themselves influenced by the experimental factors. SDO was not predicted by any of the experimentally varied factors, all $F < 1$. Likewise, neither Age Group Identity nor Public Self-Consciousness was predicted by the experimental factors, all $F < 1.64$ and $1.23$, respectively. Cavalier Humor Beliefs, however, varied as a function of Humor Type such that the nondisparaging humor produced higher CHB scores than disparaging humor, $F(1, 510) = 4.87, p = .028, \eta_p^2 = .01$. This main effect was qualified by a Humor Type x Audience Reaction two-way interaction, $F(1, 510) = 4.70, p = .031, \eta_p^2 = .01$. Participants exposed to disparaging humor featuring laughing audiences had higher CHB than their counterparts who saw the same audiences not laughing ($M = 4.67, SD = 1.29$, vs. $M = 4.39, SD = 1.27$), pairwise $p = .061$, though CHB in the nondisparaging condition did not vary as a function of Audience Reaction ($M = 4.67, SD$
= 1.15 vs. \( M = 4.85, SD = 0.97 \), pairwise \( p = .24 \). This pattern suggests that exposure to disparagement humor instilled some hesitation in participants who may have felt reluctant to express a cavalier attitude toward putting down older adults. At the same time, there was some evidence that a favorable audience reaction did offset some of this reluctance, and instead encouraged relatively cavalier beliefs.

**Main Analyses**

For all four main analyses, the core experimental design was a 2 (Audience Age) x 2 (Audience Reaction) x 2 (Participant Age Group) x 2 (Humor Type) x 2 (Participant Sex) x 2 (Comedian Sex) x 2 (Stimuli Order) mixed-model design, with repeated measurement on the last factor. I also introduced SDO, AgeID, and PSC (all centered) as continuous predictors in the model, as well as their interaction with all experimental factors except Stimuli Order. The decision to not include any interactions involving Stimuli Order and any of the individual-difference covariates was made because Stimuli Order is a primarily methodological factor, with any findings involving individual differences being uninterpretable and theoretically uninteresting.

In each analysis, residuals were examined for potential outliers, defined as cases with a residual of greater than three standard deviations above or below the mean. Outliers were identified in only one instance (see Follow-up Analysis).

Because the focus of this dissertation is on the influence of Audience Reaction on participant responses (Hypotheses 2a-2b), analyses of experimental interactions focus primarily on the comparison of participants’ responses to laughing versus nonlaughing audiences, although other comparisons will be provided wherever interesting and
appropriate.

**Humor evaluation.** Analyses of participants’ evaluation of the age-based humor did not support Hypothesis 1, which predicted that a laughing audience would produce more favorable evaluations than nonlaughing audiences, $F(1, 401) = 0.01, p = .98, \eta^2_p < .01$. However, there was a main effect for Participant Age Group. Younger participants evaluated the age-based humor more favorably than did their older counterparts ($M = 3.99, SD = 1.64$ vs. $M = 3.64, SD = 1.26$), $F(1, 401) = 5.73, p = .017, \eta^2_p = .01$.

The main effect for Participant Age Group was qualified by Comedian Sex, $F(1, 401) = 9.56, p = .002, \eta^2_p = .02$. Younger participants favored the male comedians’ humor more than older participants ($M = 4.30, SD = 1.56$ vs. $M = 3.66, SD = 1.51$), pairwise $p < .001$. There was, however, no differences by Participant Age Group for the female comedians’ humor ($M = 3.68, SD = 1.63$ vs. $M = 3.62, SD = 1.57$), pairwise $p = .76$.

The aforementioned effects were further moderated by a Comedian Sex x Participant Age Group x Audience Reaction x Humor Type four-way interaction, $F(1, 401) = 6.15, p = .014, \eta^2_p = .02$. After being exposed to nonlaughing audiences, younger participants evaluated the disparaging male comedian’s humor more positively than did older participants ($M = 3.97, SD = 1.66$ vs. $M = 2.86, SD = 1.88$), pairwise $p = .001$. There was no such difference in participants’ evaluations when exposed to the nondisparaging male’s humor ($M = 4.65, SD = 1.70$ vs. $M = 4.33, SD = 1.48$), pairwise $p = .34$; nor for any other combination of Comedian Sex, Participant Age Group, Audience Reaction, and Humor Type, all $p > .07$. This result provides partial, though weak support
for Hypothesis 7, which predicted that younger people would favor age-based
disparaging humor more than older people regardless of audience.

The four-way interaction reported above was qualified by Audience Age, thus
yielding a five-way interaction, \( F(1, 401) = 7.69, p = .006, \eta^2_p = .02 \). Pairwise
comparisons revealed a marginally significant effect for older participants’ evaluation of
the disparaging male comedian’s humor. Older participants evaluated the disparaging
male comedian’s humor more favorably when they were exposed to older audiences
laughing rather than not laughing (\( M = 3.35, SD = 1.76 \) vs. \( M = 2.44, SD = 1.84 \)),
pairwise \( p = .054 \). However, older participants’ evaluations were unaffected after having
been exposed to younger audiences laughing versus not laughing (\( M = 3.02, SD = 2.42 \)
vs. \( M = 3.28, SD = 2.67 \)), pairwise \( p = .54 \). Surprisingly, the effect was also absent for
younger participants in the disparagement humor condition (\( M = 3.78, SD = 2.23 \) vs. \( M =
4.15, SD = 1.98 \)), pairwise \( p = .51 \), as well as for all participants exposed to the
nondisparaging humor, all pairwise \( p > .10 \). This pattern yields support for Hypothesis
2a, which, based on the Social Identity approach, predicted that the responses of older
participants would be driven by the reaction of an older audience. It also provides some
support for Hypothesis 3 in that ingroup audience influence occurred among older adults
exposed to disparaging humor, even if only for the male comedian.

The aforementioned five-way interaction also revealed differences by Audience
Age. Specifically, younger participants evaluated the disparaging male comedian’s
humor more positively than did their older counterparts when they were exposed to
nonlaughing older audiences (\( M = 4.15, SD = 1.98 \) vs. \( M = 2.44, SD = 1.85 \)), pairwise \( p =
.001. This was not the case, however, for those exposed to nonlaughing younger audiences \((M = 3.78, SD = 1.87\) vs. \(M = 3.28, SD = 1.88\)), pairwise \(p = .23\), nor for any other combination of experimental factors for younger and older participants, all pairwise \(p > .79\).

With regard to humor type, a main effect showed that participants evaluated the nondisparaging humor more positively than the disparaging humor \((M = 4.37, SD = 1.70\) vs. \(M = 3.26, SD = 1.67\)), \(F(1, 401) = 56.56\), \(p < .001\), \(\eta^2_p = .12\). This result confirms the basic assumptions about the differential valences of the disparaging and nondisparaging comedic material chosen for the present experiment. This difference in evaluation was moderated by Participant Sex, \(F(1, 401) = 4.37\), \(p = .037\), \(\eta^2_p = .01\). Male participants evaluated the disparaging humor more favorably than their female counterparts \((M = 3.45, SD = 1.66\) vs. \(M = 3.07, SD = 1.61\)), pairwise \(p = .057\); but there was much less of a difference between male and female participants’ evaluations of the nondisparaging humor \((M = 4.26, SD = 1.73\) vs. \(M = 4.47, SD = 1.64\)), pairwise \(p = .29\). This provides support for Hypothesis 5, which predicted that the disparaging age-based humor would be favored more by male participants, than by their female counterparts.

A main effect for Comedian Sex showed that the male comedians’ humor was evaluated more positively than the female comedians’ humor \((M = 3.98, SD = 1.95\) vs. \(M = 3.65, SD = 2.04\)), \(F(1, 401) = 12.43\), \(p < .001\), \(\eta^2_p = .03\), but this difference also varied by Participant Sex, \(F(1, 401) = 6.20\), \(p = .013\), \(\eta^2_p = .02\). This two-way interaction of Comedian Sex x Participant Sex allowed a test of Hypothesis 6, according to which men and women might prefer comedians of their own gender. Male participants showed a
clear preference for male comedians over female comedians ($M = 4.13, SD = 1.96$ vs. $M = 3.58, SD = 2.05$), pairwise $p < .001$, which is consistent with this gender matching notion. However, there was no such difference for female participants’ evaluations of male and female comedians ($M = 3.82, SD = 1.89$ vs. $M = 3.72, SD = 1.96$), pairwise $p = .45$. In other words, there was only partial support for Hypothesis 6 because gender matching occurred only between male participants and male comedians, and not between female participants and comedians.

Besides the PSC five-way interaction reported below, no other effects for humor evaluation included Participant Age Group, Audience Age, and Audience Reaction. Of note, the three-way interaction of these variables revealed no differences, $F(1, 401) = 0.27, p = .87, \eta_p^2 < .01$.

**Stimuli order effects.** Because order effects were unexpected, they are reported separately. There was an unforeseen six-way interaction of Comedian Sex x Participant Age Group x Audience Age x Audience Reaction x Stimuli Order x Participant Sex, $F(1, 401) = 8.33, p = .004, \eta_p^2 = .02$. Younger male participants who were exposed to older audiences not laughing evaluated the male comedians’ humor more favorably than did younger female participants, but only when the female comedians’ humor was presented first ($M = 5.10, SD = 1.82$ vs. $M = 3.73, SD = 1.83$), pairwise $p = .031$. This effect was absent when the male comedians’ videos were presented first ($M = 4.35, SD = 1.88$ vs. $M = 4.81, SD = 1.65$), pairwise $p = .52$. Interestingly, a different pattern showed that older male participants who were exposed to younger nonlaughing audiences evaluated the male comedians’ humor more favorably than did their female counterparts, but again
only when the female comedians’ videos were presented first \( M = 4.32, SD = 1.76 \) vs. \( M = 2.80, SD = 1.70 \), pairwise \( p = .01 \). This effect did not emerge when the male comedians’ videos came first \( M = 4.22, SD = 1.66 \) vs. \( M = 3.46, SD = 1.64 \), pairwise \( p = .34 \). This effect was also qualified by a Comedian Sex x Participant Age Group x Audience Age x Audience Reaction x Stimuli Order x Participant Sex x Humor Type seven-way interaction, \( F(1, 401) = 8.00, p = .005, \eta_p^2 = .02 \), which suggested that this six-way interaction was only evident for older adults participants in the nondisparaging humor condition.

**Individual differences: Age Group Identification (AgeID).** Hypothesis 4 posed general, non-mutually exclusive predictions concerning the role of individual differences in moderating core experimental effects. Specifically, Hypothesis 4 predicted that outgroup/ingroup audience influence on participants’ humor ratings would be moderated by individual differences in AgeID, SDO, and PSC.

Effects that involved AgeID included a four-way interaction involving Comedian Sex x Participant Age Group x Humor Type x Age Identification, \( F(1, 401) = 7.75, p = .006, \eta_p^2 = .02 \). High AgeID younger participants evaluated the female comedian’s disparaging humor more positively than did their low AgeID counterparts, \( b = .29, se = .12, p = .016 \). However, this trend was absent among older participants, \( b = -.05, se = .11, p = .65 \), as well as for all other combinations of Comedian Sex, Participant Age Group, and Humor Type, all simple slopes \( p > .08 \) (see Figure 1).

There was also an unexpected Comedian Sex x Audience Age x Humor Type x AgeID four-way interaction, \( F(1, 401) = 6.88, p = .009, \eta_p^2 = .02 \). High AgeID
participants who were exposed to older audiences evaluated the nondisparaging male comedian’s humor more positively than their low AgeID counterparts, \( b = .20, se = .10, p = .046 \). This effect failed to reach significance for the female comedian’s nondisparaging humor, \( b = .08, se = .10, p = .45 \), as well as for all other combinations of Comedian Sex, Audience Age, and Humor Type, all simple slopes \( p > .06 \). Because AgeID was not involved in any significant effect involving Audience Age, and Audience Reaction, no effect by AgeID rendered any support for Hypothesis 4.

**Individual differences: Social Dominance Orientation (SDO).** The Humor Type main effect reported above was qualified by a Humor Type x SDO two-way interaction, \( F(1, 401) = 4.10, p = .044, \eta^2_p = .01 \). High SDO participants evaluated disparagement humor more favorably than low SDO counterparts, \( b = .12, se = .08, p = .13 \). However, this effect was reversed regarding nondisparaging humor, for which lower SDO was linked to higher evaluations, \( b = -.12, se = .09, p = .18 \) (see Figure 2). This pattern revealed, though, that low SDO individuals made a much more pronounced distinction between disparaging and nondisparaging humor (\( M_{\text{lowSDO}} = 3.11 \) vs. \( M_{\text{lowSDO}} = 4.52 \), simple slope \( p < .001 \), compared to high SDO individuals (\( M_{\text{highSDO}} = 3.41 \) vs. \( M_{\text{highSDO}} = 4.21 \), simple slope \( p < .001 \).

There was also a three-way interaction of Comedian Sex x Audience Reaction x SDO, \( F(1, 401) = 5.07, p = .025, \eta^2_p = .01 \). Whereas low SDO participants exposed to nonlaughing audiences evaluated the male comedians’ humor more positively than their high SDO participants, \( b = -.19, se = .10, p = .047 \), this was not the case for those exposed to laughing audiences, \( b = .14, se = .10, p = .14 \). There were also no differences
by SDO for evaluations of the female comedian for nonlaughing and laughing audiences, both $b = .02$, $se = .10$, $p = .82$. Because SDO was not involved in any significant effect involving Audience Age, and Audience Reaction, the present analysis did not support Hypothesis 4.

**Individual differences: Public Self-Consciousness (PSC).** With regard to PSC, there was a Participant Age Group x Audience Age x PSC three-way interaction, $F(1, 401) = 4.16$, $p = .042$, $\eta^2_p = .01$. High PSC older participants exposed to older audiences evaluated the humor more favorably than their low PSC counterparts, $b = .23$, $se = .10$, $p = .029$. This PSC effect was reversed for high PSC younger participants exposed to older audiences who evaluated the humor less favorably than their low PSC counterparts, $b = -.30$, $se = .13$, $p = .024$. There were no differences by PSC among younger and older participants exposed to younger adult audiences, $b = -.20$, $se = .12$, $p = .10$ and $b = .04$, $se = .10$, $p = .72$, respectively.

There was also a five-way interaction of Comedian Sex x Participant Age Group x Audience Age x Audience Reaction x PSC, $F(1, 401) = 4.47$, $p = .035$, $\eta^2_p = .01$. Here the primary difference emerged for high PSC older participants. Their ratings of the male comedians were higher after being exposed to older audiences laughing rather than not laughing ($M_{highPSC} = 4.14$ vs. $M_{highPSC} = 2.20$), simple slope $p = .002$. No difference were observed, however, when older participants were exposed to younger audiences ($M_{highPSC} = 3.96$ vs. $M_{highPSC} = 3.86$), simple slope $p = .90$. A similar, yet slightly weaker, effect was also evident for low PSC older participants. They too evaluated the male comedians more positively after being exposed to older audiences laughing rather than not laughing.
\( M_{\text{lowPSC}} = 4.55 \) vs. \( M_{\text{lowPSC}} = 0.99 \), simple slope \( p = .003 \). Again, there was no difference in evaluations when older participants were exposed to laughing versus nonlaughing younger audiences \( (M_{\text{lowPSC}} = 4.16 \) vs. \( M_{\text{lowPSC}} = 4.01 \), simple slope \( p = .92 \). Besides these effects, no differences by Audience Reaction emerged for high and low PSC younger participants’ evaluations of the male comedian, all simple slope \( p > .14 \), nor for evaluations of the female comedians across both Participant Age Groups, all simple slope \( p > .73 \).

In terms of differences by PSC, it was high PSC younger participants who were exposed to laughing younger audiences who evaluated the male comedians’ humor more positively than their low PSC counterparts, \( b = .50, se = .16, p = .002 \). This effect failed to reach statistical significance for the same participants’ evaluations of the female comedians’ humor, \( b = .16, se = .17, p = .34 \). The same PSC effect was also absent for younger adults’ evaluations when exposed to laughing and nonlaughing older and younger audiences, as well as for older adults in the same conditions, all simple slopes \( p > .12 \). This effect provides limited support for Hypothesis 4. Although PSC moderated younger adults’ evaluations of the male comedians’ humor, it did not moderate evaluations of the female comedians’ humor, or older adults’ evaluations of any of the comedians.

**Summary of humor evaluation.** Analyses of participants’ humor evaluations did not yield consistent support for the majority of the experimental hypotheses, including Hypothesis 1, which predicted that laughing audiences would be associated with more favorable evaluations than nonlaughing audiences. There was, however, relatively clean
confirmation of Hypothesis 3, which predicted group-based influence would occur more when the humor was disparaging, compared to nondisparaging. The outgroup social influence effect, which provided the basis of Hypothesis 2b, did not emerge for humor evaluations, but there was at least some evidence for an ingroup influence effect among older participants, which was the basis of Hypothesis 2a. Analyses also provided support for Hypothesis 3 in that older participants were influenced more by ingroup audiences when the humor was disparaging. There was also some support for Hypothesis 4 because PSC moderated younger adults’ tendency to be influenced by older adult audiences. Hypothesis 6—the gender matching by comedian hypothesis—was partially supported by the data in that male participants favored the male comedians over the female ones, but the reciprocal trend was not observed for female participants. Consistent with Hypothesis 5, male participants evaluated the disparaging humor, but not the nondisparaging humor, more favorably than their female counterparts. There was only slight support for Hypothesis 7, however, because age differences in humor evaluation were only observed for the disparaging male comedian’s humor. Overall, results for humor evaluations were sometimes congruent with predictions, yet do not provide conclusive support for any of the hypotheses.

**Humor offensiveness.** As with the previous dependent measure, participants’ judgments of offensiveness of the age-based humor did not support Hypothesis 1, which predicted that a laughing audience would produce more favorable evaluations than would nonlaughing audiences, $F(1, 400) = 0.49, p = .49, \eta^2_p < .01$. However, analyses did reveal a main effect for Participant Age Group. Older participants found the humor to be more offensive than did the younger ones ($M = 4.41, SD = 1.69$ vs. $M = 3.76, SD = 1.72$), $F(1,$
Consistent with Hypothesis 2b, there was a three-way interaction of Participant Age Group x Audience Age x Audience Reaction, $F(1, 400) = 4.11, p = .043, \eta^2_p = .01$. However, the pattern did not follow the anticipated pattern as pairwise comparisons of Audience Reaction failed to yield reliable differences, all pairwise $p > .12$. Specifically, whether an older audience was laughing or not laughing had no reliable effect on whether younger participants found the humor more or less offensive, both pairwise $p > .12$.

Rather, differences emerged between older and younger nonlaughing audiences. Younger participants found the humor more offensive when they saw nonlaughing older versus nonlaughing younger audiences ($M = 4.15, SD = 1.67$ vs. $M = 3.49, SD = 1.69$), pairwise $p = .025$. There was no such difference, however, between younger participants who saw the same audiences laughing ($M = 3.65, SD = 1.97$ vs. $M = 3.73, SD = 1.52$), pairwise $p = .79$. Differences also failed to emerge for older participants who saw nonlaughing older versus nonlaughing younger audiences and for those who saw laughing older versus laughing younger adults, all pairwise $p > .20$ (see Figure 3).

Although differences did not emerge for pairwise comparisons of Audience Reaction, as expected, the difference observed by Audience Age does seem to suggest an outgroup influence effect—at least when negative feedback is involved. In this light, Hypothesis 2b was partially supported: Outgroup older audiences caused younger observers to find the material more offensive, compared to those exposed to ingroup younger audiences.

