THESIS

RESOURCE COMPETITION AND AGEISM: A STUDY OF THE INFLUENCE OF

EMPLOYMENT SCARCITY ON THE ENDORSEMENT OF AGEIST ATTITUDES

Submitted by

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ABSTRACT

RESOURCE COMPETITION AND AGEISM: A STUDY OF THE INFLUENCE OF

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The major economic recession of 2007, which has disproportionately affected younger workers, and the rapid growth of the older population have created an environment where younger persons are economically disenfranchised and a highly visible older population persists in the labor force at a time when jobs are scarce. Intergenerational conflict may arise under these conditions due to perceived competition over economic resources, consistent with Realistic Group Conflict Theory, which posits that negative intergroup perceptions arise when the success of one group is threatened by another, potentially leading to intergroup hostility. Younger workers may perceive older workers as a threat to their economic well-being and thus harbor ageist perceptions about them.

To test this hypothesis, survey data was collected from 395 participants using Amazon's Mechanical Turk. The survey collected information about current employment status, duration of longest unemployment, number of peers unemployed, underemployment, job insecurity, and endorsement of ageist beliefs. Work centrality was investigated as a potential moderator for these relationships and perception of threat felt from older persons as a potential mediator.

Results indicated that underemployment and job insecurity were both significant predictors of ageism. Workers who experienced greater underemployment or job insecurity were more likely to harbor ageist beliefs. Additionally, work centrality moderated relationships between peer unemployment and ageism, and perception of threat from older persons mediated relationships between underemployment/job insecurity and ageism. This study provides insight into how perceptions of age are influenced by economic factors and how a vulnerable group in society is affected during periods of economic turmoil.

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INTRODUCTION AND LITERATURE REVIEW

The beginning of the new millennium has largely been characterized by a major global economic crisis. Beginning in 2007, this economic downturn has been the worst the U.S. has experienced since the Great Depression, leading many to refer to this crisis as the "Great Recession". Organizations have responded by hiring fewer workers and downsizing their current workforces, leading to a rise in unemployment. The unemployment rate has risen dramatically over the last decade, peaking at 10% in October 2009 from a prerecession low of 3.9% in December 2000 (Bureau of Labor Statistics, 2013). Though the recession has affected all workers, certain groups have been affected more than others. The youngest group of workers, those ages 16-25, has seen the highest unemployment of any age group. The unstable work environment combined with this group's age, a younger age often indicating shorter tenure and thus greater risk for being laid off, means that many in this age group are at risk of experiencing job insecurity as well as unemployment.

There is a growing older population in the U.S. that is putting a strain on government and organizational resources. The Baby Boomer age cohort, the first born in the postwar era and one of the largest age cohorts in the U.S., is approaching retirement age. The oldest of this group are already in their 60s, and as they age the number of adults over 65 is expected to increase by about 86% between 2011 and 2030 (U.S. Census Bureau, 2011; U.S. Census Bureau, 2012a). Upon retiring, these older individuals will become eligible for retirement and Social Security benefits. In an attempt to mitigate this expected strain, many organizations have introduced hurdles to the retirement process, such as changing the requirements for benefit eligibility, which is associated with older workers postponing retirement or returning to work to keep insurance

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benefits (Johnson, 2007). Thus, older workers are likely to comprise a larger part of the labor force than they historically have with the threat of depletion of shared social resources in the years leading up to their retirement.

These factors create a unique set of circumstances that may affect intergenerational attitudes. Age-based stereotypes have traditionally held that the elderly are sickly, senile, and useless (Palmore, 1999), a group that individuals distance themselves from (Becker, 1973; Tajfel & Turner, 1979). Further, despite being friendly and well-meaning, older individuals are seen as incompetent and thus worthy of pity (Fiske, Cuddy, Glick, & Xu, 2001; Fiske, Xu, Cuddy, & Glick, 1999). However, increased labor force participation by older workers will increase intergenerational contact and increase their salience to society. The especially high unemployment and underemployment among younger workers and insecurity surrounding current jobs may lead many younger people to view older people as competition for work opportunities. Perceived competition over scarce jobs along with the looming threat of retired workers draining government resources may shift perceptions of older people from weak and helpless to viewing them as a threat to financial resources, sparking strong discriminatory attitudes.

A great deal of research has examined unemployment, underemployment, and job insecurity as predictors of a variety of negative individual and organizational outcomes such as personal and family well-being (Hellgren & Sverke, 2003; Vinokur & Caplan, 1987) and a variety of psychological and physiological consequences (Hartley et al., 1991; Landsbergis, 1988; McKee-Ryan, Song, Wanberg, & Kinicki, 2005; van Vuuren, 1990). However, little research has investigated the potential role of these employment stressors as antecedents for ageism. In the current research these proposed relationships are examined in the context of

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sociological theories of age-based prejudice, reviewing extant theories to understand common stereotypes of older adults and then focusing on a sociocultural perspective, where two recent major societal changes – an explosion of the older population and an environment where financial resources are scarce – may shape perceptions toward age.

This study investigated the issue of resource competition and intergenerational conflict by focusing on several metrics of employment distress and using a direct measure of ageism to assess ageist beliefs. Specifically, unemployment status, duration of longest unemployment, peer unemployment, underemployment, and job insecurity were examined as potential predictors of ageism as they capture different aspects of a negative employment situation. Additionally, work centrality was investigated as a potential moderator of these relationships as individuals who view work as more central to their lives may be more impacted when their current employment situation is threatened. Perception of threat felt from older persons was considered as a potential mediator because any relationships that exist between the employment distress predictors and ageism outcomes may be attributable, in part, to feelings that the older generation poses a threat to the younger generation's economic success. These relationships are illustrated in a proposed model of resource competition and ageism presented in Figure 1.

Age and Ageism

Along with race and gender, age has been described as one of the three primary dimensions of interpersonal categorization (Fiske, 1998; Nelson, 2005). However, unlike the other two, an individual's age categorization changes over time and different categorizations, such as being considered "young" or "old", will affect virtually everyone. Despite its universality, little research has focused on age-based stereotypes compared to race and gender (Nelson, 2005). This relative lack of research is surprising given that age discrimination may be
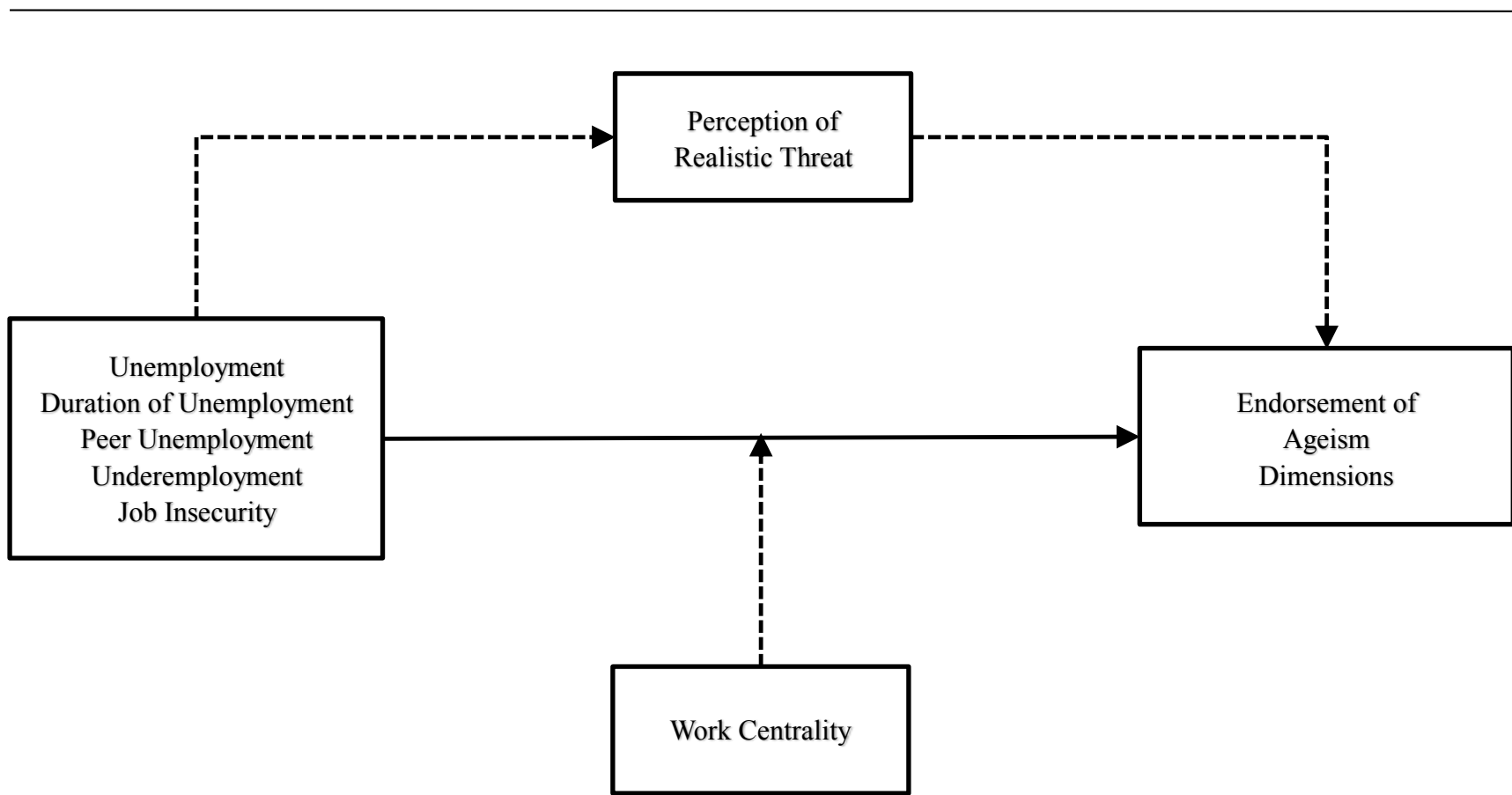
Figure 1. Proposed conceptual model for employment resource competition and ageism.

more prevalent in society than sexism or racism (Banaji, 1999) and that the consequences of ageism can have a substantial negative impact on the quality of life of those who experience it (Fiske, 1998). As life expectancy has continued to increase, the number of older adults has also grown substantially. As the population of older adults in the U.S. continues to grow, the proportion of the total population they make up will increase from about 13% in 2010 to 20.3% in 2030 and 20.9% in 2050 (U.S. Census Bureau, 2012b) creating a major impetus for further work examining age stereotypes.

Ageism was originally defined as prejudice and bigotry directed towards older persons (Butler, 1969), though this definition was expanded to include prejudice or discrimination against or in favor of any age group (Palmore, 1999). Although this modern view of ageism holds that even young people can be the targets age prejudice, early attention to the issue was garnered due to increasing prejudice toward the elderly. The term "ageism" was first used by Butler in 1969, but the concept existed long before this. Ageism became widespread in the 20th century largely because increases in life expectancy created a substantial elderly population for the first time in human history. Over the course of the last century, as the number of older adults increased, the occurrence of prejudice and bigotry also became more common. Ageism is similar to racism and sexism, but there are key differences. As previously stated, all people age and can become potential targets of ageism, unlike racism and sexism that, by definition, only affect specific groups in society. In contrast to racism, ageism has some positive traits attached to the target group as well. For example, stereotypes of older people may include "loveable" and "nurturing" (Cuddy & Fiske, 2002). Additionally, as previously stated, ageism may be more prevalent in society than sexism or racism, though, due to its implicit nature, it can be difficult to accurately assess its occurrence (Levy & Banaji, 2002).

According to Palmore (1999), ageism is divided into two categories: prejudice (beliefs and attitudes) and discrimination (actions), both of which can be positive or negative. Prejudice, in turn, encompasses stereotypes (a cognitive component) and attitudes (an affective competent) and discrimination can occur at the individual or institutional levels. A different categorization has been proposed by the Anti-Ageism Taskforce (2006) which splits ageism into four broad categories: personal, institutional, intentional, and unintentional. Personal ageism is the ideas, attitudes, beliefs, and practices biased against older persons on the part of the individual. Institutional ageism is the accepted rules and practices that discriminate against older persons, such as mandatory retirement age. Intentional ageism is the ideas, attitudes, and practices done with the knowledge that they are biased against older persons. Unintentional ageism is similar to intentional ageism, but differs in that the perpetrator of ageism is unaware of their age bias. Despite the differences in how the concept is organized, both categorizations agree that ageism can be manifested at the individual and institutional levels and that there are cognitive and affective components to it.

Factors Contributing to the Increasing Number of Older Workers

The prevalence of age-based stereotypes in society means that there are many implications for the workplace. An older population means that more older individuals may participate in the labor force. While the term "older worker" is somewhat ambiguous – the Age Discrimination in Employment Act (ADEA) offers protection to workers age 40 and above and in professional sports one can be considered "old" around the age of 30 (Charness, Czaja, & Sharit, 2007) – a National Research Panel in the U.S. adopted the age of 45 after examining health and safety needs for older workers (Wegman & McGee, 2004). In line with this definition, an older worker is any employed individual working beyond the age of 45 until retirement.

While 65 has traditionally been the age of retirement, many older workers are now choosing to remain in the workforce for longer. Since 1985, the labor force participation rate for men age 62-70 has been increasing and since 2001, the rate for both men and women over 65 has been on the rise (Mermin, Johnson, & Murphy, 2007).

This trend can be attributed to several factors such as increased life expectancy, changes in Social Security and pension plans, and a poor economy, all of which have increased the labor force participation rate for older workers (Toossi, 2009). Advances in medicine have increased life expectancy and quality of life; the average life expectancy for men has increased from 66.6 in 1960 to 75.3 in 2008 and from 73.1 to 80.3 for women over the same period (U.S. Census Bureau, 2012c). A study conducted by Blau and Shvydko (2007) found that the majority of older workers who left work from 1990-2001 did not leave due to health-related issues. As people live longer, healthier lives the amount of time they are able and willing to work will necessarily increase.

Insurance and retirement benefits also force many older workers to remain in the labor force. The high cost of insurance can be prohibitively expensive, so many choose to postpone retirement or return to work to have employer based health insurance (Johnson, 2007). Since the 1940s retirement benefits have encouraged men to retire at younger ages. However, changes to Social Security laws in the 2000s were implemented to reverse this trend. Specific changes include raising the retirement age, decreasing benefits for workers who retire early, and providing credits for additional benefits for workers who delay retirement. Also, many benefit plans have changed from defined-benefit plans to defined-contribution plans; while defined-contribution plans do not favor early or late retirement, defined-benefit plans encourage early retirement, so this change has resulted in a shift toward later retirement. Despite these changes,

amendments to the ADEA in 1986 removed mandatory retirement ages so older workers maintain the freedom to decide their own retirement plans.

Another important factor is the economic crisis that began in 2007. With the poor economy, many have lost their jobs or investments they were depending upon for retirement. Workers who lost money as a result of the recession are much more likely to delay their retirement in order to replenish lost assets. Those who lost 40% or more of their investments are about twice as likely to delay retirement and half of workers age 50-64 asked about their retirement plans in a 2009 survey responded that they would postpone retiring three or more years because of the economic turmoil (Morin, 2009).

Implications of an Age Diverse Workforce for Ageism

This increased participation rate among older workers, in turn, means that the workplace is becoming increasingly age-diverse. Throughout the 20th century the workplace has always been a mix of adults age 18-65, but the age distribution has largely been influenced by the demographics of the Baby Boomers. Prior to the Baby Boomers' entry into the workforce, the median worker age peaked at 40.5 in 1962, but as they began entering the workforce this number steadily dropped until about 1980 (Toossi, 2009). The median age had dropped to 34.8 in 1978, but this is expected to increase as the Baby Boomers age to 42.3 in 2018. The influence of this cohort on workforce demographics can be thought of as a snake swallowing an egg, where the bulge steadily passes through the body.

Today many jobs have up to four different generations working side by side: Traditionalists (born before 1946), Baby Boomers (1946-1964), Generation X (also known as the Baby Bust cohort, 1965-1976), and the Millennials (also Generation Y, 1977-1997). By the year 2020, there will be five generations as those born after 1997 (known as generation 2020) join the

workplace (Mesiter & Willyerd, 2010). Though many working-age Millennials have left the workforce to continue their education and make themselves more marketable, this cohort is actually larger than the Baby Boomers and, as younger Millennials reach working age and the older finish their schooling, they are expected to make up over 50% of the workforce by 2020 (Toossi, 2009).This increased age diversity will create a unique environment where, for the first time, people with very different values, attitudes, experiences, and ways of communicating will have to interact in the workplace. These differences can potentially lead to conflict, with age stereotypes influencing the interactions between and attitudes toward each other.

Though ageism may not be uncommon in the workplace, it is generally not dealt with as seriously as racism or sexism. Sometimes this ageism is institutional, and the organization itself condones age discriminatory policies. Older workers may feel pressure to retire earlier than they otherwise would, they are more likely to be passed over for promotions and be excluded from training programs, and older unemployed individuals tend to have more trouble finding work while those that are employed are more likely to have their skills underutilized (Anti-Ageism Taskforce, 2006). Though the ADEA was passed in 1967 to help end age discrimination at work and has led to many improvements, many issues still persist. Though mandatory retirement has largely been eliminated, for some jobs, such as those with public safety implications, exceptions are made. State employees are also not allowed to seek monetary damages under the ADEA and, unlike Title VII of the Civil Rights Act and the Americans with Disabilities Act of 1990, the ADEA does not allow for punitive and compensatory damages. Additionally, the majority of age discrimination cases filed are dismissed. In 2011, of the 23,465 complaints filed to the Equal Employment Opportunity Commission, only 1.0% was resolved with the plaintiff receiving compensation (U.S. Equal Employment Opportunity Commission, 2012a).

The consequences of widespread ageism at work are quite substantial. The economy as a whole benefits from keeping older adults active in the workforce (Feyrer, 2007) and work environments that discriminate based on age may drive them out. If negative age stereotypes are ingrained in those making hiring and promotion decisions, the organization may pass on skilled and productive employees (Tillsely & Taylor, 2001). Many studies have shown that older workers with the same credentials as younger workers are more likely to receive worse evaluations (Avolio & Barrett, 1987; Britton & Thomas, 1973; Rosen & Jerdee, 1976).The ADEA prohibits employers from discriminating on the basis of age so any actions taken by an organization that show clear differential treatment of employees due to their age are subject to litigation with financial consequences. These negative organizational consequences demonstrate the importance of addressing age discrimination at work.

The costs of ageism go beyond the workplace and have a greater impact for society. The experience of negative stereotypes can lead to negative cognitive and physiological outcomes for the targets of ageism (Levy, 2003; Levy, 2009; Levy, Ashman, & Dror, 1999; Levy, Slade, & Gill, 2006). These outcomes include cognitive performance, self-efficacy, poorer handwriting ability, the will to live, hearing, functional health, and life expectancy. Educational opportunities, which are youth-oriented, tend to be much more limited for older individuals and negative attitudes towards older people also play a role in how housing, transportation, and service accommodations are made (Anti-Ageism Taskforce, 2006). In many instances, minor modifications could improve access to older people. The perceived vulnerability of older people makes them a prime target for predatory lending, pyramid schemes, pension schemes, and other practices that can greatly reduce life savings. Ageism among healthcare providers often discourage self-efficacy which, in turn, lowers expectations of one's perceived health status. This

self-perception of health manifests itself as unhealthy behavior, which then leads to lower overall health.

Theories Explaining Ageism

Given the pervasiveness of age stereotypes and their consequences, it is important to understand the roots of age stereotypes. People live in a complex social environment and have only limited cognitive resources; to deal with this cognitive burden people must be frugal with their cognitive resources and find ways to approximate large amounts of information (Cuddy & Fiske, 2004). Stereotyping is one strategy employed to help make judgments on social interactions when effortful processing is difficult (Bodenhausen & Lichtenstein, 1987; Kruglanski & Freund, 1983; Macrae, Milne, & Bodenhausen, 1994). Mental representations of outgroups tend to be more simple and extreme than those of ingroups, which helps process information about unfamiliar groups (Cuddy & Fiske, 2004). Stereotypes also help drive behavior: the beliefs held about particular groups influence interactions with them, often confirming the stereotypes creating a self-fulfilling prophecy.

Several theories exist that explain age stereotypes, focusing on different levels – the individual, interpersonal, evolutionary, and sociocultural levels. The individual-level theories focus on how age stereotypes developed to protect one's perceptions of the self. For example, terror management theory supposes that the realization of the inevitability of death instills a lingering fear in the mind (Becker, 1973). The individual must then overcome this dissonance by distancing themselves from reminders of death, such as elderly people, and associating with other young people (Greenberg, Schimel, & Mertens, 2004; Popham, Kennison, & Bradley, 2011). Social identity theory has also been used to explain ageism. Individuals have a need to maintain a positive self-identity, of which group identity constitutes a large part. Therefore,

people strive to feel positively about the groups they belong to and create distinctions that elevate them over outgroups. Younger people will identify more strongly with other young people and distance themselves from older people to protect their egos (Kite & Wagner, 2004; Tajfel & Turner, 1979).

At the next level, interactions between individuals are used to explain age stereotypes. Langlois, Kalakanis, Rubenstein, Larson, Hallam, & Smoot, (2000) argued that ageism is a result of negative halo effects related to physical characteristics. Perceptions of attractiveness affect how people treat others and perceive themselves; the unattractive physical characteristics associated with aging lead others to believe that older people have many other negative traits. Similarly, another explanation focuses on overgeneralization effects of physical characteristics. Certain characteristics associated with age, such as droopy eyes, cause others to perceive older individuals as being lonesome and sad (Montepare & Zebrowitz, 2004). Social affordances have also been used to explain these stereotypes. People can learn to associate certain behaviors with physical traits. For example, children may learn that wrinkles signify a person who is not outgoing and believe every person with wrinkles they encounter will be not outgoing either (Palmore, 2003). These theories are all underscored by the idea that the highly visible unattractive physical features that accumulate with age are the basis for negative stereotypes.

Other explanations have proposed an evolutionary basis for ageism. In these theories, signs of evolutionary fitness are used to judge others. A study conducted by Burnstein, Crandall, and Kitayama (1994) showed that in hypothetical life-and-death situations, younger, more biologically fit people are favored over older ones. Other studies have suggested that people have evolved to view physical signs of aging as signs of weakness (Jensen & Oakley, 1980). Another suggestion is that groups are more likely to be stigmatized if they are associated with contagion

and are seen as having restricted access to resources (Kurzban & Leary, 2001). Yet another explanation examines a socioevolutionary cause. One theory on intergroup relations posits that people have evolved to live in effective groups to maximize group success and, in turn, individual success (Cottrell & Neuberg, 2005; Cottrell, Neuberg, & Li, 2007). North and Fiske (2012) suggest that older people may not be able to contribute to group success as much as younger members and thus be subject to feelings of anger and resentment.

Many theories on ageism also explain its origins in a sociocultural context. Nelson (2005) discusses two major historical developments that changed society's view of the elderly. First, the invention of the printing press meant that the culture and history of societal groups could be recorded and distributed to many. The status that elders in a society once held as purveyors of tradition and historical accounts was lost as access to this information became widespread. Second, the industrial revolution changed the nature of work for workers and their families. This created many jobs, but these jobs required workers to be mobile and migrate to where they were located. Older people were less mobile than younger people so the traditional family structure, where grandparents were very involved in the household, was abandoned as younger people left in search of jobs. Modernization of the workplace during the early 20th century also placed increased value on the ability to perform hard physical labor and less on skilled, experienced work so the elderly were increasingly seen as non-contributors to society. As previously discussed, medical advances have led to people living longer lives making older people a larger part of a society that did not know how to accommodate them (North & Fiske, 2012). Similarly, social role theory states that perceptions of groups of people are rooted in the roles they are believed to play in society (Eagly, 1987). In the context of age, the fact that older people retire from the workforce may cause people to view them as less agentic than younger people, who

continue working (Kite & Wagner, 2004).

