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The Role of Target Age in Personality Judgment Accuracy

by

Sheherezade L. Krzyzaniak

A dissertation submitted in partial fulfillment of the requirements

for the degree of Doctor of Philosophy

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Committee Approval

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RE: regarding study number IRB-FY2019-181 : Making Perceptions of Others

Dear Ms. Krzyzaniak:

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Notify the HSC of any adverse events. Serious, unexpected adverse events must be reported in writing within 10 business days.

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Sincerely,

Ralph Baergen, PhD, MPH, CIP
Human Subjects Chair

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The Role of Target Age in Personality Judgment Accuracy

Dissertation Abstract—Idaho State University (2020)

Accuracy of person perception is an important social skill that influences our day-to-day interactions and interpersonal relationships. While demographic characteristics such as target age have been found to influence judges' perceptions (Chan et al., 2012; Correll et al., 2007), this research has not been extended to the accuracy of those judgments. The current study investigated the distinctive accuracy (accuracy of judging how someone is unique) and normativity (accuracy of judging how someone is similar to the average person) of personality trait and well-being judgments made by young adults about three age groups. It was hypothesized that distinctive accuracy and normativity would decrease as discrepancy in age between judges and targets increased; and that judge characteristics including psychological well-being, life satisfaction, affect balance, attributional complexity, openness to experience, explicit ageism, anxiety about aging, knowledge of aging, and exposure to older adults, middle adults, grandparents, and parents would moderate these differences. Judges included 251 young adults who observed either young adult, middle adult, or older adult targets via video observations. Judges rated each target on personality, trait affect, and life satisfaction, and filled out a series of self-report measures. Regardless of age group being judged, young adults perceived personality and trait affect with statistically significant levels of distinctive accuracy and normativity (measured in units of beta), and life satisfaction with significant levels of normativity. For judgments of personality traits, middle adults were judged with higher levels of normativity compared to young adults and older adults. Several judge characteristics, including life satisfaction, affect balance, and exposure to grandparents, middle adults, and parents, moderated levels of distinctive accuracy and normativity of judgements of personality and life

satisfaction of different age groups. Most of these moderations increased differences in accuracy across conditions, with older adults being judged less accurately compared to other age groups. While young adults are capable of accurately judging different age groups across different domains, certain judge characteristics may be less beneficial, and sometimes even hinder judgments of older adults compared to other age groups.

Keywords: personality, well-being, age, accuracy of person perception, judgmental accuracy

Chapter 1: Introduction

We make judgments about what people are like every single day. The ability to accurately decipher what someone is like is a vital skill that is put to the test within every social interaction. These interactions can occur in many ways with complete strangers, close friends, and family members; as well as in-person, over the phone, and over social media. Whatever form a social interaction takes, there is the opportunity to gather information about people and to learn something about them, and in so doing, judgments are formed. Making accurate judgments of personality is an important skill both for the individual judging and the individual being perceived, because these perceptions inform social decisions. If we choose our friends, employees, and spouses wisely based on highly accurate personality judgments, this can have positive implications in how we experience those relationships. Naturally, we want to make informed decisions about who to share sensitive information with, lend money to, or start a family with, and misjudgments can be costly. While the average person is capable of being at least somewhat accurate in these judgments, there are some individuating characteristics and circumstances that are related to some individuals being more accurate compared to others (Beer & Watson, 2008; Christiansen et al., 2005; Letzring, 2015).

Within personality judgment accuracy research, a variety of factors have been investigated in an attempt to understand the circumstances in which accurate judgments are more likely to occur. Individual differences such as well-being, attributional complexity, and certain personality traits have been found to be related to the accuracy with which a judge perceives others, and how accurately they are perceived as a target (Human & Biesanz, 2013; Lippa & Dietz, 2000; Letzring, 2008; 2015). Contextual information also matters, such as the length of acquaintanceship between people and the type of situation in which the interaction occurs

(Biesanz et al., 2007; Funder & Dobroth, 1987). There is also research that suggests that the use of stereotyped information in judgments of others is sometimes related to more accurate judgments (Biesanz et al., 2007; Chan & Mendelsohn, 2010; Jussim et al., 2009), and that demographic group-membership labels account for a significant portion of variance in ratings of others (Correll et al., 2007). For the most part, research investigating the role of group-membership has investigated how labels influence perceptions, but not necessarily the accuracy of these perceptions.

A group-membership label that seems to be especially important within stereotype and perception research is *age* (Chan et al., 2012). Ageism is thought to be one of the most persistent forms of prejudice in American society, even over sexism and racism, with young adults holding some of the most negative attitudes and beliefs about older adults such as older adults being more forgetful, dependent on others, and less attractive (Harwood et al., 1996; Kimuna et al., 2005). Young adults tend to have relatively fewer interactions with older adults compared to their own peer group, which can be problematic because first-impressions of older adults tend to rely more on stereotypes (assumptions about a group) rather than individuating information or normative information (what the average person in a group is actually like) that is gained from personal experience (Hoogland & Hoogland, 2018). Older adults make up the fastest growing age group in the United States and currently represent about 15% of the population, indicating that studying this age group is becoming increasingly important within our society (Howden & Meyer, 2010). Understanding the role of age in person perception is crucial to inform how perceptions of age influence the judgements we make about individuals of different age groups.

Personality judgment accuracy research has not yet investigated the role of age in understanding accuracy. Since young adults tend to hold more negative attitudes toward older

adults compared with other age groups and have fewer interactions with older adults compared to their own peer group (Hoogland & Hoogland, 2018; Kimuna et al., 2005), it is possible that biological age, attitudes about age, and other individuating characteristics of the judge play important roles in personality judgment accuracy and the accuracy of judging other characteristics, such as well-being. It is possible that young adults are more adept at judging their own age group compared to older age groups, and if this is the case, it is vital to understand the individual differences between young adults that make differences in accuracy across judgments of age groups more predominant, because there may be certain characteristics of judges that predispose them to more bias in judgements (and thus less accuracy) across perceptions of different age groups. The purpose of this study is to identify whether young adults judge their own age group more accurately compared to older age groups, and whether individual differences between young adults such as psychological well-being, attributional complexity, ageism, and exposure to various age groups play a role in the accuracy of personality trait and well-being judgments across age groups.

Chapter 2: Literature Review

Personality and the Big Five

To understand the field of personality judgment accuracy, one must first be acquainted with the concept of *personality*. A definition of personality comes from Funder (2004), who conceptualized personality as "an individual's characteristic patterns of thought, emotion, and behavior, together with the psychological mechanisms…behind those patterns" (p. 5). In other words, personality is not just the behaviors a person commonly engages in across situations, but also the way they tend to think and feel in different situations. Personality describes an important part of a person's identity and is a characteristic that varies across individuals (Ozer & Benet-

Martinez, 2006). This characteristic describes not only how the person views themselves, but also how their nature is perceived by others. While personality is considered to stay relatively stable across time and across situations, it is not a static characteristic and can adapt and vary over the course of a lifespan (Chan et al., 2012).

The most commonly utilized framework of conceptualizing personality into set dimensions or *personality traits* is the *Five Factor Model* (John et al., 2008). The Five Factor Model is the dominant paradigm within personality research and includes the Big Five personality traits of extraversion, agreeableness, conscientiousness, emotional stability, and openness mindedness (Costa & McCrae, 1992; John & Naumann, 2010). The Big Five also includes additional elements called *facets* that describe subcomponents of each personality trait (Goldberg, 1999; Soto & John, 2017). For example, the personality trait of *extraversion* can be further broken down into the facets of sociability, assertiveness, and energy level; and neuroticism can be broken down into the facets of anxiety, depression, and emotional volatility.[1]

The Big Five personality traits are important predictors of various life outcomes, including mental and physical health, psychological well-being, social relationships, and personality judgment accuracy (Costa & McCrae, 1980; Letzring, 2008; 2015; Ozer & Benet-Martinez, 2006). The trait of extraversion is related to higher positive affect and psychological well-being, while the trait of neuroticism is related to higher negative affect and lower psychological well-being (Costa & McCrae, 1980). Agreeableness, conscientiousness, and extraversion are all related to better physical health and longevity over the lifespan, while neuroticism is related to an increased risk of disease and illness-related behaviors (Ozer & Benet-

[1] Different measures of personality include different numbers of facets. The measure of personality used within the current study included three facets per trait.

Martinez, 2006). Agreeableness and extraversion have also been found to predict important social outcomes, such as personality judgment accuracy (Letzring, 2008; 2015) and higher quality relationships with family and friends (Ozer & Benet-Martinez, 2006).