The analysis also revealed a four-way interaction of Comedian Sex x Audience Age x Audience Reaction x Participant Sex, $F(1, 400) = 4.19, p = .041, \eta^2_p = .01$. 
However, the effect was again not based on the predicted differences but based on audience laughter versus nonlaughter, all pairwise $p < .20$. Instead, this interaction was driven by Participant Sex and Audience Age. Female participants found the male comedians’ humor more offensive when they saw older, rather than younger, audiences not laughing ($M = 4.61, SD = 1.90$ vs. $M = 3.92, SD = 1.87$), pairwise $p = .047$. This effect did not emerge, however, among male participants ($M = 4.11, SD = 1.85$ vs. $M = 4.06, SD = 2.22$), pairwise $p = .89$, nor for nonlaughing audiences, both pairwise $p > .23$.

There was also a main effect for Humor Type showing that the disparaging humor was considered more offensive than the nondisparaging humor ($M = 4.96, SD = 1.68$ vs. $M = 3.20, SD = 1.72$), $F(1, 400) = 138.42, p < .001, \eta_p^2 = .26$. This effect was qualified by a two-way interaction of Comedian Sex x Humor Type, $F(1, 400) = 4.73, p = .030, \eta_p^2 = .011$. Participants who saw the nondisparaging humor rated the male comedian more offensive than his female counterpart ($M = 3.36, SD = 2.04$ vs. $M = 3.05, SD = 2.07$), pairwise $p = .024$. However, there were no Comedian Sex differences with regard to the disparaging humor ($M = 4.90, SD = 1.99$ vs. $M = 5.01, SD = 2.03$), pairwise $p = .42$.

The Comedian Sex x Humor Type two-way interaction was also moderated by higher order interactions—the first of which was a Comedian Sex x Audience Age x Audience Reaction x Humor Type four-way interaction, $F(1, 400) = 4.21, p = .041, \eta_p^2 = .01$. Once again, the effect did not follow the expected trend, in which pairwise differences would emerge as a function of Audience Reaction, all pairwise $p > .19$ (see Figure 4). Rather, the difference that drove this four-way interaction was between ratings of the female versus male comedian—the within-subject factor. Participants who watched
the nondisparaging humor and were exposed to older adults laughing regarded the male comedian’s humor to be more offensive than that of his female counterpart, pairwise $p = .012$. However, these differences were absent for participants exposed to the same audiences not laughing, pairwise $p = .11$. The effect was also absent for those exposed to laughing and nonlaughing audiences in the disparaging humor condition, both pairwise $p > .80$. The effect also failed to emerge for the different combinations of Audience Age $x$ Audience Reaction across both Humor Types, all pairwise $p > .13$. This is unexpected, based on the reasoning underlying outgroup influence. That is, one would assume that laughing older adults would signal inoffensiveness, rather than offensiveness. This result did not support any of the hypotheses.

The aforementioned four-way interaction was qualified by a Comedian Sex $x$ Participant Age Group $x$ Audience Age $x$ Audience Reaction $x$ Participant Sex $x$ Humor Type six-way interaction, $F(1, 400) = 4.01, p = .046, \eta^2_p = .01$. One pairwise comparison approached statistical significance according to the predicted pattern. Young female participants who saw the nondisparaging female comedian’s humor and were exposed to older audiences laughing regarded it as less offensive than their counterparts who saw the same audiences not laughing, pairwise $p = .057$. This trend, however, was not apparent for offensiveness ratings of the nondisparaging male comedian’s humor, pairwise $p = .14$. No other differences by Audience Reaction came close to statistical significance for this six-way interaction, all pairwise $p > .10$. This result confirms Hypothesis 2b because younger women’s offensiveness ratings were influenced by outgroup, rather than ingroup, members. However, the finding does not support Hypothesis 3 because it occurred for the nondisparaging humor—not the disparaging humor.
The aforementioned six-way interaction also yielded reliable differences according to Comedian Sex. Older male participants who saw older audiences laughing at the nondisparaging humor rated the male comedian’s humor more offensive than the female comedian’s humor, pairwise $p = .004$. This effect did not materialize, however, in the disparaging humor condition, pairwise $p = .50$, nor among older female participants or for younger participants of either sex across Audience Age, Audience Reaction, and Humor Type manipulations, all pairwise $p > .29$. This finding did not corroborate Hypothesis 5, which predicted a sex effect for disparaging humor. Similarly, the result did not support Hypothesis 7, which predicted differences by Participant Age Group would emerge only for disparaging humor. Finally, there was no confirmation for Hypothesis 6, which predicted gender matching would lead to male participants finding the male comedian’s humor less offensive than the female. If anything, the data revealed an instance in which male participants judged the male comedian’s humor to be more offensive than did female participants—a result that stands in direct opposition with Hypothesis 6.

**Stimuli Order effects.** There was an unexpected Comedian Sex x Participant Age Group x Participant Sex x Stimuli Order four-way interaction, $F(1, 400) = 4.53, p = .034$, $\eta_p^2 = .01$. Older female participants found the male comedians’ humor more offensive than that of the female comedians, but only when the female comedians’ videos were viewed first ($M = 4.66, se = .236$ vs. $M = 4.08, se = .240$), pairwise $p = .028$. This difference was not observed among older male participants ($M = 4.58, SD = 1.62$ vs. $M = 4.45, SD = 1.65$), pairwise $p = .57$, nor for either gender older participant who saw the male comedians’ videos first, both $p > .48$. 
**Individual differences: Age Group Identification (AgeID).** Just as for analyses of humor evaluation, the following effects tested Hypothesis 4, which predicted that participants’ humor offensiveness ratings would be moderated by AgeID, SDO, and PSC. Results are reported separately for each individual difference variable.

With regard to AgeID, there were three interactions involving Humor Type. The first was a two-way interaction of Humor Type x AgeID, $F(1, 400) = 6.46, p = .011, \eta^2_p = .02$. Whereas high AgeID participants found the disparaging humor more offensive than their low AgeID counterparts, $b = .15, se = .07, p = .043$, this trend was reversed—albeit statistically nonsignificant—for the nondisparaging humor, $b = -.14, se = .09, p = .11$.

There was also a three-way interaction of Participant Age Group x Audience Reaction x AgeID, $F(1, 400) = 5.05, p = .025, \eta^2_p = .01$. With regard to differences according to Audience Reaction, it was high AgeID younger participants who found the humor to be more offensive after being exposed to laughing audiences, rather than nonlaughing ones ($M_{highAgeID} = 4.70$ vs. $M_{highAgeID} = 3.84$), simple slope $p = .003$. This was not the case among low AgeID younger adults, ($M_{lowAgeID} = 4.44$ vs. $M_{lowAgeID} = 4.73$), simple slope $p = .37$. Interestingly, low AgeID older participants displayed a similar trend as the high AgeID younger participants in that laughing audiences produced higher offensiveness ratings than nonlaughing ones ($M_{lowAgeID} = 3.86$ vs. $M_{lowAgeID} = 3.34$), simple slope $p = .07$. The high AgeID older participants did not find the humor more or less offensive as a function of being exposed to laughing vs. nonlaughing audiences ($M_{highAgeID} = 3.83$ vs. $M_{highAgeID} = 3.58$), simple slope $p = .41$. Note that these effects do
not provide any support for Hypothesis 1 because laughing audiences actually produced higher offensiveness ratings than nonlaughing ones instead of the reverse, the predicted pattern (see Figure 5).

In terms of differences by AgeID, high AgeID younger participants who were exposed to nonlaughing audiences found the humor to be more offensive than did their low AgeID counterparts, $b = -.34$, $se = .12$, $p = .005$. However, there was no such difference by AgeID among younger participants exposed to laughing audiences, $b = .10$, $se = .11$, $p = .35$, nor for older participants in either condition, both simple slope $p > .43$.

The aforementioned three-way interaction was further qualified by Comedian Sex, $F(1, 400) = 8.02$, $p = .005$, $\eta_p^2 = .02$. When younger participants saw age-based humor presented with a nonlaughing audience, their offensiveness ratings varied as a function of AgeID for male comedians, $b = -.36$, $se = .14$, $p = .01$, but not for female comedians, $b = -.22$, $se = .15$, $p = .15$. The offensiveness ratings of older adults exposed to nonlaughing audiences did not vary in terms of AgeID for the male comedian, $b = .10$, $se = .12$, $p = .44$, nor the female comedian, $b = .08$, $se = .13$, $p = .54$. The same was also true for older adults exposed to laughing audiences, both simple slope $p > .25$. Because AgeID was not involved in any significant effect involving Audience Age, and Audience Reaction, there was no support for Hypothesis 4.

**Individual differences: Social Dominance Orientation (SDO).** First, there was a Humor Type x SDO two-way interaction, $F(1, 400) = 6.61$, $p = .011$, $\eta_p^2 = .02$. A statistical tendency showed that low SDO participants considered the disparaging humor more offensive than their high SDO counterparts, $b = -.14$, $se = .08$, $p = .06$, but this trend
was reversed for nondisparaging humor, $b = .16$, $se = .09$, $p = .07$. The finding that disparaging humor is more acceptable to them might be seen as consistent with high SDO individuals harboring higher levels of prejudice toward a variety of societal groups (e.g., Pratto et al., 1994).

The two-way interaction reported above was further moderated by a Humor Type x Audience Age x SDO three-way interaction, $F(1, 400) = 7.26$, $p = .007$, $\eta_p^2 = .02$. When the humor was disparaging and the audience was young, low SDO participants showed a trend to rate the humor more offensive than their high SDO counterparts, $b = -.20$, $se = .10$, $p = .037$. This is consistent with the intuition that egalitarians are more likely to take offense when a societal group is made fun of. However, when the same young audiences were shown with nondisparaging humor the trend was reversed. Here it was high SDO younger participants who rated the humor more offensive than did their low SDO counterparts, $b = .42$, $se = .14$, $p = .002$. No differences emerged by SDO for either Humor Type when older audiences were shown, both simple slope $p > .37$. This pattern provides at least some support for the notion that high SDO individuals are more likely to accept it when others put down a societal group. However, because SDO was not involved in any significant effect involving Audience Age, and Audience Reaction, results do not support Hypothesis 4.

**Individual differences: Public Self-Consciousness (PSC).** Recall that offensiveness analyses yielded a main effect for Participant Age Group. This main effect was qualified by a Participant Age Group x PSC two-way interaction, $F(1, 400) = 8.67$, $p = .003$, $\eta_p^2 = .02$. Simple slopes revealed that high PSC older participants found the
humor more offensive than their low PSC counterparts, \( b = .21, se = .08, p = .008 \).

Although not reaching statistical significance, this trend was reversed among younger participants for whom high PSC was associated with lower offensiveness ratings, \( b = -.13, se = .08, p = .12 \).

Finally, there was a Comedian Sex x Audience Age x Audience Reaction x PSC four-way interaction, \( F(1, 400) = 8.02, p = .005, \eta_p^2 = .02 \). With regard to differences by Audience Reaction, there were marginal effects for participants who were exposed to the female comedians’ humor. Low PSC participants found the female comedians’ humor more offensive after being exposed to younger adults laughing versus not laughing, simple slope \( p = .074 \). This trend was not apparent among high PSC participants in the same condition, simple slope \( p = .94 \), and was also absent for all participants exposed to older audiences, both simple slopes \( p > .45 \). Likewise, there were no reliable differences in offensiveness ratings of the male comedians, all simple slopes pairwise \( p > .14 \) (see Figure 6).

There were also reliable differences according to whether participants were low or high in PSC. When exposed to laughing younger audiences, high PSC participants regarded female comedians’ humor as more offensive than that of the female comedians, \( b = .28, se = .13, p = .031 \). This PSC effect failed to materialize, however, for the same participants’ ratings of the male comedians, \( b = .10, se = .13, p = .80 \). The effect was also absent for the male comedians when younger adults were laughing, both simple slope \( p > .23 \); as well as for both comedians when older audiences were both not laughing and laughing, all simple slopes \( p > .22 \). Even though this four-way interaction included
Audience Age and Audience Reaction—two variables necessary to test for support of Hypothesis 4—differences did not align with core predictions.

**Summary of humor offensiveness.** Analyses of participants’ judgments of offensiveness did not yield consistent support for any of the experimental hypotheses. Again, there was no evidence that laughing audiences affected participants’ offensiveness ratings. Confirmation of an outgroup influence effect, which provided the basis of Hypothesis 2b, only emerged under specific circumstances, e.g., for young females’ ratings of the female comedian’s nondisparaging humor, and even then the evidence was only marginally significant. Offensiveness ratings did not yield any evidence for the ingroup reference effect that was the basis of Hypothesis 2a. Rather, differences in offensiveness ratings consistently emerged between older and younger nonlaughing audiences, and sometimes between ratings of the male and female comedians. As a result of core predictions not being supported, analyses provided no corroboration for Hypothesis 4. In addition, because there was no evidence of men finding the disparaging humor to be less offensive than their female counterparts, Hypothesis 5 did not receive any support. Evidence concerning Hypothesis 6—the gender matching by comedian hypothesis—did not only fail to yield support, but even contradicted it. Findings for judged offensiveness did not coincide with Hypothesis 7—the prediction that younger participants would find the disparaging humor less offensive than older participants.

**Humor political correctness (PCness).** Just as with the evaluation and offensiveness measures measure, participants’ ratings of the age-based humor’s political correctness did not support Hypothesis 1, which predicted that a laughing audience would
be associated with higher PCness ratings than would nonlaughing audiences, \( F(1, 393) = 0.01, p = .94, \eta_p^2 < .01 \). Also similar to the other dependent measures, participants rated the nondisparaging humor more PC than those who saw the disparagement humor (\( M = 4.04, SD = 1.53 \) vs. \( M = 2.71, SD = 1.50 \)), \( F(1, 393) = 100.11, p < .001, \eta_p^2 = .20 \).

Hypothesis 5 predicted that males would find the disparagement humor to be more PC than their female counterparts. This hypothesis was not supported for PCness as male participants rated both humor types—disparaging and nondisparaging—as more PC than did female Ps (\( M = 3.52, SD = 1.53 \) vs. \( M = 3.23, SD = 1.47 \)), \( F(1, 393) = 5.16, p = .024, \eta_p^2 = .01 \).

The aforementioned main effect for Participant Sex was qualified by Audience Reaction, \( F(1, 393) = 8.99, p = .003, \eta_p^2 = .02 \). Male participants who saw audiences not laughing rated the humor more PC than did female participants in the same condition (\( M = 3.72, SD = 1.58 \) vs. \( M = 3.03, SD = 1.42 \), pairwise \( p < .001 \); but the parallel effect was absent when the same audiences were laughing (\( M = 3.33, SD = 1.49 \) vs. \( M = 3.43, SD = 1.64 \), pairwise \( p = .60 \). Although this effect was not predicted, it demonstrates that women, compared to men, seem to be particularly sensitive to others’ cues that the humor is inappropriate.

A main effect for Comedian Sex revealed that female comedians were rated more PC than the male comedians (\( M = 3.50, SD = 1.79 \) vs. \( M = 3.25, SD = 1.81 \)), \( F(1, 393) = 8.41, p = .004, \eta_p^2 = .02 \). This main effect was qualified by a four-way interaction involving Comedian Sex, Audience Age, Audience Reaction and Humor Type, \( F(1, 393) = 5.10, p = .025, \eta_p^2 = .01 \). Although the interaction included the factors necessary to test
for differential influences based on ingroup/outgroup reactions, it did not lend support for hypotheses along those lines (i.e., Hypotheses 2a-2b). As before, the difference in this interaction was not based on Audience Reaction, all pairwise $p > .27$ (see Figure 7). Rather, pairwise comparisons yielded differences according to Comedian Sex. When exposed to older audiences laughing, participants rated the nondisparaging female comedian’s humor more PC than that of her male counterpart ($M = 4.33, SD = 2.08$ vs. $M = 3.59, SD = 2.12$), pairwise $p = .005$. This difference was not apparent, however, for the disparaging humor condition ($M = 2.66, SD = 1.83$ vs. $M = 2.66, SD = 1.85$), pairwise $p = .99$, nor for either humor type when older audiences were shown not laughing, both pairwise $p > .25$.

**Stimuli Order effects.** There was an unexpected seven-way interaction of Comedian Sex x Participant Age Group x Audience Age x Audience Reaction x Humor Type x Participant Sex x Stimuli Order, $F(1, 393) = 5.05$, $p = .025$, $\eta^2_p = .01$. However, these effects are based on a cell comparisons with only $n = 3$, and therefore has questionable reliability.\(^9\) Because of its complexity, this effect is not interpretable and is therefore not reported nor discussed further.

**Individual differences: Age Group Identification (AgeID).** The following effects tested Hypothesis 4, which predicted participants’ humor PCness ratings would be moderated by AgeID, SDO, and PSC. As before, results are reported separately for each individual difference variable. Hypothesis 4 was not supported for SDO, AgeID, or PSC.

\(^9\) An analysis that omitted a test of the seven-way interaction reached essentially the same conclusions with regard to other effects reported.
The only reliable finding for AgeID was a main effect showing that low AgeID participants found the humor to be more PC than did high AgeID participants, $F(1, 393) = 5.49, p = .020, \eta_p^2 = .01$. Participants Age Group did not qualify this effect, $F(1, 393) = 1.12, p = .54, \eta_p^2 < .01$.

**Individual differences: Social Dominance Orientation (SDO).** With regard to PCness, high SDO participants found the humor more PC than did their low SDO counterparts, $F(1, 393) = 5.78, p = .017, \eta_p^2 = .01$. This main effect is broadly consistent with the notion that derogation of low-status groups is more acceptable among high SDO individuals. Unlike ratings of offensiveness, this effect was not qualified by Humor Type, $F(1, 393) = 0.06, p = .96, \eta_p^2 < .01$.

**Individual differences: Public Self-Consciousness (PSC).** Recall that the analysis of PCness yielded a main effect for Humor Type (reported above). This main effect was qualified by a two-way interaction of Humor Type x PSC, $F(1, 393) = 4.33, p = .038, \eta_p^2 = .01$. High PSC participants found the disparaging humor to be less PC than did their low PSC counterparts, $b = -.14, se = .07, p = .032$. This effect, however, was absent for participants in the nondisparaging condition, $b = .10, se = .08, p = .19$. No other effects involving PSC reached statistical significance.

**Summary of humor PCness.** Almost no meaningful effects were observed for PCness, compared to the dependent measures reported above. Support for Hypothesis 1, which posited laughing audiences would be associated with higher PCness ratings, remained elusive. Similarly, Hypotheses 2a-3 did not receive any support. In addition, the three individual difference variables were not involved in any relevant effects, thus
rendering no confirmation for Hypothesis 4. In a similar fashion, Hypothesis 5—the prediction that males would find the disparaging humor more PC than females—was not supported. Perhaps not surprisingly, the gender-matching Hypothesis 6 was also not corroborated; but the observed effects curiously trended in the direction opposite of those that were anticipated. Finally, Hypothesis 7, which predicted an interaction of Participant Age Group x Humor Type, also failed to receive any support.

**Humor repeatability.** Analyses of main effects revealed no support for the prediction that participants who saw laughing audiences would deem the humor more repeatable than their counterparts who saw the same audiences not laughing (Hypothesis 1), $F(1, 401) = 0.41, p = .53, \eta_p^2 < .01$. However, and consistent with the other dependent measures, there was a main effect for Humor Type in that participants in the nondisparaging humor condition considered the humor more repeatable than those who rated the disparaging humor ($M = 2.88, SD = 1.75$ vs. $M = 2.18, SD = 1.70$), $F(1, 401) = 21.97, p < .001, \eta_p^2 = .05$.