The stereotype content model (SCM; Fiske, Cuddy, Glick, & Xu, 2002) focuses on the content of stereotypes rather than their processes. According to this model, stereotypes function across two dimensions: warmth (good-natured, trustworthy, and friendly) and competence (independent, skillful, and able). Unlike previous models that considered stereotypes uniformly negative, the SCM suggests that stereotypes contain both positive and negative beliefs. This combination of beliefs affects people's stereotypes and behaviors toward others of different groups. Studies have shown that elderly people are included in a cluster characterized as high in warmth and low in competence, alongside other groups such as physically and intellectually disabled individuals (Fiske et al., 1999, 2001). Groups in this cluster tend to elicit paternalistic prejudices, worthy of pity and sympathy. Accordingly, older people are viewed as a low status group that does not pose a threat for resources (North & Fiske, 2012).

Resource Competition and Intergenerational Conflict

All of these theories offer some insight on how age stereotypes develop, though the number of theories and their different foci illustrate the complexity of this issue. Although this list of theories is not exhaustive, it is worthwhile to note that theories of age stereotypes rooted in resource competition are lacking. Two recent developments in the U.S. that will have a great impact on society are the recession economy and Baby Boomers' arrival to retirement age; both may have a major influence on the development of age stereotypes. Specifically, this unique set of circumstances may result in perceived competition over resources. Younger people, who constitute the majority of the unemployed and may experience greater job insecurity, may view the older population, which has been slow to retire, as competition for scarce jobs. Moreover, by postponing retirement, older workers may elicit hostility by not vacating senior positions so

workers at lower levels can move up in the organization. Even if older workers begin to retire, they may still be the target of negative perceptions. With the U.S. in economic turmoil, concerns from pundits and politicians about the older population depleting government resources have resurfaced. These issues represent a gap in the age stereotype literature that this paper intends to help address.

Factors contributing to intergenerational conflict.

During the 2007 recession, unemployment levels surged and reached highs not seen in decades. Though the overall unemployment rate peaked at 10% in late 2009, there were substantial differences between groups. The unemployment rate for younger people in the workforce has been markedly high, averaging to 18.4% for ages 16-24 and 10.9% for ages 25-29 in 2010 (Bureau of Labor Statistics, 2013). During this same period, the average unemployment rate for those 45 and older was substantially lower at 7.4%. Though much of the literature agrees that age is an important antecedent to job insecurity, support for how age influences the experience of job insecurity has been mixed, with some studies finding a positive relationship (Hartley, Jacobson, Klandermans, & van Vuuren, 1991; Mohr, 2000), others a negative (Roskies & Louis-Guerin, 1990), and some with mixed results (Näswall & De Witte, 2003; Sverke, Hellgren, Näswall, Chirumbolo, De Witte, & Goslina, 2001). However, the unemployment rate for younger people is always higher than the overall unemployment rate (Elsby, Hobijn, & Sahin, 2010; Freeman & Wise, 1982) so, as a vulnerable group, during periods of high unemployment this group will likely experience greater job insecurity. As a group that is at a higher risk for being unemployed and is likely insecure about jobs they do hold, they are also likely to view work opportunities as a scarce resource for which they must compete. With a larger older population that still participates in the labor force, it is likely that younger

individuals may perceive direct competition with the older generation.

Another area where allocation of scarce resources can lead to competition is government spending. In 1935, the Social Security Act was passed to help protect people from perils of modern life such as poverty, unemployment, loss of a spouse or parents, and old age. Since its inception, this program has been widely supported and the inclusion of the elderly has never been a point of contention. This is likely because of widespread endorsement of negative age stereotypes that viewed older adults as vulnerable and in need of protection, a view that held them as the "deserving poor" (Binstock, 1985; Moody, 2002). However, as government welfare programs have become more expensive, critics have come forth and raised the issue of generational equity, often depicting the elderly as a burden on society. The debate on this issue has focused on the distribution of government money and whether the elderly are taking more than their fair share in comparison to other groups. Wisensale (1999) discussed four issues that characterize this debate. The first issue deals with allocation of resources, specifically looking at whether the resources provided to older adults are fair in comparison to what is provided to children. The second issue is how the allocation of such resources affects the government deficit, which becomes especially salient in times of economic crisis. Third, how health care resources are rationed is another important matter. Lastly, the fairness in how Social Security is financed is questioned, specifically regarding whether the financial burden on younger adults is just.

Over the last century, the poverty rate for the elderly has dropped substantially (U.S. Census Bureau, 2012d). While this does not mean that all older adults are financially secure, it has been the basis of public outcry at different times. During this same period, the poverty rate for children under 18 years of age has increased. While public perceptions toward Social

Security have largely remained positive, other programs that provide resources to poor children, such as Food Stamps and welfare, have been the target of political scrutiny and had resources cut (Moody, 2002). With the large older population on the verge of retirement, a major concern is whether there are enough working adults to support the large number of dependents. All of these issues are occurring at a time when the government is in record debt and government spending is a polarizing topic. As public outcry pushes government officials to review their spending, expensive programs become popular targets. Social Security has been brought up many times in the press due to the expected strain by the large number of dependents (e.g., Frezza, 2014; Reuteman, 2010; Shere, 2011). The attention placed on this issue makes it more salient to the younger population, reinforcing the idea of an age conflict over resources.

Theoretical basis for intergenerational conflict.

The large older population's greater labor force participation and increasing consumption of government money through federal programs can lead to perceptions of this group as a threat to the success and well-being of the younger population. Such perceptions of competition may lead to negative outgroup attitudes (Sherif & Sherif, 1969). According to the classic work on realistic group conflict theory (RGCT; Bobo, 1983; LeVine & Campbell, 1972; Sherif, 1966; Sherif & Sherif, 1969), the existence of conflicting goals leads to intergroup hostility, and complimentary goals lead to positive perceptions of outgroups. More specifically, when the actions, beliefs, or characteristics of one group challenge the goal attainment or well-being of another group, the group will be perceived as a threat (Riek, Mania, & Gaertner, 2006). This competition, real or perceived, can occur over issues such as group safety, economic interests, political power, social status, etc. (Jackson, 1993). Once the outgroup has been regarded as a threat, they become the target of negative attitudes and stereotypes. Over time, these stereotypes

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become widely accepted and lead to high social distance between groups, setting the foundation for intergroup hostility.

RGCT has been supported by a substantial body of work since its inception (for reviews see Brown, 1995 & Jackson, 1993). Sherif and colleagues found that conflict occurred due to superordinate goals in several studies among boys in summer camps (Sherif, Harvey, White, Hood, & Sherif, 1961; Sherif & Sherif, 1953; Sherif, White, & Harvey, 1955). Similar results have been found with adolescents (Rabble & Horwitz, 1969) and adults (Blake & Mouton, 1961; 1962). RGCT has also been applied to competition between groups that are less well defined, such as race. This theory has been used to explain prejudicial attitudes toward African-Americans (Bobo, 1983), Hispanic and Asian immigrants (Stephan, Ybarra, & Bachman, 1999), and Asian-Americans (Maddux, Galinsky, Cuddy, & Polifroni, 2008). However, little research has applied this theory of group conflict to age prejudice.

Some recent work on age stereotypes has focused on prescriptive beliefs about older adults. In contrast to descriptive stereotypes, which focus on what older people supposedly are, prescriptive stereotypes focus on the behavioral norms and characteristics older people should uphold. Work on age progressions speculates that there is an expected succession in control of shared resources that people follow as they age: younger people start off with limited resources, but have greater access to resources as they reach middle-age. As they continue into old age, having already had their turn with said resources, they are expected to relinquish them (North & Fiske, 2012; 2013). According to this body of work, younger people should endorse prescriptive stereotypes of the elderly in line with their beliefs on resource allocation. In particular, there are three domains where younger people are likely to hold such stereotypes to limit older adults' access to resources: succession, consumption, and identity.

The "succession" domain refers to the younger generations' desire to ensure that there is a succession of important resources such as monetary wealth, political power, and seniority. Younger people possess fewer resources, so halting elderly control over them makes them available for younger groups to take. Similarly, the "consumption" domain refers to younger people's desire to reduce older people's consumption of shared resources, such as government welfare programs. Because these resources are finite, greater elder consumption means that less is available for younger people. By restricting how much older adults consume, young groups can take in more themselves. Lastly, the "identity" domain involves perceived obtrusion by older people on symbolic resources important to youth identity. Certain activities, roles, and styles that are seen as "cool" by younger generations compose a social identity boundary that should not be crossed by older generations; attempts to do so are to be met with resistance.

These ideas provide a theoretical rationale for why the current U.S. economic climate may lead to more widespread negative stereotypes against older adults. RGCT posits that negative stereotypes develop when groups come into conflict, real or perceived, over scarce resources. The high unemployment rate may lead to perceptions of increased competition for scarce jobs. Because unemployment is highest among younger workers, this sense of competition may be focused on the older generation and negative outgroup stereotypes may develop. Controversy surrounding government spending and debt also continues to receive a great deal of attention, and concerns about federal funding to programs such as Social Security are high, especially with the large number of older workers approaching retirement. A perceived conflict may exist between the young and old over how government money is being spent. From an age progression perspective, the succession and consumption domains are particularly applicable. Younger people may expect succession of employment opportunities where older workers, who

have already had an opportunity to advance to the most senior and well-paying jobs, should move on to retirement so those below them on the organizational ladder can advance. Younger people may also believe that older workers, due to their great numbers, are draining government programs that are supposed to provide aid to all age groups. If the older generation's access to these resources is not limited, then there is less available for other needy groups, such as children, and, as these programs run dry, there will be nothing left for the current young generations when they reach benefit age.

There is reason to believe such conflicts may occur or already be occurring. Though not specifically focusing on either RGCT or age progressions, some studies have shown that intergroup hostility arises due to conflict over economic resources. In Canada, rising and falling opposition to immigration has paralleled increases and decreases in the unemployment rate (Palmer, 1996). In the United States, concerns about immigration are highest among people lower in socioeconomic status and with less education (Pew Hispanic Center, 2006) and the strongest endorsers of anti-African-American prejudice are Caucasians closest to them in socioeconomic status (Greeley & Sheatsley, 1971; Pettigrew, 1978). These studies demonstrate that people are more likely to endorse negative outgroup stereotypes when they feel their economic well-being is threatened, so it follows that this same trend might be seen with ageism during major recessions. In fact, the number of age discrimination cases received by the ADEA peaked at 24,582 in 2008, an increase of over 5000 from the previous year and over 10,000 from the near 25 year low in 1999 (U.S. Equal Employment Opportunity Commission, 2012a; 2012b). The number of cases received has remained high, at approximately 23,000, every year since the beginning of the economic collapse.

Additionally, the potential intergenerational conflict has received increasing attention in

the media. Some pundits have speculated that the high youth unemployment rates may lead to overt intergenerational conflict (Hofland, 2013) and that it is the cause of growing civil unrest, as well as a possible catalyst for uprisings in the Middle East (Tapscott, 2011). The financing and structure of Social Security have also been the focus of media scrutiny (e.g., Bingham, 2011; Johnston, 2012; Kessler, 2012). Recent polls show that the vast majority of Americans do not want to see cuts to Social Security (Pew Research Center, 2013), but they also believe that the program has serious problems (CNN/ORC International, 2011a). Despite this consensus on Social Security's negative outlook, adults age 50 and above oppose most major changes to benefits (Sedensky, 2013). Polls also show age differences in feelings toward Social Security: in a poll conducted by CNN/ORC International (2011b), 42% of respondents age 18-34 agreed with a description of Social Security as a "monstrous lie" and a "failure", whereas only 21% of those ages 50-64 and 14% 65 and over found it accurate. Some pundits and activists have gone so far as to directly blame government aid to older adults as a major cause for the economic turmoil and claim that lobbies for older persons' interests are "stealing from the young" to give to the old and leaving nothing for future generations (Friedman, 2013; Jaffe, 2013). Though not explicitly tied to generational conflict, it is interesting to note the demographics of the recent political movements in the U.S. Of the "Occupy Wall Street" movement's members, 64.2% are below the age of 35 (Cordero-Guzman, 2013), while the majority of Tea Party supporters are over 45 years of age (The New York Times, 2010). This shows that, in times of economic hardship, people will demonstrate to voice their concerns and that the movements that arise may be influenced, at least in part, by age.

The Current Study

There has been very little work looking at the development of age prejudice as a response

to perceived competition over resources. Though age conflict resulting from economic competition has often been speculated (e.g., Dychtwald, 1999; Minkler, 2006; Turner, 1998), virtually no empirical work has investigated the issue. What work has been done has conceptualized intergenerational conflict in terms of perceptions of which age groups are more deserving of resources (such as government welfare and higher salaries; Irwin, 1996) or as public opinion on old-age assistance (Hamil-Luker, 2001), but nothing has looked at how this conflict influences overall attitudes toward older workers. One of the main purposes of this study is to help address this gap in the literature by establishing a relationship between competition over economic resources and a direct measure of ageism. The current economic situation has created an environment where jobs are scarce and turnover is high. Thus, unemployment, underemployment, and job insecurity will be the focus as jobs are a coveted resource over which perceived competition should be high, which may serve as a precursor for negative outgroup attitudes. To help elucidate these processes linear regression analyses will be used to investigate what relationships, if any, exist between the predictor variables and ageist beliefs. This will serve as a first step in establishing an empirically-based model of resource threat and ageism. The following sections discuss key predictor variables, potential moderating and mediating variables, and hypothesized relationships.

Unemployment.

An unemployed individual is one who does not have a job, but is currently seeking one. The emphasis is on 'currently seeking'; those who are not employed and do not wish to be (e.g., retirees, homemakers, full-time students, etc.) are not considered unemployed persons. Officially, the Bureau of Labor Statistics (2009) defines unemployment as not having a job, being available for work, and having sought out employment over the past four weeks. However,

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this definition has garnered a lot of criticism as it does not adequately capture the true state of employment turmoil (Hauser, 1974; Jensen & Slack, 2003). Many workers who lose their jobs and experience long-term unemployment eventually give up looking for work, usually due to lack of success. These are known as "discouraged workers" and, because they are not actively seeking work, are not counted in the unemployment rate. This definition also does not take into account workers who are underemployed – those who are employed part time and wish to have full-time employment or do not utilize all of their skills. Given these issues, the impact of unemployment is actually much larger than what the unemployment rate suggests.

While an individual's primary motivation for employment is financial well-being, it also provides several other latent benefits to psychological well-being that are described in Jahoda's (1982) latent deprivation model. Work imposes a time structure, provides a sense of collective purpose, a shared social contract, a sense of social identity and status, and requires regular activity. This is rooted in the idea that an individual has several deep-seeded needs such as having structure in their lives, expanding their social horizon, working with others to achieve collective goals that provide a sense of usefulness, knowing that they have a place and society, and being active on a regular basis (Jahoda, 1984).

Beyond the obvious economic consequences of unemployment, there are a variety of other negative outcomes associated with it as well. Unemployed persons generally report higher levels of psychological distress (Henwood & Miles, 1987) and depression (Feather & O'Brien, 1986) as well as lower self-esteem (Muller, Hicks, & Winocur, 1993). Unemployment also has a negative impact on personal and family well-being (Vinokur & Caplan, 1987) and is associated with higher levels of personal distress (Kinicki, 1985), depressive symptoms, and lower self-esteem (Tiggemann & Winefield, 1984). A meta-analysis by McKee-Ryan et al. (2005) supports

these findings, showing that unemployment has a negative impact on mental health. It has also been shown to have differential effects where the unemployment rate is high; lower mental health is reported when a worker experiences job loss during periods of high unemployment (Cohn, 1978; Turner, 1995).Though unemployment has been studied as an antecedent for many negative outcomes, it has not been studied as an antecedent for ageism. Competition over resources can lead to negative outgroup stereotypes, so in the current economic climate where younger workers are disproportionately unemployed and a large older generation is slow to retire, unemployment should be positively associated with endorsement of ageist beliefs directed toward older adults. Furthermore, beyond one's current employment status, the salience of unemployment in an individual's life should bolster endorsement of ageist beliefs. Specifically, individuals who have been unemployed for longer and individuals who observe high unemployment among their peers (family, friends, etc.) should more strongly endorse ageist beliefs.

> *Hypothesis 1a: unemployment status is associated with greater endorsement of ageist beliefs toward older persons.*
>
> *Hypothesis 1b: longer duration of unemployment is associated with greater endorsement of ageist beliefs toward older persons.*
>
> *Hypothesis 1c: greater unemployment among peers is associated with greater endorsement of ageist beliefs toward older persons.*

Underemployment.

As previously discussed, one of the criticisms of using the unemployment rate as a metric for overall economic health is that it does not account for workers who are underemployed.

Underemployment, though related to unemployment, is much more complex and this complexity has sparked the interest of researchers from a variety of disciplines. However, much of the early work on this topic has been atheoretical and the different research perspectives have spawned many different labels for the same concepts, each with their own definitions (Feldman, 1996). For example, the Bureau of Labor Statistics (2010) has defined "labor market underutilization" to include unemployed persons and involuntary part-time workers. Burris (1983) described "subjective feelings of overqualification" referring to the extent workers feel overqualified or overeducated in their jobs. Feldman, Leana, and Bolino (2002) defined "relative deprivation" as the subjective feelings workers have about the discrepancy between their current job conditions and desired conditions. Despite these discrepancies, underemployment can broadly be defined as possessing employment below the individual's full working capacity.

A few reviews have attempted to organize the literature on underemployment (most notably Feldman, 1996; McKee-Ryan & Harvey, 2011). These reviews have established eight dimensions of underemployment that exist on a continuum of subjectivity, with one end defined by objective measures (such as characteristics of the job) and the other by subjective measures (such as individual interpretation of one's employment situation). From most objective to most subjective, these dimensions are: pay/hierarchical underemployment, hours underemployment, work-status congruence, overeducation, job field underemployment, skill underutilization, perceived overqualification, and relative deprivation. Pay/hierarchical underemployment refers to workers who are paid less or have lower status jobs compared to their last job (for the reemployed) or compared to similarly skilled or situated workers (for recent labor force entrants). Hours underemployment describes when an individual is working less hours than he or she would like to, such as having part-time employment instead of full-time. Work-status

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congruence represents a match (or mismatch) between employees' preferences for his or her current work status (e.g., number of hours worked, work schedules, and shifts) and his or her actual status. Overeducation is the degree to which one requires their level of education for his or her current job. Job field underemployment occurs when an individual works in a field outside their formal area of training. Skill underutilization results when a worker does not get to utilize his or her skills and experience to the fullest extent possible. Perceived overqualification is a worker's evaluation about whether he or she is overqualified for their current role, possessing more skills or education than believed to be necessary. Relative deprivation reflects whether a worker feels entitled to more than his or her current job provides. No scales currently exist that assess all of these dimensions, though this is not a problem for the current study as the subjective dimensions are more relevant. Ageism may arise if a threat to employment opportunities is perceived even if it is not necessarily real.

As with unemployment and job insecurity, underemployment has been on the rise due to the "Great Recession". According to the Bureau of Labor Statistics (2010), 8.8 million Americans worked part-time jobs because they could not find full-time employment. As the unemployment rate has fallen in recent years, the incidence of underemployment has been on the rise, reported at 9.7% by Jacobe in 2010. When overqualification is included in the measurement of underemployment, these estimates are substantially higher with some studies finding that one in three people in the U.S. are underemployed (Green & McIntosh, 2007; Green & Zhu, 2010). The underemployment literature supports these trends, which finds that reemployed workers tend to find lower quality employment than what was lost (Gowan, Riordan, & Gatewood, 1999; Hijzen, Upward, & Wright, 2010; Kinicki, Prussia, & McKee-Ryan, 2000). Currently, underemployment is on the rise with some finding an upward, linear trend (Vaisey, 2006).

Underemployment has been linked to a variety of negative outcomes as well. Underemployment is negatively related to job satisfaction (e.g., Brasher & Chen, 1999; Johnson & Johnson, 2000; Khan & Morrow, 1991; Mayard, Joseph, et al., 2006) and job involvement (e.g., Burke, 1997; Feldman & Turnley, 1995). It is positively associated with work alienation (Lee, 2005) and certain dimensions of underemployment negatively predict job performance (Watt & Hargis, 2010). There is also evidence to suggest that overqualified workers are more likely to turn over than adequately qualified workers (McGuiness & Wooden, 2009). However, no studies looked at the relationship between underemployment and ageism. Age has been identified as an antecedent for underemployment and, though findings have been mixed, there is some evidence that underemployment peaks between the ages of 18-24 (Tam, 2010). However, given the prevalence of ageism in organizations, older workers may also be subject to the experience of underemployment. In any case, the same way unemployment may be associated with ageism due to competition over scarce jobs, underemployment may be associated with ageism due to competition over scarce *desirable* jobs.

> **Hypothesis 1d:** *greater underemployment is associated with greater endorsement of ageist beliefs toward older persons.*
>
> **Hypothesis 1e:** *greater underemployment is associated with greater endorsement of ageist beliefs toward younger persons.*

Job Insecurity.

Job insecurity has also been widely studied as a predictor for negative personal outcomes. It is conceptually similar to unemployment, but whereas unemployment involves the loss of employment status, job insecurity is defined as the perceived threat of losing one's job and the

anxiety related to that threat (De Witte, 2007). More broadly, it is a state between unemployment and employment where the worker is uncertain about having their current job in the future (Sverke & Hellgren, 2002; van Vuuren, 1990). Job insecurity is characterized by three different aspects; the first is that it is inherently a subjective experience (De Witte, 2007). A worker may feel that his or her job is at risk when, in fact, there is no real threat to it. In contrast, a worker may not be at all concerned about the future of their job when they are on the verge of being dismissed. Second, it is also characterized by uncertainty about the future. A worker that does not have any reliable information available about their employment situation is unable to do anything to prepare for or cope with job loss, such as begin looking for a new job. Third, job insecurity is involuntary by nature; workers who experience job insecurity hold positions that they believe are stable. A worker who opts for a job that is uncertain in nature, such as a temporary laborer, is not subject to job insecurity because they understand when hired that their position is short-term and turnover is expected.

Job insecurity, because of its subjective nature, has also been problematic for measurement. Not every worker who experiences job insecurity loses their job, and not every worker who loses their job experiences job insecurity. Therefore, the number of workers who are insecure will not necessarily match the number who actually lose their jobs, and, in fact, may greatly exceed it. According to an estimate put forth by Kalleberg, Reskin, and Hudson (2000), 8-9% of Americans feel insecure about their jobs, while European findings have percentages around this level that vary by country – Belgium has about 5.1% of workers who report being insecure and Hungary 14.5% (De Witte, 2007). The economic decline of the 2000s has also likely increased these numbers. While the percentages may be low, they still translate to a large absolute number of workers.