Facets of personality have also been found to predict important outcomes and provide more nuanced information about the relationship between a trait and outcome, as more specific aspects of traits are being examined (Soto & John, 2017). This project will examine personality at the *trait level* (as opposed to the facet level) as defined by the Big Five personality traits, as the Five Factor Model is the most commonly used model within personality judgment accuracy research and is considered the standard within the field (John et al., 2008; John & Naumann, 2010). While facet information will be collected (as facets are a subset of traits), personality will only be examined at the trait level through the Big Five, and not broken down further into facets. This is because this the first study to examine accuracy of personality judgment in relation to target age, and thus it seems prudent that the trait level must first be examined before informed hypotheses can be developed about more nuanced aspects such as facets.[2] Facets are often examined as a way to understand the mechanisms behind the relationships between traits and outcomes (Ozer & Benet-Martinez, 2006), therefore investigation of facets could be a worthy area of future research if traits are identified as being important across judgments of different age groups.

History of Personality Judgment Accuracy

Personality judgment accuracy is an area of research with literature spanning over the past century (Estes, 1938; Vernon, 1933), and with most early research occurring in the decades

[2] As facets contain fewer items compared to traits, it is also statistically more reliable to run analyses with traits as opposed to facets.

spanning from the 1920s to the 1950s. Early research defined *accuracy* as the relationship between a judge's perceptions and the self-reported personality of the individual being judged, which is today termed *self-other agreement* (Taft, 1955). This is the most common method through which accuracy was conceptualized and studied during its early history and is still commonly used today.

There are several potential issues with defining accuracy through the exclusive use of self-reports. While self-report measures of personality are often used due to their practicality of administration and the sheer amount of personal knowledge held by the self, self-report measures also suffer from self-presentation or impression management biases and certain limitations of self-knowledge (Paulhus & Vazire, 2007). While the self possesses a plethora of information about their own characteristics, behavior across time and situations, and thoughts and feelings that are not always externalized, an outside observer may actually be better at assessing more externalized characteristics of the individual such as facial expressions or consistency of behavior across time that may not be as readily apparent to the self (Spain et al., 2000; Vazire, 2010). In addition, most people think of themselves and want to represent themselves to others in a favorable way, which suggests that accuracy is most likely not the primary motivation of a respondent giving a self-report (Hofstee, 1994; Paulhus & Vazire, 2007). Naturally, these limitations become an issue when the purpose of that self-report is to serve as a criterion for accuracy.

It is not surprising that this definition of accuracy received criticism, and one such critique came from Cronbach (1955) who argued that basing accuracy on a self-report measure did not truly capture what an individual's personality was like. Another possible method of assessing accuracy is through the use of acquaintance-reports (also called other-reports) from

individuals who know the target well. While these other-reports can be utilized on their own as an accuracy criterion to evaluate against a judge's perceptions, other-reports can also be evaluated against *each other* to investigate *consensus* of what a target is like, or the level of agreement between two or more judges. While other-report measures of personality are certainly not free of bias, as oftentimes acquaintances will have a positive perception of a target, they do provide a different perspective of an individual compared to a self-report measure (Colvin & Bundick, 2001).

Funder (1995, 1999, 2012) encouraged researchers to utilize a more comprehensive accuracy criterion in which these different types of perspectives of what a target is like are combined together to form a more comprehensive criteria. For example, the accuracy criterion can be formed through a self-report of an individual's personality combined with multiple ratings from acquaintances as a way to utilize different points of view. He also suggested that behavioral coding be included in a more fully comprehensive accuracy criterion, in which researchers code the observed behaviors of a target based on well-established relationships between various types of behaviors and personality traits.[3] Combining multiple perspectives of an individual's personality - both from the self and from others - is considered a more valid and realistic criterion of what a person is like and compensates for some of the biases present in solely relying on a self-report measure or any single assessment in general. While Funder's recommendation for evaluating accuracy as the relationship between a judge's perceptions of a target and that target's multifaceted criterion is sometimes followed in modern-day research, investigations of *self-other agreement* (how well a target's self-report agrees with a judge's evaluation) and

[3] While behavioral coding is one possible method involved in creating a realistic accuracy criterion, this was not used within the current study. Only self-reports from targets and other-reports from acquaintances were used.

consensus (how well several judge evaluations agree with each other) are still very popular within accuracy research and represent various proxies for conceptualizing accuracy.

Cronbach (1955) also argued that accuracy should be conceptualized as different components, as there are different ways to be accurate. Because of this critique, modern-day accuracy research sometimes investigates accuracy through the components of *distinctive accuracy* and *normativity*. Distinctive accuracy refers to accurately judging the unique aspects of an individual that make them different from others; and normativity describes how similar a judge's ratings are to what the average person is like (these components are further described in the Social Accuracy Model section; see also Biesanz, 2010). While these criticisms from Cronbach were certainly justified and pointed out important concerns within the field, rather than find ways to address these troubling concerns, most early personality judgment accuracy researchers stopped studying accuracy altogether (Funder, 1987).

During this time, personality was viewed as a largely unimportant construct that was deemed unreliable at predicting behavior, assuming it even existed outside the minds of observers (Mischel, 1968). Because of this, research over the next few decades focused on biases and errors within person perception, and how judgments tend to be *inaccurate* as opposed to accurate (Nisbett & Ross, 1980; Ross, Amabile, & Steinmetz, 1977). Researchers moved away from a focus on personality to the role of the *situation* in understanding behavior and impression formation. Research on a concept known as the *fundamental attribution error* (which describes a bias toward dispositional over situational judgments when explaining behavior) became very popular.

It was not until the 1980s that personality judgment accuracy research finally made a resurgence. Person perception researchers began to argue against the idea that most judgments

are biased and inaccurate, and instead argued that personality and accuracy were concepts that are worthy of study (Swann, 1984). Funder (1987) argued and demonstrated that people are capable of accurately predicting the behavior of others by observing what they are like, and that personality is just as predictive of behavior compared to the situation (Funder & Ozer, 1983). For example, a study by Fast and Funder (2008) found that personality judgments made by acquaintances were predictive of target behaviors in laboratory situations. In addition, research has also found connections between personality traits and a host of health, psychological, and social outcomes, indicating the implications of studying personality traits (Ozer & Benet-Martinez, 2006). It was also during this time that personality judgment accuracy researchers began to improve the ways in which accuracy was conceptualized and assessed (Funder, 1995). This finally addressed Cronbach's (1955) critique against self-reports as the sole criteria for accuracy and the importance of investigating multiple components of accuracy which were critiques that had silenced the field for so many decades.

The Realistic Accuracy Model

The Realistic Accuracy Model (RAM) is a framework that outlines the process of making accurate judgments (Funder, 1995; Letzring & Funder, 2019). This model builds on Brunswik's Lens Model, which describes how an accurate judgment about an *object* is formed (Brunswik, 1956).[4] According to Brunswik's Lens Model, objects provide *cues* that give information about themselves (this can be visual, auditory, etc.) and judgments about that object can be made based on these cues. While some cues are relevant to the object, others may be misleading or irrelevant. It is vital that cues are correctly identified and utilized in order to make an accurate judgment

[4] As Brunswik's Lens Model is not specific to person perception, targets are referred to as *objects* in this context.

about that object. RAM describes accuracy in a similar way, but through the lens of social interactions (Funder, 1999; 2012).

The main components of RAM describe how accurate judgments are formed in four stages, which are the *relevance, availability, detection,* and *utilization* stages (Funder, 1995; 1999; 2012). The first two stages are in relation to the *target*, or the individual being perceived; while the last two stages are in relation to the *judge*, or the individual making perceptions. To further elaborate, the target provides information, or cues, which the judge perceives, and an individual can be both a judge and a target simultaneously (which is the case in most social situations; Funder, 2012).

The first stage of RAM is *relevance* (Funder, 1995; 1999; 2012). Targets must provide relevant cues about a personality trait in order for that trait to be judged accurately. For example, if a target is highly conscientious, there must be cues (either internal or external) that are in alignment with high levels of organization, reliability, and caution to be represented in ways that are relevant to that trait. The second stage is *availability*. A target must externally demonstrate their highly conscientious nature across a variety of circumstances in a way that is noticeable by others. For example, thinking about an organization plan but not yet acting on it is a *relevant* cue for the trait of conscientiousness, but not an *available* cue because it has not been externalized. These two stages describe the importance of the target displaying cues that are *relevant* to their nature (and not misleading), as well as *available* to others (and not only internalized) before an accurate judgment can be made.