A main effect for Comedian Sex revealed that the female comedians’ humor was deemed more repeatable than that of the male comedians, $F(1, 401) = 8.02, p = .005, \eta_p^2 = .02$. There was also a Comedian Sex x Audience Age x Humor Type x Participant Sex four-way interaction, $F(1, 401) = 8.27, p = .004, \eta_p^2 = .02$, which allowed a test for Hypothesis 6—the gender matching hypothesis. Counter to the prediction, however, male participants exposed to younger audiences actually rated the female comedian’s disparagement humor more repeatable than did female participants ($M = 2.42, SD = 1.74$ vs. $M = 1.73, SD = 2.12$), pairwise $p = .025$. This difference failed to emerge when the
humor was nondisparaging ($M = 2.63, SD = 1.98$ vs. $M = 2.91, SD = 1.94$), pairwise $p = .45$; when audiences were older, both pairwise $p > .46$; and for all ratings of the male comedians, all pairwise $p > .13$. This finding is diametrically opposed to Hypothesis 6.

The aforementioned main effect for Comedian Sex was also qualified by a Comedian Sex x Participant Age Group two-way interaction, $F(1, 401) = 6.85, p = .009$, $\eta^2_p = .02$. Younger participants rated the female comedians’ humor to be more repeatable than the male comedians’ humor ($M = 2.63, SD = 2.00$ vs. $M = 2.19, SD = 1.96$), pairwise $p < .001$. This was not the case among older participants ($M = 2.67, SD = 1.94$ vs. $M = 2.66, SD = 1.51$), pairwise $p = .88$. Although not addressing any particular hypothesis, this finding is consistent with the previously reported effects for Offensiveness and PCness. Just as the disparaging female comedian’s humor was considered less offensive than that of the male comedians, and as the female comedians’ humor was generally deemed more PC than the males, their humor was also thought to be more repeatable.

There was also a four-way interaction of Comedian Sex x Participant Age Group x Audience Reaction x Humor Type, $F(1, 401) = 7.14, p = .008$, $\eta^2_p = .02$. Pairwise comparisons by Audience Reaction did not yield significant effects, all pairwise $p > .22$ (see Figure 8).

The effect reported above was actually driven by differences based on Comedian Sex. Younger participants exposed to laughing audiences rated the male comedian’s nondisparaging humor more repeatable than that of his female counterpart ($M = 3.06, SD = 1.99$ vs. $M = 2.35, SD = 1.96$), pairwise $p = .001$. This pattern failed to emerge when younger participants saw the same audiences not laughing ($M = 2.23, SD = 1.87$ vs. $M =$
2.50, \( SD = 1.90 \), pairwise \( p = .46 \). However, the interaction also revealed a different trend: Younger participants exposed to nonlaughing audiences rated the female comedian’s disparagement humor more repeatable than that of the disparaging male comedian, pairwise \( p = .026 \). This was not true for true for participants who saw the same audiences laughing, pairwise \( p = .12 \), nor for older participants in the same conditions, both pairwise \( p > .05 \). Although the latter trend seems to provide more support for notion that the female comedian’s disparaging humor was more socially acceptable, the former pattern suggests this is not the case when it comes to nondisparaging humor.

There was an effect that included both Participant Sex and Comedian Sex, which were the two key variables needed to test for gender matching. Contrary to the predicted pattern, however, the Comedian Sex x Audience Age x Humor Type x Participant Sex four-way interaction provided partial evidence that male participants actually favored a female comedian more than female participants did. This interaction, therefore, did not provide any support for Hypothesis 6.

**Stimuli Order effects.** There were three distinct groups of order effects for humor repeatability, each including two interactions. First, there was an Audience Age x Audience Reaction x Stimuli Order three-way interaction, \( F(1, 401) = 6.34, p = .012, \eta_p^2 = .02 \). Participants who were exposed to younger audiences laughing found the humor more repeatable than their counterparts who saw the same audiences not laughing, but only when the female comedians’ humor were presented first, pairwise \( p = .030 \). This effect was absent when the male comedians’ humor was presented first, pairwise \( p = .51 \); and for both orders when the audience featured older adults, both pairwise \( p > .29 \).
However, this three-way interaction was qualified by a Participant Age Group x Audience Age x Audience Reaction x Stimuli Order four-way interaction, $F(1, 401) = 8.28, p = .004, \eta^2_p = .02$. This effect evidenced the aforementioned effect for only younger participants, pairwise $p = .012$, but not older ones, pairwise $p = .67$. Oddly, this four-way interaction also showed that younger participants exposed to older audiences laughing rated the humor more repeatable than those who saw the same audiences not laughing, but only when the male comedians’ humor was presented first, pairwise $p = .024$—an effect that was again absent among older participants in the same conditions, pairwise $p = .41$.

The repeatability analysis also produced a three-way interaction of Comedian Sex x Humor Type x Stimuli Order, $F(1, 401) = 10.89, p = .001, \eta^2_p = .03$. This interaction first showed that the female comedian’s disparagement humor was more repeatable than the male comedian’s disparagement humor, but only when the male comedian’s video was presented first, pairwise $p < .001$. The effect failed to emerge when the female comedian’s humor was shown first, pairwise $p = .55$. The interaction also yielded an effect for the nondisparaging humor. Within this condition, the female comedian’s humor was rated more repeatable than that of the male comedian, but only when the female comedian’s humor was presented first, pairwise $p = .006$, and not when the male comedian’s humor was first, pairwise $p = .44$. These effects, however, were moderated by a Participant Sex x Comedian Sex x Humor Type x Stimuli Order four-way interaction, $F(1, 401) = 4.95, p = .027, \eta^2_p = .01$. Evidently, the former effect regarding the disparaging humor generalized to both male and female participants, both pairwise $p <$
0.013; but the latter effect involving the nondisparaging humor emerged only for male participants, pairwise $p = .001$, and not for females, pairwise $p = .58$.

The analyses also revealed an unexpected Comedian Sex x Participant Age Group x Audience Age x Audience Reaction x Participant Sex x Stimuli Order six-way interaction, $F(1, 401) = 6.79, p = .010, \eta_p^2 = .02$. Younger male participants who were exposed to older audiences laughing rated the male comedians’ humor more repeatable than their female counterparts, but only when the male comedians’ humor was presented first, pairwise $p = .028$. This order effect was nonsignificant, trending in the opposite direction when the female comedians’ humor was first, pairwise $p = .08$, as well as for younger female participants in the same conditions, both pairwise $p > .52$. This effect was also moderated by a seventh factor—Humor Type, $F(1, 401) = 11.28, p = .001, \eta_p^2 = .03$—but these effects are based on a cell comparisons with only $n = 3$, and therefore has questionable reliability.

**Individual differences: Age Group Identification (AgeID).** As before, the following effects tested Hypothesis 4—the prediction that humor repeatability ratings would be moderated by AgeID, SDO, and PSC. Results are reported separately for each continuous predictor. With regard to the repeatability dependent measure, no reliable effect emerged as a function of AgeID.

**Individual differences: Social Dominance Orientation (SDO).** There was a main effect for SDO such that high SDO participants rated the humor more repeatable than their low SDO counterparts, $F(1, 401) = 8.28, p = .004, \eta_p^2 = .02$. Again, this pattern is consistent with the notion that high SDO individuals find outgroup disparagement more
acceptable than their low SDO counterparts (e.g., Pratto et al., 1994).

Analyses also yielded a three-way interaction of Comedian Sex x Audience Reaction x SDO, $F(1, 401) = 5.83, p = .016, \eta_p^2 = .01$. In terms of differences by Audience Reaction, there was a reliable pattern for high SDO participants to find the male comedian’s humor more repeatable after having been exposed to laughing audiences rather than the same audiences not laughing ($M_{\text{highSDO}} = 3.09$ vs. $M_{\text{highSDO}} = 2.50$), simple slope $p = .017$. In this sense, the fact that laughing audiences brought about higher repeatability ratings provides at least some support for Hypothesis 1. The difference by Audience Reaction did not occur, however, when the same participants considered the repeatability of the female comedian’s humor ($M_{\text{highSDO}} = 2.78$ vs. $M_{\text{highSDO}} = 2.66$), simple slope $p = .63$. Reliable differences by Audience Reaction also failed to emerge for either comedian among low SDO participants, both simple slopes $p > .19$.

With regard to differences across low and high SDO participants, exposure to laughing audiences led high SDO participants to rate both comedians’ humor more repeatable than their low SDO counterparts, female comedian $b = .25, se = .09, p = .008$, male comedian $b = .29, se = .10, p = .003$. However, after exposure to a nonlaughing audience, the effect only emerged for ratings of the female comedians’ humor, $b = .21, se = .10, p = .029$, and not the male comedians’ humor, $b = -.06, se = .10, p = .51$.

The above three-way interaction was moderated further by Audience Age, resulting in a Comedian Sex x Audience Age x Audience Reaction x SDO four-way interaction, $F(1, 401) = 9.52, p = .002, \eta_p^2 = .02$. Again, a reliable effect emerged as a function of Audience Reaction. High SDO participants found the male comedians’ humor
to be more repeatable after being exposed to younger audiences laughing rather than not laughing \((M_{\text{high SDO}} = 3.20 \text{ vs. } M_{\text{high SDO}} = 2.46)\), simple slope \(p = .01\). However, similar effects failed to emerge by Audience Age and Audience Reaction for high SDO participants’ repeatability ratings of the female comedians’ humor, both simple slope \(p > .57\), as well as for low SDO participants’ ratings across both comedians, all simple slopes \(p > .32\) (see Figure 9).

SDO effects emerged for repeatability ratings of both comedians’ humor when participants were exposed to younger audiences not laughing, female comedian \(b = .22, se = .12, p = .06\), male comedian \(b = .36, se = .12, p = .003\). With regard to older audiences, however, only repeatability ratings of the female comedians’ humor was predicted by SDO, female comedian \(b = .35, se = .11, p = .002\), male comedian \(b = .13, se = .11, p = .26\). With laughing audiences, the SDO trend was observed for ratings of the female comedians’ humor despite audience age, both simple slope \(p < .02\); but no reliable differences of this kind emerged for ratings of the male comedians’ humor, both simple slope \(p > .75\).

There was also a Comedian Sex x Audience Age x Humor Type x SDO four-way interaction, \(F(1, 401) = 6.45, p = .011, \eta^2_p = .02\). This effect showed that the positive association between SDO and repeatability ratings of the disparagement humor occurred for both videos when exposed to nonlaughing audiences, female comedian \(b = .33, se = .11, p = .002\), male comedian \(b = .28, se = .11, p = .01\). When the same audiences were laughing, the parallel pattern materialized only for the female comedian, female comedian \(b = .26, se = .12, p = .03\), but not the male comedian \(b = .01, se = .12, p = .95\).
With regard to the nondisparaging condition, the effect was reliable despite differential audience reactions for the female comedian, both simple slope $p < .04$; but failed to reach statistical significance for ratings of the male comedian’s humor, both simple slope $p > .08$.

**Individual differences: Public Self-Consciousness (PSC).** Rather unexpectedly, high PSC participants—those who were most aware of how they would be viewed by others—found the humor to be more repeatable than those with low PSC, $F(1, 401) = 4.55, p = .034, \eta^2_p = .01$. Besides this main effect, there was a Comedian Sex x Participant Age Group x Audience Age x Audience Reaction x PSC five-way interaction, $F(1, 401) = 10.07, p = .002, \eta^2_p = .02$. No reliable pairwise differences emerged as a function of Audience Reaction, the variable of central interest, all simple slopes $p > .17$.

The aforementioned five-way interaction was primarily derived from differences according to PSC. High PSC younger participants who were exposed to laughing younger audiences rated the male comedian’s humor more repeatable than their low PSC counterparts, $b = .31, se = .16, p = .047$. The effect was not reliable for all other combinations of Comedian Sex, Audience Age, and Audience Reaction among younger participants, all pairwise $p > .06$. Note that this interaction provides partial support for Hypothesis 4, which predicted continuous predictor moderation of the central effect.

The five-way interaction also yielded a marginally significant simple slope for older participants. High PSC older adults who were exposed to older audiences not laughing rated female comedians’ humor more repeatable than did their low PSC counterparts, $b = .26, se = .14, p = .059$. However, the trend was less evident for the same
participants ratings of the male comedians, $b = .24$, $se = .14$, $p = .09$; as well as for all other combinations of Comedian Sex, Audience Age, and Audience Reaction among older participants, all simple slopes $p > .07$.

**Summary of humor repeatability.**Unlike the previous dependent measures that did not reveal any evidence in support of Hypothesis 1, humor repeatability revealed at least some support, albeit minimal. Besides the order effects, analyses of humor repeatability did not yield any interactions by Audience Reaction that also included Participant Age Group and Audience Age. As previously noted, the inclusion of these three variables was necessary to test Hypotheses 2a-3. As no significant interactions emerged, these hypotheses were not supported. The same was also true with regard to the predicted Participant Sex x Humor Type interaction (Hypothesis 5), and the predicted two-way interaction, Participant Age Group x Humor Type (Hypothesis 7). There did seem to be partial confirmation of Hypothesis 4; however, differences did not emerge by Audience Reaction, thus failing to produce differences according to the anticipated pattern. There was also an opportunity to test the gender matching hypothesis because Participant Sex and Comedian Sex were included in the same interaction. However, the differences that emerged reflected cross-gender preferences, thus contradicting Hypothesis 6.

**Audience Recall Analyses**

The audience recall variables were analyzed in two different ways in order to determine the extent to which (a) participants recalled the audiences being older or younger, laughing or not laughing across conditions, and (b) whether hypothesized effects would emerge for those individuals who were more or less attentive to the
Due to nonresponse for one or both audience recall checks, 20 participants—10 older and 10 younger—were dropped from the following analysis. This resulted in an analysis sample of 248 older adults and 258 younger adults.

**Participant recall of audience manipulations.** For the exclusive purposes of gauging whether participants were able to accurately recall the age of the audiences to which they were exposed, the seven-point audience age scale was divided into theoretically meaningful groups.

**Audience age recall.** For the purposes of coding, the first three points on the audience age recall scale—20s, 30s, and 40s—were considered “younger adults” because all of the younger adult audiences used in the study seemed to be within this age range. Therefore, participants who were exposed to the younger audiences were given credit for correct audience age recall if they chose any of these points on the scale. Participants who were exposed to younger audiences but did not select the first three points of the seven-point audience age recall scale were not given credit for correct audience age recall.

Likewise, participants who were exposed to older audiences were given credit for correct audience age recall if they chose one of the last three points on the audience age scale—60s, 70s, and 80s—because all of the older adult audiences used in the study seemed to be within this age range. Participants who were exposed to older audiences but then did not select one of the last three points of the audience age recall scale were not given credit.

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Note that the third manipulation awareness check, asked after participants had completed all videos, inquired as to how offensive participants perceived the humor to be. However, this manipulation check variable was largely redundant with participants’ ratings of humor offensiveness, which occurred immediately after each video. Because of this redundancy, results for this manipulation awareness check are not reported here.
credit for correct audience age recall. Note that point four on the scale—the scale midpoint of four, indicating audiences in their 50s—was considered an incorrect response for all participants because 50-somethings are members of neither younger nor older adults’ age groupings.

Some 52.4% of participants in the disparaging humor condition correctly recalled approximate audience age from the female comedian’s video, and 50.1% recalled the same for the disparaging male’s video. Likewise, 50.1% of participants in the nondisparaging humor condition correctly recalled approximate audience age in the female comedian’s video, whereas it was 49.5% for the nondisparaging male comedian. A total of 41.2% of participants correctly recalled the approximate age group of the audiences shown in both videos to which they were exposed.

**Audience reaction recall.** The audience reaction recall variable was transformed and analyzed was analyzed in a manner similar to the audience age recall variable. Similar to the audience age recall variable, 47.8% of participants in the disparaging humor condition correctly indicated the audience’s reaction, but slightly more, 49.9%, recalled this correctly for the disparaging male. In addition, 52.1% correctly recalled the audience’s reaction in the nondisparaging female comedian’s video, and 57.2% recalled the same from the nondisparaging male comedian’s video. A total of 36.3% of participants correctly recalled the reactions of the audiences shown in both videos to which they were exposed.

**Audience recall as a moderator of experimental effects.** As was the case with the main analyses, the core design for the audience recall measures was a 2 (Audience Age) x 2 (Audience Reaction) x 2 (Participant Age Group) x 2 (Participant Sex) x 2
(Comedian Sex) mixed-model design, with repeated measurement on the last factor. I also introduced Audience Age Recall and Audience Reaction Recall as continuous (non-recoded) predictors in the model, as well as their interactions with all experimental factors. This was done using a multilevel model to generate what is effectively a repeated-measures regression analysis. This was necessary because, within each participant, a particular recall variable only pertained to one of the two videos that participants had seen, i.e. to one of the two responses that participants had provided. Put differently, each of participants’ responses had to be predicted by a different set of recall variable. However, processing limitations of the statistical software did not allow very large models to converge. Therefore, I decided not to include Stimuli Order as well as three individual difference variables (Social Dominance Orientation, Age Identification, Public Self-Consciousness) as predictors in the model. For the same reason, the experimental factor Humor Type was not investigated as a factor in the design. Rather, the data from participants who saw disparaging humor was analyzed separately from—albeit in parallel to—those who watched the nondisparaging humor. The results from each Humor Type analysis are reported in turn.

It is important to note that because of the need to conduct a repeated-measures regression analysis and the omission of certain predictor variables, the present models are not directly comparable to the original analyses. Thus, effects from these models are not exhaustively reported. Rather, I focus on only those effects that either (a) illustrates a theoretically relevant pattern that was not evident in the main analyses or (b) include relevant pairings of focal experimental factors and recall variables, e.g., Audience Age and Audience Age Recall or Audience Reaction and Audience Reaction Recall.
Humor evaluation: Disparaging humor. Regarding Audience Age Recall, the older participants thought the audience to be, the more positively they evaluated the humor, $F(1, 355.97) = 4.32, p = .038$. In a similar fashion, and with regard to Audience Reaction Recall, the more they recalled audience laughter as opposed to nonlaughter, the more positively they evaluated the humor, $F(1, 335.35) = 26.34, p = .01$.

Of particular note was the emergence of a theoretically relevant three-way interaction that was absent in the main analyses: Audience Age x Audience Reaction x Comedian Sex, $F(1, 236.56) = 4.98, p = .027$. Pairwise comparisons show that participants evaluated the male comedian’s humor more favorably after exposure to younger audiences not laughing rather than laughing, pairwise $p = .029$. This was not the case, however, for evaluations of the female comedian’s humor, pairwise $p = .86$, nor for those who were exposed to older audiences, both pairwise $p > .23$. Although this effect was not observed in the main analyses, the original Audience Age x Audience Reaction x Comedian Sex x Humor Type four-way effect trended in the same direction, $F(1, 401) = 2.59, p = .11$.

The aforementioned three-way interaction was also qualified by Participant Age Group and Audience Reaction Recall to yield a five-way interaction, $F(1, 272.02) = 3.78, p = .053$. Here the difference emerged for the female comedian’s humor, and among participants who recalled more laughter than nonlaughter. Younger participants who were exposed to laughing younger audiences evaluated the humor more positively than those exposed to the same audiences not laughing, but only when they recalled previously seeing audiences laughing, $b = 1.25, se = .57, p = .028$. The effect failed to emerge when participants were exposed to older audiences laughing vs. not laughing, $b = -.72, se = .64$,.
*p* = .26.