Like unemployment, job insecurity is also related to negative physical and mental health effects such as lower job/life satisfaction (Ashford, Lee, & Bobko, 1989; Davy, Kinicki, & Scheck, 1997; Rosenblatt, Talmud, & Ruvio, 1999), higher burnout (Dekker & Schaufeli, 1995) and anxiety and psychosomatic effects (Burchell, 1994; Hartley et al., 1991; Landsbergis, 1988; van Vuuren, 1990). It has also been suggested that insecurity can lead to lower overall well-being (Hellgren & Sverke, 2003) and, as a chronic stressor, these effects worsen over time (van Vuuren, 1990). As previously stated, age has been noted as an important antecedent for job insecurity, but there have been mixed results on which age groups are most likely to experience it. Because younger workers always experience greater unemployment during recessions, and because younger workers tend to possess less work experience and tenure than older workers, during periods of recession younger workers may be particularly vulnerable to the experience of job insecurity. As with unemployment and underemployment, job insecurity has not been studied as an antecedent to ageism. Workers who are the most concerned about losing their jobs will also be very concerned about reemployment opportunities. For these individuals, perceived competition for work should be as salient as those who are unemployed, which should also predict endorsement of ageist stereotypes.

Hypothesis 1f: greater job insecurity is associated with greater endorsement of ageist beliefs toward older persons.

Work centrality.

Work centrality is an important concept that may be a factor in acceptance of age-prejudiced attitudes. Work centrality is often defined as the personal beliefs about how much importance one attributes to work in their lives (Walsh & Gordon, 2008). It is the extent to which

an individual identifies with their work and views it as an important and defining aspect of life (Diefendorf, Brown, Kamin, & Lord, 2002). This belief affects not only their behavior at work, but also outside of the workplace (Alvesson, Ashcraft, & Thomas, 2008). An individual high in work centrality identifies very strongly with his or her work and sees roles in other domains as inseparable from the work role. This attitude is stable over time and is not affected by experiences at work, such as an increase in job demands or decrease in work resources, nor does the work setting affect this attitude (Hirschfeld & Field, 2000).

Individuals high in work centrality view work as an important part of life, providing meaning. When these individuals lose their job, they experience more negative consequences than those who do not view work as important (Greenhalgh & Rosenblatt, 1984; Jackson, Stafford, Banks, & Warr, 1983; Kinicki, 1989). Results from a meta-analysis have also found a negative correlation between work centrality and both mental health and life satisfaction following unemployment McKee-Ryan et al. (2005). Because people with high work centrality view work as an important source of meaning and fulfillment, job loss will be particularly threatening. Therefore, work centrality should moderate the relationships between unemployment, underemployment, job insecurity, and ageism.

> *Hypothesis 2a: the relationship between unemployment status and endorsement of ageist beliefs is moderated by work centrality.*
>
> *Hypothesis 2b: the relationship between duration of unemployment and endorsement of ageist beliefs is moderated by work centrality.*
>
> *Hypothesis 2c: the relationship between peer unemployment and endorsement of ageist beliefs is moderated by work centrality.*
>
> *Hypothesis 2d: the relationship between underemployment and endorsement of ageist*

beliefs is moderated by work centrality.

Hypothesis 2e: the relationship between job insecurity and endorsement of ageist beliefs is moderated by work centrality.

Realistic threat felt from older adults.

As discussed throughout this paper, competition over resources such as employment opportunities, government money, and societal status can lead to intergroup conflict. When a group views another group as a threat to goal attainment, regardless if they pose an actual threat or just a perceived one, negative stereotypes and attitudes develop that can then lead to hostility. Age groups are very visible and, according to Social Identity Theory, are important to one's individual-level identity. Therefore, because younger and older people view themselves as distinct groups, because a large disparity exists between age groups in unemployment rates, and because good jobs are scarce, negative age-based beliefs may develop due to perceived intergroup threat stemming from competition over jobs. This suggests that any relationships between unemployment, underemployment, job insecurity, and ageism exist due to the perception of such threats. Therefore, perception of threat felt from older persons should mediate these relationships.

Hypothesis 3a: unemployment status is associated with greater perceived realistic threat felt from older persons.

Hypothesis 3b: longer duration of unemployment is associated with greater perceived realistic threat felt from older persons.

Hypothesis 3c: greater peer unemployment is associated with greater perceived realistic threat felt from older persons.

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Hypothesis 3d: *greater underemployment is associated with greater perceived realistic threat felt from older persons.*

Hypothesis 3e: *greater job insecurity is associated with greater perceived realistic threat felt from older persons.*

Hypothesis 4a: *the relationship between unemployment status and endorsement of ageist beliefs toward older persons is mediated by perceived realistic threat.*

Hypothesis 4b: *the relationship between duration of unemployment and endorsement of ageist beliefs toward older persons is mediated by perceived realistic threat.*

Hypothesis 4c: *the relationship between peer unemployment and endorsement of ageist beliefs toward older persons is mediated by perceived realistic threat.*

Hypothesis 4d: *the relationship between underemployment and endorsement of ageist beliefs toward older persons is mediated by perceived realistic threat.*

Hypothesis 4e: *the relationship between job insecurity and endorsement of ageist beliefs toward older persons is mediated by perceived realistic threat.*

METHODS

Participants

Participants were recruited using Amazon's Mechanical Turk website (MTurk; *www.mturk.com*). MTurk has "workers" complete tasks, known as HITs, set up by "requesters" for monetary compensation. This was originally designed as a means to get humans to perform tasks that computers often struggle with, such as accurate transcription of audio files or identification of specific behaviors in a video. However, the large participant pool and low costs of recruitment have made this platform increasingly popular as a method of data collection over the last several years. Several behavioral studies have already been conducted using MTurk in a variety of contexts (e.g., Mason & Watts, 2009; Kaufmann, Schulze, & Veit, 2011; Suri & Watts, 2011). Though a number of concerns have been raised about the quality of MTurk samples (see Goodman, Cryder, & Cheema, 2012), they have been found to have psychometric properties comparable to that of more commonly used samples (Buhrmester, Kwang, & Gosling, 2011). MTurk samples also have some advantages over more traditional undergraduate research populations: they tend to be more demographically diverse (Buhrmester, Kwang, & Gosling, 2011) and are more likely to possess work experience. Both of these make this sample particularly appealing for this study- the greater age diversity can provide insight into how participants' age factors into the proposed relationships and the sample's labor force participation is necessary to investigate the effects of unemployment, underemployment, and job insecurity.

A total of 426 MTurk workers participated in this study, though data from 26 was discarded after implementing data cleaning procedures (described in further detail below)

bringing the total to 400 (172 male, 228 female) useable participants. Participants' ages ranged from 19 to 82 (*M* = 37.58, *SD* = 12.36) and 26 self-identified as African-American, 17 as Asian, 322 as White/Caucasian, 19 as Hispanic/Latino, 3 as Pacific Islander, and 13 as multiracial. They represent a heterogeneous sample of the workforce, with 47 currently not employed, 5 having fixed-term employment, 17 working on a piecework/commission basis, 5 having seasonal employment, 77 working part-time, and 246 working full-time; 3 participants did not report their current employment situation.

Procedure

A description of the task was posted on the MTurk website with a brief description of what participants would be asked to do. Participation was restricted to workers that were age 18 or older, currently resided in the U.S., and had maintained a HIT approval rate of at least 95% over at least 50 tasks. Participants were further informed that their work would not be accepted if their survey completion time was much faster than expected based on pilot tests (they were told the survey should take no more than 40 minutes but not given the minimum time) and if they failed too many questions designed to check response quality (they were not given the exact number of failed items acceptable). Participants were compensated $1.50 for completion and the average completion time was approximately 30 minutes. The measures used in this study were included as part of a larger survey.

The survey consisted of two parts: a screening survey and the actual survey. Once participants accepted the MTurk HIT, they were provided with a link to the screening survey. The screening survey consisted of a single forced response item asking them to enter their MTurk worker identification number (MID). Code was included in the MTurk HIT that would append the MID to the redirection URL, which the screening survey would retrieve, present to

the participants, and then ask if it was correct; This procedure made it less likely that participants would enter a random string of characters. Once participants confirmed their MID, they were redirected to the actual survey and their MID was stored. After a batch of participants was collected, their MIDs would be included as embedded data in the screening survey so that anyone that entered a stored MID would be redirected to a page thanking them for their interest but informing them that they cannot participate more than once. Because MIDs are not completely anonymous, results from the screening survey were kept separate from the actual survey's results without a means to link them.

Instruments

Unemployment.

To assess current employment status, three items were adapted from the Bureau of Labor Statistics' (2009) definition of unemployment. These items include: "Do you currently hold any full-time, part-time, temporary, or seasonal employment?", "Are you currently available for work?", and "Have you, over the last four weeks, actively looked for a job?". If the participant answered "no" to the first question and "yes" to the second and third questions then he or she is considered unemployed. This was used to be consistent with more widespread definitions of unemployment common in the literature and to ensure that participants who report not having jobs are actually available and willing to work (for example, not on maternity leave, on disability, or have full-time student status). Items for this scale are presented in Appendix A.

Experience with unemployment.

Experience with unemployment goes beyond one's current employment status and seeks to understand how much of an impact unemployment has had on a person's life. This was accomplished by focusing on the longest period of unemployment the participant has

experienced and how many of his or her peers have been unemployed, which tap into an individual and a social element of unemployment. The frame of reference was restricted to the past seven years to ensure that these unemployment experiences were related to the current recession as the societal factors (e.g., size of older population, perceived causes of recession, unemployment representation by age group) were different compared to prior U.S. recessions. To assess length of unemployment, participants were asked "Have you ever been unemployed during the past seven years?" and, if the response was "yes", were then asked "During the past seven years, what was the duration of your longest unemployment, in months?". To assess peer unemployment, participants were asked "Has any person in your social network (relatives, friends, coworkers, acquaintances, etc.) been unemployed during the past seven years?" and, if the response was "yes", were then asked "During the past seven years, how many people in your social network (relatives, friends, coworkers, acquaintances, etc.) have been unemployed?" Both follow-up questions were scored on a continuous scale with length of unemployment measured in months and peer unemployment measured in number of people. Items for this scale are presented in Appendix B.

Underemployment.

Underemployment was measured using the Scale of Perceived Overqualification (Maynard, Joseph, & Maynard, 2006). This scale included nine items that focus on the overqualification dimension of underemployment which assesses if individuals feel they have more education, experience, and/or skills than required by their current job ($\alpha = .89$). There are currently no measures of underemployment that include all of the dimensions identified by the diverse body of work on the topic from different disciplines. A scale that focused on perceived overqualification was selected over those focusing on other dimensions because it is more

subjective in nature, which may be more predictive of perceived threat than objective measures. This subjectivity is also advantageous as it is not feasible to collect certain objective measures of underemployment from an anonymous participant pool. Items were rated on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree) and an underemployment score was computed by taking the mean of all responses. Items for this scale are presented in Appendix C.

Job insecurity.

The five-item, unidimensional Job Insecurity Scale (Hellgren, Chirumbolo, De Witte, Goslinga, Näswall, & Sverke, 2001) has participants rate items on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree) to measure global job insecurity. Reliability for this scale was assessed on populations from four countries: Belgium (α = .90), Italy (α = .76), the Netherlands (α = .91), and Sweden (α = .89). Overall job insecurity score was calculated by taking the average of the ratings for all items. This scale was selected because it provides a short measure of job insecurity with acceptable reliability scores. Items for this scale are presented in Appendix D.

Work centrality.

The Work Involvement Questionnaire (Kanungo, 1982) is a unidimensional six-item measure that was adapted to be rated on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree) to assess level of work centrality (α = .75). A work centrality score is calculated by taking the mean of all item responses. Though this scale was designed to measure "work involvement", the definition of this construct is actually the same as that of work centrality. This difference in nomenclature is likely due to inconsistencies in the early literature on work centrality (Paullay, Alliger, & Stone-Romero, 1994) and, despite the name, this scale is one of few that actually measures work centrality without being contaminated by other similar

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constructs such as job involvement. Items for this scale are presented in Appendix E.

Perceived threat from older persons.

Participants responded to nine questions measuring realistic threat felt from older adults in a variety of domains including economic and political threats. These items were adapted from a measure designed to assess realistic threat felt from Asian Americans (α = .93; Maddux et al., 2008), which, in turn, was adapted from a measure designed to assess threat felt from African Americans (Stephan et al., 2002) and. Items were modified to be relevant to older persons and were rated on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree). Items for this scale are presented in Appendix F.

Ageism toward the old.

An adapted version of the Fraboni Scale of Ageism (FSA; Fraboni, Saltstone, & Hughes, 1990) was used to assess ageism toward older adults. Earlier ageism scales only assessed the cognitive component of ageism, whereas the FSA was developed to assess the affective component and discriminatory behaviors as well. The FSA has become one of the most widely used scales of ageism and its psychometric properties have subsequently been scrutinized. Rupp, Vodanovich, and Crede (2005) reexamined the factor structure of the original scale and revised it so that it included 23 items loading on three factors: stereotypes (α = .79), separation (α = .76), and attitudes (α = .70). The scale was further modified by changing the referent from "old persons" to "older persons" so it would be more relevant to older members of the workforce. Several items in the stereotype dimension were not applicable when the referent was changed to older persons (e.g., "Teenage suicide is more tragic than suicide among the old.") so they were removed and replaced with new items reflecting stereotypes of older persons in the workplace. A total of six stereotype items were discarded and replaced with five workplace stereotypes items.

Due to the salience of the workplace in these items, it was expected that they would load onto a distinct factor, bringing the total number of dimensions to four. This was evaluated using confirmatory factor analysis. Items were rated on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree) and a score was calculated for each dimension by averaging scores for that dimensions' items. Items for this scale are presented in Appendix G.

Ageism toward the young.

As previously discussed, modern views on ageism look at not only attitudes toward the old, but also attitudes toward the young. In order to draw conclusions about the effect of resource threat on ageism toward the young, a scale that measures such youth ageism is necessary. Unfortunately, little work has been done to develop such a scale and no scales currently exist that assess the different dimensions of ageism directed toward younger persons. To deal with this, six items on stereotypes of younger persons in the workplace were created. This was done to parallel the workplace stereotype items created for older adults; if the adapted FSA did not function as intended then these workplace specific stereotype scales could still be used to make inferences about attitudes toward each group. These were also rated on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree) and a scale score was calculated by taking the mean. Items for this scale are presented in Appendix H.

Data Cleaning

Though MTurk samples are increasingly being used for data collection, it is still a relatively novel source and there is a lot of discussion on how to ensure quality data (see Long, 2012; Paolacci & Warglien, 2009). Because participants are being offered monetary compensation and are allowed to complete the survey in an unproctored setting, response quality is a concern. To help ameliorate these issues, several screening procedures were included in a

stepwise fashion in line with recommendations from Huang, Curran, Keeney, Poposki, and DeShon (2012). Specific procedures included screening based on failed item checks, response frequency, completion time, and response invariance. As previously stated, the work of 26 participants was rejected and removed prior to running any analyses. This process is illustrated in Figure 2.

Item checks.

Six items were distributed throughout the survey designed to check if the participant was responding thoughtfully. These items used the same rating scale as the items around them, but had clear correct responses (e.g., please choose "strongly agree" for this question). This was the first step in data screening and if a participant responded incorrectly to more than one of these items, their work was rejected. Participants who missed more than one of these items may have been responding to questions at random. A total of 17 participants were rejected based on this criterion.

Response frequency.

The second step was to reject participants who did not complete a high percentage of the survey. The cutoff was set at 90% and participants who missed more than 20 of the 197 items were discarded. Participants who missed more than 10% of the survey likely were not highly motivated and the accuracy of their ratings should be called into question. An additional two participants were discarded based on this criterion. The highest missing percentage for an included participant was about 7%.

Completion time.

The third step in the screening procedure was to review the time taken to complete the survey. It is unlikely that participants who completed the survey in a very short amount of time

Step	Description	Additional Participants Discarded
1. Item Checks	Six items were included to check quality of responses (e.g., "Please choose 'strongly agree' for this question). If more than one of these was answered incorrectly, data from the participant was discarded.	17
2. Response Frequency	Participants who failed to respond to a large amount of the items were discarded. The cutoff was set at approximately 10% (20/197 items).	2
3. Completion Time	Total time to complete the survey was used to screen for poor quality data. Participants who completed the survey in under 7:30 minutes were discarded.	6
4. Response Invariance	Response variance was used to check if respondents filled out the survey with mostly the same responses. Any participants whose data had a standard deviation below .50 were removed.	1

Figure 2. Overview of data cleaning procedures and number of participants removed at each step.

had time to read, comprehend, process, and thoughtfully respond to each question. A minimum completion time was set by asking four individuals (two undergraduates and two graduate students) to pilot the study and read each question carefully. Completion times for pilot testers ranged from 15-27 minutes. Half of the fastest pilot completion time, 7 minutes and 30 seconds, was used as a cutoff to minimize data rejection. Six additional participants were rejected because they completed the survey too quickly.

Response invariance.

The final screening step was to look at the response variance for each participant. If there was little variance, it would mean that participants largely provided the same response for every item in the survey. This would be very unlikely given that the included scales measured a variety of distinct constructs and included several reverse-coded items. A standard deviation was calculated for each participant, and anyone below .50 was rejected. One other participant was rejected based on this cutoff.

Missing Data

Pattern of missing data.

The pattern of missing data was calculated for each scale separately using Little's Missing Completely at Random (MCAR) Test (Little, 1988). A significant p-value indicates that the missing responses are not missing completely at random and may be missing according to a variable that was measured (MAR) or a variable that was not measured (MNAR). Results from Little's MCAR Test indicate that all but one of the scales are MCAR. One of the ageism dimensions, the attitude dimension, had a significant p-value meaning that it was not missing completely at random. Separate variance t-tests were then evaluated to see if the pattern of missingness was MAR. Some of these p-values were significant, suggesting that some of this

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missing data may be MNAR. However, due to the small number of missing values, 18 out of 2000 (.09%), no additional actions were taken to model this missing data.

Data imputation.

Expectation maximization (EM) was used to impute data for missing responses (Dempster, Laird, & Rubin, 1977). It is a maximum likelihood procedure that uses a regression equation to impute missing values. After this imputation, new parameters estimates are calculated and then used to rerun the regression imputation to produce new replacement data. This process is repeated in an iterative fashion until the estimates converge (Howell, 2007). EM is advantageous to many other more commonly uses methods of dealing with missing data because it produces unbiased estimates and overcomes issues of underestimating standard errors (Schafer, 1997; Schafer & Olsen, 1998). This procedure was used to impute values for 891 missing values (1.13% of all values). Missing data was not a major concern though as no scale was missing more than 1.13% of the responses.

Overview of Analyses

In order to assess the effect of resource threat on ageist beliefs, hierarchical multiple linear regression was used (MLR). Prior to this, several preliminary analyses were conducted to ensure the appropriateness of this approach. First, confirmatory factor analyses (CFA) were performed to check the psychometric properties of each scale included in the survey. Next, descriptive statistics from the collected data were examined to see if any abnormalities were present. Following this, trends in the data were examined to ensure that the assumptions of MLR were met and this type of analysis was appropriate; results indicated that the assumptions were not violated and MLR analyses could be carried out. Next, correlations between predictor and outcome variables were assessed to see which relationships should be further probed. Finally,

these relationships were analyzed with hierarchical MLR to see if any significant effects existed. All predictor variables except unemployment status were centered so that they have a mean of zero. Unemployment status was not centered because it is a dichotomous variable.

RESULTS

Factor Analyses

CFA was used to investigate the factor structure of the scales used in this survey. CFA is a method of modeling the covariation among a set of variables as a function of the latent constructs that underlie them. It is useful for determining the number of these latent variables, explaining the meaning of these latent variables based on the items that define them, and identifying items that function poorly (DeVellis, 2012). CFA was used to corroborate the factor structure of the existing scales included in this study and to check that of any newly created scales. This was conducted using Mplus, using the default settings that allow the factors to correlate. The variance for each factor was fixed at 1.0.

A separate CFA model was specified for each scale according to the dimensionality described by their respective authors. The appropriateness of each model was evaluated by examining the fit statistics, reliabilities, factor loadings, and item discrepancies for each model. Specifically, the fit indices used were the chi-square test (X^2), the comparative fit index (CFI), the root-mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). A small and nonsignificant X^2 value indicates good model fit, though this measure tends to be heavily influenced by larger sample sizes. The current study included 400 participants so this measure may not provide worthwhile information. CFI scores at or above .90 indicate good model fit. For the RMSEA, a value of .08 or below indicates good fit. SRMR values of .05 or lower are indicative of good fit. Factor loadings in the .30 range or above suggest an item is representative of the underlying dimension with higher loadings demonstrating a stronger relationship. Inter-item discrepancies (also referred to as "residual correlations") with

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absolute values above .10 can be indicative of problems such as doublets forming, useless redundancy, or other issues.

Unidimensional models were specified for work centrality, underemployment, job insecurity, perceived threat from older persons, and ageism toward the young scales. Several multidimensional models were specified for the revised FSA ageism scale. CFA model fit results are summarized in Table 1. Factor loadings for each model are included in Appendices H-S. Information from the discrepancy matrices is presented in Appendices T-AE. Reliability for each model was calculated using McDonald's (1999) omega; this is a good method of assessing reliability because it is based on the ratio of common variance to total variance and is not affected by correlated errors (such as systematic error) or true-score equivalence. It also provides information about homogeneity, which is important for single factor tests because the items will all be related.

These results suggest that the one-factor models for work centrality ($\chi^2[9] = 10.126$, $p = .340$; RMSEA = .018; SRMR = .020; CFI = .998), job insecurity ($\chi^2[5] = 72.805$, $p < .001$; RMSEA = .184; SRMR = .036; CFI = .948), and ageism toward the young ($\chi^2[5] = 8.031$, $p = .155$; RMSEA = .039; SRMR = .020; CFI = .994) were appropriate with no revisions. Reliabilities for each scale were acceptable (work centrality: $\omega = .826$; job insecurity: $\omega = .903$; ageism toward young: $\omega = .798$). The underemployment scale's fit statistics indicated a poor fit ($\chi^2[27] = 254.205$, $p < .001$; RMSEA = .145; SRMR = .071; CFI = .851). Though the factor loadings were acceptable, examination of the discrepancy matrix showed that there were possible doublets forming and several items were highly redundant. Items 7 and 8 were identified as being potentially problematic as they had high residual correlations with several other items, though the pattern did not suggest that other factors were forming. Therefore both items were

Table 1: Summary of CFA Results for Scales

Scale	χ^2 (df)	RMSEA	SRMR	CFI	$\Delta\chi^2$ (df)
Work Centrality	10.13 (9)	0.02	0.02	1.00	-
Job Insecurity	72.81 (5)*	0.18	0.04	0.95	-
Ageism Toward Young	8.03 (5)	0.04	0.02	0.99	-
Underemployment	254.21 (27)*	0.15	0.07	0.85	-
Underemployment (items 7 & 8 removed)	69.57 (14)*	0.10	0.04	0.95	184.63 (13)
Perceived Threat from Old	130.63 (27)*	0.10	0.05	0.94	-
Perceived Threat from Old (item 6 removed)	110.45 (20)*	0.11	0.04	0.95	20.18 (7)
Perceived Threat from Old (items 6 & 8 removed)	56.29 (14)*	0.09	0.04	0.97	54.16 (6)
3 Factor Ageism	513.67 (206)*	0.06	0.06	0.87	-
3 Factor Ageism (items 1, 13, 15, 17, & 20 removed)	284.64 (116)*	0.06	0.05	0.91	229.03 (90)
4 Factor Ageism	477.29 (203)*	0.06	0.06	0.89	-
4 Factor Ageism (items 6 & 13 removed)	343.82 (164)*	0.05	0.05	0.91	133.48 (39)
All Scales, No Ageism Toward Young	1624.12 (917)*	0.04	0.06	0.90	

Note: $\Delta\chi2$ relative to preceding model; *$p<.05$.

removed. After rerunning the one-factor model with items 7 and 8 discarded there was a significant improvement in model fit ($\chi^2[14] = 69.573$, $p < .001$; RMSEA = .100; SRMR = .044; CFI = .949). Reliability for this final model was acceptable ($\omega = .867$). The one-factor model of perceived threat also showed a poor fit ($\chi^2[27] = 130.629$, $p < .001$; RMSEA = .098; SRMR = .046; CFI = .943). Item 6 loaded poorly on the factor and the discrepancy matrix suggested the presence of useless redundancy. This model was rerun after removing item 6. Though the fit statistics improved, they were still not ideal ($\chi^2[20] = 110.449$, $p < .001$; RMSEA = .106; SRMR = .043; CFI = .949). Removing item 8, which had a very high residual correlation with item 5, in addition to item 6 and rerunning the model resulted in a substantial fit statistic improvement ($\chi^2[14] = 56.286$, $p < .001$; RMSEA = .087; SRMR = .038; CFI = .971). This included a CFI change of over .01, which indicates a meaningful difference (Cheung & Rensvold, 2002). The revised perceived threat model also had an acceptable reliability ($\omega = .894$). Though a unidimensional model was specified by the authors of the perceived threat scale, certain items seemed as though they may form a distinct factor on theoretical grounds as these focused on perceived threat in regard to employment. An exploratory factor analysis was conducted on half of the data to see if any different factor models emerged. Results from this analysis indicated that, according to eigenvalues and parallel analysis, a two-factor model was not a substantial improvement over the one-factor model so the unidimensional structure was retained. Analyses moved forward with the revised underemployment and perceived threat scales.