The third stage of RAM is *detection* (Funder, 1995; 1999; 2012). A target may be adept at displaying relevant and available cues, but it is vital that the judge *detects* these cues. This means that the judge must be paying attention to the target's behavior and notice that the target is

providing trait-relevant information. Only cues that are successfully *detected* can contribute to accuracy. The final stage of *utilization* is the last step necessary for an accurate judgment to occur. A judge must understand how the actions of the target relate to different personality traits to make a more accurate judgment of what the target is generally like. It is also important that the judge is able to recognize *irrelevant* cues that could mislead a judgment. If cues are not correctly utilized, accuracy is not possible. The four-stage process described in RAM argues that all four-steps occurring in the proper order are necessary requirements for accuracy to occur. If even one step is missed or completed incorrectly, accuracy is not possible.

RAM also describes four moderators that influence the accuracy process, which include the *good judge, good target, good information,* and *good trait.* While each of these moderators has been investigated through previous research, they have not been investigated in relation to the age of either the target or judge. The *good judge* and the *good target* moderators describe factors that influence why some judges and targets are more accurate perceivers and more accurately perceived compared to others. The *good judge* is adept at encouraging and detecting cues from targets and understands how those cues are related to the target's personality. The good judge is likely to be more likable, social, and psychologically healthy (Human & Biesanz, 2011; Letzring, 2008; 2015), form more complex schemas of what others are like compared to less accurate judges, and understand the connection between behavior and traits (Christiansen et al., 2005; Krzyzaniak, 2018). The *good target* is adept at making relevant cues available to be judged and is typically judged with higher levels of accuracy. Good targets tend to be more consistent in behavior across situations compared to other targets and provide more relevant and available cues about their thoughts and feelings (Colvin, 1993; Funder, 2012; Human & Biesanz, 2013). In terms of personality, older adults self-report lower levels of anxiety, depression,

hostility, and neuroticism compared to other age groups (although older adults may be at a greater risk of developing clinical levels of depression and anxiety; Fiske et al., 2009; McCrae et al., 2005). These are aspects of personality associated with higher levels of psychological well-being and being judged more accurately and normatively (Human & Biesanz, 2011). Thus, it is possible that older adults may actually be better targets compared to younger adults based on expected differences in personality and well-being across age groups.

The *good trait* is any personality trait or characteristic that is easier to judge accurately (Funder, 2012; Krzyzaniak & Letzring, 2019). This includes personality traits that are more *observable*, or traits that tend to be more behaviorally or verbally expressed by a target and for which there are more cues made available within the environment. More observable traits tend to be more readily externalized in social situations and across situations and relationships. The most common example of the good trait is extraversion, which can be accurately judged just based on physical appearance (Naumann et al., 2009).

Good information includes the aspects of *quantity* and *quality* of information. Accuracy is more likely when high quality information about a target is made available, in that some information is more relevant to and revealing of personality than other information. Targets who are more expressive tend to be more open and revealing about their personality traits and provide higher quality information to judges. Accuracy is also more likely as *quantity* of information increases, in that judges in a long-term relationship and with more exposure to a target are generally more accurate compared to strangers across most traits (Biesanz et al., 2007; Letzring et al., 2006).

This project will define the process of personality judgment accuracy as outlined by RAM and will assess accuracy using an accuracy criterion that is made up of a combination of a

self-report measure of personality as well as at least one other-report measures of personality from acquaintances of the targets. Discussion will include aspects associated with the good judge and the good target, as both moderators of accuracy and their interaction are of interest within this project. However, primary focus will be placed on the good judge and the *detection* and *utilization* stages of the four-step process, as the focus of the research question is to understand how individual differences of judges are related to accuracy across judgments of targets from different age groups.

Estimating Accuracy with the Social Accuracy Model

The Social Accuracy Model of interpersonal perception (SAM; Biesanz, 2010) is a multilevel model used by accuracy researchers to estimate levels of accuracy. This project will utilize SAM to estimate judges' accuracy across targets. While most previous research has used correlational approaches to estimate accuracy, SAM is a much more powerful approach that can deal with the statistical weaknesses and instability associated with correlations. The model estimates two different components of accuracy, which are descriptive of both the judge and the target. In SAM, accuracy is estimated through the relationship between the judge's perceptions of a target and that target's accuracy criterion, which is made up of multiple assessments of that target. The accuracy criterion is viewed as a fixed point for each target, while level of accuracy varies depending on the judge's perceptions. For this project, a realistic accuracy criterion will be used for each target and will be made up of a combination of a self-report measure of personality from the target and at least one other-report assessments of personality from acquaintances of at least 6-months (Funder, 1995; Letzring et al., 2006; Letzring & Human, 2013).

Accuracy can be thought of separately in terms of the judge and the target, which are concepts referred to as *perceptive accuracy* and *expressive accuracy* (Biesanz, 2010). *Perceptive*

accuracy describes the accuracy of the judge and describes how accurately a judge perceives targets in comparison to other judges. *Expressive accuracy* describes how accurately a target is perceived compared to other targets. Given that the current research is focused on the role of the judge, this project will focus on *perceptive accuracy*.

Accuracy can also be broken into components that describe different ways to be accurate, which include *distinctive accuracy* and *normativity*. As this project is focused on perceptive accuracy, these components will be explained in terms of the judge. *Distinctive accuracy* refers to judgements that differentiate among targets and identify how a target is unique compared to the average person and other targets (Biesanz, 2010). In other words, perceiving the unique characteristics of others and what makes them different compared to others is associated with higher distinctive accuracy scores for judges. Statistically, this can be thought of as the relationship between a judge's ratings of a target and that target's accuracy criterion (see The Social Accuracy Model section for a more detailed description of analyses for distinctive accuracy and normativity). Normativity is different from traditional perspectives of accuracy and refers to judgments that identify how a target is similar to the average person. For example, perceiving someone as being more similar to what the average person is like is associated with higher judge normativity scores. Statistically, this is the relationship between a judge's ratings of a target and the normative profile, or what the average person within a specific group is like. The normative profile is highly associated with a socially desirable profile (r = .86, Biesanz, 2010), and under most circumstances, perceiving others more normatively is related to seeing others more favorably. SAM accounts for distinctive accuracy and normativity in terms of both perceptive and expressive accuracy. This project will investigate both distinctive accuracy and normativity of the judge, as these components highlight different ways to be accurate and

differentiate the type of information judges are using in their perceptions of targets, whether it be information about that particular target (associated with distinctive accuracy) and/or information about what the average person within a group is like (associated with normativity).

Characteristics of the Good Judge: Well-Being, Personality Traits, Attributional Complexity, and Variables Related to Age-Attitudes

In terms of the good judge, several factors are associated with higher levels of accuracy. Good judges of personality tend to be socially adept, psychologically well-adjusted, and understand their own emotions and the emotions of others (Beer & Watson, 2008; Letzring, 2008). The good judge is also more likely to have a personality profile that includes higher levels of agreeableness, openness to experience, and extraversion (Davis & Kraus, 1997; Letzring, 2008, 2015). The good judge tends to craft more complex schemas of others' personalities and is more motivated to understand the relationships between personality traits, emotions, and behavior. It is thought that characteristics of the good judge encourage targets to make more relevant cues available, as well as increase the ability to detect and utilize those cues more readily and efficiently, which are all steps that contribute to more accurate judgments (Colvin, 1993).[5] Individuals who are adept at accurately judging personality traits have also been found to be more accurate in judging affect (Hall et al., 2016; Ickes, 1993; Letzring et al., 2018), with levels of accuracy for judgments of personality traits and affect being very similar (Hall et al., 2008).

[5] While this is an important part of the good judge moderator, face-to-face interactions were not included in the current study.

Well-Being of Judges

An important characteristic of the good judge that is related to higher levels of accuracy is *well-being*. Well-being is a concept that has been conceptualized in many different ways. A traditional definition of *subjective* well-being includes the characteristics of high positive affect, low negative affect, and high life satisfaction, and is also sometimes referred to as the internal appraisal of happiness (Arthaud-Day et al., 2005). This type of well-being is very popular within the literature but is considered somewhat limited in scope in only capturing hedonic happiness (Ryff, 1989; Ryff & Keyes, 1995). Therefore, *psychological* well-being is also often considered, as this type of well-being includes factors that predict the long-term positive functioning of the person, or their eudemonic well-being. This includes the ability to cope with stress (which tends to be defended against by various aspects of well-being), perceived social support, emotional stability, and environmental control (Thoits, 2011; Thory, 2015; Bar-On, 2010). In other words, psychological well-being is the balance between the challenges faced by an individual and having the resources necessary to cope with those challenges (Dodge et al., 2012). Individuals with the necessary psychological, social, emotional, and behavioral resources are better equipped to deal with stress, which in turn promotes better functioning. It is important to consider well-being through multiple perspectives using both subjective and psychological well-being when possible to more fully capture the overall well-being of the individual (Cohen, 2004; Ryff, 1989). Ryff (1989) developed a measure of psychological well-being that conceptualizes this concept in diverse ways and measures multiple dimensions of psychological well-being including internal appraisals, relationship satisfaction, and environmental functioning. For this project, *well-being* is understood through the different lenses of subjective well-being (through affect balance, or the balance between positive and negative affect a person experiences in their day to day life, and

and life satisfaction) and psychological well-being (through the dimensions of Ryff's Psychological Well-Being Scale; Ryff; 1989; Ryff & Keyes, 1995).