The evaluation analyses of the disparaging humor also produced an independent five-way interaction of Audience Age x Audience Reaction x Comedian Sex x Audience Age Recall x Audience Reaction Recall, *F*(1, 284.01) = 3.81, *p* = .052. Again, the female comedian’s humor was evaluated more favorably among participants who (a) were exposed to younger adults laughing rather than not laughing, (b) recalled laughing audiences, and (c) recalled younger audiences, *b* = 1.22, *se* = .63, *p* = .055. This effect did not persist when participants were exposed to laughing vs. nonlaughing older audiences, *b* = -.56, *se* = .61, *p* = .36, nor when the audiences were thought to be older, pairwise *p* = .31.

**Humor evaluation: Nondisparaging humor.** Diverging from the disparaging humor analyses, analyses failed to produce a main effect for Audience Age Recall, *F*(1, 374.99) = 0.32, *p* = .86. However, there was a reliable pattern for Audience Reaction Recall, in which participants provided more positive humor evaluations when they recalled the audiences having been older, rather than younger, *F*(1, 373.19) = 40.74, *p* < .001.

Besides the main effect for Audience Age Recall, there was a four-way interaction of Audience Reaction x Participant Sex x Audience Age Recall x Audience Reaction Recall, *F*(1, 371.40) = 4.59, *p* = .033. Female participants who were exposed to laughing audiences, but recalled seeing older audiences not laughing, evaluated the humor less favorably than their counterparts who saw the same audiences not laughing, *b* = -.91, *se* = .51, *p* = .08. Male participants also evaluated the humor less positively after exposure to laughing vs. nonlaughing audiences when they recalled older audiences not
laughing, $b = -1.45, se = .43, p = .001$; but unlike the women, the pattern failed to emerge when they recalled older audiences not laughing, $b = -1.15, se = .37, p = .69$. Rather, men’s tendency to evaluate the nondisparaging humor as a function of laughter vs. nonlaughter persisted when they recalled younger audiences laughing, $b = -1.60, se = .28, p = .033$. The evaluations of women, however, did not vary as a function of Audience Reaction when they recalled younger audiences laughing, $b = .38, se = .35, p = .29$.

Evaluations of the nondisparaging humor were also predicted by an Audience Age x Audience Reaction x Participant Sex x Participant Age Group x Audience Age Recall x Audience Reaction Recall five-way interaction, $F(1, 371.40) = 4.13, p = .043$. In this instance, simple slopes yielded only one reliable effect: Younger male participants evaluated the nondisparaging age-based humor more positively after being exposed to older adults not laughing rather than laughing, but only when they recalled the audiences having been older, $b = 1.41, se = .70, p = .044$. The effect was absent when the young men recalled younger audiences, $b = .35, se = .47, p = .45$; as well as when audiences were younger, all simple slope $p > .31$.

**Humor offensiveness: Disparaging humor.** Just as with the evaluation measures pertaining to the disparaging humor, offensiveness analyses produced both of the main effects of interest. Participants found the humor to be more offensive to the extent that they recalled younger audiences, $F(1, 349.69) = 2.99, p = .085$. They also found it to be offensive to the extent that they recalled audiences not laughing, $F(1, 343.87) = 12.20, p = .001$.

Of particular theoretical interest, offensiveness ratings of the disparaging humor produced an Audience Age x Audience Reaction x Participant Age Group three-way
interaction, $F(1, 304.51) = 7.06, p = .008$. This same effect was also observed in the main analyses. However, and unlike the main analyses, the pattern followed the anticipated pattern in the present model. Specifically, younger participants who were exposed to nonlaughing older audiences rated the humor to be more offensive than those who saw the same audiences laughing, pairwise $p = .006$. This pattern failed to emerge when the audiences were younger, pairwise $p = .27$, and for all older participants regardless of Audience Reaction, both pairwise $p > .43$.

The aforementioned three-way interaction was qualified by Comedian Sex, thus yielding a four-way interaction of Audience Age x Audience Reaction x Participant Age Group x Comedian Sex, $F(1, 241.51) = 7.73, p = .006$. Younger participants’ tendency to find the disparaging humor more offensive after exposure to nonlaughing vs. laughing audiences occurred only with regard to the female comedian’s humor, pairwise $p = .003$. The effect was absent for the male comedian’s humor, pairwise $p = .23$.

There was also separate three-way interaction of Audience Age x Participant Sex x Audience Age Recall, $F(1, 349.69) = 4.56, p = .033$. Here, male participants found the disparaging humor to be more offensive after they were exposed to older audiences but recalled younger ones, $b = 1.10, se = .41, p = .008$. The difference failed to emerge when the men recalled older audiences, $b = -.15, se = .47, p = .076$, as well as for females exposed to either audience, both simple slope $p > .40$.

The three-way interaction was qualified by three more factors, thus generating a six-way interaction of Audience Age x Audience Reaction x Participant Sex x Comedian Sex x Audience Age Recall x Audience Reaction Recall, $F(1, 295.50) = 4.33, p = .038$. In this case, however, it was female participants who found the disparaging humor to be
more offensive after exposure to younger adults not laughing and when they recalled older audiences laughing, $b = 1.64$, $se = .77$, $p = .033$. This effect was nonsignificant with regard to older audiences’ laughter vs. nonlaughter, $b = .48$, $se = 1.76$, $p = .79$.

Offensiveness analyses for the disparaging humor also produced two five-way interactions, the first of which was Audience Reaction $\times$ Participant Age Group $\times$ Participant Sex $\times$ Comedian Sex $\times$ Audience Reaction Recall, $F(1, 280.27) = 7.27$, $p = .007$. Younger female participants who recalled audience laughter found the female comedian’s humor more offensive after being exposed to nonlaughing audiences rather than laughing ones, $b = 1.71$, $se = .58$, $p = .003$. Offensiveness ratings remained unaffected for the male comedian’s humor, $b = .54$, $se = .74$, $p = .47$, as well as when older participants were exposed to both comedians’ humor featuring laughing vs. nonlaughing audiences, both simple slope $p > .34$.

The second five-way effect was an interaction of Audience Reaction $\times$ Participant Age Group $\times$ Participant Sex $\times$ Audience Age Recall $\times$ Audience Reaction Recall, $F(1, 333.57) = 4.44$, $p = .036$. Again, younger female participants who recalled audience laughter found the female comedian’s humor to be more offensive after exposure to audience nonlaughter compared to laughter, but here it was only when the women also recalled older audiences, $b = 1.63$, $se = .61$, $p = .014$. The effect failed to emerge for younger male participants under the same conditions, $b = .66$, $se = .74$, $p = .37$.

**Humor offensiveness: Nondisparaging humor.** Similar to evaluations of the nondisparaging humor, there was no main effect for Audience Age Recall, $F(1, 372.61) = 0.19$, $p = .67$. The offensiveness measure yielded only the main effect for Audience Reaction Recall, $F(1, 465.61) = 4.66$, $p = .032$. In this case, recalling nonlaughing
audiences was associated with higher offensiveness ratings.

The first theoretically-relevant interaction for offensiveness ratings of the nondisparaging humor was a three-way interaction of Audience Reaction x Comedian Sex x Audience Reaction Recall, $F(1, 320.62) = 7.40, p = .007$. Of the participants who recalled nonlaughing audiences, those who were exposed to laughing audiences found the female comedian’s nondisparaging humor to be less offensive than those exposed to nonlaughing audiences, $b = -.66, se = .35, p = .058$. There was no such effect for the male comedian’s humor, $b = .34, se = .34, p = .31$; nor for any participants who recalled laughing audiences, both simple slope $p > .30$.

An independent four-way interaction of Audience Age x Participant Age Group x Comedian Sex x Audience Age Recall also emerged, $F(1, 309.68) = 4.13, p = .043$. Younger participants who were exposed to older audiences and also recalled older audiences found the humor to be less offensive than did their counterparts who were exposed to younger audiences, $b = -.80, se = .46, p = .069$. This pattern did not resonate with older participants whatsoever, $b = .26, se = .50, p = .59$; nor for any participants who recalled younger audiences, all simple slope $p > .15$.

A separate six-way interaction of Audience Reaction x Participant Age Group x Participant Sex x Comedian Sex x Audience Age Recall x Audience Reaction Recall revealed a different pattern, $F(1, 311.19) = 5.10, p = .025$. In this case, younger male participants found the nondisparaging male comedian’s humor to be more offensive after exposure to nonlaughing audiences rather than laughing ones, but only among those who recalled older audiences laughing, $b = 1.62, se = .71, p = .023$. Older participants who also recalled older audiences laughing did not differentiate their offensiveness ratings as a
function of audience laughter, $b = -.59$, $se = 1.08$, $p = .59$.

**Humor PCness: Disparaging humor.** Significant main effects emerged for both Audience Reaction Recall and Audience Age Recall. Coinciding with prior results, recalling audiences to be older was associated with increased humor PCness, $F(1, 329.58) = 6.13$, $p = .014$. Likewise, recalling audiences to have been laughing was linked to higher PCness ratings, $F(1, 354.83) = 3.56$, $p = .06$.

Of particular interest to the present study, analyses revealed a four-way interaction of Audience Age x Audience Reaction x Participant Age Group x Comedian Sex, $F(1, 241.51) = 8.57$, $p = .004$. Younger participants’ found the disparaging humor to be more PC after exposure to laughing vs. nonlaughing audiences occurred only with regard to the female comedian’s humor, pairwise $p = .009$. The effect was absent for the male comedian’s humor, pairwise $p = .73$. This effect failed to emerge in the Main Analyses five-way interaction of Audience Age x Audience Reaction x Participant Age Group x Comedian Sex x Humor Type.

Analyses of the disparaging humor PCness yielded a five-way interaction of Audience Age x Audience Reaction x Participant Age Group x Participant Sex x Audience Reaction Recall, $F(1, 329.58) = 4.91$, $p = .027$. Younger male participants found the humor to be more PC when exposed to younger audiences not laughing rather than laughing, but only among those who recalled nonlaughing audiences, $b = 1.74$, $se = .78$, $p = .026$. The same pattern failed to emerge for those exposed to older adults’ differential reactions, $b = .61$, $se = .56$, $p = .27$. However, there was some evidence suggesting that older male participants who saw younger audiences not laughing, but recalled audiences laughing, actually rated the humor more PC than those who saw the
audiences laughing, \( b = 1.13, se = .62, p = .07 \). The effect did not generalize to older men who were exposed to ingroup older audiences either laughing or not laughing, \( b = .42, se = .50, p = .40 \).

There was also an Audience Age x Audience Age Group x Participant Sex x Comedian Sex x Audience Age Recall five-way interaction, \( F(1, 221.22) = 4.15, p = .043 \). Here the only significant simple effect emerged as a function of Participant Age Group. Younger female participants who were exposed to older audiences found the disparaging female comedian’s humor to be more PC than older females, but only among those who recalled seeing younger audiences, \( b = 1.13, se = .55, p = .042 \). The effect failed to emerge when exposed to younger audiences, \( b = .65, se = .63, p = .28 \), and for all other pairwise comparisons of Participant Age Group, all simple slope \( p > .14 \).

Finally, PCness analyses produced an Audience Age x Participant Age Group x Comedian Sex x Audience Age Recall x Audience Reaction Recall five-way interaction, \( F(1, 284.20) = 4.15, p = .043 \). Older participants who were exposed to older audiences rated the female comedian’s disparagement humor more PC than those who were exposed to younger audiences, but only among those who recalled younger audiences not laughing, \( b = 1.13, se = .55, p = .042 \). This effect did not reach statistical significance among younger participants in the same conditions, \( b = -.46, se = .60, p = .044 \).

**Humor PCness: Nondisparaging humor.** With regard to the PCness analyses for the nondisparaging humor, there was no main effect for Audience Reaction Recall, \( F(1, 329.58) = 2.03, p = .16 \). There was, however, the customary main effect for Audience Age Recall, \( F(1, 354.83) = 8.89, p = .003 \). The older the recalled audience was, the more participants tended to rate it PC.
Analyses also yielded an Audience Age x Audience Reaction x Participant Sex x Audience Reaction Recall four-way interaction, $F(1, 370.55) = 5.37, p = .021$. Male participants who were exposed to older audiences not laughing, but later recalled audiences laughing, rated the humor more PC than their male counterparts who saw the same audiences laughing, $b = .89$, $se = .36$, $p = .013$. Males who were in the same conditions, except exposed to younger audiences, were not differentially influenced by laughing vs. not laughing, $b = -.37$, $se = .31$, $p = .024$.

There was also an unrelated four-way interaction of Audience Age x Participant Sex x Comedian Sex x Audience Age Recall, $F(1, 332.81) = 5.70, p = .018$. Male participants who were exposed to younger audiences, but recalled older audiences, found the female comedian’s humor to be more PC than those who were exposed to older audiences, $b = .93$, $se = .42$, $p = .028$. No such effect was evident among comparable female participants, $b = .25$, $se = .39$, $p = .53$.

Analyses of PCness for nondisparaging humor finally yielded a four-way interaction of Audience Reaction x Participant Age Group x Participant Sex x Audience Reaction Recall, $F(1, 370.55) = 5.19, p = .023$. Younger female participants regarded the female comedian’s humor to be more PC after being exposed to laughing rather than not laughing audiences, but only when they later recalled laughing audiences, $b = 1.05$, $se = .39$, $p = .008$. Interestingly, there were no differences in how older females regarded the laughing vs. nonlaughing audience reactions, $b = -.32$, $se = .38$, $p = .40$.

**Humor Repeatability: Disparaging humor.** As with prior audience recall analyses of disparaging humor, both of the relevant main effects reached statistical significance. Regarding Audience Reaction Recall, participants who recalled laughing
audiences also rated the disparaging humor more repeatable than those who recalled nonlaughing audiences, $F(1, 319.86) = 25.76, p = .001$. Likewise, and pertaining to Audience Age Recall, participants who recalled older audiences rated the humor more repeatable than those who recalled younger ones, $F(1, 361.87) = 8.89, p = .003$.

Repeatability analyses revealed only three relevant interactions, the first of which was a three-way interaction of Audience Age x Audience Reaction x Audience Reaction Recall, $F(1, 319.86) = 4.22, p = .041$. This effect is characterized by mirroring trends. On one hand, participants who were (a) exposed to older adults laughing and (b) recalled nonlaughing audiences rated the disparaging humor to be more repeatable than those exposed to older audiences not laughing, $b = .38, se = .27, p = .16$. At the same time, participants who were exposed to younger adults laughing but also recalled nonlaughter deemed the humor more repeatable than those exposed to the same younger adults not laughing, $b = -.46, se = .31, p = .14$.

There was also an Audience Reaction x Audience Age Group x Comedian Sex x Audience Reaction Recall four-way interaction, $F(1, 319.86) = 4.22, p = .041$. Again, simple effects took a mirroring form. Younger participants who were exposed to nonlaughing audiences, and recalled nonlaughter, regarded the female comedian’s humor as more repeatable than their nonlaughter-recalling counterparts who were exposed to laughing audiences, $b = .70, se = .35, p = .047$. Conversely, older participants who were exposed to laughing audiences, and recalled nonlaughter, found the female comedian’s humor to be more repeatable than did their counterparts who were exposed to nonlaughing audiences, $b = -.60, se = .31, p = .055$.

Repeatability analyses also yielded a five-way interaction of Audience Reaction x
Audience Age Group x Participant Sex x Comedian Sex x Audience Reaction Recall, 
$F(1, 257.28) = 4.41, p = .037$. Younger female participants who were exposed to, and 
recalled, laughing audiences regarded the female comedian’s disparaging humor to be 
more repeatable than their counterparts who saw the same audiences not laughing, $b = 
1.33, se = .49, p = .007$. At the same time, older female participants seemed to have no 
such propensity, $b = -.79, se = .63, p = .21$. A second pattern in the simple effects 
revealed the reciprocal pattern. Younger female participants who were exposed to, and 
recalled, nonlaughing audiences regarded the female comedian’s disparaging humor to be 
more repeatable than did their counterparts who witnessed the same audiences laughing, 
$b = 1.20, se = .51, p = .019$.

**Humor Repeatability: Nondisparaging humor.** The dependent measure humor 
repeatability yielded six effects when analyzed in the context of nondisparaging humor: 
one main effect and five interactions. As before, the recall of laughing audiences was 
associated with higher repeatability ratings, $F(1, 267.37) = 4.66, p = .032$. However, there 
was no reliable effect for Audience Age Recall, $F(1, 374.57) = 0.19, p = .067$.

The first theoretically-relevant interaction to emerge from the analysis was a 
three-way interaction of Audience Reaction x Participant Sex x Audience Reaction 
Recall, $F(1, 334.28) = 5.55, p = .019$. Female participants who were exposed to audiences 
not laughing, and later recalled nonlaughing audiences, found the humor to be more 
repeatable than when audiences were laughing, $b = .81, se = .41, p = .050$. Similar male 
participants seemed relatively unaffected by the influence of laughing vs. nonlaughing 
audiences, $b = .43, se = .35, p = .23$.

The aforementioned three-way interaction was qualified by Audience Age Recall,
this forming a four-way interaction of Audience Reaction x Participant Sex x Audience Reaction Recall x Audience Age Recall, $F(1, 322.67) = 6.93, p = .009$. Now instead of one significant simple slope, there were three. First, female participants who recalled seeing laughing older audiences found the humor more repeatable after being exposed to nonlaughing audiences, $b = 1.09, se = .54, p = .045$. This pattern did not generalize to male participants under the same conditions, $b = -.36, se = .55, p = .052$. Second, male participants who recalled seeing older audiences not laughing found the humor to be more repeatable following exposure to nonlaughing audiences, $b = 1.52, se = .58, p = .010$. This time the pattern did not hold for female participants, $b = .65, se = .69, p = .35$. Third, male participants who recalled younger audiences laughing rated the humor more repeatable following their exposure to nonlaughing audiences, $b = .81, se = .40, p = .042$. Again, there was no difference in repeatability ratings by Audience Reaction for the female participants, $b = .01, se = .50, p = .99$.

Next, analyses yielded a four-way interaction of Audience Age x Audience Reaction x Audience Age Recall x Audience Reaction Recall, $F(1, 322.67) = 4.51, p = .035$. Participants who were exposed to younger audiences not laughing found the humor more repeatable than those exposed to younger audiences laughing, but only among participants who recalled seeing older audiences not laughing, $b = 1.74, se = .57, p = .003$. Other participants who recalled older audiences not laughing remained relatively unaffected by the laughing vs. nonlaughing reactions of older audiences, $b = -.06, se = .73, p = .093$.

Finally, a four-way interaction of Audience Age x Participant Age Group x Audience Age Recall x Audience Reaction Recall revealed a different pattern, $F(1,
Younger participants who were exposed to younger audiences, and who recalled older audiences laughing, found the humor more repeatable than those exposed to older audiences, $b = 1.61, se = .58, p = .006$. This pattern was not observed among older participants under the same conditions, $b = -.36, se = .55, p = .52$.

**Post-humor Attitudes Toward Older Adults**

In addition to the main dependent measures that focused on humor ratings, I also explored the possibility that that the central experimental factors would influence participants’ attitudes toward older adults. To this end, all participants completed the Aging Semantic Differential (ASD) following the humor rating tasks. Participants’ total score for ASD was entered as the lone dependent variable in a model similar to that of the four main dependent measures previously reported. For interpretation purposes, it is important to note that higher ASD scores denote more negative attitudes toward older adults; whereas lower scores signal more positive attitudes.