Several different multidimensional models were specified for the ageism toward the old scale. First, a three-factor model (stereotype, separation, and attitude) based on the revisions proposed by Rupp et al. (2005) was specified with the work stereotype items included in the stereotype dimension. Results indicated a poor model fit ($\chi^2[206] = 513.672$, $p < .001$; RMSEA =

.061; SRMR = .057; CFI = .872). The factor loadings for all items were acceptable. The discrepancy matrix suggested that several items were problematic, though no clear patterns emerged. Items 1, 13, 15, 17, and 20 were identified as being the most problematic items – those with the greatest number and largest values of residual correlations exceeding .10 – were discarded. After this, the same three-factor model was rerun. The fit statistics improved, albeit not substantially (χ^2[116] = 284.638, p < .001; RMSEA = .060; SRMR = .052; CFI = .906), and many problematic discrepancies still existed. These unsatisfactory findings may be a result of adapting the scale for older adults and including new items. To further investigate the cause of the poor fit, a four-factor model that included all items was specified with the work stereotype items loading on a separate, work stereotype, factor. Results of this model mirrored the three-factor model with all items included: fit statistics all demonstrated a poor fit (χ^2[203] = 477.294, p < .001; RMSEA = .058; SRMR = .057; CFI = .886) and, despite acceptable factor loadings, the discrepancy matrix showed several items with high residual correlations. The most problematic of these, item 6 and 13, were dropped and the four-factor model was rerun. These results showed a large improvement over the original four-factor solution (χ^2[164] = 343.818, p < .001; RMSEA = .052; SRMR = .053; CFI = .913), though there were still problems with residuals. The revised four-factor model was not clearly superior to the revised three-factor model. Despite this, the four-factor structure was accepted; this was done because the revised stereotypes were based on recent literature, similar to the scale for ageism toward the young, and these may have stronger relationships with the predictors. Though the results of these CFAs are unsatisfactory, they are in line with those obtained by previous work (Rupp et al., 2005). Reliabilities for each dimension were acceptable for research purposes, though markedly lower than those of the other scales used in this study (stereotype dimension: ω = .674; work stereotype dimension: ω = .775; separation

dimension: $\omega = .751$; attitude dimension: $\omega = .682$).

As a final step, a CFA was run including every scale to ensure that they were all distinct from each other. This model specified nine factors, one for each scale and four for the ageism toward the old scale. The χ^2 for this model was significant and the SRMR and CFI values were just outside the acceptable range ($\chi^2[1139] = 2039.052$, $p < .001$; RMSEA = .044; SRMR = .060; CFI = .889). This is may have been due to the conceptual similarity between the stereotypes of the young and stereotypes of the old scales so the young stereotype scale was removed and the model was rerun with eight factors. The fit statistics improved substantially and the SRMR was just outside of the acceptable range ($\chi^2[917] = 1624.123$, $p < .001$; RMSEA = .044; SRMR = .056; CFI = .904). The χ^2 was still significant, but this was likely due to the large sample. These results support the conclusion that these scales are distinct.

Regression Analyses

Assumptions of MLR.

Prior to running regression analyses, the descriptive statistics were examined to ensure there were no issues with the data (see Table 2). The assumptions of MLR were then checked to make sure that this type of analysis was appropriate; all predictor variables were checked against each outcome variable separately. Examination of scatter plots of the standardized residuals plotted against predicted outcome scores indicated that there was a linear relationship between the predictor variables and each dimension of ageism, so a linear model was acceptable. Durbin-Watson values exceeded 1.0 for each predictor-outcome relationship, so the assumption of independence was not violated. Histograms and normal probability plots of the residuals showed that the data was normally distributed. Variance inflation factor (VIF) scores were all below 10, indicating that multicollinearity was not an issue (Myers, 2000). Scatter plots of the residuals on

each predictor indicate that the assumption of homoscedasticity was not violated. The presence

of outliers/influential data points was detected and flagged by examining leverage values (those

greater than twice the average), student deleted residuals (beyond three standard deviations

above or below the average), and Cook's distance values (greater than 4/400 or .01). Participants

who were flagged as being outliers/influential by all three were examined. A total of five

participants – participants 12, 99, 301, 405, and 421 – were determined to be problematic when

they were checked against different ageism dimensions. MLR models were specified with these

participants included and removed to see if there was a substantial difference in the results.

These participants did prove to be particularly influential and were thus removed, bringing the

total number of participants to 395.

Table 2. Summary of Descriptive Statistics

	N	Min	Max	Mean	SD
Age	395	19.00	82.00	37.60	12.35
Unemployment Status	395	0.00	1.00	.09	.29
Unemployment Length	395	0.00	216.00	12.29	21.92
Peer Unemployment	395	0.00	100.00	6.64	11.36
Underemployment	395	1.00	5.00	3.48	.79
Job Insecurity	395	1.00	5.00	2.18	.88
Work Centrality	395	1.00	4.83	2.54	.71
Perceived Threat from Old	395	1.00	5.00	2.40	.78
Ageism - Stereotype	395	1.00	5.00	2.78	.69
Ageism - Work Stereotype	395	1.00	4.75	2.79	.77
Ageism - Separation	395	1.00	3.71	1.98	.52
Ageism - Attitude	395	1.00	3.80	2.13	.52
Ageism Toward Young	395	1.20	5.00	3.35	.72

Variable correlations.

The next step in the process was to review the correlations between key predictor and

outcome variables. These relationships are summarized in Table 3. Unemployment status and

peer unemployment were not significantly related to the outcome variables of interest, though duration of unemployment was significantly positively related to ageism toward the young. Underemployment was found to be significantly positively related to the stereotype and work stereotype dimensions of ageism toward the old and ageism toward the young. Job insecurity showed significant positive relationships with all dimensions of ageism toward the old and ageism toward the young. Perceived threat from older persons was significantly related to peer unemployment, underemployment, and job insecurity. Work centrality showed a significant negative relationship with underemployment. Age was considered to be a potential covariate as it is expected to be correlated with the predictor variables (younger persons are more likely to experience unemployment, underemployment, and job insecurity as previously discussed). Age is also expected to be correlated to the dimensions of ageism as research has shown that younger persons tend to be the greatest endorsers of negative age stereotypes (Finkelstein, Burke, & Raju, 1995; Rupp et al., 2005). Therefore, it is important to account for the effect of this variable in models to determine if the employment resource variables of interest have any predictive power beyond that of age. Though not all of the predictor variables showed significant relationships with the dimensions of ageism, they were retained in the model as they are correlated to the significant predictors, belong to the theoretical model, and likely explain some of the same variance that the significant predictors do.

MLR main effects.

To assess the predictive ability of each independent variable, separate MLR models were specified for each individual predictor. This was done to help understand what relationship, if any, exists between the predictor and outcome variables in the model. If a substantial relationship was found, the predictor was retained in a more complex model. This was carried out in a

Table 3. Correlation Matrix of All Predictor, Moderator, Mediator, Outcome, and Covariate Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
Unemployment Status (1)	-												
Unemployment Length (2)	.24*	-											
Peer Unemployment (3)	-.01	.11*	-										
Underemployment (4)	.05	.09	.09	-									
Job Insecurity (5)	.27*	.03	.16*	.14*	-								
Work Centrality (6)	-.01	-.04	.00	-.10	-.01	-							
Perceived Threat - Older Persons (7)	.08	.01	.11*	.13*	.27*	.09	-						
Ageism – Stereotype (8)	.08	.07	.01	.19*	.20*	.14*	.62*	-					
Ageism - Work Stereotype (9)	.03	-.03	.05	.08	.17*	.05	.53*	.59*	-				
Ageism – Separation (10)	.05	-.02	-.02	.02	.26*	.15*	.58*	.50*	.44*	-			
Ageism – Attitude (11)	.00	.00	-.01	.02	.17*	.02	.45*	.36*	.39*	.57*	-		
Ageism Toward Young (12)	.04	.10	.04	.16*	.09	-.12*	.00	.14*	.18*	.00	.02	-	
Age (13)	.02	.10	-.12*	.01	-.01	.02	-.34*	-.18*	-.29*	-.21*	-.25*	.07	-

*Note: N = 395; *p<.05.*

hierarchical fashion with age entered first to account for the effect of this variable and then each individual predictor variable entered in the next step. Each dimension of ageism toward the old and the young ageist stereotype scale was regressed on each independent variable separately. Relationships were assessed using significance values (p-value cutoff of .05) and by examining the proportion of variance explained by each model (R^2). The hypotheses state that unemployment status, duration of unemployment, peer unemployment, underemployment, and job insecurity should all predict each dimension of ageism toward older persons while only underemployment should predict ageism toward younger persons. Prior to any analyses all of the predictors were centered except for unemployment status, as it was a dichotomous variable.

Results for the regression models of the stereotype dimension of ageism are presented in Table 4. Underemployment ($\beta = .17$, $p < .001$) and job insecurity ($\beta = .15$, $p < .001$) both significantly predicted this outcome dimension. These models each accounted for 4% of the variance in the outcome beyond age alone ($\Delta R^2 = .04$); though this may not seem like a large increase, the outcome, ageism, has substantial consequences for the people who experience it. Understanding potential antecedents is important in practical terms as this small percentage still translates to a large number of potential targets. Unemployment status ($\beta = .20$, $p = .09$), unemployment duration ($\beta = .00$, $p = .07$), and peer unemployment ($\beta = .00$, $p = .82$) were not significant predictors. This provided support for hypotheses 1d and 1f, but not for hypotheses 1a-1c.

Results for the model regressing the work stereotype dimension are summarized in Table 5. Job insecurity ($\beta = .14$, $p < .01$) was the only significant predictor and the model including age and job insecurity accounted for 11% of the variance ($R^2 = .11$), an increase of 3% over the model with only age ($\Delta R^2 = .03$). Unemployment status ($\beta = .08$, $p = .53$), unemployment length

(β = .00, p = .96), peer unemployment (β = .00, p = .82), and underemployment (β = .08, p = .07) were nonsignificant. Thus, hypothesis 1f was further supported, but hypotheses 1a-1d were not.

The results for the MLR model of the separation dimension are included in Table 6. Job insecurity significantly predicted this dimension of ageism (β = .15, p < .001) and explained an additional 7% of the variance beyond age (ΔR^2 = .07). Unemployment status (β = .11, p = .24), unemployment length (β = .00, p = .95), peer unemployment (β = .00, p = .38), and underemployment (β = .02, p = .61) were not significant predictors. This finding supported hypothesis 1f, but no evidence was found to support hypotheses 1a-1d

Table 7 shows the results for the model for the attitude dimension of ageism. Again, job insecurity was the only significant predictor (β = .10, p < .01), explaining 3% of the variance beyond age (ΔR^2 = .03). Unemployment status (β = .01, p = .92), unemployment length (β = .00, p = .64), peer unemployment (β = .00, p = .45), and underemployment (β = .02, p = .61) were all non-significant. Hypothesis 1f was supported, but 1a-1d were not.

Results for ageism toward the young regressed on the predictors are presented in Table 8. Underemployment (β = .15, p < .01) was significant in this model. This accounted for a 3% increase in variance explained over age (ΔR^2 = .03). This provided support for hypothesis 1e. Unemployment status (β = .11, p = .41), length of unemployment (β = .00, p = .07), peer unemployment (β = .00, p = .38), and job insecurity (β = .07, p = .08) were not statistically significant, but again, these were not hypothesized to predict ageism toward the young.

The results of these preliminary analyses were encouraging and demonstrated that some of the predictor variables do predict the various dimensions of ageism. However, it is important to note that these predictors are correlated and thus likely account for some of the same variance in each ageism outcome variable. Therefore, all significant predictors for a given outcome should

Table 4. Hierarchical Regression Results for the Stereotype Dimension of Ageism

Predictors	B	SE	R^2	ΔR^2	Adj. R^2	F	df
Age	-.01*	.00	.03	.03	.03	13.37	1
Age	-.01*	.00	.04	.01	.03	8.13	2
Unemployment Status	.20	.12					
Age	-.01*	.00	.04	.01	.04	8.38	2
Unemployment Length	.00	.00					
Age	-.01*	.00	.03	.00	.03	6.70	2
Peer Unemployment	.00	.00					
Age	-.01*	.00	.07	.04	.07	14.81	2
Underemployment	.17*	.04					
Age	-.01*	.00	.07	.04	.07	15.18	2
Job Insecurity	.15*	.04					

Note: $N = 395$; unstandardized betas reported; *$p<.05$; age was entered into the model first, then each individual predictor variable was entered in a separate model.

Table 5. Hierarchical Regression Results for the Work Stereotype Dimension of Ageism

Predictors	B	SE	R^2	ΔR^2	Adj. R^2	F	df
Age	-.02*	.00	.09	.00	.08	36.55	1
Age	-.02*	.00	.09	.00	.08	18.44	2
Unemployment Status	.08	.13					
Age	-.02*	.00	.09	.00	.08	18.23	2
Unemployment Length	.00	.00					
Age	-.02*	.00	.09	.00	.08	18.26	2
Peer Unemployment	.00	.00					
Age	-.02*	.00	.09	.01	.09	20.00	2
Underemployment	.08	.05					
Age	-.02*	.00	.11	.03	.11	24.82	2
Job Insecurity	.14*	.04					

Note: $N = 395$; unstandardized betas reported; *$p<.05$; age was entered into the model first, then each individual predictor variable was entered in a separate model.

Table 6. Hierarchical Regression Results for the Separation Dimension of Ageism

Predictors	B	SE	R^2	ΔR^2	Adj. R^2	F	df
Age	-.01*	.00	.05	.00	.04	17.88	1
Age	-.01*	.00	.05	.00	.04	9.64	2
Unemployment Status	.10	.09					
Age	-.01*	.00	.04	.00	.04	8.92	2
Unemployment Length	.00	.00					
Age	-.01*	.00	.05	.00	.04	9.31	2
Peer Unemployment	.00	.00					
Age	-.01*	.00	.04	.00	.04	9.05	2
Underemployment	.02	.03					
Age	-.01*	.00	.11	.07	.11	24.91	2
Job Insecurity	.15*	.03					

Note: $N = 395$; unstandardized betas reported; *$p<.05$; age was entered into the model first, then each individual predictor variable was entered in a separate model.

Table 7. Hierarchical Regression Results for the Attitude Dimension of Ageism

Predictors	B	SE	R^2	ΔR^2	Adj. R^2	F	df
Age	-.01*	.00	.06	.00	.06	26.93	1
Age	-.01*	.00	.06	.00	.06	13.44	2
Unemployment Status	.01	.09					
Age	-.01*	.00	.06	.00	.06	13.55	2
Unemployment Length	.00	.00					
Age	-.01*	.00	.07	.00	.06	13.74	2
Peer Unemployment	.00	.00					
Age	-.01*	.00	.06	.00	.06	13.58	2
Underemployment	.02	.03					
Age	-.01*	.00	.09	.03	.09	19.76	2
Job Insecurity	.10*	.03					

Note: $N = 395$; unstandardized betas reported; *$p<.05$; age was entered into the model first, then each individual predictor variable was entered in a separate model.

Table 8. Hierarchical Regression Results for the Stereotypes of the Young

Predictors	*B*	*SE*	*R²*	*Δ R²*	Adj. *R²*	*F*	*df*
Age	.00	.00	.00	.00	.00	1.86	1
Age	.00	.00	.01	.00	.00	1.28	2
Unemployment Status	.11	.13					
Age	.00	.00	.01	.01	.01	2.54	2
Unemployment Length	.00	.00					
Age	.00	.00	.01	.00	.00	1.31	2
Peer Unemployment	.00	.00					
Age	.00	.00	.03	.03	.03	6.26	2
Underemployment	.15*	.05					
Age	.00	.00	.01	.01	.01	2.46	2
Job Insecurity	.07	.04					

Note: N = 395; unstandardized betas reported; *p<.05; age was entered into the model first, then each individual predictor variable was entered in a separate model.

be included in the same regression model so their effects can be accounted for. This was only an issue for the stereotype dimension of ageism, which was significantly predicted by both underemployment and job insecurity. Another hierarchical MLR model was specified that regressed the stereotype dimension on age in the first step, and then on age, underemployment, and job insecurity in the second. Results for this model are presented in Table 9. After inclusion of the two predictor variables both underemployment (β = .15, p < .01) and job insecurity (β = .14, p < .001) were still significant. This model accounted for 10% of the variance in the outcome variable (R^2 = .10), an increase of 9% beyond age (ΔR^2 = .09).

Together, these results suggest that employment stressors do predict ageist beliefs. Though unemployment status, length of unemployment, and peer unemployment did not predict any dimensions of ageism toward older persons, underemployment did predict the stereotype dimension as well as ageism toward the young and job insecurity was an important predictor for

Table 9. Hierarchical Regression Results for the Stereotype Dimension of Ageism

Predictors	*B*	*SE*	R^2	Adj. R^2	ΔR^2	*F*	*df*
Age	-.01*	.00	.03	.03	.03	13.37	1
Age	-.01*	.00	.10	.09	.07	14.43	3
Underemployment	.15*	.04					
Job Insecurity	.14*	.04					

Note: $N = 395$; unstandardized betas reported; *$p<.05$; age was entered into the model first, then the set of predictor variables.

all dimensions of ageism toward older persons. Thus, hypothesis 1d was partially supported, hypothesis 1f was fully supported, and hypotheses 1a, 1b, and 1c were not supported by the MLR results for main effects.

MLR moderation effects.

With the presence of some main effects established, the next step was to investigate the role of work centrality as a moderator. To this end, hierarchical MLR models were specified that included age as a covariate in the first step, the predictor variable of interest and moderating variable, work centrality, in the second, and the interaction term in the third. These interaction effects were assessed for individual predictor variables. P-values (.05 cutoff) and proportion of variance explained (R^2) were examined to see if a moderating relationship existed.

Results for the stereotype dimension of ageism are presented in Tables 10-14. The interaction term for peer unemployment was significant ($\beta = -.01$, $p < .01$) and accounted for an increase of 7.2% in variance explained ($R^2 = .07$), an increase of 1.7% beyond the model without the interaction ($\Delta R^2 = .02$). The models for the interaction terms for unemployment status ($\beta = -.38$, $p = .06$), length of unemployment ($\beta = .00$, $p = .97$), underemployment ($\beta = -.07$, $p = .20$), and job insecurity ($\beta = -.09$, $p = .08$) were all nonsignificant. These findings provided support for

hypothesis 2c, but not for hypotheses 2a, 2b, 2d, or 2e.

Results for the work stereotype dimension of ageism are presented in Tables 15-19. These results indicate that none of the interaction terms were associated with the work stereotype dimension: unemployment status (β = -.14, p = .51), length of unemployment (β = .00, p = .39), peer unemployment (β = .00, p = .21) underemployment (β = -.02, p = .73), job insecurity (β = -.08, p = .14) were all nonsignificant. These findings did not support hypotheses 2a-2e.