Psychological well-being and subjective well-being are related to a variety of positive social outcomes, including personality judgment accuracy and accuracy of judging affect (Beer & Watson, 2008; Davis & Kraus, 1997; Krzyzaniak, 2018; Letzring, 2015; Letzring & Human, 2013). The good judge tends to be psychologically healthy and socially adept and is more likely to perceive others favorably (Beer & Watson, 2008; Letzring, 2015). Individuals higher in psychological well-being tend to judge others with higher levels of *normativity* (Krzyzaniak, 2018; Letzring, 2015). The normative profile has been found to be highly related to a socially desirable personality profile (r = .86; Biesanz, 2010), which indicates that individuals high in psychological well-being may be more likely to judge targets in positive ways and have a better understanding of what the average person is like.

The good judge of personality traits tends to be socially well-adjusted and have strong social relationships, which are important characteristics of well-being (Cohen, 2004; Letzring, 2008; 2015; Thoits, 2011). The good judge is also more emotionally sensitive and is adept at perceiving the emotions and thoughts of others (termed empathic accuracy; Ickes, 1993). These findings suggest that individuals high in psychological well-being may interact in ways that make targets feel more comfortable with revealing relevant information about themselves (Colvin, 1993). A discussion of judge well-being is important in consideration of accuracy, because previous research has suggested that this characteristic is an important predictor of normativity of the judge (Krzyzaniak, 2018; Letzring, 2015). Therefore, this study will examine the judge characteristics of affect balance, satisfaction with life, and psychological well-being as potential moderators of accuracy across judgments of different age groups. Affect balance, or the

emotions a judge feels on average in their day-to-day life, was chosen over examining positive and negative affect separately to allow for examination of judge trait affect as a single moderator.

Personality Traits of Judges

Research in personality judgement accuracy has suggested that the good judge of personality not only possesses strong social skills and other characteristics associated with high psychological well-being and subjective well-being, but also tends to be more outgoing, warm, and emotionally stable. The personality traits of extraversion, agreeableness, and emotional stability (a term for low neuroticism) have well-documented relationships with psychological well-being, in that individuals with higher levels of these traits tend to be more socially adept, view others in more positive ways, have higher levels of positive affect, and are more emotionally intelligent (McCrae & Costa, 1991; McCrae, 2002).

Across the literature, the personality traits of agreeableness, extraversion, and emotional stability have been found to predict accuracy broadly speaking, self-other agreement, and normativity. Good judges tend to describe themselves and be assessed as having higher levels of extraversion in terms of warmth and sociability, as well as agreeableness in terms of sympathy and cooperation (Vogt & Colvin, 2003). Judges who describe themselves as having higher levels of agreeableness and emotional stability tend to see others in more favorable ways (Wood, Harms, & Vazire, 2010). In support of this finding, research looking at different components of accuracy found that judges with higher levels of agreeableness and psychological well-being tend to rate others more normatively, indicating that agreeable individuals are more likely to see others in more positive ways and as being more similar to the average person (Letzring, 2015).

Research investigating judgments of interpersonal sensitivity, which includes perceptions of affect, social status, and personality traits, found similar findings in that more interpersonally sensitive judges tend to be higher in the personality traits of extraversion and emotional stability (Hall, et al., 2009). Judges higher in extraversion, agreeableness, and emotional stability are also more accurate in terms of levels of overall accuracy and are thought to engage in social behaviors that elicit more trait-relevant cues from targets (Letzring, 2008). Some research has found a relationship between self-other agreement and openness to experience (Kolar, 1996), but not all research has supported these findings (Christiansen et al., 2005). Due to the well-supported relationships between personality traits and personality judgment accuracy, the Big Five trait of open mindedness will be investigated as possible moderators of both distinctive accuracy and normativity of the judge across judgments of different age groups. This specific trait was chosen because judges who are more open minded should be more willing to look past stereotypes of age when making judgments of older adults, which should be related to less differences in accuracy across judgments of different age groups.

Attributional Complexity of Judges

Cognitive functioning is a broad concept that is defined as an individual's mental capabilities that aid in learning, remembering, and utilizing information. This concept is made up of a variety of components that include aspects such as intelligence, cognitive complexity, analytical and verbal reasoning, and memory (Chang, 2014). Research supports the idea that intelligence predicts higher levels of accuracy and that the good judge is adept at learning, remembering, and utilizing information provided by targets to make more accurate judgments of personality (Christiansen et al., 2005; Lippa & Dietz, 2000). Part of the process of accurately judging another person involves the ability and motivation to detect and utilize multiple cues

provided by the target at one time (including past actions, if available), decide what information is relevant fairly quickly, and update judgments as necessary when new information becomes available. This can be a cognitively demanding process, and thus the ability to work quickly and efficiently with abstract information is a useful skill in personality judgment accuracy. It is also helpful for the good judge to understand how behavior relates to personality traits to successfully connect actions and general tendencies of a target with personality, which is called dispositional intelligence (Christiansen et al., 2005). While other aspects of cognitive functioning have been theorized to also be important, such as memory and fluid intelligence, research has not supported the idea that these aspects of cognitive functioning are predictive of either distinctive accuracy or normativity (Krzyzaniak, 2018). Various aspects of high cognitive functioning (in conjunction with social aptitude) are thought to be beneficial for both judges and targets, but especially beneficial for the good judge and can help the judgment process to be more efficient and accurate (Christiansen et al., 2005).

An important cognitive aspect that has not received extensive attention within the accuracy literature is the concept of *attributional complexity* (Fletcher et al., 1986). *Attributional complexity* is defined as the ability to understand and utilize social information more efficiently, the tendency to explain behavior in more complex ways, and the motivation to understand the behavior of others (Fletcher et al., 1986). This important social-cognitive factor is not necessarily related to other measures of more general or abstract intelligence due to its specific application to social situations. The accuracy research that has investigated this characteristic has found a connection to higher levels of accuracy when judging attitudes (Fletcher et al., 1990) and distinctive accuracy of judging personality traits (Krzyzaniak, 2018).

Individuals with higher levels of attributional complexity tend to take more diverse factors into account when making assessments of others and are more likely to consider both dispositional and situational factors when evaluating a target's personality or viewpoint (Follett & Hess, 2002). This means that these individuals are more likely to consider both what a target is like in terms of their disposition (or their personality traits), as well as the specific situation the target is being influenced by. Because of this, these individuals are less likely to commit the *fundamental attribution error*, which is a bias in social judgment in which a behavior is attributed to dispositional factors despite awareness of strong situational forces (Nisbett & Ross, 1980; Ross et al., 1977). Individuals with higher levels of attributional complexity consider more complex explanations when trying to understand the behavior of others and think more deeply about a target's actions. When encouraged to think more intensely about a target's dispositional qualities, individuals high in attributional complexity tend to be more accurate in identifying a target's attitude toward a subject, despite the presence of strong situational circumstances that have influenced the target's behavior in misleading ways (Fletcher et al., 1990).

Attributional complexity is also related to higher levels of well-being, which has been previously discussed as an important factor related to personality judgment accuracy, and more specifically normativity (Fast et al., 2008). Attributional complexity is related to a positive social reputation, with individuals high in this trait being more likely to be perceived as wise, expressive, happy, thoughtful, and empathetic, and as having strong social skills and high levels of well-being when assessed by close acquaintances. This indicates that attributional complexity has positive social consequences. Because of these connections to both personality judgment accuracy and well-being (which has well-known connections to normativity; Letzring, 2015), attributional complexity is a judge characteristic that was considered as a moderator of accuracy

across judgments of different age groups within this project. The judge characteristics discussed within this section describe aspects of well-being, personality traits, and cognitive functioning that may be especially important in understanding how young adult judges make accurate perceptions of different age groups.

The Role of Stereotypes, Normative Information, and Attitudes in Judgments of Personality

The characteristics of judges and targets discussed up until this point have theoretical and empirical connections to various forms of interpersonal accuracy. While some concepts have been studied in more depth than others, characteristics such as well-being, personality traits, and attributional complexity each have at least some established connections to judgment accuracy. A topic that has received relatively little attention in accuracy research is the role of demographic group-variables, such as gender, ethnicity/race, and age of both the judge and the target. Some research has investigated the role of judge gender in making accurate judgments, with females slightly outperforming males (Vogt & Colvin, 2003; Letzring, 2010; Taft, 1955), but this has not been extended to other types of demographic variables.