The experimental design of the follow-up analysis was a 2 (Audience Age) x 2 (Audience Reaction) x 2 (Participant Age Group) x 2 (Humor Type) x 2 (Participant Sex) design. As before, the continuous predictors, SDO, AgeID, and PSC were included in the model, as well as their interaction with all experimental factors except Stimuli Order. The only difference between the present analysis and the previous humor rating analyses is that the within-subject factor—Comedian Sex—was excluded here because it was measured after participants had already been exposed to both, a male and female comedian. In other words, Comedian Sex was not a theoretically meaningful predictor of
participants’ post-humor attitudes toward older adults.\textsuperscript{11}

Standardized residual scores from the present analysis identified two potential outlier cases, with outlier being defined as having residual scores of greater than three standard deviations above or below the residual mean (i.e., 0). When the two cases in question were removed from the analyses, results revealed marked differences between the “full sample results” and those in which the two cases were omitted. For this reason, the suspect cases were considered true outliers, and were excluded. The results reported below are based on this slightly reduced sample.

Recall Hypothesis 8, which predicted that younger participants attitudes toward older adults would be negatively impacted by their having been exposed to disparagement humor featuring laughter versus nonlaughter; and Hypothesis 9, which predicted younger people’s attitudes toward older adults would be positively impacted by exposure to older adults laughing at the humor versus not laughing.

First, there was a main effect for Participant Age Group such that younger participants had less positive attitudes toward older adults than did older participants themselves ($M = 3.52, SD = 0.95$ vs. $M = 3.25, SD = 0.93$), $F(1, 399) = 10.53, p = .001$, $\eta_p^2 = .03$. Although this effect did not address any particular hypothesis, this finding is consistent with the notion that ageism exists.

Rather interestingly, there was a two-way interaction of Audience Age x Audience Reaction, $F(1, 399) = 5.88, p = .016$, $\eta_p^2 = .01$. This interaction yielded a

\textsuperscript{11} Even though Comedian Sex was excluded, Stimulus Order, which referred to the order in which the male and female comedian were presented, was retained as an experimental factor as differences in the experience of the stimuli might still influence subsequent ageist attitudes.
marginally significant simple effect for the predicted pattern: Participants who were exposed to nonlaughing older audiences expressed less positive attitudes toward older adults than their counterparts who were exposed to laughing older adults ($M = 3.45$, $SD = 0.91$ vs. $M = 3.22$, $SD = 1.05$), pairwise $p = .06$. The effect was not evident—and even trending in the opposite direction—when participants were exposed to nonlaughing versus laughing younger audiences ($M = 3.36$, $SD = .93$ vs. $M = 3.53$, $se = .088$), pairwise $p = .13$ (see Figure 10).

Although it is interesting that this two-way interaction produced anticipated differences, it applied to all participants—not just younger adults. Indeed, the Participant Age Group x Audience Age x Audience Reaction three-way interaction did not approach statistical significance, $F(1, 399) = 0.63$, $p = .42$, $\eta^2_p < .01$. In addition, the effect emerged for both disparaging and nondisparaging humor, and not just for the former. Thus, there was no direct support for either relevant hypothesis. However, the general pattern of the Audience Age x Audience Reaction did resemble the one predicted by Hypothesis 9. That is, nonlaughing responses to age-based humor led to less positive age-based attitudes, whereas laughing audiences led to the opposite.

There was also a Humor Type x Audience Reaction x Participant Sex three-way interaction, $F(1, 399) = 4.67$, $p = .031$, $\eta^2_p = .01$. Within the disparaging humor condition, male participants had less favorable attitudes toward older adults after being exposed to nonlaughing audiences, compared to laughing ones, ($M = 3.62$, $SD = 0.97$ vs. $M = 3.21$, $SD = 0.76$), pairwise $p = .008$. This pattern, however, was absent among female participants in the same condition ($M = 3.32$, $SD = 0.96$ vs. $M = 3.47$, $SD = 0.94$),
pairwise $p = .39$, as well as for all participants in the nondisparaging who were exposed to either Audience Reaction, all pairwise $p > .39$. This effect was also qualified by a four-way interaction of Humor Type x Participant Age Group x Audience Reaction x Participant Sex, $F(1, 399) = 6.19$, $p = .013$, $\eta^2_p = .02$. Rather unexpectedly, the aforementioned three-way interaction only held for older male participants ($M = 3.50$, $SD = 0.88$ vs. $M = 2.81$, $SD = 0.91$), pairwise $p = .002$, but not their younger counterparts ($M = 3.73$, $SD = 1.04$ vs. $M = 3.61$, $SD = 0.83$), pairwise $p = .57$. Just as with the three-way interaction, the effect failed to reach significance for either participant age group when among female participants in the disparaging condition, both pairwise $p > .11$; nor for any combination of Participant Age Group, Participant Sex, or Audience Reaction within the nondisparaging condition, all pairwise $p > .11$.

**Stimuli Order effects.** Note that order effects were particularly unexpected for the present dependent measure because it was not part of the experimental design in which order was varied. Instead, ASD was measured after the presentation and evaluation of both videos. Therefore, the results that follow suggest that the order of video presentation actually did shape participants’ ASD.

The aforementioned main effect for Participant Age Group was qualified by a Participant Age Group x Stimuli Order two-way interaction, $F(1, 399) = 4.66$, $p = .031$, $\eta^2_p = .01$. Younger participants had less positive attitudes toward older adults when the female comedians’ humor was presented first, pairwise $p < .001$, but not when the male comedians’ humor was first, pairwise $p = .40$.

The analysis also yielded a two-way interaction of Stimuli Order x Participant
Sex, $F(1, 399) = 6.77, p = .01, \eta^2_p = .02$. Male participants reported less positive attitudes toward older adults when they were first exposed to the female comedians, compared to the male comedians, ($M = 3.49, SD = 0.91$ vs. $M = 3.28, SD = 0.90$), pairwise $p = .037$. This pattern, however, trended in the opposite direction for female participants—albeit failing to reach statistical significance, ($M = 3.29, SD = 0.91$ vs. $M = 3.49, SD = 0.89$), pairwise $p = .10$. This two-way interaction was moderated by Humor Type, $F(1, 399) = 6.62, p = .010, \eta^2_p = .02$. With regard to nondisparaging humor, male participants expressed less positive attitudes toward older adults when the female comedians’ humor was presented first, compared to the male comedians humor being first, pairwise $p = .002$. The opposite was true for female participants who reported less positive attitudes toward older adults when the male comedians’ humor was presented first, pairwise $p = .036$. With regard to the disparaging humor, attitudes toward older adults did not differ as a function of Humor Type or Participant Sex, both pairwise $p > .82$. This three-way interaction was further qualified with Participant Age Group, $F(1, 399) = 6.35, p = .012, \eta^2_p = .02$. The trend for male participants to express less positive attitudes toward older adults after viewing nondisparaging humor with the female comedian’s humor presented first was only evident for younger participants, pairwise $p = .005$, but absent for older males in the same conditions, pairwise $p = 10$. Somewhat surprisingly, older females exposed to the nondisparaging humor had less positive attitudes toward older adults when the male comedian’s humor was shown first, pairwise $p = .024$, whereas the effect was absent for younger women in the same conditions, pairwise $p = .57$. Analyses also revealed unexpected simple effects for the disparaging humor condition: As in the nondisparaging condition, males’ attitudes toward older adults varied as a function of
Stimuli Order. However, younger males had less positive attitudes toward older adults when the disparaging female’s humor was presented first, pairwise $p = .016$, and older males had less positive attitudes toward their own age group when the male comedian’s humor came first, pairwise $p = .018$. No effects by Stimuli Order were observed for either Participant Age Group of female participants in the disparaging humor condition, both pairwise $p > .32$. This four-way interaction was moderated by Audience Age, $F(1, 399) = 5.68, p = .018, \eta^2_p = .01$. Results showed that this interaction is primarily driven by a single simple effect: Older females exposed to the nondisparaging humor had less positive attitudes toward older adults when the male comedian’s humor was shown first, but only when exposed to older audiences, pairwise $p = .09$. This difference was absent among older women who saw younger audiences, pairwise $p = .96$.

The two-way interaction of Audience Age x Audience Reaction was qualified by a Humor Type x Audience Age x Audience Reaction x Stimuli Order four-way interaction, $F(1, 399) = 8.55, p = .004, \eta^2_p = .02$. Participants’ propensity to have less positive attitudes toward older adults after exposure to nonlaughing versus laughing audiences was most prevalent in the disparaging humor condition, and specifically, when the disparaging female comedian’s humor was shown first, pairwise $p = .002$. The effect was completely absent when the male comedian’s disparagement humor was shown first, pairwise $p = .78$, as well as either order when participants were exposed to younger adults in the disparaging condition, both pairwise $p > .31$, and for all combinations of Audience Age, Audience Reaction, and Stimuli Order within the nondisparaging condition, all pairwise $p > .08$. 
Individual differences: Age Group Identification (AgeID). There were no specific hypotheses for continuous predictor effects with the ASD analysis. However, including the continuous predictors in the present analysis allowed for further explorations of effects including Participant Age Group, Audience Age, and Audience Reaction. As before, results are reported separately for each continuous predictor.

Participants with higher AgeID had less positive attitudes toward older adults compared to their low AgeID counterparts, $F(1, 399) = 52.04$, $p < .001$, $\eta_p^2 = .12$. This main effect was qualified by a Participant Age Group x AgeID two-way interaction, $F(1, 399) = 4.36$, $p = .037$, $\eta_p^2 = .01$. Younger participants with high AgeID had more positive attitudes toward older adults than their low AgeID counterparts, $b = -.25$, $se = .04$, $p < .001$. The same trend also emerged for older adult participants, albeit less strongly, $b = -.12$, $se = .04$, $p = .002$. The effect, however, was moderated by a Humor Type x Participant Age Group x Audience Age x AgeID four-way interaction, $F(1, 399) = 4.36$, $p = .037$, $\eta_p^2 = .01$. High AgeID older adults who watched nondisparaging humor featuring younger audiences had more positive attitudes toward their own age group than their low AgeID counterparts, $b = -.21$, $se = .08$, $p = .007$. This trend according to AgeID did not reach statistical significance for any other combination of Humor Type and Audience Age for either younger or older participants, all simple slopes $p > .09$.

Individual differences: Social Dominance Orientation (SDO). A main effect for SDO revealed that high SDO participants had less positive attitudes toward older adults than did their low SDO counterparts, $F(1, 399) = 6.92$, $p = .009$, $\eta_p^2 = .02$, which is consistent with the notion that SDO is positively correlated with dominance motives and
endorsements of social inequality. This main effect for SDO was qualified by a Participant Age Group x Audience Reaction x SDO three-way interaction, $F(1, 399) = 4.83, p = .029, \eta_p^2 = .01$. This effect was not supportive of either relevant hypothesis, however, because the interaction was driven by the individual difference variable—SDO—and not by Audience Reaction effects. High SDO younger adults who saw laughing audiences had less positive attitudes toward older adults than their low SDO counterparts, $b = .15, se = .05, p = .003$. This effect was absent for younger adults who saw nonlaughing audiences, $b = .08, se = .05, p = .14$; and also failed to reach statistical significance for older adults exposed to either Audience Reaction, both simple slopes $p > .08$.

The analysis also yielded a four-way interaction of Humor Type x Participant Age Group x Audience Age x SDO, $F(1, 399) = 8.25, p = .004, \eta_p^2 = .02$. High SDO younger participants who were in the nondisparaging condition and saw audiences laughing expressed less positive attitudes toward older adults than their low SDO counterparts, $b = .14, se = .06, p = .025$. Similarly, older high SDO participants who were in the disparaging condition and saw audiences laughing had less positive attitudes of older adults than older low SDO participants in the same condition, $b = .29, se = .10, p = .004$. This SDO-based effect, however, failed to reach statistical significance for either age group across the remaining combinations of Humor Type and Audience Age, all simple slopes $p > .07$ (see Figure 11).

**Individual differences: Public Self-Consciousness (PSC).** Regarding PSC, analyses yielded a Participant Age Group x Audience Reaction x PSC three-way
interaction, $F(1, 399) = 4.29, p = .039, \eta^2_p = .01$. High PSC younger participants who
were exposed to laughing audiences subsequently had less positive attitudes toward older
adults than did their low PSC counterparts, $b = .14, se = .06, p = .017$. This effect failed
to materialize for younger participants exposed to nonlaughing audiences, $b = -.01, se =
.06, p = .83$; as well as for older participants in both reaction conditions, both simple
slopes $p > .77$.

The aforementioned three-way interaction was moderated by a Humor Type x
Participant Age Group x Audience Reaction x PSC four-way interaction, $F(1, 399) =
4.43, p = .036, \eta^2_p = .01$. Simple comparisons by Audience Reaction showed that low
PSC younger participants in the nondisparaging humor conditions had less positive
attitudes toward older adults after being exposed to nonlaughing audiences rather than
laughing ones ($M_{lowPSC} = 3.43$ vs. $M_{lowPSC} = 2.35$), simple slope $p = .039$. A similar, yet
less reliable effect emerged for high PSC participants in the nondisparaging humor
conditions. These individuals also had less positive attitudes toward older adults after
exposure to nonlaughing versus laughing audiences ($M_{highPSC} = 3.33$ vs. $M_{highPSC} = 2.81$),
but the difference was much less pronounced compared to low PSC individuals, simple
slope $p = .061$. Although not providing direct support for either relevant hypothesis, these
patterns are broadly consistent with Hypothesis 9. However, no other differences
emerged according to Audience Reaction for older participants, or for either Participant
Age Group in the disparaging conditions, all simple slope $p > .35$.

The aforementioned pattern does not provide direct support for either relevant
hypothesis because it occurred in the nondisparaging humor condition. In the spirit of
Prejudiced Norm Theory, one might have expected that the social views toward 
*disparaged* outgroups would remain constant or even improve after audience disapproval 
of humor directed toward the group. However, the present effect shows that individuals’ 
attitudes toward relatively *nondisparaged* older adults were less positive after having 
been exposed to nonlaughing audiences. It seems that younger participants were inclined 
to adopt harsher views toward the older group when the audiences seemed to take offense 
at seemingly harmless humor. This pattern is more consistent with the character of 
Hypothesis 9, which assumed nonlaughter can lead to negative attitudes toward the 
humor-targeted group. However, the effect lacked the inclusion of Audience Age, which 
was the key qualification predicted by Hypothesis 9.

More reliable effects emerged as a function of PSC. High PSC younger adults 
who watched nondisparaging humor featuring laughing audiences subsequently had less 
positive attitudes toward older adults than did their low PSC counterparts, $b = .22$, $se = .07$, $p = .003$. This effect was absent for younger participants who watched the same 
humor with the same audiences not laughing, $b = -.11$, $se = .09$, $p = .22$; as well as for all 
other combinations of Humor Type, Participant Age Group, and Audience Reaction, all 
simple slopes $p > .27$.

There was also a Humor Type x Audience Age x PSC three-way interaction, $F(1, 399) = 4.43$, $p = .036$, $\eta^2_p = .01$. High PSC participants who watched nondisparaging 
humor featuring younger audiences had less positive attitudes toward older adults than 
did their low PSC counterparts, $b = .16$, $se = .05$, $p = .002$. This PSC effect was absent for 
participants who saw older audiences, $b = .04$, $se = .05$, $p = .45$, as well as for both
reaction conditions for the disparagement humor, both simple slope $p > .19$.

**Summary of post-humor attitudes toward older adults.** Analyses of attitudes toward older adults did render partial and indirect support for Hypotheses 9. A two-way interaction of Audience Age x Audience Reaction provided at least some support for differential attitudes toward older adults as a function of having seen older audiences laughing versus not laughing at the humor, but not younger audiences. This observed effect hints at a backlash effect for older adults when members of their group are shown not laughing at age-based humor. Also coinciding with the spirit of Hypothesis 9, younger participants in the nondisparaging humor conditions had less positive attitudes toward older adults after being exposed to nonlaughing audiences rather than laughing ones. However, Hypothesis 8—the one that predicted negative attitudes toward older adults after exposure to audiences laughing—was not supported.
Chapter 8: Discussion

The present research investigated pertinent questions in the research on intergroup humor. Of primary focus was an exploration of age-based humor, and how ingroup and outgroup audience cues influenced older and younger adults’ ratings of the humor. This focus was derived from an interest in two competing hypotheses, one based on the Social Identity approach (cf. Abrams et al., 1990; Hogg, 2006; Tajfel & Turner, 1986; Turner & Oakes, 1986) and one based on the Outgroup Moral Authority approach (Moulton & Kemmelmeier, 2013; cf. Miller & Effron, 2010), with regard to differential influence on older and younger adults’ attitudes toward age-based humor. I also explored whether these effects differed as a function of humor type and whether they were qualified by participant age, sex, or individual differences.

Also of interest, and arguably what yielded the most interesting results, was an investigation of how older adult audiences reacting with either laughter or nonlaughter affected individuals’ post-humor attitudes toward older adults. Here, I explored the possibility that age-based humor influenced people’s attitudes toward older adults, in general—much how exposure to sexist humor shapes men’s attitudes toward women (cf. Ford, 2000; Ford et al., 2001) and whites’ attitudes toward racial minorities (cf. Ford, 1997), respectively. I also explored whether these humor “aftereffects” varied as a function of humor type; and/or were moderated by participant age, sex, or individual differences.

Finally, I sought to replicate several effects reported in the humor literature including differences in humor preference by age and sex (Martin et al., 2003), and the
“canned laughter” effect by which audience cues of laughter enhance observers’
enjoyment of humorous stimuli, compared to those not exposed to laughter (cf.
Bachorowski & Owren, 2001; Martin & Gray, 1996; Fuller & Sheehy-Skeffington, 1974;
Brown, Brown, & Ramos, 1981). Please see Table 1 for a graphic image of which
hypotheses were supported by the data, and which ones were not.

The Social Identity Approach versus the Outgroup Moral Authority Approach

Predictions derived from the Social Identity approach held that individuals would
be influenced more by the reactions of audiences who share their group membership than
by audiences who belong to a salient outgroup (Abrams et al., 1990). The hypothesis
based on the Outgroup Moral Authority approach, however, postulated the opposite: that
individuals would be swayed more by the reactions of outgroup members if this outgroup
was the target of humor. Overall, it was an empirical question whether one approach or
the other would receive support, so competing hypotheses were posed—one derived from
each perspective.

Of course, there was also the possibility that neither hypothesis would be
supported due to competing, but simultaneously occurring influences in the
experimentally contrived circumstances to which participants were exposed. On one
hand, there were latent ingroup loyalties that may have prompted participants to anchor
their personal appraisals on those who share a common identity (cf. Turner & Oakes,
1986)—in this case, older audiences for older participants and younger ones for younger
participants. On the other hand, they could have just as easily perceived themselves to be
in a situation that merited an assessment of the others’ psychological standing or
situational authority to appraise the situation (cf. Miller & Effron, 2010; Vorauer, 2006). Such awareness could give rise to behaving in accordance with norms of larger society. If each of these pressures were felt simultaneously, then it is possible that they countervailed one another, thus resulting in no observed differences based on audience age.

Rooted in past research (Moulton & Kemmelmeier, 2013), Hypothesis 2b predicted that participants of a particular age would be more swayed by the differential reactions of outgroup audiences. Straightforward evidence supporting this hypothesis failed to emerge. However, because younger adults found the humor more offensive when they saw nonlaughing older versus nonlaughing younger audiences, there was some evidence that younger adults were more sensitive to the reactions of outgroup older adults than to the reactions of ingroup younger adults. This cannot serve as incontrovertible evidence for an outgroup moral authority effect. It did, however, align with the notion that younger adults did take into account older adults’ social standing, and hence, their psychological license to assess the situation (cf. Miller & Effron, 2010; Vorauer, 2006).

Hypothesis 2b also predicted that older adults’ humor ratings would be influenced in ways consistent with the outgroup authority approach. This was based on the assumption that, among older adults, younger adults can be viewed as an attractive outgroup; and on evidence showing that cues from “attractive” others can persuade judgment (cf. Davis, 1999). Despite this, results did not yield evidence that younger audiences had a differential impact on older participants.