Table 10. Test of the Moderating Effect of Work Centrality on the Unemployment Status-Stereotype Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	*SE*	*B*	*SE*	*B*	*SE*
Age	-.01*	.00	-.01*	.00	-.01*	.00
Unemployment Status			.20	.12	.20	.12
Work Centrality			.14*	.05	.17*	.05
Unemp. Status × Work Cen.					-.38	.20
R^2	.03		.06		.07	
ΔR^2	.03		.03		.01	
Adj. R^2	.03		.06		.06	
F	13.37		8.58		7.37	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 11. Test of the Moderating Effect of Work Centrality on the Unemployment Length-Stereotype Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	*SE*	*B*	*SE*	*B*	*SE*
Age	-.01*	.00	-.01*	.00	-.01*	.00
Unemployment Length			.00	.00	.00	.00
Work Centrality			.15*	.05	.15*	.05
Unemp. Length × Work Cen.					.00	.00
R^2	.03		.06		.06	
ΔR^2	.03		.03		.00	
Adj. R^2	.03		.06		.05	
F	13.37		8.88		6.65	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 12. Test of the Moderating Effect of Work Centrality on the Peer Unemployment-Stereotype Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	*SE*	*B*	*SE*	*B*	*SE*
Age	-.01*	.00	-.01*	.00	-.01*	.00
Peer Unemployment			.00	.00	.00	.00
Work Centrality			.14*	.05	.15*	.05
Peer Unemp. × Work Cen.					-.01*	.00
R^2	.03		.06		.07	
ΔR^2	.03		.02		.02	
Adj. R^2	.03		.05		.06	
F	13.37		7.55		7.51	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 13. Test of the Moderating Effect of Work Centrality on the Underemployment-Stereotype Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	SE	B	SE	B	SE
Age	-.01*	.00	-.01*	.00	-.01*	.00
Underemployment			.18*	.04	.18*	.04
Work Centrality			.16*	.05	.16*	.05
Underemployment × Work Cen.					-.07	.05
R^2	.03		.10		.10	
ΔR^2	.03		.07		.00	
Adj. R^2	.03		.09		.09	
F	13.37		14.18		11.06	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 14. Test of the Moderating Effect of Work Centrality on the Job Insecurity-Stereotype Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	SE	B	SE	B	SE
Age	-.01*	.00	-.01*	.00	-.01*	.00
Job Insecurity			.18*	.04	.18*	.04
Work Centrality			.16*	.05	.16*	.05
Job Insecurity × Work Cen.					-.07	.05
R^2	.03		.09		.10	
ΔR^2	.03		.06		.00	
Adj. R^2	.03		.09		.09	
F	13.37		13.51		10.94	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 15. Test of the Moderating Effect of Work Centrality on the Unemployment Status-Work Stereotype Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	SE	B	SE	B	SE
Age	-.02*	.00	-.02*	.00	-.02*	.00
Unemployment Status			.08	.13	.08	.13
Work Centrality			.06	.05	.07	.05
Unemp. Status × Work Cen.					-.14	.22
R^2	.09		.09		.09	
ΔR^2	.09		.00		.00	
Adj. R^2	.08		.08		.08	
F	36.55		12.82		9.71	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 16. Test of the Moderating Effect of Work Centrality on the Unemployment Length-Work Stereotype Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	SE	B	SE	B	SE
Age	-.02*	.00	-.02*	.00	-.02*	.00
Unemployment Length			.00	.00	.00	.00
Work Centrality			.06	.05	.07	.05
Unemp. Length × Work Cen.					.00	.00
R^2	.09		.09		.09	
ΔR^2	.09		.00		.00	
Adj. R^2	.08		.08		.08	
F	36.55		12.78		9.69	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 17. Test of the Moderating Effect of Work Centrality on the Peer Unemployment-Work Stereotype Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	SE	B	SE	B	SE
Age	-.02*	.00	-.02*	.00	-.02*	.00
Peer Unemployment			.00	.00	.00	.00
Work Centrality			.06	.05	.07	.05
Peer Unemp. × Work Cen.					.00	.00
R^2	.09		.09		.09	
ΔR^2	.09		.00		.00	
Adj. R^2	.08		.08		.08	
F	36.55		12.69		9.93	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 18. Test of the Moderating Effect of Work Centrality on the Underemployment-Work Stereotype Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	SE	B	SE	B	SE
Age	-.02*	.00	-.02*	.00	-.02*	.00
Underemployment			.09	.05	.09	.05
Work Centrality			.07	.05	.07	.05
Underemployment × Work Cen.					-.02	.06
R^2	.09		.10		.10	
ΔR^2	.09		.01		.00	
Adj. R^2	.08		.09		.09	
F	36.55		14.04		10.54	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 19. Test of the Moderating Effect of Work Centrality on the Job Insecurity-Work Stereotype Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	*SE*	*B*	*SE*	*B*	*SE*
Age	-.02*	.00	-.02*	.00	-.02*	.00
Job Insecurity			.14*	.04	.14*	.04
Work Centrality			.06	.05	.06	.05
Job Insecurity × Work Cen.					-.08	.06
R^2	.09		.12		.12	
ΔR^2	.09		.03		.00	
Adj. R^2	.08		.11		.11	
F	36.55		17.11		13.41	
df	1		3		4	

Note: $N = 395$; unstandardized betas reported; *$p<.05$; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Results for the separation dimension of ageism are presented in Table 20-24. The interaction term for peer unemployment was significant ($\beta = -.01$, $p < .01$) and accounted for an increase of 2% in variance explained ($\Delta R^2 = .02$). The models for the interaction terms for unemployment status ($\beta = -.28$, $p = .07$), length of unemployment ($\beta = .00$, $p = .55$), underemployment ($\beta = .00$, $p = .98$), and job insecurity ($\beta = .01$, $p = .75$) were all nonsignificant. These findings provided support for hypothesis 2c, but not for hypotheses 2a, 2b, 2d, or 2e.

Results for the attitude dimension of ageism are presented in Table 25-29. These results indicate that none of the interaction terms were associated with the attitude dimension: unemployment status ($\beta = .08$, $p = .58$), length of unemployment ($\beta = .00$, $p = .55$), peer unemployment ($\beta = .00$, $p = .14$) underemployment ($\beta = -.04$, $p = .32$), job insecurity ($\beta = -.07$, $p = .09$) were all nonsignificant. These findings did not support hypotheses 2a-2e.

Table 20. Test of the Moderating Effect of Work Centrality on the Unemployment Status-Separation Dimension of Ageism Relationship

Predictors	Step 1: Covariate B	SE	Step 2: Predictors B	SE	Step 3: Interaction B	SE
Age	-.01*	.00	-.01*	.00	-.01*	.00
Unemployment Status			.11	.09	.10	.09
Work Centrality			.12*	.04	.13*	.04
Unemp. Status × Work Cen.					-.28	.15
R^2	.04		.07		.08	
ΔR^2	.04		.03		.01	
Adj. R^2	.04		.07		.07	
F	17.88		10.15		8.51	
df	1		3		4	

Note: $N = 395$; unstandardized betas reported; *$p<.05$; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 21. Test of the Moderating Effect of Work Centrality on the Unemployment Length-Separation Dimension of Ageism Relationship

Predictors	Step 1: Covariate B	SE	Step 2: Predictors B	SE	Step 3: Interaction B	SE
Age	-.01*	.00	-.01*	.00	-.01*	.00
Unemployment Length			.00	.00	.00	.00
Work Centrality			.12*	.04	.12*	.04
Unemp. Length × Work Cen.					.00	.00
R^2	.04		.07		.07	
ΔR^2	.04		.03		.00	
Adj. R^2	.04		.06		.06	
F	17.88		9.63		7.30	
df	1		3		4	

Note: $N = 395$; unstandardized betas reported; *$p<.05$; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 22. Test of the Moderating Effect of Work Centrality on the Peer Unemployment-Separation Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	*SE*	*B*	*SE*	*B*	*SE*
Age	-.01*	.00	-.01*	.00	-.01*	.00
Peer Unemployment			.00	.00	.00	.00
Work Centrality			.12*	.04	.12*	.04
Peer Unemp. × Work Cen.					-.01*	.00
R^2	.04		.07		.09	
ΔR^2	.04		.03		.02	
Adj. R^2	.04		.06		.08	
F	17.88		9.89		9.74	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 23. Test of the Moderating Effect of Work Centrality on the Underemployment-Separation Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	*SE*	*B*	*SE*	*B*	*SE*
Age	-.01*	.00	-.01*	.00	-.01*	.00
Underemployment			.03	.03	.03	.03
Work Centrality			.12*	.04	.12*	.04
Underemployment × Work Cen.					.00	.04
R^2	.04		.07		.07	
ΔR^2	.04		.03		.00	
Adj. R^2	.04		.06		.06	
F	17.88		9.87		7.38	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 24. Test of the Moderating Effect of Work Centrality on the Job Insecurity-Separation Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	SE	B	SE	B	SE
Age	-.01*	.00	-.01*	.00	-.01*	.00
Job Insecurity			.16*	.03	.16*	.03
Work Centrality			.12*	.03	.12*	.03
Job Insecurity × Work Cen.					.01	.04
R^2	.04		.14		.14	
ΔR^2	.04		.10		.00	
Adj. R^2	.04		.13		.13	
F	17.88		20.93		15.69	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 25. Test of the Moderating Effect of Work Centrality on the Unemployment Status-Attitude Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	SE	B	SE	B	SE
Age	-.01*	.00	-.01*	.00	-.01*	.00
Unemployment Status			.01	.09	.01	.09
Work Centrality			.02	.04	.01	.04
Unemp. Status × Work Cen.					.08	.15
R^2	.06		.07		.07	
ΔR^2	.06		.00		.00	
Adj. R^2	.06		.06		.06	
F	26.93		9.00		6.82	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 26. Test of the Moderating Effect of Work Centrality on the Unemployment Length-Attitude Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	*SE*	*B*	*SE*	*B*	*SE*
Age	-.01*	.00	-.01*	.00	-.01*	.00
Unemployment Length			.00	.00	.00	.00
Work Centrality			.02	.04	.02	.04
Unemp. Length × Work Cen.					.00	.00
R^2	.06		.07		.07	
ΔR^2	.06		.00		.00	
Adj. R^2	.06		.06		.06	
F	26.93		9.08		6.89	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 27. Test of the Moderating Effect of Work Centrality on the Peer Unemployment-Attitude Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	*SE*	*B*	*SE*	*B*	*SE*
Age	-.01*	.00	-.01*	.00	-.01*	.00
Peer Unemployment			.00	.00	.00	.00
Work Centrality			.02	.04	.02	.04
Peer Unemp. × Work Cen.					.00	.00
R^2	.06		.07		.07	
ΔR^2	.06		.00		.00	
Adj. R^2	.06		.06		.06	
F	26.93		9.20		7.48	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 28. Test of the Moderating Effect of Work Centrality on the Underemployment-Attitude Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	SE	B	SE	B	SE
Age	-.01*	.00	-.01*	.00	-.01*	.00
Underemployment			.02	.03	.01	.03
Work Centrality			.02	.04	.02	.04
Underemployment × Work Cen.					-.04	.04
R^2	.06		.07		.07	
ΔR^2	.06		.00		.00	
Adj. R^2	.06		.06		.06	
F	26.93		9.11		7.08	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 29. Test of the Moderating Effect of Work Centrality on the Job Insecurity-Attitude Dimension of Ageism Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	SE	B	SE	B	SE
Age	-.01*	.00	-.01*	.00	-.01*	.00
Job Insecurity			.10*	.03	.09*	.03
Work Centrality			.02	.04	.01	.04
Job Insecurity × Work Cen.					-.07	.04
R^2	.06		.09		.10	
ΔR^2	.06		.03		.01	
Adj. R^2	.06		.09		.09	
F	26.93		13.22		10.68	
df	1		3		4	

Note: N = 395; unstandardized betas reported; *p<.05; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Table 30. Test of the Moderating Effect of Work Centrality on the Underemployment-Ageism Toward Young Relationship

Predictors	Step 1: Covariate		Step 2: Predictors		Step 3: Interaction	
	B	*SE*	*B*	*SE*	*B*	*SE*
Age	.00	.00	.00	.00	.00	.00
Underemployment			.14*	.05	.13*	.05
Work Centrality			-.11*	.05	-.11*	.05
Underemployment × Work Cen.					-.06	.06
R^2	.00		.04		.05	
ΔR^2	.00		.04		.00	
Adj. R^2	.00		.04		.04	
F	1.87		5.74		4.55	
df	1		3		4	

Note: $N = 395$; unstandardized betas reported; *$p<.05$; variables entered in hierarchical fashion with age entered first as a covariate, the set of predictors entered in step 2, and the interaction term entered in step 3.

Results for ageism toward the young are presented in Table 30. The interaction term of underemployment and work centrality did not significantly predict ageism toward the young ($\beta = -.06$, $p = .32$). This did not support hypothesis 2d.

MLR mediation effects.

To establish if the relationships between unemployment, experience with unemployment, underemployment, job insecurity, and the dimensions of ageism toward older persons are mediated by perception of threat felt from older persons, Baron and Kenny's (1986) four-step procedure was used. According to this process, the first step is to regress each outcome variable, the ageism dimensions, on the predictor variables to demonstrate that a relationship worth explaining exists. However, this first step need not always hold true for a meditational relationship to exist. Next, the mediator, perceived threat from older persons, is regressed on the set of predictors to show that they are related. Third, the outcome variables are regressed on the mediator separately to show that a relationship exists between these. Finally, the outcome

variables are separately regressed on the significant predictors and mediator together to assess the indirect effect. Predictor variables that are not related to the mediator are not included in the final model. Age was once again included as a covariate and the relationships examined in each step were evaluated using significance tests (at a .05 cutoff) and increases in the proportion of variance explained (ΔR^2).

The results for the first step of this process are described above in the discussion of single predictor main effects. Underemployment and job insecurity were both significant predictors of the stereotype dimension, job insecurity was the only significant predictor of the work stereotype, separation, and attitude dimensions, and underemployment was significant for ageism toward the young. Step two regressed perceived threat on the predictor variables separately and found that underemployment ($\beta = .13, p < .01$) and job insecurity ($\beta = .23, p < .001$) were both significant and the models accounted for 13% ($R^2 = .13$) and 19% ($R^2 = .19$) of the variance respectively; these results are displayed in Table 31. Thus, hypotheses 3d and 3e were both supported. Hypotheses 3a-3c were not supported.

Results for step 3 of the process are presented in Table 32. Perceived threat felt from older persons was significant for the stereotype ($\beta = .56, p < .001; R^2 = .38$), work stereotype ($\beta = .48, p < .001; R^2 = .30$), separation ($\beta = .38, p < .001; R^2 = .34$), and attitude ($\beta = .27, p < .001; R^2 = .21$) dimensions of ageism toward older persons. These results demonstrate that perceived threat from older persons is related to all dimensions of ageism toward older persons, which supports this variable's role as a potential mediator.

These results indicate that direct effects are present between underemployment/job insecurity and certain dimensions of ageism, that underemployment and job insecurity are related to perceived threat felt from older persons and that this is related to all dimensions of ageism

toward the old, suggesting the presence of an indirect effect. When the dimensions of ageism are regressed on the full models including predictor variables and the mediator, the models explains a substantial amount variance with threat remaining significant. Predictor variables sometimes remain significant or become nonsignificant depending on the outcome. This is viewed by some as evidence for determining whether a relationship is fully mediated (the entire relationship is explained away by the mediator) or partially mediated (the predictor still has an effect on the outcome after accounting for the effect of the mediator). However, due to the larger sample size used in this study, significance tests may not provide accurate information so conclusions about full or partial mediation may not be warranted on the basis of this. Instead, the Sobel test can be used to test significance of mediation relationships, which provides more accurate results when working with a large sample size. Additionally, Kenny (2014) states that most analysts believe the essential steps in establishing mediation are steps 2 and 3 and significant relationships need not be established in steps 1 and 4. This can occur because the direct effect may often have relatively low power, especially when compared to the indirect effect (Kenny & Judd, 2014). Therefore, the relationship between underemployment and all of the dimensions of ageism may still be mediated by perceived threat despite the absence of significant main effects. The Sobel test was calculated for these as well to determine if a significant indirect effect exists.

Results of the Sobel test indicate that the indirect effect of underemployment on the stereotype dimension ($z* = 2.55$, $SE = .03$, $p = .01$) and that of job insecurity on the stereotype dimension ($z* = 5.31$, $SE = .02$, $p < .001$) are both significant. The Sobel test also indicates significance for the indirect effects of underemployment ($z* = 2.53$, $SE = .02$, $p = .01$) and job insecurity on the work stereotype dimension ($z* = 5.17$, $SE = .02$, $p < .001$), underemployment ($z* = 2.54$, $SE = .02$, $p = .01$) and job insecurity on the separation dimension ($z* = 5.22$, $SE = .02$,

$p < .001$), and underemployment ($z* = 2.48$, $SE = .01$, $p = .01$) and job insecurity on the attitude dimension ($z* = 4.82$, $SE = .01$, $p < .001$). These results support that the relationships between underemployment and job insecurity and the dimensions of ageism toward older persons are mediated by perception of threat felt from older persons, supporting hypotheses 4d and 4e.

Results for step 4 of the process for the stereotype dimension are presented in Table 33. After inclusion of perceived threat to the model, underemployment was still significant ($\beta = .10$, $p < .01$; $R^2 = .40$), but job insecurity was not ($\beta = .03$, $p = .42$; $R^2 = .38$).

Results for step 4 of the process for the work stereotype dimension are presented in Table 34. When perceived threat was included, job insecurity was no longer significant ($\beta = .03$, $p = .39$; $R^2 = .30$).

Results for step 4 for the separation dimension are presented in Table 35. For the model including the mediator, job insecurity remained significant ($\beta = .07$, $p < .01$; $R^2 = .35$).

Results for step 4 of the process for the attitude dimension are presented in Table 36. After perceived threat was added, job insecurity was not significant ($\beta = .04$, $p = .19$; $R^2 = .22$).

Table 31. Hierarchical Regression Results for Perceived Threat from Older Persons

Predictors	B	SE	R^2	ΔR^2	Adj. R^2	F	df
Age	-.02*	.00	.12	.01	.12	51.17	1
Age	-.02*	.00	.12	.01	.12	27.36	2
Unemployment Status	.23	.13					
Age	-.02*	.00	.12	.00	.11	25.91	2
Unemployment Length	.00	.00					
Age	-.02*	.00	.12	.01	.12	26.90	2
Peer Unemployment	.01	.00					
Age	-.02*	.00	.13	.02	.13	29.92	2
Underemployment	.13*	.05					
Age	-.02*	.00	.19	.07	.18	44.58	2
Job Insecurity	.23*	.04					

Note: N = 395; unstandardized betas reported; *p<.05; age was entered into the model first, then each individual predictor variable was entered in a separate model.

Table 32. Hierarchical Regression Results for Perceived Threat from Older Persons

Stereotype Dimension							
Predictors	*B*	*SE*	*R²*	*Δ R²*	Adj. *R²*	*F*	*df*
Age	-.01*	.00	.03	.03	.03	13.37	1
Age	.00	.00	.38	.35	.38	121.54	2
Perceived Threat of Old	.56*	.04					

Work Stereotype Dimension							
Predictors	*B*	*SE*	*R²*	*Δ R²*	Adj. *R²*	*F*	*df*
Age	-.02*	.00	.09	.09	.08	36.55	1
Age	-.01*	.00	.30	.21	.29	83.35	2
Perceived Threat of Old	.48*	.04					

Separation Dimension							
Predictors	*B*	*SE*	*R²*	*Δ R²*	Adj. *R²*	*F*	*df*
Age	-.01*	.00	.04	.04	.04	17.88	1
Age	.00	.00	.34	.29	.33	99.44	2
Perceived Threat of Old	.38*	.03					

Attitude Dimension							
Predictors	*B*	*SE*	*R²*	*Δ R²*	Adj. *R²*	*F*	*df*
Age	-.01*	.00	.06	.06	.06	26.93	1
Age	.00*	.00	.21	.15	.21	53.44	2
Perceived Threat of Old	.27*	.03					

Note: $N = 395$; unstandardized betas reported; *$p<.05$; age was entered into the model first, then perceived threat from older persons.

Table 33. Test of the Mediating Effect of Perceived Threat on the Relationships for the Stereotype Dimension of Ageism

Predictors	B	SE	R^2	ΔR^2	Adj. R^2	F	df
Age	-.01*	.00	.03	.03	.03	13.37	1
Age	.00	.00	.40	.36	.39	85.18	3
Underemployment	.10*	.03					
Perceived Threat of Old	.54*	.04					
Age	.00	.00	.38	.35	.38	81.18	3
Job Insecurity	.03	.03					
Perceived Threat of Old	.55*	.04					

Note: $N = 395$; unstandardized betas reported; *$p<.05$; age was entered into the model first, then perceived threat along with one predictor variable of interest in separate models.

Table 34. Test of the Mediating Effect of Perceived Threat on the Relationships for the Work Stereotype Dimension of Ageism

Predictors	B	SE	R^2	ΔR^2	Adj. R^2	F	df
Age	-.02*	.00	.09	.09	.08	36.55	1
Age	-.01*	.00	.30	.21	.29	55.56	3
Underemployment	.02	.04					
Perceived Threat of Old	.48*	.04					
Age	-.01*	.00	.30	.21	.29	55.78	3
Job Insecurity	.03	.04					
Perceived Threat of Old	.47*	.05					

Note: $N = 395$; unstandardized betas reported; *$p<.05$; age was entered into the model first, then perceived threat along with one predictor variable of interest in separate models.

Table 35. Test of the Mediating Effect of Perceived Threat on the Relationships for the Separation Dimension of Ageism

Predictors	B	SE	R^2	ΔR^2	Adj. R^2	F	df
Age	-.01*	.00	.04	.04	.04	17.88	1
Age	.00	.00	.34	.30	.33	66.89	3
Underemployment	-.03	.03					
Perceived Threat of Old	.39*	.03					
Age	.00	.00	.35	.31	.34	70.15	3
Job Insecurity	.07*	.03					
Perceived Threat of Old	.36*	.03					

Note: $N = 395$; unstandardized betas reported; *$p<.05$; age was entered into the model first, then perceived threat along with one predictor variable of interest in separate models.

Table 36. Test of the Mediating Effect of Perceived Threat on the Relationships for the Attitude Dimension of Ageism

Predictors	B	SE	R^2	ΔR^2	Adj. R^2	F	df
Age	-.01*	.00	.06	.06	.06	26.93	1
Age	.00*	.00	.22	.15	.21	35.71	3
Underemployment	-.02	.03					
Perceived Threat of Old	.28*	.03					
Age	.00*	.00	.22	.15	.21	36.27	3
Job Insecurity	.04	.03					
Perceived Threat of Old	.26*	.03					

Note: $N = 395$; unstandardized betas reported; *$p<.05$; age was entered into the model first, then perceived threat along with one predictor variable of interest in separate models.

Age group as a potential moderator.

The results of these various analyses suggested that several indicators of employment distress are important predictors for ageist outcomes. Age was included in the regression models specified because of its role as a potential covariate. Thus, these results demonstrated that the predictors of interest were significantly related to ageist outcomes even after the effect of age was accounted for. However, an argument can be made that an individual's membership in a particular age group differentially influences endorsement of ageist beliefs. This suggests that age acts as a moderating variable such that older persons and younger persons with similar employment experiences (levels of underemployment and job insecurity, for example) will exhibit different levels of ageism.

To test this idea the above analyses were repeated to include interaction terms for age group (for the main effect analyses this included predictor-age group interactions, for the moderation analyses this included predictor-age group and work centrality-age group interactions). Age was recoded into a dichotomous variable where individuals age 18-29 were labeled "younger persons" and those 45 and above were labeled "older persons"; these age ranges were specified in accordance with national trends about which age groups experience the highest and lowest unemployment rates (Bureau of Labor Statistics, 2013). These age groups are theoretically important because we might expect that any existing predictor-ageism relationships may differ depending on membership to a specific group. Interaction terms for age group were included in each model for every analysis in a hierarchical fashion. For example, main effect MLR models were rerun to include an interaction term (predictor-age group interaction) and work centrality MLR models were rerun to include an additional interaction term (predictor-work centrality, predictor-age group, and work centrality-age group). Inclusion of the age group

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interaction terms consistently failed to produce any significant results (unstandardized β values

ranged from .00 to .30) and added little to no explanatory power to previous models (ΔR^2 values

ranged from .00 to .01). As such, it appears that age group did not moderate any of the

relationships between the predictors and the ageism variables.

DISCUSSION

Many theories exist that explain age stereotypes by focusing on different levels ranging from individual beliefs to societal changes. In the current study, the development of ageism was investigated using a sociocultural perspective, specifically looking at how economic factors and shifts in age demographics influence endorsement of ageist beliefs. The recession has created an environment where unemployment, underemployment, and job insecurity are high. While these have been studied as stressors and linked to a variety of negative outcomes (e.g., Henwood & Miles, 1987; Feather & O'Brien, 1986; Brasher & Chen, 1999; Lee, 2005; Ashford, Lee, & Bobko, 1989; Burchell, 1994), they have never been studied as antecedents to ageism. Here, RGCT (Sherif, 1966; Sherif & Sherif, 1969) was used to explain how these indicators of employment distress may lead to the formation of negative age attitudes. This study explores a novel research question that has been speculated, but never directly investigated. Understanding how employment stressors can lead to ageism is important for understanding ageism, especially during a period of economic recession when the older population is growing to record numbers.

The current recession has made employment a scarce resource that is important to individuals not just for their financial well-being, but also for their mental and physical well-being. Thus, competition should arise over these coveted employment opportunities between groups of people in society. This competition may manifest itself between younger and older persons given the salience of age in society due to the overrepresentation of younger workers among the unemployed (Bureau of Labor Statistics, 2013) and a larger and more visible older population working past traditional retirement age (Mermin, Johnson, & Murphy, 2007) and then "draining", as some claim, shared welfare programs when they do retire. According to RGCT,

the young may perceive older workers as a threat to their economic success, denying

employment opportunities by refusing to retire and taking more than their fair share of welfare

programs like Social Security. This perceived threat may lead to the formation of negative

stereotypes and attitudes, which can then evolve into hostility in the form of ageism.