A large body of research suggests that stereotypes and attitudes about a group, including age, gender, or ethnicity/race, influence how judges perceive targets within that group. This research has mainly investigated patterns of judgments rather than the actual accuracy of these perceptions (Chan & Mendelsohn, 2010; Correll et al., 2007; Krueger & Rothbart, 1988). For example, randomly assigning an artificial target to a label that identifies them as belonging to a specific demographic (such as male vs. female) is related to differences in the way that target is judged on characteristics such as competence, expertise, and personality. Due to the manipulation of demographic labels used within this type of research, with all other aspects of

the target held constant, this research has mainly investigated judgments of constructed or imagined targets, rather than judgments made about real people. This is certainly an issue when it comes to the generalizability of this research, as it is unclear how it would apply to more real-world situations where judges make perceptions of actual people.

Previous research has suggested that young adults hold especially negative attitudes towards older adults, and thus they are more likely to endorse stereotyped information about older age groups (Harwood et al., 1996; Hoogland & Hoogland, 2018; Kimuna et al., 2005). Research investigating media portrayals of the elderly across the 20th century found that negative portrayals of older adults substantially increased and positive portrayals substantially decreased across the years of 1950 – 1996 (Miller, Miller, McKibbin, & Pettys, 1999), which is concerning given the fact that young adults tend to have fewer direct interactions with this age group compared to their own age group (Gellis et al., 2003; Kimuna et al., 2005). A study investigating perceptions of different age groups (young adults aged 20-30; middle adults aged 45-55; and older adults aged 65-85) across six countries including the US, found that young adult students consistently viewed older adults as being higher in benevolence, but lower in physical vitality compared to other age categories (Harwood et al., 1996). Another study found that older adults (60+) were perceived as being more depressed compared to other age categories (Chan et al., 2012), despite some research in personality and aging indicating that the opposite may be true (McCrae et al., 2005). In terms of the role of age, existing research suggests that stereotypes and attitudes about age can influence how young adults perceive older adults and is a topic that should be further investigated in relation to accuracy of interpersonal judgments.

The Use of Normative Information and Stereotypes in Judgments of Others

When making perceptions of others, judgments about personality traits may come from various sources of information related to the person being judged. When there is little to no individuating information about a target available, ratings based on knowledge of *normative information* are expected and commonplace (Biesanz et al., 2007; Chan & Mendelhson, 2010; Postmes et al., 2002). Normative information is what the average person within a specific group is actually like, or in other words, the average rating of any given item on a measure across a large sample of targets (Biesanz, 2010). The normative profile is highly related to a more socially desirable profile within personality judgment accuracy research, and oftentimes judges who perceive targets more normatively are also more likely to see targets more favorably (Biesanz, 2010; Letzring, 2015). The more that individuating information is made available about a target, generally the less normative information is relied on within judgments (Biesanz et al., 2007; Chan & Mendelhson, 2010). Generally speaking, a judge has access to both individuating and normative information about a target and utilizes both types of information in judgments (Funder, 2012; Neuberg & Fiske, 1987). When a judge relies on information about what the average person is like, this is associated with higher levels of *normativity*, while relying on individuating information about what a person is like is associated with higher levels of *distinctive accuracy* (please see the section Estimating Accuracy with the Social Accuracy Model).

Another type of information that may be used in personality judgments is stereotypes. It is well-established throughout the person perception literature that *stereotypes* about a group influence how a target belonging to that group is perceived (Chan & Mendelsohn, 2010; Correll et al., 2007; Jussim et al., 1995; Sherman et al., 2005). Stereotypes can be thought of as

assumptions about group-membership that are specific to a certain label (such as a target's ethnicity/race, gender, or age). While some stereotypes have been found to be at least somewhat accurate and can be helpful when making judgments of targets for which there is little to no information available (Jussim et al., 2009), other stereotypes are based on negative biases rather than an accurate average representation of that group (Chan et al., 2012). For example, research has found that when two job applicants are identical in every way except for a manipulated label of gender (female vs. male), the job applicant labeled as female is rated significantly lower in perceived competence and recommended salary, indicating a bias in judgment based on the label of gender (Correll et al., 2007).

Labels such as gender, age, and ethnicity/race tend to significantly predict ratings of personality (and other characteristics) of a target over and above individuating information when there is an especially strong association between the label being manipulated and the trait of interest, such as in the case of female/male with the associated trait of femininity/masculinity (Chan & Mendelsohn, 2010; Krueger & Rothbart, 1988). In these cases, the label is so strongly associated with the trait that it is usually more heavily relied on and predicts greater variance in judge-ratings of a target than individuating information. In addition to the perceived relevance of a label to any given trait, certain individuals are simply more likely to rely on labels and stereotypes compared to others due to pre-existing attitudes and biases. For example, research has found that individuals with especially negative implicit or explicit attitudes toward a group are significantly more likely to rely on negative stereotypes when making personality judgments of targets belonging to that group (Gawronsky et al., 2003; Sherman et al., 2005). On the other hand, judges with higher levels of openness to experience tend to be more accepting of information that does not fit with a stereotype, indicating the importance of considering this

personality trait in understanding judge accuracy (Gocłowska et al., 2017). Judges who report a greater liking of a certain group tend to rely less on negative stereotypes when judging members of that group, suggesting that consideration of *attitudes* toward a specific group is also important when evaluating the use of stereotypes in judgments (Jussim et al., 1995). Research has found that judges who are motivated to make less-prejudiced judgments are less likely to rely on labels and stereotypes, which suggests that motivation to more fully understand others, or attributional complexity, is another factor that plays a role (Plant & Devine, 1998). It is worth mentioning that most research that has investigated stereotypes has utilized laboratory manipulations in which judges are exposed to descriptive information of hypothetical targets, rather than actual people. Therefore, it is unclear as to how these findings would apply to face-to-face interactions or video observations where targets are real people, which is something that the current study addressed

Stereotypes and Attitudes Toward Age

While the gender and ethnicity/race of a target have been found to have a significant effect on judges' ratings of that target (Chan & Mendelsohn, 2010; Correll et al., 2007), target-age has actually been found to explain more variance in judge's ratings of personality compared to either gender or ethnicity/race. In a study that investigated the role of target gender, race, and age group in judge stereotypes across different nations, it was found that target-age explained up to 36% of the variance in ratings of personality compared to only 4-5% for gender or race (Chan et al., 2012).[6] This is especially relevant for research investigating the role of age in personality judgment accuracy, as it suggests that the age of targets significantly impacts how they are perceived, possibly over and above other labels such as gender or ethnicity/race. In terms of age-

[6] While differences in perceptions were investigated here, accuracy was not evaluated.

specific stereotypes that may influence these perceptions, older adults (60+) tend to be stereotyped negatively as difficult, needy, and incompetent, but positively as kind-hearted and agreeable (Fiske et al., 2002; Hummert, 1990). While some stereotypes have been found to be at least somewhat accurate (Jussim et al., 2009), research suggests that other age stereotypes do not necessarily match with how the elderly perceive themselves. In terms of self-other agreement across facets of the Big Five personality dimensions, older adults are viewed as more depressed and more vulnerable than their self-report data suggests, as well as less active, less competent, and less trusting of others (Chan et al., 2012).

A study that investigated the self-other agreement of personality age stereotypes found that personality stereotypes of different age groups (including adolescents, young-adults, middle-adults, and older adults) when averaged across judges were somewhat accurate when compared to the self-reported personality traits of targets (Chan et al., 2012).[7] These averaged judgments were usually accurate in terms of the ranking of traits within and across age groups (e.g., judges were accurate in perceiving that older adults were higher in agreeableness compared to openness; and that older adults were more agreeable than any other age group). Despite this, judges also tended to exaggerate the levels of various personality traits within an age group's personality trait-profile. This means that while judges could identify that the average older adult is lower on openness mindedness compared to other age groups, they judged them as being even lower on this trait than their self-reports indicated. This same study also found that individual-judges' stereotypes were often much less accurate compared to stereotypes averaged across judges,

[7] It is important to note that the current study is distinct from the one described here in that the criterion for accuracy is a realistic accuracy criterion (as opposed to a self-report), accuracy was investigated through the components of distinctive accuracy and normativity, and judges made perceptions of real people after observing them (as opposed to judging an imaginary target).