With regard to Hypothesis 2a, there was no support for ingroup influence among
younger adults. That is, how younger adults responded to age-based humor was not influenced by the reactions of an audience consisting of younger adults. However, there was limited evidence that older adults—those whose age ingroup was explicitly targeted by the humor—were influenced in ways consistent with the Social Identity approach. Older participants evaluated the disparaging male comedian’s humor more favorably when they were exposed to older (but not younger) audiences laughing rather than not laughing. In addition, high PSC older participants, who were dispositionally more aware how they would appear to others, rated the male comedians’ humor as more offensive after being exposed to older audiences laughing rather than not laughing. No such differences were observed when older participants were exposed to younger audiences.

Based on these findings, social influence aligning with the Social Identity approach was partially supported with regard to older adults. Whereas the reputation of the older age group was called into question by humor regardless of whether the audience was older or younger, perhaps the nonlaughter of older adults highlighted a need for ingroup solidarity among older participants, which was absent when the audiences were younger. In other words, the imperative to support one’s ingroup perspective may have otherwise trumped any motive to cede authority to the attractive younger outgroup. The nonlaughing older adult audiences may have signaled the younger comedian had “gone too far”—a cue that may have been considered less relevant when coming from the younger outgroup.

On balance, neither of the two broader theoretical frameworks received compelling evidence. However, the evidence that did emerge favored the Social Identity
approach among older adults, and the Outgroup Moral Authority approach among younger adults. In other words, it seems that all participants—both older and younger adults—were more sensitive to the cues of older audiences, compared to those of younger ones. The prevailing theme seems to be that the members of the group targeted by the humor—the older adult audiences—were more influential than their younger counterparts regardless of whether they represented the ingroup or the outgroup to observers.

**Effects did not uniformly support theory-derived hypotheses.** Abrams et al. (1990) reviewed a number of studies supporting the general notion that ingroup influence is most often observed in intergroup settings. In the context of humor, Moulton and Kemmelmeier (2013) observed support for an Outgroup Moral Authority effect with regard to how whites rated racial humor. Besides some weak evidence favoring social identity for older adults, the Outgroup Moral Authority effect for younger adults emerged as the most consistently supported theoretical approach in the present study. It is important to note that this pattern was also found in past research on racial humor using the same group-based humor paradigm, i.e. Moulton and Kemmelmeier (2013), although the present study was the first known investigation that also accounted for group-based influence on members of the humor-targeted group.

**Age-based humor dynamic: Similarities and differences.** One consistent finding in the present investigation is that age-based humor presents a phenomenon that seems to be governed by ingroup/outgroup influence effects in ways similar to race-based humor. In the simplest sense, group-based influence manifested itself similarly across race- and age-based humor domains when using the same methodological paradigm to investigate
both phenomena. That is, outgroup influence manifested among younger adults in the present study just as it did among whites in Moulton and Kemmelmeier (2013). It is important to note, however, that there was more direct evidence of outgroup influence in the race-based studies of Moulton and Kemmelmeier. This is likely because participants in the race-based studies perceived the use of racial humor to be quite socially risky, thus increasing situational ambiguity regarding the appropriateness of the humor in question, and causing them to be more directly influenced more by outgroup reactions, compared to ingroup ones. In contrast, participants in the present study likely perceived the use of age-based humor to be only somewhat socially risky, thereby having only marginal effects on their perceptions of situational ambiguity, and causing them to be only indirectly affected by outgroup reactions. Within the domain of racial humor delivered by white comedians, white observers actually ascribe more moral authority to blacks than to fellow whites when it comes to appraising ambiguous race-disparaging humor (Moulton & Kemmelmeier, 2013). Perhaps this phenomenon was based on the history between blacks and whites in this country, which has firmly established that the overt expression of prejudice is not acceptable.

Compared to the findings of Moulton and Kemmelmeier (2013), however, there was only weak evidence that older audiences held more license than younger ones with regard to influencing the views of younger adults. This could have been because there was no latent history of discrimination between young and old that makes ingroup boundaries salient. After all, ageism—unlike racism—seems to perpetuate largely unacknowledged by those whom it directly affects (Levy, 2001). Younger adults poking fun at older adults may just be far more socially acceptable than white comedians making
fun of black people or men making fun of women. This may be because there just have not been significant, high-profile clashes between older and younger adults as there have been for other social groups in recent history, and/or because older adults tend to have more resources and social power than these other groups.

Because the three experiments reported by Moulton and Kemmelmeier (2013) used the same dependent variables and item scaling as the present investigation, I was able to make their data pertaining race-based humor and the ratings pertaining to age-based humor from the present investigation. It is clear that the participants in these studies saw very different comedic performances; thus, overall evaluations of the different comedians may not be informative. This might be different, however, for perceptions of political correctness, which arguably may be driven to a large extent by the general nature of the humor, not merely by the individual comedic performance.

When collapsing the means from Moulton and Kemmelmeier’s three studies, ratings of humor PCness indeed showed that age-based disparagement humor was thought to be much more politically correct than its race-based equivalent ($M = 3.40$, $SD = 1.40$, vs. $M = 2.43$, $SD = 1.19$), $t(1136) = 12.60$, $p < .001$. Similarly, the race-based humor was thought to be more offensive ($M = 4.22$, $SD = 1.48$, vs. $M = 3.95$, $SD = 1.71$), $t(1137) = 2.82$, $p < .001$; and less repeatable ($M = 2.27$, $SD = 1.37$, vs. $M = 2.53$, $SD = 1.44$), $t(1146) = 3.18$, $p < .02$, than its age-based counterpart. Despite being dubbed the “third great –ism” behind racism and sexism (Palmore, 2001), these findings are consistent with the idea that there is little social apprehension with regard to disparagement humor based on age.
**Age is not arbitrary.** Another way to account for the lack of replication from race to age group contexts is to acknowledge that age is not an “arbitrary set” characteristic, whereas race is (cf. Sidanius & Pratto, 1999). Based on social dominance theory, arbitrary set groups include all those groups that are not biologically assigned, but rather ascribed and socially reified by culture (e.g., race, ethnicity, religion, etc.). Age groups, being based on chronological time, are not ascribed by society, even when societies construe the meaning of age and aging in different ways and entertain different stereotypes. The fact that every member of society can anticipate ending up in the chronologically advanced group (if they live long enough) represents a fundamental difference between age and other social categories (Palmore, 2001). Every member of the group of older adults does know “the other side of the joke” because they were young once. This implies that, at an earlier point in their life, older adults may have held the very same stereotypes and they may have even laughed about the same jokes that they are now subject to. Thus, age groups and age group hierarchies may not evoke group dominance motives (Sidanius & Pratto, 1999).

**Post-humor Attitudes toward Older Adults Vary by Social Context**

The present research also examined post-humor aftereffects of attitudes toward older adults. The idea behind this was to determine whether individuals’ attitudes toward older adults following exposure to age-based humor varied as a function of the laughing versus nonlaughing reactions, and of older audiences reactions, specifically, i.e., Hypotheses 8 and 9, respectively.

Before discussing any experimental effects, note that younger adults had less
positive attitudes toward older adults than did older adults, which aligns with prior research (cf. Kelly et al., 1987). More importantly, this finding is consistent with an underlying assumption of the present investigation: that ageism exists and is most strongly exhibited by younger adults.

The present investigation produced at least some support for the notion that group-based humor can affect people’s attitudes toward the group that the jokes target. There was indirect support for Hypothesis 9, despite the fact that the observed effect was not restricted to only disparaging humor or younger participants, which were two assumptions made by Hypothesis 9. The present investigation showed that participants who were exposed to nonlaughing older audiences subsequently expressed less positive attitudes toward older adults than their counterparts who were exposed to laughing older adults. The effect was less evident—and even trending in the opposite direction—when participants were exposed to nonlaughing versus laughing younger audiences. Although this effect partially aligned with anticipated differences, it applied to all participants—not just younger adults. That is, both older and younger adults held more positive views of older adults when they saw older adults laughing at jokes about their own age group. Perhaps seeing older adults laugh at the humor made salient the idea that that the stereotypes of older adults as cranky curmudgeons does not hold. This effect may not be particularly surprising for younger adults: Once evidence was made salient that their age-stereotypes were not accurate, their stereotypes changed. Nevertheless, this finding demonstrates that younger adults’ views of older adults are highly malleable. Interestingly, this effect also applied to older adult participants, for whom one would expect that they do not need any external evidence to determine that they not conform to
the ageist stereotype. It is important to note, however, that participants’ pre-existing attitudes toward older adults was not measured in the present study, and that speculation about the malleability of participants attitudes is based only on relative differences between experimental conditions. It is possible, for instance, that participants with more positive attitudes toward older adults were assigned to the older adult nonlaughter condition purely by chance. However, this is unlikely as random assignment to conditions generally corrects for such a potential confound.

It is worth noting that the salutary effect of older adults laughing at jokes about their own group was not restricted to disparagement humor. Because the effect was not qualified by Humor Type, this effect of older adults’ laughter on attitudes toward older individuals occurred equally for disparaging and non-disparaging age-based humor. This runs counter to the assumption of Prejudiced Norm Theory, which lends itself to the expectation that disparaging humor should be more likely to reinforce existing stereotypes than nondisparaging humor (Ford & Ferguson, 2004). This means that older adults laughing about themselves does not only bestow the kinds of positive effects for health and psyche that the literature had documented (cf. Solomon, 1996). Rather, laughing at jokes about themselves also seems to undermine existing stereotypes about older adults.

The Moderating Effects of Individual Difference

Individual differences played a major role in moderating key differences across experimental factors. The present research explored the following individual difference measures as potential moderators of audience shaping effects on older and younger
adults’ perceptions of age-based humor: Age Group Identification (AgeID), Social Dominance Orientation (SDO), and Public Self-Consciousness (PSC). All three variables were observed to qualify experimental effects, with AgeID being perhaps the most influential in this regard.

**Age Group Identification (AgeID).** People usually do not find humor that targets their own group to be funny; however, there are people who do not strongly identify with their own groups (Nahemow, 1986). In other words, the more one identifies with one’s group, the less one appreciates put-down humor that targets their group (La Fave, 1970; Nahemow, 1986). Because age was the group-defining factor in the present research, AgeID was collected as a potential moderator of experimental effects.

**General effects.** Intergroup theories—particularly those derived from the Social Identity approach—would argue that identification is always a process that is specific with regard to particular groups, and particular membership within those groups. For this reason, there was no reason to make a priori assumptions that either older or younger adults would identify more strongly with their respective groups.

Coinciding with the Social Identity approach, low AgeID individuals found the humor to be more PC than higher AgeID people. It seems that people who were more invested in their own age groups had a certain sensitivity toward age-based humor content that caused them to find it less socially acceptable. Conversely, those who were less invested in their own age group seem to have had fewer qualms with its social acceptability. These low AgeID individuals likely laughed at the humor freely without apprehension about its social appropriateness. Given this trend for humor PCness, one
might also expect low AgeID individuals to evaluate the humor more positively, but in fact, the opposite was true. High AgeID was associated with more favorable humor evaluations—at least with regard to the nondisparaging male comedian.

**Older adults.** Compared to their younger counterparts who were most influenced by outgroup reactions; older adults were particularly susceptible to ingroup influence, as anticipated by the Social Identity approach. Based on this, it would seem that AgeID is a particularly strong moderator of older adults’ responses to age-based humor.

Perhaps not surprisingly, older adults’ identification with their age group moderated their humor evaluations and offensiveness ratings—the two measures that depended more on personal preference than perceived social norms. High AgeID participants found the disparaging humor more offensive than did their low AgeID counterparts; however, the effect failed to emerge for older adults when the humor was nondisparaging. This pattern supports the idea that older adults who identify more strongly with their own age groups are also most sensitive to disparagement directed toward it (cf. La Fave, Haddad, & Marshall, 1974; Nahemow, 1986).

For highly identified older adults, recognizing their group as a target for humorous disparagement might have presented a greater threat, thus rendered these individuals more susceptible to influence from ingroup others. However, older adults who did not identify very strongly with their own age group—perhaps those who were hesitant to count themselves among the ranks of older adulthood—may not have been differentially influenced by ingroup members. Such individual differences are not inconsistent with the Social Identity approach, which allows for individuals to attribute
differential importance to their group memberships (Hogg, 2006).

**Younger adults.** AgeID also proved to be a moderator of experimental effects for younger participants. High AgeID younger participants had more positive attitudes toward older adults than did their low AgeID counterparts—a trend that also emerged for older adult participants, albeit less strongly. The AgeID effects among younger participants seemed to run counter to past research on age identification, which has suggested that low age identifiers hold more positive attitudes toward older adults, compared high age identifiers (Packer & Chasteen, 2006).

Highly age-identified younger adults might have simply been much more aware of intergroup divisions based on age, thus prompting them to pay more attention to the role that age plays in their own and other people’s lives. This might have cued them into an awareness of their own age, which translated into a greater sense of belonging or identification to their age group. In turn, this heightened reflexivity on the subject of age might have also made them more conscious of the potential for harming outgroup older adults. Conversely, low age-identified younger adults may have taken their own age for granted. They simply may not have reflected upon age, were less attentive to the potential for harming outgroups through ageism, and therefore did not have especially positive attitudes toward older adults, post-humor.

**Social Dominance Orientation (SDO).** This individual difference measure was included as a moderator because it generally measures how individuals perceive societal groups of different statuses (Pratto et al., 1994). High SDO is often associated with prejudice against low status groups, with members of dominant groups being more likely
to engage in the expression of unfavorable views of lower status groups (cf. Sidanius & Pratto, 1999). Conversely, high SDO members of low status groups are often more willing to acquiesce to the negative evaluations of their group on the part of dominant groups.

In line with Hodson et al. (2010), who reported a link between SDO and cavalier attitudes toward outgroup humor, high SDO participants evaluated disparagement humor more favorably than their low-SDO counterparts. This finding corroborates the above notion if one assumes that in the context of interactions between younger and older individuals the latter group tends to be stigmatized. In addition, even though social dominance theory distinguishes age groups from other societal groupings (Sidanius & Pratto, 1999), the findings reported herein are consistent with past research that has demonstrated SDO to be a reliable predictor of age-based attitudes (cf. Aosved, Long, & Voller, 2009; Tausch & Hewstone, 2010).

**General effects.** Low SDO individual were much more sensitive to the nature of the humor than high SDO individuals, which is consistent with the idea that low SDO people hold higher egalitarian concerns (cf. Pratto et al. 2006). This likely makes them more sensitive to the potential of offending lower-status groups, compared to their high-SDO counterparts.

High SDO participants found the humor to be more PC than did their low SDO counterparts, especially after having been exposed to laughing audiences. Furthermore, high SDO participants regarded the male comedians’ humor to be more repeatable after having been exposed to laughing audiences rather than nonlaughing ones. Again, these
findings are broadly consistent with the notion that outgroup derogation is more acceptable among high SDO individuals, and that these people may be harboring higher levels of prejudice toward a variety of societal groups (e.g., Hodson et al, 2010; Pratto et al., 1994).

**Older adults.** Whereas most findings for SDO pertained to all participants regardless of age, one effect was specific to older participants. High SDO older adults who saw audiences laughing at age disparaging humor had less positive views of older adults (as a group) than did older low SDO participants in the same condition. It seems that older adults who accept existing patterns of social inequality felt less positive toward their ingroup after they had been “put in their place” by the younger comedians. This pattern is consistent with prior work on system justification tendencies that are known to emerge among low status group members—ingroup ambivalence and outgroup favoritism (Jost & Burgess, 2000; Jost, Banaji, & Nosek, 2004). Such work demonstrates that members of low status groups may devalue their own group or prefer a high status outgroup when they consider their own group’s lower status justified.

Social Dominance Orientation is known to be a strong predictor of ambivalent attitudes toward ingroup members—especially after low status ingroup members threaten a status quo (Jost & Burgess, 2000). In the present study, audience nonlaughter represented the breaking a status quo that otherwise dictates laughter in response to jokes. Thus, one might have expected SDO differences in older adults’ attitudes toward the ingroup to differ based on ingroup laughter vs. nonlaughter. However, this was not the case. Differences emerged only after participants’ exposure to audiences who were
laughing—the reaction that most supported the status quo—and it did not seem to matter whether the laughing audiences were old or young.

Perhaps high SDO older adults’ tendency to view their ingroup relatively negatively following exposure to audiences laughing at disparagement humor was not so much driven by an antipathy toward their own group, but by their favoring the outgroup younger adults to their own group. That is, high SDO older adults may have reported negative post-humor attitudes toward their ingroup because the younger comedians—representing an attractive outgroup—made them more conducive to influence by the disparaging message (cf. Davis, 1999). This pattern aligns with outgroup favoritism tendencies reported in prior research on system justification effects. Perhaps the most famous classical study of outgroup favoritism effects was the doll experiment of Clark and Clark (1947). In this work, young black children from the U.S. were asked to choose between either a black doll, which represented ingroup preference, or a white doll, which represented outgroup favoritism. Contrary to the ingroup preference hypothesis, the black children overwhelmingly favored the white doll over the black one. It would seem that the black children in this study had come to understand their relatively disadvantaged social position, and thus developed attitudes toward their own ingroup that coincided with the existing hierarchy of blacks and whites in U.S. society (Sidanius & Pratto, 1999).

The outgroup favoritism phenomenon is not restricted to divisions by race, but has also been demonstrated to exist among older adults. Jost et al. (2004) reported evidence of explicit and implicit outgroup favoritism among older adults. These authors
found that older adults’ implicit outgroup favoritism was expressed almost as strongly as younger adults’ implicit ingroup attitudes. Although the effects by Jost et al. (2004) were not qualified by SDO, the outgroup-favoring tendency on the part of older adults seems to align with the effect that emerged in the current study.

Although the evidence did not perfectly coincide with system justification-based assumptions, there was evidence that high SDO older adults may have contributed to their own group’s victimization through ingroup ambivalence, outgroup favoritism, or a combination of the two. Whatever the process driving the effect, the pattern only manifested when there were clear social cues indicating others’ agreement that their group was of low status, i.e., audiences laughing at humor that targeted older adults.

**Younger adults.** Concerning younger adults’ SDO, there was some evidence to support the notion that individuals who endorsed group-based inequality were more prone to express prejudice after being exposed to age group-based humor. However, and somewhat inconsistent with Prejudiced Norm Theory (Ford & Ferguson, 2004), the effect emerged only when participants were exposed to nondisparaging humor. High SDO younger participants who saw laughing audiences in the nondisparaging condition expressed less positive attitudes toward older adults than did their low SDO counterparts. This raises important questions about the necessity of the disparagement assumption of Prejudiced Norm Theory, and warrants future investigation.

**Public Self Consciousness (PSC).** Public Self-Consciousness refers to “a general awareness of the self as a social object that has an effect on others” (Fenigstein et al., 1975, p. 523). In this way, high PSC individuals are more attentive to external social
appearances, particularly those that concern how they may appear to others (Fenigstein, 2009). This measure was employed in the present study in order to assess how aware participants were of their own appearance and behavior, and to determine if the degree to which they monitor their own behaviors qualifies any experimental effects.

Public Self Consciousness emerged most consistently as a moderator of participants’ PCness and humor repeatability ratings. This seems consistent with the idea that PSC refers to social awareness, with these two variables making specific to the acceptability of the humor in social contexts. PSC was much less likely to qualify personal evaluations of the humor or judgments of its offensiveness, which are more personal and less social in nature.