This study sought to investigate this phenomenon by looking at not just unemployment,

but also duration of unemployment, unemployment among peers, underemployment, and job

insecurity. Doing so allowed for a more complex operationalization of employment as a resource

that provided better insights into how it can influence ageist beliefs. Therefore, the question was

not just whether having a job is associated with ageism, but if the prevalence of unemployment

in one's life, the adequacy of current employment, and the fear of losing employment are as well.

Beyond just assessing the predictive power of these variables, perception of realistic threat from

older persons and work centrality were included to gain a better understanding of why these

relationships may exist, with the former potentially mediating them and the latter moderating.

The results from the various MLR models supported that employment resources are

associated with endorsement of ageist beliefs and that this operates, at least in part, through

perception of realistic threat. The regression models specified to test main effects demonstrated

that underemployment and job insecurity were important predictors of different dimensions of

ageism, supporting hypotheses 1d and 1f. Results from the moderation analyses showed that the

interaction terms for peer unemployment-work centrality were significant predictors of the

stereotype and separation dimensions of ageism. This suggests that the relationship between peer

unemployment and these dimensions of ageism depends on level of work centrality. Thus,

hypothesis 2c was partially supported. Regression models for mediation effects found that

underemployment and job insecurity were both associated with perceived threat from older

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persons, supporting hypotheses 3d and 3e. Further analyses established that the relationships between underemployment and job insecurity were mediated by threat as well, supporting hypotheses 4d and 4e.

The results showed that some of the hypotheses were supported while others were not. In general it did not appear that unemployment (unemployment status, duration of unemployment, and unemployment among peers) was an important predictor of ageism. No significant relationships were found and they provided little to no explanatory power to their respective models However, the results were more promising for underemployment and job insecurity, which did appear to have substantial relationships with certain dimensions of ageism. Work centrality was a significant moderator for the relationship between peer unemployment and ageism. Additionally, results from the mediation analyses suggest that the relationship between underemployment/job insecurity and the dimensions of ageism toward older persons are mediated by perception of threat felt from older persons.

These results support the assertion that threats to employment, at least as measured by underemployment and job insecurity, are associated with endorsement of ageist beliefs. It is somewhat surprising that the unemployment-related measures were not important predictors of ageism – given the nation-wide age trends that show younger persons are unemployed at much higher rates, it was expected that those without jobs would be younger and blame their circumstances on older persons. However, it may be that underemployment and job insecurity predicted ageism due to their subjectivity. Individuals who perceive their employment situation to be inadequate may also be more likely to perceive competition over jobs, regardless if such competition actually exists. The fact that both of these predictors are mediated by perception of threat from the old supports this notion that subjective beliefs are better predictors. Work

centrality was not found to moderate the relationships between the various predictors and dimensions of ageism, despite previous research suggesting that those higher in work centrality are more likely to experience greater negative consequences of unemployment (Greenhalgh & Rosenblatt, 1984; Jackson et al., 1983; Kinicki, 1989).

This study also supports the idea that ageism can arise due to competition over jobs. Individuals who feel that they are overqualified for their current jobs or are concerned about losing them are more likely to believe that older persons in society pose a threat to them economically. As a marginalized group in society, older workers may be an easy scapegoat for workers unhappy with their current employment situation. The perspective may be that, because older workers are not retiring, there are few opportunities for advancement in organizations and that less experienced workers are higher on the list of potential layoffs. This then leads to adoption of negative age attitudes as a response to the perceived threat, which is how outgroup hostility develops according to RGCT. Also worthy of mention is that items from the SCM (Fiske et al., 2002) were included in the survey. Participants in this study rated older persons 3.26 on the competence dimension and 3.68 on the warmth dimension (both out of 5.00). Fiske et al. had originally found elderly people rated as 2.74 on competence and 4.06 on warmth. While the referent may have been different in both studies (older persons here and elderly persons in the other study) and the methods of data collection were not the same, this provides some evidence that attitudes toward older persons are changing and they are seen increasingly as competition and less as warm and friendly.

Strengths of the Current Study

Though concerns have been raised about the viability of using MTurk workers as participants for research in the behavioral sciences (Goodman, Cryder, & Cheema, 2012), the use

of this population was likely a strength for the current study. First, this sample was much more age diverse. The mean age of participants was just under 38, with the youngest participant age at 19 and oldest at 82. When studying attitudes toward age groups, it is vital to have an age-representative sample to assess the beliefs of age ingroups and outgroups. This older sample was also active in the workforce, something that is unlikely in an undergraduate sample. This was necessary to study the impact of unemployment, underemployment, and job insecurity as well as perceived competition for jobs.

MTurk workers tend to spend large amounts of time completing tasks for relatively low pay – in this sample the average worker devoted roughly 14 hours per week to MTurk HITs. While this may be detrimental to researchers studying topics such as employee engagement or job involvement as such workers may be completing MTurk tasks during work hours, this may indicate that such workers are unemployed or underemployed, which is a sample that is otherwise difficult to access. This study was also conducted after a major economic recession, which offers a unique opportunity to study topics such as unemployment and underemployment. When the economy is strong the rates of the predictors of interest are much lower, making it more difficult to find adequate samples.

Limitations of the Current Study

Although this study contributes to the literature on ageism, it is not without limitations. First, this study was conducted with a cross-sectional design. This does not allow any causal inferences to be made about the predictors and ageism. Though the direction of the proposed relationships has a strong theoretical foundation, the given arguments can only suggest causality, but not provide direct evidence.

Second, the psychometric properties of the ageism toward the old scale were less than

ideal, the details of which are discussed in detail in the results section. The dimensionality of the model was not strongly supported by the CFAs run on the data and the reliabilities, while acceptable, were lower than what is preferable by convention. These properties were in line with previous research, which also did not provide strong support for the structure. Modification of the scale to adapt it for older persons instead of the elderly may be partially to blame for this. Furthermore, no scales existed that assess ageism toward younger persons or middle-aged persons despite a modern view of the topic that suggests any age group can be a target. A better scale is needed to accurately assess all the dimensions of ageism for all of these age groups, which will help more accurately assess the relationships with unemployment, underemployment, and job insecurity.

Another potential limitation is that only one dimension of underemployment was assessed because no scales exist that assess them all. While this proved to be an important predictor of ageist beliefs, the subjectivity of the way it was operationalized (perceived overqualification) may be behind this. It would be interesting to include a more objective measure of underemployment to see if it is also predictive of ageism.

Though the use of MTurk participants was considered a strength of this study, it could also be considered a limitation. This sample is not random and is being compensated financially for their participation so their motivation to answer thoughtfully is uncertain. Social desirability is also a concern when asking questions about ageism, which may have influenced responding. Other common concerns about this type of sample include participants rushing through the survey or participating multiple times in the same study, though the screening and data cleaning procedures described in the methods section should help address these concerns.

Implications for Research

The results of this study add to the literature on ageism, specifically on how ageism develop. This study focused on the sociocultural perspective of ageism, which explains ageism in the context of cultural and societal changes, arguing they are major drivers for attitudes toward age. Here, changes in the makeup of national age demographics coupled with sustained economic drought can result in ageism. Additionally, this study applies Sherif's RGCT to age discrimination. While this has been used in the past to explain development of racial stereotypes (e.g., Greeley & Sheatsley, 1971; Palmer, 1996,) it has not been used to explain age stereotypes. Though potential age conflict has been speculated in the past by researchers and pundits, this is the first study to directly study this phenomenon. These results will help answer questions raised about how age-related attitudes are influenced by concerns about depletion of Social Security and other welfare programs, youth unemployment, and intergroup competition. This broadens understanding of how ageism develops and can help inform other research focusing on perceptions of age as the U.S. population continues to age.

This study also provides preliminary support for the proposed conceptual model of ageism resulting from intergroup competition. These results suggest that subjective feelings of inadequate employment predict endorsement of ageist beliefs and that perception of threat from older adults explains, at least in part, these relationships. An individual's level of work centrality was also identified as an important piece of the model, functioning as a moderator, Though more work is needed to further expound these relationships, this does bring to light newly-identified consequences that result from underemployment and job insecurity, two well-known stressors. These are especially noteworthy as they have implications not just for the individuals who experience these, but also for the people these individuals interact with.

Implications for Practice

Ageism is a concern for organizations as it tends to be dealt with less seriously than other forms of workplace discrimination yet can still result in litigation with financial consequences. As the older population grows and works longer and younger generations enter the workplace, the work environment becomes more age diverse and learning how to manage age conflict is crucial. Knowing that underemployment and job insecurity may lead to the formation of ageism (as well as many other negative outcomes), an organization can work to help attenuate workers' experience of these. By making the work more engaging, adding responsibilities, and providing opportunities for advancement an employer can reduce the experience of underemployment. Honestly communicating and justifying decisions for downsizing workforces and instituting policies such as furloughs instead of laying off employees can help minimize the impact of job insecurity. Even if it is not possible to institute these policies, knowing that ageism may develop when underemployment and job insecurity are prevalent can lead organizations to take preemptive steps. Additionally, because underemployment and job insecurity are more prevalent during economic recessions, it can mean that older persons, an already vulnerable group, may become increasingly marginalized in tough economic times. This helps explain the trend of increasing ADEA complaints as the regression continued. Knowing this can help organizations and lawmakers provide additional protections for older workers.

Future Directions

The goal of this study was to establish a relationship between employment distress and ageism. Results were promising and demonstrated that a relationship does exist, though more work is needed elucidate how these employment predictors influence ageist beliefs. Future research should investigate the roles of younger and middle-aged persons more, specifically by looking at ageism outcomes for these groups and threat felt from them. Doing so will help us

understand if only the elderly become targets of ageism when economic resources are scarce or if outgroup hostility increases for all age groups. A first step in accomplishing this is to develop better instruments. Though the modern perspective of ageism holds that members of any age group can experience ageism, no scales have been developed to assess ageism toward the young or middle-aged.

This study examined a novel phenomenon that has not been extensively researched before so the results can be used to help construct a theoretical foundation for more complex modeling in the future. For example, structural equation modeling might be used to test the conceptual model of resource competition and ageism proposed in this study. A limitation of this study was that it used a cross-sectional design, so future research should work to establish a process model by using a longitudinal design to establish causative relationships.

Follow up research in this area should also take into account other factors that may affect the predictor-ageism relationships. For example, research has demonstrated that intergroup contact is effective in reducing prejudice (Allport, 1954; Pettigrew & Tropp, 2000; Williams, 1947). Future studies should investigate the role of age diversity in the workplace to see if workers who regularly interact with people of different ages are less likely to endorse ageist beliefs even when underemployment or job insecurity are an issue. Because workplace age demographics may be influenced by the type of work, industry may function as a moderator where certain types of jobs are more likely to induce ageism.

CONCLUSION

Ageism is a topic that has not received as much attention as sexism or racism, yet it is just as important and likely more prevalent than the other two. Many theories have been put forth to explain how age stereotypes develop and here sociocultural theories and theories of intergroup conflict were invoked to explain how scarcity of employment resources may influence ageist beliefs. This study demonstrates that subjective measures of employment resources – underemployment and job insecurity – predict endorsement of ageist beliefs. Additionally, these relationships are mediated, at least in part, by perception of threat felt from older persons. Work centrality was also found to moderate relationships between unemployment among peers and ageism. This supports the notion that perception of competition over employment resources is perceived to exist between age groups and leads to negative attitudes toward older persons. These results are important as they help explain how ageism may develop and how this is affected by major societal trends. Additionally, this helps draw attention to a vulnerable population that may be increasingly marginalized when economies are in recession.

REFERENCES

Allport, G. W. (1979). *The nature of prejudice.* Reading, MA: Addison-Wesley.

Alvesson, M., Ashcraft, K. L., & Thomas, R. (2008). Identity matters: Reflection on the
construction of identity scholarship in organization studies. *Organization, 15,* 5-28.

Anti-Ageism Task Force (2006). *Ageism in America.* New York, NY: International Longevity
Center. Retrieved January 13, 2012, from
http://www.mailman.columbia.edu/sites/default/files/Ageism_in_America.pdf

Ashford, S., Lee, C., & Bobko, P. (1989). Content, causes, and consequences of job
insecurity. A theory-based measure and substantive test. *Academy of Management
Journal, 32*, 803-829.

Avolio, B. J., & Barrett, G. V. (1987). Effects of age stereotyping in a simulated interview.
Psychology and Aging, *2*, 56-63.

Banaji, M. R. (1999). *Unconscious isms: Examples from racism, sexism, and ageism.* Paper
presented at the Way Women Lean Conference, New Haven, CT.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social
psychological research: Conceptual, strategic, and statistical considerations. *Journal
of Personality and Social Psychology*, *51*, 1173-1182.

Becker, E. (1973). *The denial of death.* New York, NY: Free Press.

Bingham, A. (2011, November 30). Payroll tax cuts: Will they bankrupt social security? *ABC
News.* Retrieved from http://abcnews.go.com/blogs/politics/2011/11/payroll-tax-cuts-
will-they-bankrupt-social-security/

Binstock, R. H. (1985). The oldest old: A fresh perspective or compassionate ageism

revisited? *Milbank Memorial Fund Quarterly, 63,* 420-451. doi:10.2307/3349887

Blake, R. R., & Mouton, J. S. (1961). Reactions to intergroup competition under win-lose conditions. *Management Science*, *7*, 420-435.

Blake, R. R., & Mouton, J. S. (1962). The intergroup dynamics of win-loss conflict and problem-solving collaboration in union-management relations. In M. Sherif (Ed.), *International relations and leadership* (pp. 94-141). New York, NY: John Wiley.

Blau, D., & Shvydko, T. (2007). *Labor market rigidities and the employment behavior of older workers* (Work Papers No. 07-21). Retrieved from http://ideas.repec.org/p/cen/wpaper/07-21.html

Bobo, L. (1983). Whites' opposition to busing: Symbolic racism or realistic group conflict? *Journal of Personality and Social Psychology*, *45*, 1196-1210.

Bodenhausen, G. V., & Lichtenstein, M. (1987). Social stereotypes and information-processing strategies: The impact of task complexity. *Journal of Personality and Social Psychology*, *52*, 871-880. doi: 10.1037/0022-3514.52.5.871

Brasher, E. E., & Chen, P. Y. (1999). Evaluation of success criteria in job search: A process perspective. *Journal of Occupational and Organizational Psychology*, *72*, 57-70.

Britton, J. O., & Thomas, K. R. (1973). Age and sex as employment variables: Views of employment service interviewers. *Journal of Employment Counseling, 10,* 180-186.

Brown, R. (2011). *Prejudice: Its social psychology*. Somerset, NJ: John Wiley & Sons.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk a new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, *6*, 3-5.

Burchell, B. (1994). The effects of labour market position, job insecurity and unemployment

on psychological health. In D. Gallie, C. Marsh, & C. Vogler (Eds.), *Social change and the experience of unemployment* (pp. 188-212). Kettering, Northamptonshire: Oxford University Press.

Bureau of Labor Statistics, U.S. Department of Labor. (2009). How the government measures unemployment. Retrieved from: http://www.bls.gov/cps/cps_htgm.htm

Bureau of Labor Statistics, U.S. Department of Labor. (2010). Employment situation summary. Released January 08, 2010, for December 2009. Retrieved from: http://www.bls.gov/news.release/empsit.nr0.htm

Bureau of Labor Statistics, U.S. Department of Labor. (2013). Labor force statistics from the current population survey. Retrieved November 10, 2013 from http://data.bls.gov/pdq/querytool.jsp?survey=ln

Burke, R. J. (1997). Correlates of under-employment among recent business school graduates. *International Journal of Manpower, 18*, 627-635.

Burnstein, E., Crandall, C., & Kitayama, S. (1994). Attitudes and social cognition. *Journal of Personality and Social Psychology*, *67,* 773-789.

Burris, B. H. (1983). The human effects of underemployment. *Social Problems, 31,* 98-110.

Butler, R. N. (1969). Age-ism: Another form of bigotry. *Gerontologist, 9,* 243-246.

Charness, N., Czaja, S., & Sharit, J. (2007). Age and technology for work. In K. Shultz & G. Adams (Eds.), *Aging and Work in the 21st Century* (pp. 225-250). Mahwah, NJ: Lawrence Erlbaum Associates.

Cheung, G. W. & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, *9*, 233-255.

CNN/ORC International. (2011). *Poll 16*. Retrieved from http://www.people-

press.org/files/legacy-pdf/02-22-13%20Spending%20Release.pdf

CNN/ORC International. (2011). *Poll 15*. Retrieved from

http://i2.cdn.turner.com/cnn/2011/images/09/12/rel15b.pdf

Cohn, R. M. (1978). The effect of employment status change on self-attitudes. *Social

Psychology, 41,* 81–93.

Cordero-Guzman, H. R. (2013, October 19). Main stream support for a mainstream

movement. Retrieved from http://occupywallst.org/media/pdf/OWS-profile1-10-18-

11-sent-v2-HRCG.pdf

Cottrell, C. A., & Neuberg, S. L. (2005). Different emotional reactions to different groups: A

sociofunctional threat-based approach to "prejudice." *Journal of Personality and

Social Psychology, 88,* 770-789. doi:10.1037/0022-3514.88.5.770

Cottrell, C. A., Neuberg, S. L., & Li, N. P. (2007). What do people desire in others? A

sociofunctional perspective on the importance of different valued characteristics.

Journal of Personality and Social Psychology, 92, 208-231. doi:10.1037/0022-

3514.92.2.208

Cuddy, A. J. C., & Fiske, S. T. (2002). Doddering, but dear: Process, content, and function in

stereotyping of older persons. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice

against older persons* (pp. 3-26). Cambridge, MA: MIT Press.

Davy, J. A., Kinicki, A. J., & Scheck, C. L. (1997). A test of job security's direct and

mediated effects on withdrawal cognitions. *Journal of Organizational Behavior*, *18*,

323-349.

De Witte, H. (2005). Job insecurity: Review of the international literature on definitions,

prevalence, antecedents and consequences. *SA Journal of Industrial Psychology*, *31*,

1-6.

Dekker, S., & Schaufeli, W. (1995). The effects of job insecurity on psychological health and withdrawal: A longitudinal study. *Australian Psychologist, 30*, 57-63.

Dempster, A. P., Laird, N. M., & Rubin, D. B. (1977). Maximum likelihood from incomplete data via the EM algorithm. *Journal of the Royal Statistical Society: Series B (Methodology)*, *39,* 1-38.

DeVellis, R. (2012). *Scale Development Theory and Applications*. Los Angeles, CA: Sage Publications.

Diefendorff, J. M., Brown, D. J., Kamin, A. M., & Lord, R. G. (2002). Examining the roles of job involvement and work centrality in predicting organizational citizenship behaviors and job performance. *Journal of Organizational Behavior, 23,* 93-108.

Dychtwald, K. (1999). *Age power: How the 21st century will be ruled by the new old.* New York, NY: Jeremy P. Tarcher/Putnam.

Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation.* Hillsdale, NJ: Erlbaum.

Elsby, M. W., Hobijn, B., & Sahin, A. (2010). *The labor market in the great recession* (Report No. w15979). Retrieved from http://www.nber.org/papers/w15979.

Feather, N. T., & O'Brien, G. E. (1986). A longitudinal study of the effects of employment and unemployment on school leavers. *Journal of Occupational Psychology, 59,* 121-144.

Feldman, D. C., & Turnley, W. H. (1995). Underemployment among recent business college graduates. *Journal of Organizational Behavior, 16,* 691-706.

Feldman, D. C. (1996). The nature, antecedents and consequences of underemployment.

Journal of Management, 22, 385-407.

Feldman, D. C., Leana, C. R., & Bolino, M. C. (2002). Underemployment and relative

    deprivation among reemployed executives. *Journal of Occupational and*

    Organizational Psychology, 75, 453-471.

Feyrer, J. (2007). Demographics and productivity. *Review of Economics and Statistics, 89,*

    100-109.

Finkelstein, L. M., Burke, M. J., & Raju, M. S. (1995). Age discrimination in simulated

    employment contexts: An integrative analysis. *Journal of Applied Psychology*, *80*,

    652-663.

Fiske, S. T. (1998). Stereotyping, prejudice, and discrimination. In D. T. Gilbert, S. T. Fiske,

    & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 357-411). New York,

    NY: McGraw-Hill.

Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2001). *A model of stereotype content as*

    often mixed: Separate dimensions of competence and warmth respectively follow from

    status and competition. Unpublished manuscript.

Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype

    content: Competence and warmth respectively follow from status and competition.

    Journal of Personality and Social Psychology, 82, 878-902.

Fiske, S. T., Xu, J., Cuddy, A. C., and Glick, P. (1999). (Dis)respecting versus (dis)liking:

    Status and interdependence predict ambivalent stereotypes of competence and

    warmth. *Journal of Social Issues, 55,* 473-489.

Fraboni, M., Saltstone, R., & Hughes, S. (1990). The Fraboni Scale of Ageism (FSA): An

    attempt at a more precise measure of ageism. *Canadian Journal on Aging/La Revue*

Canadienne du Vieillissement, 9, 56-66.

Freeman, R. B., & Wise, D. A. (1982). The youth labor market problem: Its nature, causes, and consequences. In *The youth labor market problem: Its nature, causes, and consequences* (pp. 1-16). Chicago, IL: University of Chicago Press.

Frezza, B. (2014, February 21). 10 ways to dodge the mess we baby boomers are leaving the millennials. Forbes. Retrieved from http://www.forbes.com/sites/billfrezza/2014/02/21/10-ways-to-dodge-the-millennial-curse/

Friedman, T. L. (2013, October 15). Sorry, kids, we ate it all. Retrieved from http://www.nytimes.com/2013/10/16/opinion/friedman-sorry-kids-we-ate-it-all.html?_r=3&

Goodman, J. K., Cryder, C. E., & Cheema, A. (2013). Data collection in a flat world: The strengths and weaknesses of Mechanical Turk samples. *Journal of Behavioral Decision Making*, *26*, 213-224.

Gowan, M. A., Riordan, C. M., & Gatewood, R. D. (1999). Test of a model of coping with involuntary job loss following a company closing. *Journal of Applied Psychology, 84,* 75-86.

Greeley, A. M., & Sheatsley, P. B. (1971). Attitudes toward racial integration. *Scientific American, 6,* 42-49.

Green, F., & McIntosh, S. (2007). Is there a genuine under-utilization of skills amongst the over-qualified? *Applied Economics, 39,* 427-439.

Green, F., & Zhu, Y. (2010). Overqualification, job dissatisfaction, and increasing dispersion in the returns to graduate education. *Oxford Economic Papers, 62,* 740-763.

Greenberg, J., Schimel, J., & Mertens, A. (2004). Ageism: Denying the face of the future. In T. D. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 27-48). Cambridge, MA: MIT Press.

Greenhalgh, L., & Rosenblatt, Z. (1984). Job insecurity: Toward conceptual clarity. *Academy of Management Review*, *9*, 438-448.

Hamil-Luker, J. (2001). The prospects of age war: Inequality between (and within) age groups. *Social Science Research, 30,* 386-400. doi: 10.1006/ssre.2001.0703

Hartley, J., Jacobson, D., Klandermans, B., & Van Vuuren, T. (1990). *Job insecurity: Coping with jobs at risk*. Thousand Oaks, CA: Sage Publications.

Hauser, P. M. (1974). The measurement of labour utilization. *Malayan Economic Review*, *19*, 1-17.