indicating that the individual judge does not always have accurate expectations for the personality of the average person in any given age group. While self-reports are not necessarily indicative of what a target is actually like compared to using a more multifaceted accuracy criterion (as suggested by Funder, 1995; 2012), these findings do suggest somewhat of a disconnect in how older adults view themselves compared to how they are perceived, and that there is a potential for bias toward certain personality stereotypes in judgments of older adults.Research suggests that individuals of all ages, but especially young people, are more likely to hold negative attitudes toward older adults compared to targets of other ages (Harwood et al., 1996; Stuart-Hamilton & Mahoney, 2003). In fact, *ageism* (prejudicial attitudes toward the old) is thought to be one of the most prevalent and persistent forms of prejudice within U.S. society, and is also unfortunately one of the least studied compared to other forms of prejudice such as sexism and racism (Harwood et al., 1996; Luo et al., 2013). Individuals within their late teens to early-twenties hold some of the most negative attitudes toward old-age, and this is especially pronounced in college-students (Gellis et al., 2003; Kimuna et al., 2005).[8] Previous literature has strongly suggested that these negative attitudes stem at least partially from the fact that young adults are likely to have relatively fewer meaningful interactions with older adults compared to targets of their own age group or targets classified as middle-aged, and thus there is usually limited personal experience to rely on in the construction of normative information about older age groups (Kalavar, 2001; Knapp & Stubblefield, 2000). Unfortunately, this limited personal experience is related to a greater reliance on negative stereotyped images from media portrayals

[8] It is important to note that older adults also hold some of the most negative views of older adults (Chopik & Giasson, 2017; Hummert et al., 2002).

of the elderly, which influences the attitudes and biases young adults hold about aging and the old (Gellis et al., 2003; Kimuna et al., 2005).

Another factor that influences stereotyped perceptions of older adults is *aging anxiety*, which is the distress an individual feels when thinking about the aging process, either in oneself or in others (Lasher & Faulknender, 1993). Individuals with greater aging anxiety tend to fear aging more and have a greater dislike of the elderly. In addition, these individuals tend to be more likely to endorse negative age-related stereotypes and are more likely to have a negative emotional reaction to viewing an older-adult face (Hummert et al., 1997). Possible reasons for these findings are the fact that these individuals tend to have less *knowledge of the aging process*, which contributes to a general lack of understanding of aging and older adults. Individuals with higher aging anxiety also report fewer positive experience with older adults and feel less self-efficacy about their own ability to age well (Witte, 1992). These factors may work together to promote greater explicit ageism toward older adults, which is certainly cause for concern. Based on this research, the judge characteristics of aging anxiety, knowledge of aging, and explicit agism will each be investigated as moderators of accuracy of judgments of different age groups.

While many young adults do report positive interactions with grandparents that fall within the older adult age category, research has suggested that these interactions do not generalize well to perceptions of other older adults for whom there is considerably less individuating or normative information available (Hoogland & Hoogland, 2018). This suggests that these interactions are not enough to encourage general positive perceptions of older adults and that they should be investigated separately (Knapp & Stubblefield, 2000). Perceptions and descriptions of grandparents can differ quite considerably compared to judgments of other older

adults. While descriptions of grandparents are usually very positive and focus on favorable personality traits such as kindness and agreeableness, perceptions of other older adults focus more on unfavorable physical characteristics (such as wrinkles) and health-related problems (Hoogland & Hoogland, 2018). It is important to note, however, that young adults who report more meaningful interactions with older-adult targets other than grandparents are more likely to hold positive attitudes toward older-adults and the aging process, indicating that increased and diversified exposure to this population can have a positive influence (Luo et al., 2013). This research suggests that quality and quantity of exposure to various age groups should be taken into account when understanding the accuracy of perceiving different age groups, and that this should be considered separately from parents and grandparents. For this reason, the current study investigated exposure to parents, grandparents, middle adults, and older adults as potential moderators in differences in accuracy across judgments of different age groups.

The Current Study

The role of age in accuracy of personality judgment is a question that has not yet been addressed by accuracy research. The older-adult population (60+) is growing more rapidly than any other age group and already makes up around 15% of the total population according to a 2010 U.S. census (Howden & Meyer, 2010). This fact, combined with the prevalence of ageist attitudes among all age groups but especially among young adults, suggests that studying the ways in which older adults are perceived compared to other age groups is of vital importance to our aging society. The role of age and age-attitudes have been studied in relation to accuracy of age stereotypes, and predicting variations in judge ratings (Chan et al., 2012), but no study to date has investigated whether targets of different ages can be accurately judged by young adults and whether accuracy differs across judgments of targets from different age groups.

Previous research suggests that young adults are more likely to hold negative attitudes toward older adults and tend to have very limited interactions with older adults compared to individuals of their own age group (with grandparents being the exception; Kalavar, 2001; Knapp & Stubblefield, 2000). This biases judgment of older age groups and could potentially be related to lower levels of accuracy. The current study will investigate accuracy of young adults' interpersonal judgments of different target age groups (young adults, middle adults, and older adults), as well as whether individual characteristics of the judge moderate differences in accuracy across age groups.

Accuracy of Judging Subjective Well-Being

Thus far, the focus of this literature review has been on the accuracy of judging personality traits. This is because previous accuracy research has mainly focused on the accuracy of judging personality as opposed to other individual difference characteristics. While this means that the discipline has been able to search out and provide more detailed information about this specific type of accuracy, it is also limiting in that it does not usually consider perceptions of other characteristics that are made on a daily basis. While a sizable body of research does exist regarding the accuracy of judging *emotional states* (or state affect), this research has developed almost completely independently of personality judgment accuracy despite core theoretical similarities in terms of the process involved in forming accurate judgments (Hall et al., 2017). Other characteristics have also been investigated within accuracy research (although to a far lesser extent), including the accuracy of judging personal values (McDonald & Letzring, 2016) and the accuracy of judging risk-taking propensity (Vineyard, Letzring, Krzyzaniak, & Cruthirds, manuscript in preparation). There is a growing need within the accuracy field to investigate accuracy of perceiving a wider variety of characteristics beyond personality traits,

using theoretical models such as Brunswik's Lens Model (Brunswik, 1956) and the RAM (Funder, 1995; 1999; 2012). Understanding the ways in which judges make accurate perceptions of a variety of characteristics, and not just personality traits, will further our understanding of this important interpersonal skill.

One potentially important person perception characteristic that has not yet been investigated in any known accuracy study is the accuracy of judging *well-being* (see the Judge Well-Being section for a more detailed description of the different components of well-being in relation to the judge). Subjective well-being in particular (defined by high positive affect, low negative affect, and high life satisfaction) is related to various mental health and interpersonal outcomes, including lower levels of depression and anxiety, higher levels of emotional stability, greater relationship satisfaction, and higher levels of social desirability (Brajša-Žganec et al., 2011; Galinha & Pais-Ribeiro, 2011). Individuals with higher subjective well-being tend to be happier and psychologically healthier, perceive their relationships as more fulfilling, and are generally well-liked by their peers. Skill in accurately perceiving this important trait may be highly beneficial for judges in making more informed decisions about the quality of mental health of those around them. More specifically, these judgements could better guide decisions of whom it is desirable to approach in a first-impression scenario or figuring out when a well-acquainted target's mental health has declined. This is an especially important skill for judges working in health-care settings (such as therapists or clinicians) that rely on their ability to make accurate judgments of patients' or clients' mental health every day. Given that older adults are oftentimes negatively stereotyped as having characteristics of poor mental health (Chan et al., 2012; Hoogland & Hoogland, 2018), this is an especially interesting characteristic to investigate within the current study, while also addressing some of the limitations of current accuracy

research where personality traits have often been the sole focus. Therefore, in addition to investigating young adults' accuracy of judging personality traits across different age groups, the current study will also investigate the accuracy of judging subjective well-being through the aspects of trait affect and life satisfaction.

Hypotheses

The first hypothesis is that young adults will judge their own age group more accurately (as assessed with distinctive accuracy and normativity) in terms of both personality judgment accuracy and accuracy of judging subjective well-being (defined by trait affect and life satisfaction), compared to middle adult and older adult targets; and that young adults will judge middle adults more accurately than older adults but less accurately than their own age group. In other words, accuracy will decrease as the age-discrepancy between judges and targets increases. This pattern is expected given that young adults spend more time with their own age group compared to older age groups and that young adults tend to hold more biases toward older adults.