**General effects.** Rather counterintuitively, high PSC individuals—those who were most aware of how they would be viewed by others—generally found the humor to be more repeatable than those with low PSC. However, and coinciding with predictions based on humor type, this main effect was qualified by higher-order interactions. High PSC participants found the disparaging humor to be less PC than did their low PSC counterparts. There was, however, no difference in how high and low PSC individuals responded to nondisparaging humor. Perhaps high PSC individuals were more attuned with their social surroundings and therefore paid greater attention to the disparaging content of the humor. This might explain why higher-order differences by PSC emerged only when the humor was disparaging.

**Older adults.** With regard to older adults, it was those with high PSC who found the humor more offensive than their low PSC counterparts. This finding is not surprising,
as one would expect people with higher levels of Public Self-Consciousness to be more sensitive to the potential offensiveness of group-based humor. It is worth noting, however, that the effect of Humor Type was independent from the effect of Participant Age Group. This means that these are additive effects, implying that older adults high in PSC were most responsive to the manipulated disparagement levels of the humor, and were mostly like to find it offensive. More interestingly, however, was how PSC affected older adults’ propensity to repeat age-based humor themselves. High PSC older adults who were exposed to older audiences not laughing rated female comedians’ humor more repeatable than did their low PSC counterparts.

The aforementioned pattern is somewhat counterintuitive, as one would assume low PSC individuals would be more prone to repeating the age-based jokes rather than the opposite. This is because the telling of age-based jokes could be considered risky due to its potential to offend others (cf. Berger, 2010). In addition, because PSC is positively associated with greater awareness of and interest in the impressions individuals make on others (Fenigstein, 2009), the natural assumption is that high PSC individuals would avoid being associated with such humor. Perhaps the willingness to repeat the humor among high PSC older adults was an attempt to distance themselves from the stereotypical “grumpy” representation by the nonlaughing older audiences used in the video clips. In other words, high PSC older adults might have regarded the older adult nonlaughing audience samples as poor exemplars of their age group, and thus contrasted their views from those cued by the audience on behalf of the “better” older adult exemplar (cf. Duval et al., 2000). It remains an open question as to why this contrast effect emerged only for the female comedians and not also for the male comedians.
Younger adults. There were also a couple of effects for PSC among younger participants. High PSC younger participants who were exposed to older audiences evaluated the humor less positively than did their low PSC counterparts; but when exposed to laughing younger audiences, high PSC individuals evaluated the male comedians’ humor more positively, and rated it more repeatable, than did their low PSC counterparts. In the first instance, high PSC participants seemed to be uncomfortable with age-based joking by younger comedians, and in the presence of older adult audiences. In other words, they evaluated the humor based on a broad social norm that one not offend outgroups. In the second instance, however, younger adults high in PSC seemed to be more attentive to fellow ingroup members than to societally shared rules about political correctness. That is, their evaluation hinged on the presence of ingroup others signaling the humor was funny. Together, the evidence suggests that, as expected, high PSC individuals were especially attentive to socially accepted norms, compared to their low PSC counterparts.

Similarities between Older and Younger Participants

Despite differences younger and older adults’ humor evaluations and offensiveness ratings, there was also plenty of evidence of similarity between older and younger adults’ responses. No age differences emerged with regard to how PC older and younger adults found the humor, nor regarding how likely they would be to repeat the jokes to others. These findings indicate that, although younger adults may laugh more at age-based humor than their older counterparts, older adults are no more sensitive to the generalized use and perpetuation of such humor. Rather, older adults may recognize the
humor in stereotypic age-based attributes that they observe in themselves or someone they know, and be just as likely to tell “ageist” jokes as are their younger counterparts. This evidence underscores a theoretically important similarity between younger and older adults with regard to how they navigate the phenomenon of ageism. Whereas personal evaluations and opinions of humor offensiveness may reflect personal views that do not entail any social action, ratings of humor PCness and repeatability arguably take into consideration other people’s anticipated view or perceived social norms. In other words, there is consensus between old and young concerning the acceptability of age-based humor, which in turn suggests societal consensus regarding the topic of ageism, in general.

**Differences between Older and Younger Participants**

Outgroup-directed humor is qualitatively different when it is perceived by the outgroup versus the ingroup, e.g., younger adults versus older adults (Kelly et al., 1987). This was perhaps the most pervasive finding in the current investigation. Older and younger adults indeed had differential perceptions of, and attitudes toward, age-based humor. Younger adults were more appreciative and accepting of age-based humor than their older counterparts. Younger participants evaluated the humor more favorably, and found it less offensive, than did their older counterparts. Follow-up correlational analyses reveal that there was also a difference in associations between humor evaluation and offensiveness ratings between younger and older adults (Female Comedian, younger adults $r = -.195, p < .01$ vs. older adults $r = -.505, p < .01$, Fisher’s $z = 4.13, p < .001$; Male Comedian, younger adults $r = -.303, p < 0.01$ vs. older adults $r = -.594, p < .01$,}
Fisher’s $z = 4.19, p < .001$). Similarly, there was also a difference in associations between humor evaluation and ratings of PCness between younger and older adults (Female Comedian, younger adults $r = .368, p < .01$ vs. older adults $r = .507, p < .01$, Fisher’s $z = -1.97, p = .049$; Male Comedian, younger adults $r = .363, p < .01$ vs. older adults $r = .534, p < .01$, Fisher’s $z = -2.46 = p = .019$).

These pattern highlights an important distinction between how younger and older adults conceive of age-based humor. It seems that younger adults are not only able to enjoy the humor more than older ones, but that they also tend to dissociate their personal evaluations from how offensive and politically correct they found it to be. Older adults, on the other hand, are more apt to evaluate the humor as a function of how offensive and PC they regard it.

However, an analysis of correlations between humor evaluations and ratings of its repeatability revealed striking similarities between younger and older participants. There were no differences in associations between humor evaluation and repeatability ratings between younger and older adults (Female Comedian, younger adults $r = .656, p < .01$ vs. older adults $r = .676, p < .01$, Fisher’s $z = -0.41, p = .68$; Male Comedian, younger adults $r = .368, p < .01$ vs. older adults $r = .427, p < .01$, Fisher’s $z = -0.80 = p = .42$). In other words, both older and younger participants were apt to repeat the humor to the extent that they evaluated it favorably.

**Participant Sex**

Overall, there were no consistent sex effects with regard to the main dependent measures. There were, however, sporadic clues suggesting sex-differentiated humor
preferences do actually exist. Men regarded the age-based humor stimuli to be more PC than did females and they tended to favor disparagement humor, compared to women (cf. Solomon, 1996). This finding replicates Martin et al. (2003) in that, on average, men have greater appreciation for aggressive humor than do women. The results are congruent with previous evidence showing men to be more accepting of the use verbal aggression (Archer et al., 1995; Gladue, 1991).

Further evidence for men’s propensity toward aggressive humor can be gleaned from differences in women’s perceptions of the male and female comedian. With regard to humor offensiveness ratings, women regarded the male comedians’ humor as more offensive than that of the females, but only after being exposed to older audiences not laughing. Although hypothesized outgroup authority differences were not observed, the finding coincides somewhat with the “gender matching” prediction—Hypothesis 6—which predicted that participants would demonstrate favoritism toward comedians of the same gender. When exposed to older audiences who were not laughing, women tended to judge the male comedian more harshly than his female counterpart.

In contradiction to the aforementioned effect, the offensiveness dependent measure yielded a pattern that was not only inconsistent with Hypothesis 6, but seemingly contradicted it entirely. Male participants judged the male comedian’s humor to be more offensive than did female participants, but those who were exposed to younger audiences actually rated the female comedian’s disparagement humor more repeatable than did female participants. This finding is consistent with the notion that men are more appreciative of aggressive humor than women (Martin et al., 2003), and
could even indicate a propensity for men to appreciate humor with a high degree of “shock value.”

**Audience Reaction**

In the present research there was a nearly complete lack of empirical support for differential humor appraisals resulting from exposure to laughing vs. nonlaughing audiences. This was most surprising in light of the extant literature on the effects of audience laughter having a facilitative effect on research participants (e.g., Axsom, Yates, & Chaiken, 1987; Bachorowski & Owren, 2001; Brown et al., 1981; Cupchik & Leventhal, 1974; Davis, 1999; Leventhal & Cupchik, 1975; Martin & Gray, 1996). However, a reliable pattern remained elusive across dependent measures.

It is not entirely clear why the facilitative effect of audience laughter versus nonlaughter was not replicated in the present experiment. One might argue exposure to the audience laughter versus nonlaughter manipulation—two (~one second) exposures per video—was simply too subtle for some participants. However, the results of the audience recall analyses suggest that this potential limitation is not likely to have confounded results. One-third-to-one-half of participants—both older and younger adults—correctly recalled the approximate age group and reaction of the audience to which they were exposed. In addition, prior experiments using the same approach and research design did find Audience Reaction to be consequential on a more consistent basis (Moulton & Kemmelmeier, 2013). This suggests that the design of the present study was likely not the reason for the lack of influence Audience Reaction had on participants.

Perhaps the lack of consistent Audience Reaction effects was due to
idiosyncrasies with the humor routines themselves. It is indeed possible that something about the content of the materials that I selected for inclusion in the study may have caused participants to discount the audience cues. This possibility, however, seems remote simply because it is unlikely that four separate standup comedy routines would be similarly idiosyncratic. In addition, the Audience Reaction effects that did emerge were observed for both disparaging and nondisparaging humor.

It seems most likely that the lack of consistent effects for Audience Reaction was due to the topic of humor: aging. As previously mentioned, aging and age-based prejudice is not a “hot button” issue that incites the same type of social anxiety that race- and sex-based humor often does, so participants may have not found the material to be ambiguously inappropriate. That is, they simply may not have felt any imperative to reference or take into account others’ reactions before judging the humor.

**Humor Type**

Finally, humor type was manipulated as an experimental factor because it was expected that disparaging and nondisparaging humor would elicit different reactions. As expected, the nondisparaging humor received consistently more positive ratings than the disparaging humor across all four dependent variables, that is, humor evaluation, offensiveness, PCness, and repeatability ratings. For participants of both age groups, non-ageist humor was generally favored over ageist humor. This is encouraging because it suggests that older and younger people similarly prefer humor that does not put-down the older group.
Audience Recall

As previously noted, the Audience Recall variables could not be analyzed within the full model of each main analyses, thus limiting the comparability of these analyses to the main analyses. Although the present models are not directly comparable to the original analyses, there were instances when similar effects shone through the data. One of the most consistent finding from these analyses, however, was the tendency for favor humor in which the targets are members of the audience. It seems that, despite the aggressive or nonaggressive nature of it, individuals are more attracted to age-based humor when representatives of the target group are thought to be present. This is an interesting finding, and may be unique to social groups defined by age. In other words, it is doubtful that individuals would prefer racial jokes to be told in the presence of black people, just as it is unlikely that people would rather sexist jokes be told in the presence of women. The other relevant main effect for these analyses—Audience Reaction Recall—also followed a consistent pattern across dependent measures: Recall of laughing audiences yielded more positive humor appraisals. This effect occurred regardless of Humor Type in most cases, but of note, occurred with all four main dependent measures for the disparaging humor. Awareness of audience characteristics may be more imperative in the disparaging context, which is ambiguously aggressive by nature.

There were also several higher order interactions that yielded interesting patterns—those that would have been otherwise missed without the use of audience recall variables. Of note, Younger participants who were exposed to laughing younger audiences evaluated the disparaging humor more positively than those exposed to the
same audiences not laughing, but only when they recalled previously seeing audiences laughing. However, there was also a great deal inconsistency across patterns. For example, younger participants who were exposed to nonlaughing older audiences rated the female comedian’s disparaging humor to be more offensive than those who saw the same audiences laughing. Although emerging from different interactions, this pattern seems to contradict the one previously discussed, thus rendering them both useless in terms of supporting any of the theory-driven hypotheses posed in this report. Other peculiar interaction patterns across the latter two main dependent variables also leads the reader to believe that many of these effects emerged randomly—by chance.

**Broader Implications**

Disparagement humor has recently gained popularity in major media comedy outlets (e.g., Comedy Central, HBO), and recent research and theorizing has connected intergroup disparagement humor—and nonchalant views toward it—with prejudice and intergroup bias (Ford & Ferguson, 2004; Hodson et al., 2010). Today’s age-based humor is similar to that of the past, but it has become edgier than it once was. Despite this, historically there has been a lack of study on the effects of age-based humor on individuals’ attitudes toward older adults as a group. Perhaps because of this, there has also been an absence of research on the moderating influence of older and younger adults’ cues of laughter versus nonlaughter on others’ humor appraisals. The present research addressed each of these underexplored facets of age-based humor while also accounting for differences based on humor type, participant age group, sex, and individual differences.
This investigation suggests that age-based group influence on individuals’ appraisals of humor is similar to that based on other types of social groups, but is also viewed somewhat differently. Conceptually replicating the findings of Moulton and Kemmelmeier (2013), younger adults seemed to be influenced more by the reactions of outgroup older audiences than by ingroup younger audiences. However, and unlike the findings of Moulton and Kemmelmeier, outgroup influence in the present study was subtle, and emerged only in unexpected ways. There was also some support for an ingroup influence effect among older participants, although again, this pattern was inconsistent across dependent measures and often included additional unexpected factors.

As noted in Chapter 2, myriad factors associated with age discrimination blur the lines between what is offensive and what is not, which is not as often the case with race- and sex-based humor. To say the least, the present research arrives at the same conclusion as Kite et al. (2005), namely, that people hold rather complex multidimensional attitudes toward older adults as a group. This is not to say, however, that a complexity of findings in any way limits the implications of investigations of group dynamics based on age. Rather, it points to broader questions about ageism as a social problem: Is the perpetuation of “ageism” through age-based humor a social problem? This depends on what one considers a social problem. According to Henslin (2011),

[A] social problem is an aspect of society that people are concerned about and would like changed. Social problems begin with an objective condition, some aspect of society that can be measured or experienced… The second key element of a social problem is subjective concern, the concern that a significant number of
people (or a number of significant people) have about the condition. (p. 3)

From this perspective, it seems that age-based humor meets the first criterion—that of being an objective and measurable condition. Indeed, the present investigation demonstrated measureable differences in how such humor perceived, and that the more aggressive forms are viewed with more concern than the less aggressive forms. However, the phenomenon perhaps falls short of the fulfilling Henslin’s second key element of a social problem—that of holding the concern of a significant number of people or a number of significant people. Based on the current investigation, it is difficult to assert that a significant number of people—or even a significant number of older adults—are vehemently opposed to humor that targets and/or disparages older age. Indeed, there were several instances of older adults finding the humor to be just as funny, offensive, politically correct, and repeatable as did their younger counterparts.

There were also instances when older adults did find the humor to be less funny, more offensive, etc., than did younger adults. However, the lack of consistency with these effects arguably points to differences in humor taste between older and younger adults (cf. Martin et al., 2003), and not necessarily broader concerns about the social implications of the humor. It is important to note that older people often self-stereotype (Giles & Reid, 2005), embrace age-based humor (Williams & Giles, 1998), and may even be more ageist than their younger counterparts (Kite et al., 2005). Despite the fact that a significant number of people may not be opposed to poking fun at older adults, this is not to say that there is not a number of significant people who are.

There has been a growing contingent of academics who not only consider ageism
a social problem, but who have based their careers on researching and reporting the ways “the third great -ism,” oppresses older adults into positions of social subordination (cf. Butler, 1995; Palmore, 2001). One could even argue that this nucleus of academics compiling evidence in favor of ageism as a social problem represents a number of significant people—the second element of a social problem as defined by Henslin (2011). The feminist movement in the U.S. was inextricably linked to the research agendas of academic researchers whose applications of theory and collections of empirical evidence helped change how people view sex-based social hierarchies (Abrar, Lovenduski, & Margetts, 2000). In a similar way, a number of significant academics advancing theory and research in support of an anti-ageism movement could be just the impetus needed for ageism to be widely recognized as a social problem. As noted in the introduction, however, it is difficult to argue that these academics represent any sort of significant force when considered alongside the numbers of their counterparts who crusade against the original “-isms”—racism and sexism.

Assuming that ageism is indeed a qualitatively unique –ism in that it lacks clear social etiquette, the question then becomes whether the social acceptability of age-based humor will maintain status quo, or whether trends will shift in the direction of prohibition as with other –isms. One way this could occur is by older adults gaining more visibility and respect as a distinct social group. The present research demonstrated that younger adults tend to hold more negative views toward older adults than older adults themselves do. Because younger adults tend to dominate the mass media and popular culture at the exclusion of older adults (Levy & Banaji, 2004; Zebowitz & Montepare, 2000), one could argue that the social norms regarding age-based humor may only begin to change
as older adults gain more of a group presence in society. With the relative proportion of older adults increasing in the U.S. and most other industrialized societies, ageism is likely something that will move to the forefront of public discourse.

The norms surrounding age-based humor might also change by way of popular consensus. The baby boomer cohort represents a large proportion of the total population, so regardless of whether ageism has any actual negative consequences on older adults, they might be uncomfortable with being stereotyped and collectively speak out against it. By numbers alone, older adults could raise awareness of their age bracket as a socially oppressed group. Such consciousness-raising could influence younger and middle aged adults to recognize the potential harm in humor based on age stereotypes, and result in the critical mass of solidarity needed to quell the propagation of ageism and ageist humor. While such a series of events is certainly possible, it is not entirely plausible.

Rather than a shift in social norms regarding the use and overall acceptability of age-based humor, it seems more likely that we will witness a shift in age stereotype content. People are now living longer than ever before, thus expanding the category boundaries that now define the “typical” older adult. As a result, the widely held stereotypical conceptions of “older adult” are likely to become more diversified, thereby beginning to weaken many of the stereotype-based preconceptions many people now take for granted (Schewe & Balazs, 1990). The older adult of the future will likely have a diverse number of possible roles to choose from, which will garner more respect for the older adult group than in years past (Cox, 1990). The stereotyped conception of the frail, homebound senior may discontinue use as a predominant age stereotype meme. This is
not to say, however, that age-based stereotypes will automatically vanish from U.S. culture due to a diversification of the older adult population. What is more likely is a gradual extinction of traditional old age stereotypes as more contemporary older adults choose to actively defy them. The present experiment even provided evidence that the laughing-nonlaughing manipulation for the older audiences was sufficient to influence people’s post-humor attitudes toward older adults. This is encouraging.

**Limitations**

As with any research, the present investigation had several limitations. Below I list and discuss a few of these limitations.

**Design.** The present study employed a factorial design in which the responses of participants exposed to laughing audiences were compared to those who were exposed to the same audiences not laughing. That is, each Audience Reaction condition had its own counterpart between which meaningful comparisons could be made. In this way, each example of humor acted as a “control” for its opposite-valenced counterpart, thus precluding the need for a “no audience reaction” control condition. However, the exclusion of such a condition meant that there could be no baseline or “pure” participant response to the humor—comparisons between conditions were merely relative.\(^1\)

**Sample.** Due to convenience sampling, the generalizability of the sample is unclear. Although convenience sampling is commonly employed in the social sciences, there is potential reason to be concerned about the older adult sample. All of the

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\(^1\) Moulton and Kemmelmeier (2013) employed a “no audience” control condition, but it only controlled for visual audience laughter and not for audible audience laughter.
participants for this study were recruited online; and most of the older adults were recruited via MTurk—a popular crowdsourcing website. However, because relatively few older adults use such websites compared to other age groups (Hoffman, 2009), one has to be concerned that my sample of older adults was not representative of the general population of older adults.

The small monetary reward offered for participation may have biased sample selection. Individuals with higher socio-economic status (SES) may have been less likely to opt in to the study than those with lower SES, thus skewing the sample toward the less wealthy. Also, because older adults tend to have more assets, less debt, and be more financially satisfied than younger adults (Hansen, Slagsvold, & Moum, 2008), the nominal compensation may have been more attractive to younger adults than older adults.