Hellgren, J., Chirumbolo, A., De Witte, H., Goslinga, S., Näswall, K., & Sverke, M. (2001). A cross-cultural validation of a job insecurity measure. In M. Sverke, K. Näswall, J. Hellgren, A. Chirumbolo, H. De Witte, S. Goslinga. European Unions in the Wake of Flexible Production. Paper presented at The Tenth European Congress on Work and Organizational Psychology, Prague (pp. 51-66). Stockholm, Sweden: National Institute for Working Life.

Hellgren, J., & Sverke, M. (2003). Does job insecurity lead to impaired well-being or vice versa? Estimation of cross-lagged effects using latent variable modelling. *Journal of Organizational Behavior, 24,* 215-236.

Henwood, F., & Miles, I. (1987). The experience of unemployment and the sexual division of labour. In D. Fryer & P. Ullah (Eds.), *Unemployed people* (pp. 94-110). Milton Keynes, England: Open University Press.

Hijzen, A., Upward, R., & Wright, P. W. (2010). The income losses of displaced workers. *Journal of Human Resources, 45,* 243-269.

Hirschfeld, R. R., & Feild, H. S. (2000). Work centrality and work alienation: Distinct aspects of a general commitment to work. *Journal of Organizational Behavior, 21,* 789–800.

Hofland, H. (2013, August 05). *What future for the lost generation?* Retrieved from http://www.presseurop.eu/en/content/author/4025811-henk-hofland

Howell, D. C. (2007). The treatment of missing data. *The Sage handbook of social science methodology*, (pp. 208-224). Thousand Oaks, CA: Sage Publications.

Huang, J. L., Curran, P. G., Keeney, J., Poposki, E. M., & DeShon, R. P. (2012). Detecting and deterring insufficient effort responding to surveys. *Journal of Business and Psychology*, *27,* 99-114.

Irwin, S. (1996). Age related distributive justice and claims on resources. *British Journal of Sociology,* 68-92.

Jackson, J. W. (1993). Realistic group conflict theory: A review and evaluation of the theoretical and empirical literature. *The Psychological Record*, *43,* 395-413.

Jackson, P. R., Stafford, E. M., Banks, M. H., & Warr, P. B. (1983). Unemployment and psychological distress in young people: The moderating role of employment commitment. *Journal of Applied Psychology, 68,* 525-535.

Jacobe, D. (2010). No improvement in Gallup's underemployment rate in May. Gallup Poll Briefing, June 25.

Jaffe, I. (2013, October 30). Arguments over social security pit old vs. young. Retrieved from http://www.npr.org/2013/10/30/241722361/arguments-over-social-security-pit-old-vs-

young

Jahoda, M. (1982). *Employment and unemployment: A social-psychological analysis.* Cambridge, England: Cambridge University Press.

Jahoda, M. (1984). Social institutions and human needs: A comment on Fryer and Payne. *Leisure Studies, 3,* 297-299

Jensen, G. D., & Oakley, F. B. (1980). Aged appearance and behavior: An evolutionary and ethological perspective. *Gerontologist, 20,* 595-597. doi: 10.1093/geront/20.5_Part_1.595

Jensen, L., & Slack, T. (2003). Underemployment in America: Measurement and evidence. *American Journal of Community Psychology*, *32,* 21-31.

Johnson, G. J., & Johnson, W. R. (2000). Perceived overqualification and dimensions and job satisfaction: A longitudinal analysis. *Journal of Psychology, 134,* 537-555.

Johnson, R. W. (2007). What happens to health benefits after retirement? *Center for Retirement Research at Boston College.*

Johnston, D. C. (2012, May 4). Social security is not going broke. Reuters. Retrieved from http://blogs.reuters.com/david-cay-johnston/2012/05/04/social-security-is-not-going-broke/

Kalleberg, A. L., Reskin, B. F., & Hudson, K. (2000). Bad jobs in America: Standard and nonstandard employment relations and job quality in the United States. *American Sociological Review*, *65*, 256-278.

Kanungo, R. N. (1982). Measurement of job and work involvement. *Journal of Applied Psychology*, *67,* 341-349.

Kaufmann, N., Schulze, T., & Veit, D. (2011). More than fun and money. Worker motivation

in crowdsourcing-a study on Mechanical Turk. In Proceedings of the Seventeenth Americas Conference on Information Systems, Detroit, MI.

Kenny, D. A., & Judd, C. M. (2014). Power anomalies in testing mediation. *Psychological Science,* in press.

Kenny, D. (2014, April 9). Mediation. Retrieved July 27, 2014, from http://davidakenny.net/cm/mediate.htm#DI

Kessler, G. (2012, December 10). Lindsey graham's 'bankruptcy' trifecta. Washington Post. Retrieved from http://www.washingtonpost.com/blogs/fact-checker/post/lindsey-grahams-bankruptcy-trifecta/2012/12/07/b1003866-40a4-11e2-ae43-cf491b837f7b_blog.html

Khan, L. J., & Morrow, P. C. (1991). Objective and subjective underemployment relationships to job satisfaction. *Journal of Business Research, 22,* 211-218.

King, S. P. (2011). *Development and validation of the workplace intergenerational atmosphere scale* (Doctoral dissertation). Loyola University, Chicago, IL.

Kinicki, A. (1985). Personal consequences of plant closings: A model and preliminary test. *Human Relations, 38,* 197-212.

Kinicki, A. J. (1989). Predicting occupational role choices after involuntary job loss. *Journal of Vocational Behavior, 35,* 204-218.

Kinicki, A. J., Prussia, G. E., & McKee-Ryan, F. (2000). A panel study of coping with involuntary job loss. *Academy of Management Journal, 43,* 90-100.

Kite, M. E., & Wagner, L. S. (2004). Attitudes toward older adults. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 129-162). Cambridge, MA: MIT Press.

Kruglanski, A. W., & Freund, T. (1983). The freezing and unfreezing of lay-inferences: Effects on impressional primacy, ethnic stereotyping, and numerical anchoring. *Journal of Experimental Social Psychology*, *19,* 448-468.

Kurzban, R., & Leary, M. R. (2001). Evolutionary origins of stigmatization: The functions of social exclusion. *Psychological Bulletin, 127,* 187-208. doi:10.1037/0033-2909.127.2.187

Landsbergis, P. (1988). Occupational stress among health care workers: A test of the job demands-control model. *Journal of Occupational Behaviour, 9,* 217-239.

Langlois, J. H., Kalakanis, L., Rubenstein, A. J., Larson, A., Hallam, M., & Smoot, M. (2000). Maxims or myths of beauty? A meta-analytic and theoretical review. *Psychological Bulletin*, *126,* 390-423.

Lee, C. H. (2005). A study of underemployment among self-initiated expatriates. *Journal of World Business, 40,* 172-187.

Levine, R. A., Campbell, D. T. (1972). *Ethnocentrism: Theories of conflict, ethnic attitudes, and group behavior.* New York, NY: Wiley.

Levy, B. R., & Banaji, M. R. (2002). Implicit ageism. In T. D. Nelson (Ed.), *Ageism: Stereotypes and prejudice against older persons* (pp. 49-75). Cambridge, MA: MIT Press.

Levy, B. R. (2003). Mind matters: Cognitive and physical effects of aging selfstereotypes. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 58,* 203-211.

Levy, B. (2009). Stereotype embodiment: A psychosocial approach to aging. *Current Directions in Psychological Science, 18,* 332-336.

Levy, B. R., Ashman, O., & Dror, I. (1999). To be or not to be: The effects of aging self-stereotypes on the will-to-live. *Omega: Journal of Death and Dying, 40,* 409-420.

Levy, B. R., Slade, M. D., & Gill, T. (2006). Hearing decline predicted by elders' age stereotypes. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 61,* 82-87.

Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83,* 1198-1202.

Long, A. (2012, June 29). The behavioral lab. *The Behavioral Lab*. Retrieved May 27, 2014, from http://thebehaviorallab.wordpress.com/

Macrae, C. N., Milne, A. B., & Bodenhausen, G. V. (1994). Stereotypes as energy-saving devices: A peek inside the cognitive toolbox. *Journal of Personality and Social Psychology*, *66*, 37-47. doi: 10.1037/0022-3514.66.1.37

Maddux, W. W., Galinsky, A. D., Cuddy, A. J., & Polifroni, M. (2008). When being a model minority is good... and bad: Realistic threat explains negativity toward Asian Americans. *Personality and Social Psychology Bulletin*, *34*, 74-89.

Mason, W. A., & Watts, D. J. (2009). Financial incentives and the performance of crowds. In *Proceedings of the ACM SIGKDD workshop on human computation* (pp. 77-85). New York: ACM.

Maynard, D. C., Joseph, T. A., & Maynard, A. M. (2006). Underemployment, job attitudes, and turnover intentions. *Journal of Organizational Behavior, 27,* 509-536.

McGuinness, S., & Wooden, M. (2009). Overskilling, job insecurity, and career mobility. *Industrial Relations, 48,* 265-286.

McKee-Ryan, F. M., & Harvey, J. (2011). "I have a job, but...": A review of

underemployment. *Journal of Management*, *37,* 962-996.

McKee-Ryan, F. M., Song, Z., Wanberg, C. R., & Kinicki, A. J. (2005). Psychological and

physical well-being during unemployment: A meta-analytic study. *Journal of Applied

Psychology*, *90,* 53-76.

Mermin, G. B. T., Johnson, R. W., & Murphy, D. P. (2007). Why do boomers plan to work

longer? *The Journals of Gerontology Series B: Psychological Sciences and Social

Sciences, 62,* S286-S294.

Meister, J. C., & Willyerd, K. (2010). Multiple generations @ work. In *The 2020 Workplace:

How Innovative Companies Attract, Develop, and Keep Tomorrow's Employees

Today* (pp. 41-70). New York, NY: Harper Collins Publishers.

Minkler, M. (2006). Generational equity and the new victim blaming. In H. R. Moody (Ed.),

Aging: Concepts and controversies (pp. 181–190). Newbury Park, CA: Pine Forge

Press.

Mohr, G. B. (2000). The changing significance of different stressors after the announcement

of bankruptcy: A longitudinal investigation with special emphasis on job insecurity.

Journal of Organizational Behavior, *21,* 337-359.

Montepare, J. M., & Zebrowitz, L. A. (2004). A social-developmental view of ageism. In T.

D. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 129-

161). Cambridge, MA: MIT Press.

Moody, H. R. (2002). Should age or need be the basis for entitlement? In H. Moody (Ed.),

Aging concepts and controversies (pp. 179-214). Thousand Oaks, CA: Sage

Publications.

Morin, R. (2009). Analysis and commentary: Most middle-aged adults are rethinking

retirement plans. The threshold generation. Washington, DC: Pew Research Center. Retrieved from http://pewresearch.org/pubs/1234/the-threshold-generation.

Muller, J., Hicks, R., & Winocur, S. (1993). The effects of employment and unemployment on psychological wellbeing in Australian clerical workers: Gender differences. *Australian Journal of Psychology, 45,* 103-108.

Myers, R. H. (2000). Classical and modern regression with applications. Pacific Grove, CA: Duxbury Press.

Näswall, K., & De Witte, H. (2003). Who feels insecure in Europe? Predicting job insecurity from background variables. *Economic and Industrial Democracy*, *24*, 189-215.

Nelson, T. D. (2005). Ageism: Prejudice against our feared future self. *Journal of Social Issues, 61,* 207-221. doi:10.1111/j.1540-4560.2005.00402.x

North, M. S., & Fiske, S. T. (2012). An inconvenienced youth? Ageism and its potential intergenerational roots. *Psychological Bulletin*, *138,* 982-997. doi: 10.1037/a0027843

North, M. S., & Fiske, S. T. (2013). Act your (old) age: Prescriptive ageist biases over succession, consumption, and identity. *Personality and Social Psychology Bulletin*, *39,* 720-734.

Palmer, D. L. (1996). Determinants of Canadian attitudes toward immigration: More than just racism? *Canadian Journal of Behavioural Science/Revue Canadienne des Sciences du Comportement*, *28,* 180-192. doi: 10.1037/0008-400X.28.3.180

Palmore, E. B. (1999). *Ageism: Negative and positive.* New York, NY: Springer.

Palmore, E. B. (2003). Ageism comes of age. *The Gerontologist*, *43,* 418-420.

Paolacci, G., & Warglien, M. (2009, October 6). Experimental Turk. *Experimental Turk*. Retrieved January 20, 2014, from http://experimentalturk.wordpress.com/

Paullay, I. M., Alliger, G. M., & Stone-Romero, E. F. (1994). Construct validation of two

   instruments designed to measure job involvement and work centrality. *Journal of*

   Applied Psychology, 79, 224-228. doi: 10.1037/0021-9010.79.2.224

Pettigrew, T. F., & Tropp, L. R. (2000). Does intergroup contact reduce prejudice? Recent

   meta-analytic findings. In S. Oskamp (Ed.), *Reducing prejudice and discrimination,*

   (pp. 93-114). East Sussex, United Kingdom: Psychology Press.

Pettigrew, T. F. (1978). Three issues in ethnicity: Boundaries, deprivations, and perceptions.

   In J. M. Yinger & S. J. Cutler (Eds.), *Major social issues: A multidisciplinary view*,

   (pp. 25-49). New York, NY: Free Press.

Pew Research Center, Pew Hispanic Center. (2006). *America's immigration quandary*.

   Retrieved from: http://pewhispanic.org/files/reports/63.pdf

Pew Research Center. (2013). *As sequester deadline looms, little support*

   for cutting most programs. Retrieved from: http://www.people-press.org/files/legacy-

   pdf/02-22-13%20Spending%20Release.pdf

Popham, L. E., Kennison, S. M., & Bradley, K. I. (2011). Ageism, sensation-seeking, and

   risk-taking behavior in young adults. *Current Psychology: A Journal for Diverse*

   Perspectives on Diverse Psychological Issues, 30, 184-193.

Rabbie, J. M., & Horwitz, M. (1969). Arousal of ingroup-outgroup bias by a chance win or

   loss. *Journal of Personality and Social Psychology*, *13,* 269-277. doi:

   10.1037/h0028284

Reuteman, R. (2010, February 8). Will baby boomers bankrupt social security? CNBC.

   Retrieved from http://www.cnbc.com/id/34941334

Riek, B. M., Mania, E. W., & Gaertner, S. L. (2006). Intergroup threat and outgroup attitudes:

A meta-analytic review. *Personality and Social Psychology Review*, *10,* 336-353.

Rosen, B., & Jerdee, T. H. (1976). The nature of job-related age stereotypes. *Journal of Applied Psychology, 61,* 180-183.

Rosenblatt, Z., Talmud, I., & Ruvio, A. (1999). A gender-based framework of the experience of job insecurity and its effects on work attitudes. *European Journal of Work and Organizational Psychology, 8,* 197-217.

Rosencrantz, H. A., & McNevin, T. E. (1969). A factor analysis of attitudes toward the aged. *The Gerontologist*, 9, 55-59.

Roskies, E., & Louis-Guerin, C. (1990). Job insecurity in managers: Antecedents and consequences. *Journal of Organizational Behavior*, *11,* 345-359.

Rupp, D. E., Vodanovich, S. J., & Credé, M. (2005). The multidimensional nature of ageism: Construct validity and group differences. *The Journal of Social Psychology*, *145,* 335-362.

Schafer, J. L., & Olsen, M. K. (1998). Multiple imputation for multivariate missing-data problems: A data analyst's perspective. *Multivariate Behavioral Research, 33,* 545-571.

Schafer, J. L. (1997). *Analysis of incomplete multivariate data. Book No. 72, Chapman & Hall series monographs on statistics and applied probability.* London, England: Chapman & Hall.

Sedensky, M. (2013, November 03). Poll: Older Americans nix social security changes. Retrieved from http://www.apnorc.org/news-media/Pages/News Media/poll-older-americans-nix-social-security-changes.aspx

Shere, D. (2011, May 11). Fox business host falsely claims baby boomers will "bankrupt"

social security "in a couple of months". Media Matters. Retrieved from

http://mediamatters.org/research/2011/05/11/fox-business-host-falsely-claims-baby-

boomers-w/179536

Sherif, M., & Sherif, C. W. (1953). *Groups in harmony and tension. An integration of studies*

on intergroup relations. New York, NY: Harper & Brothers.

Sherif, M., & Sherif, C. W. (1953). *Interdisciplinary relationships in the social sciences.*

Chicago, IL: Aldine Publishing Company.

Sherif, M. (1966). *In common predicament: Social psychology of intergroup conflict and*

cooperation. Boston, MA: Houghton Mifflin.

Sherif, M., Harvey, O. J., White, B. J., Hood, W. R., & Sherif, C. W. (1961). *Intergroup*

conflict and cooperation: The robbers cave experiment (Vol. 10). Norman, OK:

University Book Exchange.

Sherif, M., White, B. J., & Harvey, O. J. (1955). Status in experimentally produced groups.

American Journal of Sociology, *60,* 370-379.

Stephan, W. G., Ybarra, O., & Bachman, G. (1999). Prejudice toward immigrants. *Journal of*

Applied Social Psychology, *29,* 2221-2237.

Suri, S., & Watts, D. J. (2011). Cooperation and contagion in web-based, networked public

goods experiments. *PLoS One*, *6,* e16836.

Sverke, M. & Hellgren, J. (2002). The nature of job insecurity: Understanding employment

insecurity on the brink of a new millennium. *Applied Psychology: An International*

Review, 51, 23-42.

Sverke, M., Hellgren, J., Näswall, K., Chirumbolo, A., De Witte, H., & Goslinga, S. (2004)

Job insecurity and union membership: European unions in the wake of flexible

production. Brussels: P.I.E.-Peter Lang.

Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. In W. G. Austin
    & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 94–109).
    Monterey, CA: Brooks/Cole.

Tam, H. (2010). Characteristics of the underemployed and the overemployed in the UK.
    Economic and Labour Market Review, 4, 8-20.

Tapscott, D. (2011, April 04). The world's unemployed youth: revolution in the air? Retrieved
    from http://www.theguardian.com/commentisfree/2011/apr/04/unemployed-youth-
    revolution-generational-conflict

The New York Times. (2010, April 14). Polling the tea party. Retrieved from
    http://www.nytimes.com/interactive/2010/04/14/us/politics/20100414-tea-party-poll-
    graphic.html?ref=politics#tab=9

Tiggemann, M., & Winefield, A. H. (1984). The effects of unemployment on the mood, self-
    esteem, locus of control, and depressive affect of school-leavers. *Journal of*
    Occupational Psychology, *57,* 33-42.

Tillsley, C., & Taylor, P. (2001). Managing the third age workforce: A review and agenda for
    research. In I. Glover & M. Branine (Eds.), *Ageism in work and employment*, (pp.
    311-326). Burlington, VT: Ashgate Publishing.

Toossi, M. (2009). Labor force projections to 2018: "Older workers staying more active,"
    Monthly Labor Review, 132, 30-51.

Turner, J. B. (1995). Economic context and the health effects of unemployment. *Journal of*
    Health and Social Behavior, 36, 213-229.

Turner, B. S. (1998). Ageing and generational conflicts: A reply to Sarah Irwin. *British*

Journal of Sociology, 49, 299-304. doi:10.2307/591314

U.S. Census Bureau (2011). Table 1: Population: 2011. *The Older Population in the United States: 2011.* Retrieved June 19, 2013, from

http://www.census.gov/population/age/data/2011.html

U.S. Census Bureau (2012a). Table 2: Projections of the population by selected age groups and sex for the United States: 2015 to 2060. *2012 National Population Projections: Summary Tables.* Retrieved June 19, 2013, from

http://www.census.gov/population/projections/data/national/2012/summarytables.html

U.S. Census Bureau (2012b). Table 3: Percent distribution of the projected population by selected age groups and sex for the United States: 2015 to 2060. *2012 National Population Projections: Summary Tables.* Retrieved June 19, 2013, from

http://www.census.gov/population/projections/data/national/2012/summarytables.html

U.S. Census Bureau (2012c). Table 104: Expectation of life at birth, 1970 to 2008, and projections, 2010 to 2020. *Births, Deaths, Marriages, & Divorces: Life Expectancy.* Retrieved December 3, 2012, from

http://www.census.gov/compendia/statab/cats/births_deaths_marriages_divorces/life_ expectancy.htmll

U.S. Census Bureau (2012d). Table 3: Poverty status of people, by age, race, and Hispanic origin: 1959 to 2012. *Historical Poverty Tables - People.* Retrieved November 13, 2013, from http://www.census.gov/hhes/www/poverty/data/historical/people.html

U.S. Equal Employment Opportunity Commission. (2012). Enforcement & litigation statistics. *Age discrimination in employment act (includes concurrent charges with title VII, ADA and EPA) FY 1997 - FY 2012.* Retrieved from:

http://www.eeoc.gov/eeoc/statistics/enforcement/adea.cfm

U.S. Equal Employment Opportunity Commission. (2012). Enforcement & litigation statistics. *Age discrimination in employment act (ADEA) charges FY 1992 - FY 1996*. Retrieved from: http://www.eeoc.gov/eeoc/statistics/enforcement/adea-a.cfm

Vaisey, S. (2006). Education and its discontents: Overqualification in America, 1972–2002. *Social Forces, 85,* 835-864.

van Vuuren, T. (1990). *Met ontslag bedreigd. Werknemers in onzekerheid over hun arbeidsplaats bij veranderingen in de organisatie.* Amsterdam: VU Uitgeverij.

Vinokur, A., & Caplan, R. (1987). Attitudes and social support: Determinants of job seeking behavior and well-being among the un-employed. *Journal of Applied Social Psychology, 17,* 1007-1024.

Walsh, K., & Gordon, J. R. (2008). Creating an individual work identity. *Human Resource Management Review, 18,* 46-61.

Watt, J. D., & Hargis, M. B. (2010). Boredom proneness: Its relationship with subjective underemployment, perceived organizational support, and job performance. *Journal of Business Psychology, 25,* 163-174.

Wegman, D. H., & McGee, J. P. (Eds.), (2004). Health and safety needs of older workers. Washington, DC: National Research Council.

Williams, R. M., Jr. (1947). The reduction of intergroup tensions: A survey of research on problems of ethnic, racial, and religious group relations. New York, NY: Social Science Research Council Bulletin.

Wisendale, S. K. (1999). Grappling with the generational equity debate: An ongoing challenge for the public administrator. *Public Integrity*, *1,* 1-19.

APPENDIX

Appendix A
Unemployment Items

1. Do you currently hold any full-time, part-time, temporary, or seasonal employment?

    Yes/No

2. Are you currently available for work?

    Yes/No

3. Have you, at any point over the last four weeks, actively looked for a job?

    Yes/No

Appendix B
Experience with Unemployment Items

1. Have you ever been unemployed during the past seven years?

    Yes/No

2. Has any person in your social network (relatives, friends, coworkers, acquaintances, etc.)

    been unemployed during the past seven years?

    Yes/No

3. During the past seven years, what was the duration of your longest unemployment, in

    months?

    Response must be a number, max of 600 (50 years)

4. During the past seven years, how many people in your social network (relatives, friends,

    coworkers, acquaintances, etc.) have been unemployed?