The second hypothesis is that individual characteristics of judges will moderate these differences in accuracy across age groups. More specifically, the characteristics of psychological well-being[9], affect balance, satisfaction with life, attributional complexity, openness to experience, knowledge about aging, and quantity and quality of exposure to older adults, grandparents, middle adults, and parents will each separately negatively moderate differences in

[9] It is important to note that while psychological well-being of the judge was investigated as a moderator of accuracy, psychological well-being was not assessed for targets. Rather, this study only investigated the accuracy of judging subjective well-being, made up of the aspects of trait affect balance and life satisfaction. This decision was made to reduce the amount of judgements required by judges following observation of each target. Given that psychological well-being assesses an aspect of well-being, it could be expected that the accuracy of judging psychological well-being would fit with similar patterns to the accuracy of judging trait affect or life satisfaction.

distinctive accuracy and normativity for judgments of both personality and well-being across age groups. In other words, higher levels of these characteristics will be related to smaller differences in accuracy across age groups. In addition, it is expected that explicit ageism and anxiety about aging will positively moderate these differences, in that higher levels of these characteristics will be related to greater differences in accuracy across age groups, with accuracy being the lowest in the older adult age group. While this hypothesis assumes support for Hypothesis 1, moderators will still be investigated in the case of null findings for Hypothesis 1, as judge characteristics may still help explain a potential relationship between distinctive accuracy or normativity and target age group. It was anticipated that the characteristics of psychological well-being, affect balance, and satisfaction with life would be stronger moderators of normativity than of distinctive accuracy, based on patterns from previous research (Letzring, 2015). It was also expected that openness to experience and attributional complexity would be stronger moderators of distinctive accuracy than of normativity due to judges being more motivated to notice and utilize individuating information about targets. There were no other expected differences in terms of patterns of distinctive accuracy vs. normativity, or across judgments of personality traits, affect, and life satisfaction.[10]

[10] While it was not investigated within the current study, there is reason to believe that the accuracy of judging personality should be positively related to the accuracy of judging affect. As this is the first study to investigate the accuracy of judging life satisfaction, it is unclear how accuracy of this domain would be related to the accuracy of judging other domains. However, given that life satisfaction is a component of subjective well-being (alongside trait affect), it stands to reason that the accuracy of judging life satisfaction should also be positively related to the accuracy of judging personality and trait affect.

Chapter 3: Method

Target Participants

Part of the materials for this study consisted of video-recorded interactions of target individuals. These videos were viewed and assessed by judges to evaluate personality judgment accuracy and accuracy of judging well-being. A total sample size of 54 targets (18 for each age group) was identified as necessary for the requirements of this study. This number was chosen to allow for greater generalizability of judgments of different age groups, as small target sample-sizes (such as 6-8) are often criticized for a lack of generalizability. The exact boundaries of age categories tend to differ, therefore age groups were chosen as a general representation of an age group rather than a strict standard that is used across studies (Chan et al., 2012; Harwood et al., 1996). In addition, age group boundaries were kept somewhat constrained to keep a greater distance in age between groups and facilitate a stronger manipulation of target age. Young adults were classified as between the ages of 18-28, middle adults were between the ages of 45-55, and older adults were between the ages of 70-80. Young adult targets were recruited through the SONA system from social and behavioral science classes that receive class credit for research participation; middle adult targets were recruited from the community through the use of a Facebook ad; and older adult targets were recruited through the community through the use of a preexisting contact database. All older adult targets had previously passed the Mini-Mental Status Examination within the last three years, which is a dementia screening tool used to assess cognitive impairment (Folstein et al., 1975). Community targets received $10 for participation.

Target Demographics. Target participants consisted of 54 individuals between the ages of 18-79 (M = 49, SD = 22.24). Gender consisted of 52% male and 48% female, and ethnicity/race was made up of 90% White, 7% Hispanic, 2% Biracial, and 2% other. Of the 23

target participants from the total sample who identified as students, class standing consisted of 26% Freshmen, 39% Sophomore, 4% Junior, 9% Senior, and 22% Other. A total of 10 additional targets were collected but were not used as part of the stimulus materials for this study due to not receiving at least one acquaintance report (described in the Target Procedure section) or failing the age piloting for this study (described in the Age Piloting section). Target demographics by age group can be found in Table 1.

Table 1

Descriptive Demographics for Targets by Age group.

	Young Adults	Middle Adults	Older Adults
Age			
Range	18-27	45-55	71-79
M (*SD*)	21.78 (3.10)	49.94 (2.96)	75.28 (2.56)
Perceived Age *(based on pilot study)*			
Range	14-44	28-74	45-90
M (*SD*)	22.72 (4.03)	48.19 (6.59)	71.48 (6.56)
Gender			
Male	50%	56%	50%
Female	50%	44%	50%
Ethnicity/Race			
White	72%	95%	100%
Hispanic	22%		
Asian			
Black/African American			
Biracial	6%		
Other		5%	
University Class Standing			
Freshman	28%	6%	
Sophomore	50%		
Junior	6%		
Senior	11%		
Other	5%	17%	6%
Not a student		77%	94%

Target Measures

Personality Traits. Personality traits were measured using the Big Five Inventory-2 (BFI-2; Soto & John, 2017). Targets completed a self-report version of this measure. This scale measures personality in terms of the Five Factor Model, which consists of the five personality traits of extraversion, conscientiousness, agreeableness, open mindedness, and negative emotionality. This is a 60-item measure on a 5-point scale ranging from *agree strongly* to *disagree strongly*. The BFI-2 demonstrates high internal reliability for each trait (α = .85 - .90) as well as a good 8-week test-retest reliability (r = .76 - .84; Soto & John, 2017).

Trait Affect. Trait affect was assessed using a trait-version of the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Targets completed a self-report version of this measure. This measure consists of 20-items that each list a word describing a positive or negative emotion, with 10 items per category. For each word, targets indicated how often they feel that emotion in general on a 5-point scale ranging from *not at all* to *extremely*. The 20-item version of the PANAS has very slight quasi-dimensional properties across positive and negative affect (r = -.12, or 1% - 5% shared variance) and good internal reliability for both scales (PA α = .88; NA α = .77). The PANAS has also demonstrated adequate reliability over 8-weeks (PA r = .68; NA r = .71; Watson et al., 1988).

Life Satisfaction. The Satisfaction with Life Scale (SWLS) was used to assess life satisfaction (Diener et al., 1985). Targets completed a self-report version of the SWLS. The SWLS consists of 5 items on a 7-point scale, ranging from *strongly disagree* to *strongly agree*. This scale has good internal reliability (α = .87) and test-retest reliability over an 8-week period (r = .82; Diener et al., 1985).

Target Procedure

Targets came to a designated room on the Idaho State University campus to participate in a get-to-know-you video-recorded interview. A research assistant was present with the target throughout the interview and only one target participated at a time. The target was greeted by the research assistant and asked for their SONA ID number, if applicable. First, the target viewed a computerized consent form using a provided laptop computer and completed self-report versions of the BFI-2, the PANAS, and the SWLS, as well as some demographic information including age, gender, ethnicity/race, and class standing. The next part of the study involved a video-recorded interview that took between 5-15 minutes that consisted of the research assistant asking the target questions about hobbies, occupation (or most recently held occupation), goals, thoughts and feelings, meaningful experiences, and broad get-to-know-you topics relevant to a variety of situations and experiences (see Appendix B for a full list of interview questions). The goal of this interview was to encourage targets to reveal relevant information related to their personality and well-being, including information about traits that are typically less easily judged. It is thought that prompting targets for more personal information about thoughts, feelings, meaningful life experiences, and relationships would provide more information about less easily judged traits, such as openness to experience and neuroticism (as well as potentially aspects of well-being), as these traits are related to more emotional or internal experiences that are not always outwardly expressed (Spain et al., 2000). At the conclusion of the interview, the target completed an assessment of state-affect using the PANAS.[11] They were then asked to use the provided laptop computer to email at least three acquaintances of at least six-months with a request to complete other-report versions of the BFI-2, trait-level PANAS, and SWLS for that

[11] This measure is intended for use in future studies.

target. A total of 18 target participants had responses from 1 acquaintance; 15 had responses from 2 acquaintances; 20 had responses from 3 acquaintances; and 1 had responses from 7 acquaintances. Acquaintance participants were not provided compensation for participation. A total of 8 targets were excluded from the final study due to having no responses from acquaintances.

Video Stimulus Creation. Videos of targets were edited to fit within a 3-4-minute timeframe to stay in line with other accuracy research that has used video-recordings as stimuli and to reduce possible judge-fatigue (Krzyzaniak et al., 2019; Letzring & Colman, 2019). To condense the full interview down to this timeframe, each question was edited down to 20-40 seconds, beginning at the point when the participant first started answering the question and ending at a point when the participant had finished their thought. Any speaking done by the research assistant was edited out if possible, and only the target was visible throughout the edited video. If the research assistant happened to ask a follow-up question during the interview, this was also edited out unless it was needed for context. To give judge-participants information about what question was being asked, a textbox with this information briefly appeared at the start of each new question being answered.

Age Piloting

Due to the concern that some targets may appear vastly older or younger than their actual age, it was determined that all target participants must pass a pilot test of age perception before being included in the final study. A sample size of 20 participants per target was identified as being adequate for the requirements of the age piloting, with the intent of having each target's age judged by a moderate number of participants. Pilot participants were recruited through the

SONA system to judge the age of targets and were required to meet the young adult age criteria of being between the ages of 18-28.