Materials. There are limitations with the variety of standup comedy that is suited for studying the processes and effects age-based humor. Unlike the abundance of available standup comedy footage that focuses on sex and race, there is relatively less standup material that focuses on age. It is possible, therefore, that because of the relative rarity of age-based humor, individuals reacted to it differently than they would have for more popular types of group-based humor.

In addition, because of the lack of age-based humor available, I was somewhat restricted in my choice of stimuli, which may have led to selecting less-than-desirable humor material for the purposes of the present study. That is, possibly the stimuli I selected were not as engaging as they could have otherwise been, thus limiting individuals’ inclinations to notice and/or be influenced by the experimental
manipulations. Perhaps the observed effects would have been more consistent with past findings, i.e., Moulton and Kemmelmeier (2013), had I been afforded the luxury of choosing from more footage samples than those that were available.

Finally, regarding materials, one of the key individual difference measures could not be used as a moderator variable in the present study as was planned originally. Cavalier Humor Beliefs (CHB) was influenced by key experimental manipulations. As a result, this variable could not be used to investigate whether individual differences in CHB moderated the effects of the very same experimental variations.

**Stimuli Order effects.** Unexpectedly, the present research produced a number of higher order interactions that included stimuli order. This experimental variation was originally counter-balanced for methodological reasons, i.e. to ensure that any effects of the key experimental variables would not be confounded by the order in which the two videos were presented, which each participant watched. The fact that effects for Stimuli Order emerged means that the video shaped participants’ experience was shaped by the specific sequence. As discussed earlier, the effects including Stimulus Order were not interpretable. However, although the analyses of substantive effects reported in this dissertation were net of any order effects, the presence of such order effects does represent an important limitation to the results presented in this dissertation. Future research might examine this issue further.

**Future Directions**

The complexity of the findings reported herein highlights a need to search for more answers. There is currently little research being conducted on ageism as a socio-
psychological phenomenon (Nelson, 2004). However, with the “graying of society” at the proverbial doorstep perhaps it is time that more serious investigations of ageism are undertaken. In particular, more research is needed at the intersection of humor and age prejudice because, as past investigations have shown, humor—and others’ reactions to it—can have profound effects on the transmission of ageist ideas.

More research is needed to investigate how individuals’ appraisals of age-based humor is shaped by the reactions of others. The present investigation did not yield much evidence to support that group-based social influence plays in integral role in how humor on ageing is perceived, but this does not necessarily mean that such influence is nonexistent. Perhaps, as previously mentioned, some unforeseen limitation with the experimental stimuli attributed to the lack of expected effects, e.g., chosen stimuli was not engaging or audience footage was not representative of older adults as a whole. Future investigations employing a similar experimental paradigm could focus on these issues and either confirm or deny their consequence on the effects in question.

The present investigation used a factorial design to investigate the relative influence of Audience Age and Audience Reaction on participants’ humor ratings. However, it did not employ a “no audience” control group to measure the humor appraisals of participants who had not been influenced by audience manipulations. The inclusion of this condition would have established a baseline measurement of humor appraisals, thus allowing for subsequent analyses that could investigate the directionality of audience influence effects independent from its relative comparison group. That is, the inclusion of a no audience control condition would have allowed further exploration of
the effects observed, particularly whether audience laughter tended to facilitate positive participant responses or if audience nonlaughter inhibited positive responses compared to the baseline group. Future research could include such a control group in order to make these important distinctions.

Finally, most of the research that has been conducted on intergroup humor seems to assume *disparagement* is necessary for the humor to have measurable effects on people’s attitudes and stereotypes toward the targeted group. However, the present investigation has demonstrated that this is not necessarily the case. Whereas the aggressive tone of disparagement humor may represent more of a threat to older adults, as a group, compared to nondisparaging humor, it seems to have little-to-no additional effect on observers’ attitudes. Future investigations should explore this phenomenon more closely to determine why disparagement and nondisparaging humor seem to be on par with regard to stereotype- and attitude-based humor after effects (cf. Olson et al., 1999).

**Conclusion**

Ageism matters because it is the manifestation of biases against a large (and growing) segment of our population. It is true that older people tend to have higher self-esteem and be better off financially than their younger and middle-aged counterparts. However, this has little to do with how older adults are treated by the rest; indeed, no segment of society deserves to withstand the worst of discrimination based simply on a group membership.

Perhaps what makes ageism an elusive prejudice to study is the very fact that
younger people can easily become distracted (and perhaps envious) of the nice life many older people now enjoy. In addition, being that older adults were once younger adults themselves, they can likely empathize with the woes and tribulation that accompanies young adulthood. In fact, such a broad-view perspective of the vicissitudes of adulthood may actually serve as a protective factor with regard to self-esteem and other measures of adult wellbeing (Solomon, 1996).

Humor helps people cope with life’s problems and gain a greater sense of control throughout the life course (Fry, 1986; Saper, 1990; Solomon, 1996). From a symbolic interactionists’ perspective, humor allows one to redefine situations as less threatening than they would otherwise be seen (Goffman, 1967). Again, this is a matter of gaining control over one’s life. However, humor creation, i.e., telling jokes, may have more positive effect on older persons’ sense of control than mere responding to humor (Martin & Lefcourt, 1983). With this in mind, it is a small wonder that older adults are often the first to laugh at ageist humor, and maybe even the first to offer ageist humor directed at themselves (e.g., “Oops… I must have just had a senior moment!”).

Recommendations: How to Ditch Ageism

Only when older adults empower themselves and make determinations about their own lives can the insidious effects of ageism be countered. In other words, it is only older individuals who can definitively identify ageism and confront its promoters (Angus & Reeve, 2006). However, this is a nearly impossible expectation as older adults are largely underrepresented in younger adults’ social networks, thus excluding them from having much of a say in contemporary social developments (Uhlenberg & Gierveld, 2004).
Separating older adults from their social powers and not allowing them to play integral roles in society may help propagate the erroneous belief that they have entered a stage of life where they are obsolete (Esposito, 1987). The more we isolate elders from mainstream society, the less power they have to confront their would-be oppressors. The fight ageist ageism likely must begin with efforts on the part of the rest of the population.

Younger adults could start by fostering social norms and values supportive of respect and cherishing for the elderly (Palmore, 1999). To the extent that people in U.S. culture believe that the elderly should be valued, respected, and cared for, reminders of aging should promote positive reactions toward the elderly (Greenberg et al., 2004). To the extent that older adults are perceived in negative terms, the converse becomes true: not being old represents health, acuity, and other desirable states of being (Levy & Banaji, 2004). Everyone should strive to become aware of their negative views of aging and consciously strive to identify with the positive attributes of older adults.
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Appendix

Research Materials

Main Analysis Dependent Measures.

How funny or not funny were the comedian’s jokes?
○ ○ ○ ○ ○ ○ ○ ○
Not at all Neutral Very funny

How much did you like or dislike the comedian?
○ ○ ○ ○ ○ ○ ○ ○
Dislike Neutral Like very much
very much

How politically correct or politically incorrect were the comedian’s jokes?
○ ○ ○ ○ ○ ○ ○ ○
Very politically incorrect Neutral Very politically correct

How offensive or not offensive were the comedian’s jokes?
○ ○ ○ ○ ○ ○ ○ ○
Not at all offensive Neutral Very offensive

How likely would you be to repeat the jokes in this routine to a close friend?
○ ○ ○ ○ ○ ○ ○ ○
Not at all likely Neutral Very likely

How likely would you be to repeat the jokes in this routine to a member of your family?
○ ○ ○ ○ ○ ○ ○ ○
Not at all likely Neutral Very likely

How likely would you be to repeat the jokes in this routine to someone you meet for the first time?
○ ○ ○ ○ ○ ○ ○ ○
Not at all likely Neutral Very likely
Humor Styles Questionnaire—Affiliative Subscale (HSQ—Affiliative).

I usually don’t laugh or joke around much with other people.

- Strongly disagree
- Neutral
- Strongly agree

I don’t have to work very hard at making other people laugh—I seem to be a naturally humorous person.

- Strongly disagree
- Neutral
- Strongly agree

I rarely make other people laugh by telling funny stories about myself.

- Strongly disagree
- Neutral
- Strongly agree

I laugh and joke a lot with my closest friends.

- Strongly disagree
- Neutral
- Strongly agree

I usually don’t like to tell jokes or amuse people.

- Strongly disagree
- Neutral
- Strongly agree

I enjoy making people laugh.

- Strongly disagree
- Neutral
- Strongly agree

I don’t often joke around with my friends.

- Strongly disagree
- Neutral
- Strongly agree

I usually can’t think of witty things to say when I’m with other people.

- Strongly disagree
- Neutral
- Strongly agree
Humor Styles Questionnaire—Aggressive Subscale (HSQ—Aggressive).

If someone makes a mistake, I will often tease them about it.

○ ○ ○ ○ ○ ○ ○ ○

**Strongly disagree** Neutral **Strongly agree**

People are never offended or hurt by my sense of humor.

○ ○ ○ ○ ○ ○ ○ ○

**Strongly disagree** Neutral **Strongly agree**

When telling jokes or saying funny things, I am usually not very concerned about how other people are taking it.

○ ○ ○ ○ ○ ○ ○ ○

**Strongly disagree** Neutral **Strongly agree**

I do not like it when people use humor as a way of criticizing or putting someone down.

○ ○ ○ ○ ○ ○ ○ ○

**Strongly disagree** Neutral **Strongly agree**

Sometimes I think of something that is so funny that I can’t stop myself from saying it, even if it is not appropriate for the situation.

○ ○ ○ ○ ○ ○ ○ ○

**Strongly disagree** Neutral **Strongly agree**

I never participate in laughing at others even if all my friends are doing it.

○ ○ ○ ○ ○ ○ ○ ○

**Strongly disagree** Neutral **Strongly agree**

If I don’t like someone, I often use humor or teasing to put them down.

○ ○ ○ ○ ○ ○ ○ ○

**Strongly disagree** Neutral **Strongly agree**

Even if something is really funny to me, I will not laugh or joke about it if someone will be offended.

○ ○ ○ ○ ○ ○ ○ ○

**Strongly disagree** Neutral **Strongly agree**
Cavalier Humor Beliefs (CHB).

Sometimes people need to relax and realize that a joke is just a joke.

- Strongly disagree
- Neutral
- Strongly agree

Society needs to lighten up about jokes and humor generally.

- Strongly disagree
- Neutral
- Strongly agree

People get too easily offended by jokes.

- Strongly disagree
- Neutral
- Strongly agree

It is okay to laugh at the differences between people.

- Strongly disagree
- Neutral
- Strongly agree

Jokes are simply fun.

- Strongly disagree
- Neutral
- Strongly agree

People should try to tell jokes that don’t put others down.

- Strongly disagree
- Neutral
- Strongly agree

Social Dominance Orientation (SDO).

It would be good if groups could be equal.

- Strongly disagree
- Neutral
- Strongly agree

Group equality should be our ideal.

- Strongly disagree
- Neutral
- Strongly agree
All groups should be given an equal chance in life.

Strongly disagree Neutral Strongly agree

We should do what we can to equalize conditions for different groups.

Strongly disagree Neutral Strongly agree

We should strive for increased social equality.

Strongly disagree Neutral Strongly agree

We would have fewer problems if we treated people more equally.

Strongly disagree Neutral Strongly agree

We should strive to make incomes as equal as possible.

Strongly disagree Neutral Strongly agree

No one group should dominate in society.

Strongly disagree Neutral Strongly agree

Some groups of people are simply inferior to other groups.

Strongly disagree Neutral Strongly agree

In getting what you want, it is sometimes necessary to use force against other groups.

Strongly disagree Neutral Strongly agree

To get ahead in life, it is sometimes necessary to step on other groups.

Strongly disagree Neutral Strongly agree
If certain groups stayed in their place, we would have fewer problems.

Strongly disagree Neutral Strongly agree

It’s probably a good thing that certain groups are at the top and other groups are at the bottom.

Strongly disagree Neutral Strongly agree

Inferior groups should stay in their place.

Strongly disagree Neutral Strongly agree

Sometimes other groups must be kept in their place.

Strongly disagree Neutral Strongly agree

**Age Group Identification (AgeID).**

I like being a member of my age group.

Strongly disagree Neutral Strongly agree

I am proud to be a member of my age group.

Strongly disagree Neutral Strongly agree

My age group membership is central to who I am.

Strongly disagree Neutral Strongly agree

I believe that being a member of my age group is a positive experience.

Strongly disagree Neutral Strongly agree

I have a clear sense of my age group identity and what it means to me.

Strongly disagree Neutral Strongly agree
Public Self-Consciousness (PSC).

I’m concerned about my style of doing things.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Neutral</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
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</tbody>
</table>

I’m concerned about the way I present myself.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Neutral</th>
<th>Strongly agree</th>
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</thead>
<tbody>
<tr>
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</table>

I’m self-conscious about the way I look.

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<thead>
<tr>
<th>Strongly disagree</th>
<th>Neutral</th>
<th>Strongly agree</th>
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<tbody>
<tr>
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</tbody>
</table>

I usually worry about making a good impression.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Neutral</th>
<th>Strongly agree</th>
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</thead>
<tbody>
<tr>
<td>○</td>
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</table>

One of the last things I do before I leave my house is look in the mirror.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Neutral</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
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</tbody>
</table>

I’m concerned about what other people think of me.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Neutral</th>
<th>Strongly agree</th>
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</thead>
<tbody>
<tr>
<td>○</td>
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<td>○</td>
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</table>

I’m usually aware of my appearance.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Neutral</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
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</table>
### Table

**Summary of hypotheses support across dependent measures**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Humor Evaluation</th>
<th>Humor Offensiveness</th>
<th>Humor PCness</th>
<th>Humor Repeatability</th>
<th>Post-humor ASD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>†</td>
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<tr>
<td>Hypothesis 2a</td>
<td>†</td>
<td>○</td>
<td>○</td>
<td>○</td>
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</tr>
<tr>
<td>Hypothesis 2b</td>
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<td>†</td>
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<td>○</td>
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<tr>
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<td>†</td>
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<td>○</td>
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<td>†</td>
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<td>n/a</td>
<td>n/a</td>
<td>○</td>
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<tr>
<td>Hypothesis 8</td>
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<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>†</td>
</tr>
</tbody>
</table>

*Note:* ✔ = hypothesis supported, † = hypothesis partially/conceptually supported, ○ = hypothesis not supported, † = opposite of hypothesis observed
Figures

Figure 1
Humor Evaluation: Comedian Sex x Participant Age Group x Disparagement Condition x Age Identification four-way interaction

1a. Older participants evaluations of disparaging humor

1b. Younger participants evaluations of disparaging humor

1c. Older participants evaluations of non-disparaging humor

1d. Younger participants evaluations of non-disparaging humor

Note: Humor evaluation, shown on the Y-axis, was recorded on a seven-point scale.
Figure 2

*Humor Evaluation: Disparagement Condition x SDO two-way interaction*

*Note:* Low SDO reflects estimates for SDO values 1 SD below the mean and high SDO reflects estimates for SDO values 1 SD above the mean.
Figure 3

*Humor Offensiveness: Participant Age Group x Audience Age x Audience Reaction three-way interaction*

3a. Offensiveness ratings of older participants by audience age and reaction

3b. Offensiveness ratings of younger participants by audience age and reaction

*Note:* Humor offensiveness ratings, shown on the Y-axis, was recorded on a seven-point scale with 1 representing least offensive and 7 representing most offensive.
Figure 4

_Humor Offensiveness: Comedian Sex x Audience Age x Audience Reaction x Disparagement Condition_

Four-way interaction

4a. Offensiveness ratings of disparaging female

   comedian

4b. Offensiveness ratings of disparaging male

   comedian

4c. Offensiveness ratings of nondisparaging

   female comedian

4d. Offensiveness ratings of nondisparaging

   male comedian

*Note:* Humor offensiveness, shown on the Y-axis, was recorded on a seven-point scale with 1 representing least offensive and 7 representing most offensive.
Figure 5

_Humor Offensiveness: Participant Age Group x Audience Reaction x AgeID three-way interaction_

5a. Offensiveness ratings of low and high AgeID older participants by audience age and reaction

5b. Offensiveness ratings of low and high AgeID younger participants by audience age and reaction

**p < .01

_Note: Low AgeID reflects estimates for AgeID values 1 SD below the mean and high AgeID reflects estimates for AgeID values 1 SD above the mean._
Figure 6

*Humor Offensiveness: Comedian Sex x Audience Age x Audience Reaction x PSC four-way interaction*

6a.
Low PSC participants’ offensiveness ratings of female comedians by audience age and reaction

6b.
High PSC participants’ offensiveness ratings of female comedians by audience age and reaction

6c.
Low PSC participants’ offensiveness ratings of male comedians by audience age and reaction

6d.
High PSC participants’ offensiveness ratings of female comedians by audience age and reaction

*Note:* Low PSC reflects estimates for PSC values 1 SD below the mean and high PSC reflects estimates for PSC values 1 SD above the mean. \( p < .10 \)
Figure 7

_Humor PCness: Comedian Sex x Audience Age x Audience Reaction x Disparagement Condition four-way interaction_

7a.
PCness ratings of disparaging female comedian

7b.
PCness ratings of disparaging male comedian

7c.
PCness ratings of nondisparaging female comedian

7d.
PCness ratings of nondisparaging male comedian

_Note:_ Humor PCness, shown on the Y-axis, was recorded on a seven-point scale with 1 representing least PC and 7 representing most PC.
**Figure 8**

*Humor Repeatability: Comedian Sex x Participant Age Group x Audience Reaction x Disparagement Condition four-way interaction*

8a. Older participants’ rated repeatability of disparaging comedians

8b. Older participants’ rated repeatability of nondisparaging comedians

8c. Younger participants’ rated repeatability of disparaging comedians

8d. Younger participants’ rated repeatability of nondisparaging comedians

*Note:* Humor repeatability, shown on the Y-axis, was recorded on a seven-point scale with 1 representing least repeatable and 7 representing most repeatable.
Figure 9

*Humor Repeatability: Comedian Sex x Audience Age x Audience Reaction x SDO four-way interaction*

9a. Low SDO participants’ rated repeatability of female comedians by audience age and reaction

9b. High SDO participants’ rated repeatability of female comedians by audience age and reaction

9c. Low SDO participants’ rated repeatability of male comedians by audience age and reaction

9d. High SDO participants’ rated repeatability of male comedians by audience age and reaction

**p < .01

*Note:* Humor repeatability, shown on the Y-axis, was recorded on a seven-point scale with 1 representing least repeatable and 7 representing most repeatable.
Figure 10

*ASD as a Function of Experimental Manipulations: Audience Age x Audience Reaction two-way interaction*

Participants’ attitudes toward older adults (ASD) as a function of Audience Age and Audience Reaction

*Note:* Attitudes toward older adults, shown on the Y-axis, was recorded on a seven-point scale with 1 representing most positive attitudes toward older adults and 7 representing least positive attitudes. $+p < .10$. 
Figure 11

ASD as a Function of Experimental Manipulations: Disparagement Condition x Participant Age Group x Audience Age x SDO four-way interaction

11a. Low SDO participants’ ASD scores by audience age after viewing disparagement humor

11b. High SDO participants’ ASD scores by audience age after viewing disparagement humor

11c. Low SDO participants’ ASD scores by audience age after viewing nondisparaging humor

11d. High SDO participants’ ASD scores by audience age after viewing nondisparaging humor

Note: ASD, shown on the Y-axis, was recorded on a seven-point scale with 1 representing most positive attitudes and 7 representing least positive. *p < .10.