    Response must be a number, max of 100

5. During the past seven years, how many of your *friends* have been unemployed?

    Response must be a number, max of 100

6. During the past seven years, how many of your *relatives* have been unemployed?

    Response must be a number, max of 100

1. My job requires less education than I have.

2. The work experience that I have is not necessary to be successful on this job.

3. I have job skills that are not required for this job.

4. Someone with less education than myself could perform well on my job.

5. My previous training is not being fully utilized on this job.

6. I have a lot of knowledge that I do not need in order to do my job.

7. My education level is above the education level required by my job.

8. Someone with less work experience than myself could do my job just as well.

9. I have more abilities than I need in order to do my job.

Appendix D
Job Insecurity Items

1. I am afraid I will get fired.

2. I worry about keeping my job.

3. I fear I will lose my job.

4. I think I might get fired in the near future.

5. I am sure I can keep my job. (R)

Appendix E
Work Centrality Items

1. The most important things that happen in life involve work.

2. Work is something people should get involved in most of the time.

3. Work should only be a small part of one's life. (R)

4. Work should be considered central to life.

5. In my view, an individual's personal life goals should be work-oriented.

6. Life is worth living only when people get absorbed in work.

Appendix F

Perceived Threat Felt from Older Persons Items

1. Older people hold too many positions of power and responsibility in this country.

2. Older people dominate American society more than they should.

3. When older people are in positions of authority, they discriminate against younger people when making hiring decisions.

4. Older people have more economic power than they deserve in this country.

5. Older people make it harder for younger people to get good jobs.

6. Many companies believe older people are more qualified than younger people.

7. Older people have more political power than they deserve in this country.

8. Older people make it harder for younger people to have a good quality of life.

9. The legal system lets older people get away with more than younger people.

Appendix G
Ageism toward Older Person Items

Stereotype Dimension

1. Many older people are not interested in making new friends, preferring instead the circle of

   friends they have had for years.

2. Many older people just live in the past.

3. Many older people are happiest when they are with people their own age.

4. Older people complain more than other people do.

Work Stereotype Dimension

5. Many older people are not motivated when confronting challenges.

6. Older people tend to be less productive at work.

7. It is difficult to train older people to perform new tasks.

8. Older people usually struggle with technology.

9. Older people have a hard time learning new things.

Separation Dimension

10. I sometimes avoid eye contact with older people when I see them.

11. I don't like it when older people try to make conversation with me.

12. Complex and interesting conversation cannot be expected from most older people.

13. Feeling depressed when around older people is probably a common feeling.

14. Older people should find friends their own age.

15. Older people should feel welcome at the social gatherings of young people. (R)

16. Older people don't really need to use our community sports facilities.

17. It is best that older people live where they won't bother anyone.

Affective Attitude Dimension

18. I personally would not want to spend much time with an older person.

19. The company of most older people is quite enjoyable. (R)

20. It is sad to hear about the plight of older people in our society these days. (R)

21. Older people should be encouraged to speak out politically. (R)

22. Most older people are interesting, individualistic people. (R)

Appendix H
Ageism toward Younger Person Items

1. Many younger people tend to have a strong sense of entitlement.

2. Younger people are more concerned with themselves than with others.

3. The younger generations of today have a strong work ethic. (R)

4. Younger people often lack focus.

5. Most young people are discourteous when interacting with others.

Appendix I
Factor Loadings for Work Centrality Scale

Appendix I. Factor Loadings for Work Centrality Scale

Survey Item	Factor 1
Item 1	.71
Item 2	.53
Item 3	.66
Item 4	.79
Item 5	.70
Item 6	.60

Appendix J
Factor Loadings for Job Insecurity Scale

Appendix J. Factor Loadings for
Job Insecurity Scale

Survey Item	Factor 1
Item 1	.85
Item 2	.84
Item 3	.90
Item 4	.77
Item 5	.66

Appendix K
Factor Loadings for Ageism toward Younger Persons Scale

Appendix K. Factor Loadings for Ageism Toward Young Scale

Survey Item	Factor 1
Item 1	.61
Item 2	.76
Item 3	.65
Item 4	.69
Item 5	.61

Appendix L
Factor Loadings for Underemployment Scale

Appendix L. Factor Loadings for Underemployment Scale

Survey Item	Factor 1
Item 1	.75
Item 2	.65
Item 3	.69
Item 4	.68
Item 5	.72
Item 6	.68
Item 7	.60
Item 8	.52
Item 9	.70

Appendix M
Factor Loadings for Revised Underemployment Scale

Appendix M. Factor Loadings for
Revised Underemployment Scale
(Items 7 & 8 Removed)

Survey Item	Factor 1
Item 1	.71
Item 2	.62
Item 3	.71
Item 4	.65
Item 5	.73
Item 6	.72
Item 9	.70

Appendix N

Factor Loadings for Perceived Threat Felt from Older Persons Scale

Appendix N. Factor Loadings for
Perceived Threat from Old Scale

Survey Item	Factor 1
Item 1	.74
Item 2	.85
Item 3	.63
Item 4	.79
Item 5	.71
Item 6	.26
Item 7	.83
Item 8	.74
Item 9	.63

Factor Loadings for Revised Perceived Threat Felt from Older Persons Scale

Appendix O. Factor Loadings for Revised Perceived Threat from Old Scale (Item 6 Removed)	
Survey Item	Factor 1
Item 1	.75
Item 2	.85
Item 3	.62
Item 4	.80
Item 5	.71
Item 7	.83
Item 8	.74
Item 9	.62

Appendix P

Factor Loadings for Second Revision to Perceived Threat Felt from Older Persons Scale

Appendix P. Factor Loadings for
Revised Perceived Threat from
Old Scale (Items 6 & 8 Removed)

Survey Item	Factor 1
Item 1	.76
Item 2	.86
Item 3	.61
Item 4	.80
Item 5	.68
Item 7	.84
Item 9	.61

Appendix Q
Factor Loadings for 3-Factor Ageism Scale

Appendix Q. Factor Loadings for 3-Factor Ageism Scale			
Survey Item	Factor 1	Factor 2	Factor 3
Item 1	.50		
Item 2	.60		
Item 3	.45		
Item 4	.61		
Item 5	.62		
Item 6	.65		
Item 7	.74		
Item 8	.53		
Item 9	.67		
Item 10		.53	
Item 11		.61	
Item 12		.58	
Item 13		.49	
Item 14		.43	
Item 15		.38	
Item 16		.58	
Item 17		.69	
Item 18			.71
Item 19			.61
Item 20			.36
Item 21			.47
Item 22			.56

Appendix R

Factor Loadings for Revised 3-Factor Ageism Scale

Appendix R. Factor Loadings for Revised 3-Factor
Ageism Scale (Items 1, 13, 15, 17, & 20 Removed)

Survey Item	Factor 1	Factor 2	Factor 3
Item 2	.59		
Item 3	.43		
Item 4	.60		
Item 5	.61		
Item 6	.64		
Item 7	.76		
Item 8	.54		
Item 9	.69		
Item 10		.55	
Item 11		.62	
Item 12		.56	
Item 14		.42	
Item 16		.58	
Item 18			.72
Item 19			.63
Item 21			.47
Item 22			.55

Appendix S
Factor Loadings for 4-Factor Ageism Scale

Appendix S. Factor Loadings for 4-Factor Ageism Scale

Survey Item	Factor 1	Factor 2	Factor 3	Factor 4
Item 1	.54			
Item 2	.66			
Item 3	.49			
Item 4	.64			
Item 5		.61		
Item 6		.64		
Item 7		.78		
Item 8		.55		
Item 9		.72		
Item 10			.53	
Item 11			.61	
Item 12			.58	
Item 13			.50	
Item 14			.43	
Item 15			.37	
Item 16			.58	
Item 17			.69	
Item 18				.71
Item 19				.61
Item 20				.36
Item 21				.48
Item 22				.56

Appendix T
Factor Loadings for Revised 4-Factor Ageism Scale

Appendix T. Factor Loadings for Revised 4-Factor Ageism Scale (Items 6 & 13 Removed)

Survey Item	Factor 1	Factor 2	Factor 3	Factor 4
Item 1	.54			
Item 2	.67			
Item 3	.49			
Item 4	.64			
Item 5		.57		
Item 7		.82		
Item 8		.57		
Item 9		.75		
Item 10			.51	
Item 11			.61	
Item 12			.61	
Item 14			.41	
Item 15			.38	
Item 16			.60	
Item 17			.71	
Item 18				.71
Item 19				.61
Item 20				.36
Item 21				.48
Item 22				.57

Appendix U
Discrepancy Matrix for Work Centrality Items

Appendix U. Discrepancy Matrix for Work Centrality Items

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6
Item 1	.00					
Item 2	-.03	.00				
Item 3	.00	.00	.00			
Item 4	-.01	.03	.02	.00		
Item 5	.00	.01	-.01	-.01	.00	
Item 6	.05	-.03	-.03	-.02	.02	.00

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Appendix V
Discrepancy Matrix for Job Insecurity Items

Appendix V. Discrepancy Matrix for Job Insecurity Items

	Item 1	Item 2	Item 3	Item 4	Item 5
Item 1	.00				
Item 2	-.04	.00			
Item 3	-.01	.04	.00		
Item 4	**.10**	-.06	-.04	.00	
Item 5	-.02	.02	-.01	.02	.00

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Appendix W

Discrepancy Matrix for Ageism toward Younger Person Items

Appendix W. Discrepancy Matrix for Ageism Toward Young Items

	Item 1	Item 2	Item 3	Item 4	Item 5
Item 1	.00				
Item 2	.03	.00			
Item 3	-.02	-.03	.00		
Item 4	-.03	.00	.04	.00	
Item 5	.00	.00	.02	-.02	.00

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Appendix X
Discrepancy Matrix for Underemployment Items

Appendix X. Discrepancy Matrix for Underemployment Items

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9
Item 1	.00								
Item 2	.01	.00							
Item 3	-.07	-.06	.00						
Item 4	.05	.03	-.03	.00					
Item 5	.02	.00	.02	-.03	.00				
Item 6	-.07	-.03	**.11**	-.03	.05	.00			
Item 7	**.14**	-.05	.02	-.05	-.03	-.09	.00		
Item 8	.01	**.19**	**-.11**	**.23**	-.06	-.09	**-.10**	.00	
Item 9	-.06	-.02	.09	-.09	-.01	.09	.06	-.05	.00

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Appendix Y
Discrepancy Matrix for Revised Underemployment Items

Appendix Y. Discrepancy Matrix for Revised Underemployment Items (Items 7 & 8 Removed)

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 9
Item 1	.00						
Item 2	.05	.00					
Item 3	-.06	-.06	.00				
Item 4	**.10**	.07	-.03	.00			
Item 5	.04	.01	-.01	-.01	.00		
Item 6	-.07	-.04	.06	-.04	.01	.00	
Item 9	-.03	-.01	.07	-.07	-.03	.05	.00

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Appendix Z

Discrepancy Matrix for Perceived Threat from Older Person Items

Appendix Z. Discrepancy Matrix for Perceived Threat from Older Persons Items

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9
Item 1	.00								
Item 2	.03	.00							
Item 3	-.08	-.04	.00						
Item 4	.02	.01	.03	.00					
Item 5	-.01	-.01	.05	-.04	.00				
Item 6	-.07	-.03	**.11**	-.04	.08	.00			
Item 7	.04	.04	-.03	.00	-.07	-.01	.00		
Item 8	-.05	-.03	.04	-.03	**.14**	.03	-.02	.00	
Item 9	-.04	-.05	**.10**	.03	.02	.06	-.03	.03	.00

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Appendix AA
Discrepancy Matrix for Perceived Threat Felt From Older Person Items

Appendix AA. Discrepancy Matrix for Revised Perceived Threat from Older Persons Items (Item 6 Removed)

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 7	Item 8	Item 9
Item 1	.00							
Item 2	.02	.00						
Item 3	-.08	-.04	.00					
Item 4	.02	.00	.03	.00				
Item 5	-.01	-.01	.05	-.03	.00			
Item 7	.04	.04	-.02	.00	-.07	.00		
Item 8	-.05	-.03	.04	-.03	**.14**	-.02	.00	
Item 9	-.04	-.04	**.11**	.03	.02	-.02	.03	.00

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Appendix AB
Discrepancy Matrix for Revised Perceived Threat Felt From Older Person Items

Appendix AB. Discrepancy Matrix for Revised Perceived Threat from Older Persons Items (Items 6 & 8 Removed)

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 7	Item 9
Item 1	.00						
Item 2	.01	.00					
Item 3	-.07	-.04	.00				
Item 4	.01	-.01	.03	.00			
Item 5	.01	.01	.08	-.01	.00		
Item 7	.02	.03	-.02	-.01	-.05	.00	
Item 9	-.03	-.04	**.12**	.03	.05	-.02	.00

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Appendix AC. Discrepancy Matrix for 3-Factor Ageism Items

	1	2	3	4	5	6	7	8	9
Item 1	.00								
Item 2	.03	.00							
Item 3	**.15**	**.11**	.00						
Item 4	.01	.09	-.08	.00					
Item 5	.02	.04	-.01	.01	.00				
Item 6	-.01	-.05	-.04	.02	.05	.00			
Item 7	-.04	-.04	-.04	-.03	-.01	-.02	.00		
Item 8	.01	-.02	.05	-.05	-.01	-.07	.05	.00	
Item 9	-.08	-.08	-.03	-.03	-.04	-.05	**.15**	**.12**	.00
Item 10	**.11**	.03	.04	-.02	.00	.00	-.05	.03	-.02
Item 11	.00	.02	-.05	.03	-.05	.06	-.05	-.05	-.07
Item 12	-.06	-.05	.00	.05	-.01	.04	-.06	**-.11**	-.06
Item 13	**.13**	**.14**	.01	**.14**	.06	**.09**	.00	.01	.02
Item 14	**.12**	.07	**.11**	.03	.05	**.10**	.04	.07	.03
Item 15	-.05	-.06	-.08	.04	-.07	.05	-.02	-.09	-.04
Item 16	-.06	.01	.00	.02	-.02	.08	-.07	**-.10**	-.07
Item 17	.01	.05	.02	.04	-.01	**.13**	-.06	**-.10**	-.06
Item 18	.00	.03	.05	.07	-.02	.08	-.03	-.02	.02
Item 19	.04	-.06	-.06	-.04	-.05	.06	.02	-.05	-.02
Item 20	-.03	-.05	-.08	.02	-.02	**.11**	-.04	**-.10**	-.06
Item 21	-.02	-.01	-.05	.02	.06	**.11**	.01	.00	-.01
Item 22	-.01	-.06	-.03	-.02	-.05	.05	-.04	-.06	.01

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Discrepancy Matrix for 3-Factor Solution to Ageism toward Older Person Items (continued)

Appendix AC. Discrepancy Matrix for 3-Factor Ageism Items (continued)

	10	11	12	13	14	15	16	17	18	19	20	21	22
Item 10	.00												
Item 11	.08	.00											
Item 12	-.03	-.01	.00										
Item 13	**.12**	.01	**-.10**	.00									
Item 14	.01	-.03	**-.09**	.06	.00								
Item 15	.04	-.01	-.04	-.04	.01	.00							
Item 16	-.06	.03	.07	**-.10**	-.01	-.03	.00						
Item 17	**-.11**	.00	**.12**	-.03	-.01	-.04	.07	.00					
Item 18	**.10**	.03	.02	.07	.05	.09	.02	.00	.00				
Item 19	.05	-.09	-.06	-.01	-.03	**.15**	-.09	**-.11**	.04	.00			
Item 20	-.03	.02	.02	-.07	-.09	**.10**	.04	.07	-.03	-.06	.00		
Item 21	.02	-.05	.01	-.07	-.01	**.13**	.00	-.04	-.07	.00	.04	.00	
Item 22	-.08	-.01	.00	-.02	-.06	.03	.02	-.02	**-.10**	**.09**	.08	**.11**	.00

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Discrepancy Matrix for Revised 3-Factor Solution to Ageism toward Older Person Items

Appendix AD. Discrepancy Matrix for Revised 3-Factor Ageism Items (Items 1, 13, 15, 17, & 20 Removed)

	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 14	Item 16	Item 18	Item 19	Item 21	Item 22
Item 2	.00																
Item 3	**.13**	.00															
Item 4	**.10**	-.07	.00														
Item 5	.05	.00	.02	.00													
Item 6	-.04	-.02	.03	.06	.00												
Item 7	-.04	-.03	-.04	-.02	-.03	.00											
Item 8	-.02	.05	-.05	-.02	-.07	.03	.00										
Item 9	-.08	-.03	-.04	-.05	-.06	**.12**	**.10**	.00									
Item 10	.04	.05	-.01	.00	.01	-.06	.03	-.03	.00								
Item 11	.04	-.04	.04	-.04	.07	-.05	-.04	-.07	.06	.00							
Item 12	-.02	.02	.08	.01	.07	-.04	-.09	-.04	-.04	-.01	.00						
Item 14	.08	**.13**	.05	.07	**.11**	.04	.08	.04	.01	-.03	-.08	.00					
Item 16	.03	.02	.04	.00	**.10**	-.07	-.09	-.07	-.07	.03	.08	-.01	.00				
Item 18	.04	.06	.07	-.01	.09	-.04	-.02	.00	.09	.03	.04	.06	.02	.00			
Item 19	-.06	-.06	-.04	-.05	.06	.01	-.06	-.04	.04	-.09	-.05	-.03	-.09	.02	.00		
Item 21	.00	-.04	.02	.07	**.12**	.01	-.01	-.01	.02	-.05	.02	.00	.01	-.07	-.01	.00	
Item 22	-.05	-.02	-.01	-.04	.06	-.04	-.06	.00	-.08	.00	.02	-.04	.03	-.09	.09	**.11**	.00

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Appendix AE
Discrepancy Matrix for 4-Factor Solution to Ageism toward Older Person Items

Appendix AE. Discrepancy Matrix for 4-Factor Ageism Items

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9
Item 1	.00								
Item 2	-.03	.00							
Item 3	**.12**	.06	.00						
Item 4	-.03	.03	**-.12**	.00					
Item 5	.07	.08	.02	.06	.00				
Item 6	.03	-.01	.00	.08	.07	.00			
Item 7	-.02	-.03	-.02	.00	-.03	-.04	.00		
Item 8	.03	.00	.07	-.02	-.02	-.07	.01	.00	
Item 9	-.06	-.07	-.02	-.01	-.06	-.07	.08	.07	.00
Item 10	.09	.00	.02	-.04	.02	.03	-.04	.04	-.01
Item 11	-.02	-.01	-.08	.01	-.02	.09	-.03	-.03	-.06
Item 12	-.08	-.08	-.02	.03	.02	.08	-.04	-.09	-.05
Item 13	**.11**	**.10**	-.02	**.11**	.09	**.12**	.00	.02	.02
Item 14	**.10**	.04	.10	.02	.07	**.12**	.04	.08	.04
Item 15	-.06	-.08	-.10	.03	-.05	.08	-.01	-.08	-.04
Item 16	-.08	-.03	-.02	.00	.01	**.12**	-.06	-.08	-.06
Item 17	-.02	.01	-.01	.02	.03	**.18**	-.04	-.09	-.05
Item 18	.01	.04	.06	.08	.00	**.10**	-.03	-.02	.01
Item 19	.05	-.06	-.06	-.03	-.04	.08	.01	-.05	-.03
Item 20	-.03	-.05	-.08	.03	-.02	**.12**	-.04	**-.10**	-.07
Item 21	-.02	-.01	-.05	.03	.07	**.13**	.00	.00	-.01
Item 22	-.01	-.06	-.02	-.01	-.04	.07	-.05	-.06	.00

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Appendix AE
Discrepancy Matrix for 4-Factor Solution to Ageism toward Older Person Items (continued)

Appendix AE. Discrepancy Matrix for 4-Factor Ageism Items (continued)

	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Item 16	Item 17	Item 18	Item 19	Item 20	Item 21	Item 22
Item 10	.00												
Item 11	.07	.00											
Item 12	-.03	-.01	.00										
Item 13	**.11**	.00	-.10	.00									
Item 14	.01	-.03	-.09	.06	.00								
Item 15	.04	-.01	-.04	-.04	.01	.00							
Item 16	-.06	.03	.08	**-.10**	-.01	-.03	.00						
Item 17	**-.11**	.00	**.12**	-.03	-.01	-.04	.07	.00					
Item 18	.10	.03	.03	.07	.05	.09	.02	.01	.00				
Item 19	.05	-.09	-.06	-.01	-.03	**.15**	-.09	**-.11**	.04	.00			
Item 20	-.03	.02	.02	-.07	-.09	**.10**	.04	.07	-.03	-.07	.00		
Item 21	.02	-.05	.01	-.07	-.01	**.13**	.00	-.04	-.07	-.01	.04	.00	
Item 22	-.08	-.01	.00	-.02	-.06	.03	.02	-.02	-.09	.09	.08	**.10**	.00

Note: $N = 395$; problematic residual correlations (absolute values greater than .10) are bolded.

Discrepancy Matrix for Revised 4-Factor Solution to Ageism toward Older Person Items

Appendix AF. Discrepancy Matrix for Revised 4-Factor Ageism Items (Items 6 & 13 Removed)

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 7	Item 8	Item 9	Item 10
Item 1	.00								
Item 2	-.03	.00							
Item 3	**.12**	.05	.00						
Item 4	-.03	.03	**-.12**	.00					
Item 5	.10	**.11**	.05	.10	.00				
Item 7	-.01	-.02	-.02	.01	-.02	.00			
Item 8	.04	.00	.07	-.01	-.01	-.03	.00		
Item 9	-.06	-.07	-.02	.00	-.06	.03	.04	.00	
Item 10	**.11**	.02	.04	-.01	.08	.00	.07	.02	.00
Item 11	-.01	.00	-.07	.03	.03	.00	.00	-.03	.09
Item 12	-.07	-.08	-.02	.04	.06	-.02	-.07	-.03	-.03
Item 14	**.12**	.06	**.11**	.04	**.11**	.08	**.10**	.07	.03
Item 15	-.05	-.07	-.09	.04	-.02	.01	-.06	-.02	.04
Item 16	-.07	-.03	-.02	.01	.05	-.03	-.07	-.04	-.06
Item 17	.00	.02	.00	.03	.08	-.01	-.06	-.02	**-.10**
Item 18	.01	.04	.06	.09	.05	-.01	.00	.03	**.12**
Item 19	.05	-.06	-.06	-.03	.00	.03	-.03	-.02	.06
Item 20	-.03	-.06	-.08	.03	.00	-.03	-.10	-.06	-.02
Item 21	-.02	-.01	-.05	.03	**.10**	.02	.01	.00	.03
Item 22	-.01	-.06	-.03	-.01	-.01	-.04	-.05	.01	-.07

Note: N = 395; problematic residual correlations (absolute values greater than .10) are bolded.

Appendix AF
Discrepancy Matrix for Revised 4-Factor Solution to Ageism toward Older Person Items (continued)

Appendix AF. Discrepancy Matrix for Revised 4-Factor Ageism Items (Items 6 & 13 Removed; continued)

	Item 11	Item 12	Item 14	Item 15	Item 16	Item 17	Item 18	Item 19	Item 20	Item 21	Item 22
Item 11	.00										
Item 12	-.03	.00									
Item 14	-.02	-.09	.00								
Item 15	-.01	-.05	.01	.00							
Item 16	.02	.05	-.01	-.04	.00						
Item 17	-.01	.09	-.01	-.04	.04	.00					
Item 18	.04	.02	.06	.09	.01	.01	.00				
Item 19	-.08	-.07	-.02	**.15**	-.10	**-.11**	.04	.00			
Item 20	.02	.02	-.08	**.10**	.03	.06	-.03	-.07	.00		
Item 21	-.05	.00	.00	**.13**	-.01	-.04	-.07	-.01	.04	.00	
Item 22	-.01	-.01	-.05	.03	.01	-.02	-.10	.09	.08	.10	.00

Note: N = 395; problematic residual correlations (absolute values greater than .10) are bolded.