Pilot Participants Demographics. Pilot participants were made up of a total of 60 students between the ages of 18-28 (M = 21.45, SD = 2.98) recruited through the SONA system. Gender was made up of 83% female and 17% male.[12] Ethnicity/Race was 75% White, 13% Hispanic, 5% Asian, 3% Black/African American, 2%, Biracial, and 2% other. Class standing consisted of 25% freshman, 32% sophomore, 23% junior, 17% senior, and 3% other. A total of 3 participants were excluded from the age piloting due to failing more than 20% of the embedded attention checks.

Pilot Participants Procedure. Pilot participants completed the pilot study online in a place of their choosing. Participants watched up to 25 videos of approximately 20-30 seconds each, with each video-clip focused on a different target's answer to the first question of the interview ("Tell me a little bit about yourself."). Videos were made up of a combination of young adult, middle adult, and older adult targets and were presented in the same randomized order for each pilot participant. After each video, participants answered up to three questions about that target's age, including whether that target fit into one of the listed age categories (18-28; 45-55; or 70-80), which age category the target fit into, and the exact age of the target. Perceived age of the target was evaluated through this third question. If the target revealed their age at any point during the video-clip, that information was omitted for the purposes of the pilot

[12] While some research has suggested that females may be slightly better judges of personality traits compared to males (Vogt & Colvin, 2003; Letzring, 2010; Taft, 1955), this finding has not been replicated consistently and any differences are likely to be small.

study. Pilot participants concluded the study with several basic demographic questions. This study took up to 30 minutes to complete.

Piloting Criteria for Targets. To successfully pass the age piloting, targets had to be identified as being within 5 years of their age-range on average across 20 ratings. For example, an older adult target (aged 70-80) would need an average age-rating between 65-85 to pass the age piloting and be included as a target within the judge portion of this study (see Table 1). A total of two targets (one middle adult and one older adult) were excluded due to not meeting the age piloting criteria.

Judge Participants

Judge participants consisted of 251 undergraduate students from Idaho State University, ranging in age from 18-28 (M = 20.26, SD = 2.45) recruited from the SONA system for class credit. Gender was made up of 69% female and 31% male.[13] Ethnicity/Race was 78% White, 15% Hispanic, 2% Asian, 1% Black/African American, 1%, Biracial, and 3% other. Class standing consisted of 38% freshman, 39% sophomore, 17% junior, 5% senior, and 1% other.

Several power analyses were run using the program GPower to determine the correct sample size for this study. Power was set at .80 for all analyses. For Hypothesis 1, results indicated that for a one-way ANOVA with 3 groups and a moderate to small effect size of .20, a sample of 246 would be appropriate. For Hypothesis 2, results indicated that for a multiple regression with two predictors and a medium-sized effect of .15, a sample of 68 would be adequate. These two power analyses were chosen because they represent the statistics necessary to analyze each hypothesis. Based on these results, a sample size of 246 was deemed appropriate

[13] Gender was relatively evenly distributed across age group conditions.

for the requirements of this study, with approximately 82 participants in each group. These requirements were also deemed acceptable for the use of the multilevel model SAM, as 50 participants per group is considered enough to get a stable estimate of accuracy within multilevel models (50 participants per group * 3 groups = 150 participants; Maas & Hox, 2005). For the current study, 9 SAM models were run for Hypothesis 1, comprising three models investigating accuracy of all age groups combined (with one model for each judgment domain of personality traits, trait affect, and life satisfaction); and six models utilizing dummy coding to investigate differences in accuracy between three age groups (with two models for each judgment domain). For Hypothesis 2, a total of 72 SAM models were run which included investigating differences in moderations of accuracy between three-age groups with two models for each judgment domain (six per moderator) for 12 separate moderators. In the case of a significant moderation, moderation estimates of accuracy for each age group were investigated.

Judge Measures[14]

Psychological Well-Being. Psychological well-being was measured using Ryff's Psychological Well-Being Scale (Ryff's PWBS; Ryff 1989; Ryff & Keyes, 1995). This measure assesses psychological well-being across the six domains of Self-Acceptance, Positive Relations with Others, Autonomy, Environmental Mastery, Meaning in Life, and Personal Growth.[15] The 84-item version includes 14 items for each domain and is measured on a 6-point response scale ranging from *completely disagree* to *completely agree*. Ryff's PWBS is a popular measure of psychological well-being, with the 84-item version having good internal consistency for the total score (α = ..87) and a high correlation with the 120-item full-version (*r* = .98; Ryff, 1989; Ryff &

[14] Items for all measures can be found in Appendix A..
[15] Domains were not investigated within the current study.

Keyes, 1995). A strong internal reliability was found for the total score within the current study (α = .96).

Attributional Complexity. Attributional complexity was measured with the Attributional Complexity Questionnaire (ACQ; Fletcher et al., 1986). Attributional complexity is conceptualized as the tendency to provide more complex explanations of behavior, the tendency to think more abstractly about behavior, and higher motivation to understand the behaviors of others. The ACQ is a 28-item measure of attributional schemas with questions on a 7-point scale, ranging from *strongly agree* to *strongly disagree*. The ACQ has good internal reliability (α = .85) and acceptable 18-day test-retest reliability (*r* = .80; Fletcher et al., 1986). An acceptable internal reliability was found for the current study (α = .76).

Personality Traits. Personality traits were measured using the Big Five Inventory-2 (BFI-2; Soto & John, 2017). Judges completed a self-report version of this measure. A high to adequate internal reliability was found for each trait within the current study (α = .72 - .90).

Affect Balance. Affect balance was assessed using a trait-version of the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Judges completed a self-report version of this measure. Affect balance was calculated as positive affect minus negative affect, with scores greater than 0 indicating a higher level of positive affect compared to negative affect (and vice versa). A good internal reliability was found for both scales within the current study (PA α = .88; NA α = .88).

Life Satisfaction. The Satisfaction with Life Scale (SWLS) was used to assess life satisfaction (Diener et al., 1985). Judges completed a self-report version of this measure. A good internal reliability was found for the current study (α = .86).

Ageism. Ageism was measured using the revised version of the Fraboni Scale on Ageism (FSA; Fraboni et al., 1990; revised by Rupp et al., 2005). The revised-FSA measures affective and cognitive components of ageism through the domains of stereotypes, separation, and affective attitude. This is a 29-item measure on a 4-point scale ranging from *strongly agree* to *strongly disagree.* The FSA has been found to have acceptable internal consistency, $\alpha = .86$ (Fraboni et al., 1990). A high internal reliability was found for the current study ($\alpha = .89$).

Knowledge of Aging. Knowledge of aging was measured using the Palmore's Facts on Aging Quiz multiple-choice version (PFAQ; Harris et al., 1996; Palmore, 1977). This is a 25-item multiple-choice test that assesses individual's knowledge of aging and older adults, as well as age bias. The multiple-choice version of this test has been found to be more discerning with less measurement error compared to the original true/false version (Harris et al., 1996; Palmore, 1977). A few questions had their answers slightly altered to reflect more up to date statistics about old age.[16]

Aging Anxiety. Aging anxiety was measured with the refined version of the Anxiety about Aging Scale (AAS; Lasher & Faulknender, 1993). This measure assesses the amount of anxiety an individual feels when considering the aging process across the four dimensions of fear of old people, psychological concerns, physical appearance, and fear of loss. This measure is negatively related to quantity and quality of exposure to older adults, aging self-efficacy, and knowledge of aging. This is a 20-item measure that assess statements on a four-point scale from

[16] Question 19 which reads, "The proportion of the US population now age 65 or over is:" had a correct answer of 13%. This was changed to 15% to reflect more up to date statistics. Question 25 which reads, "The health and economic status of old people (compared to younger people) in the year 2010 will:" was changed to reflect the time period this study took place (2019-2020). Multiple-choice selections were also slightly altered to reflect this change.

strongly agree to *strongly disagree* and has been found to have acceptably high internal consistency (α = .82). A high reliability was found for the current study (α = .86).

Exposure to Older Adults, Grandparents, Middle Adults, and Parents. Quality and quantity of exposure to older adults, grandparents, middle adults, and parents were measured through 8 questions on a 10-point scale ranging from *almost never* to *extremely often*. Exposure to each category was measured through separate questions. The questions were, "How often do you have interactions with older/middle-aged adults (between the ages of 70-80/between the ages of 45-55, and not including your grandparents/parents)?" and, "How often do you find these interactions meaningful?" The questions were asked twice regarding either older adults or middle adults. These questions were also repeated in relation to parents and grandparents. These questions were chosen because previous research has indicated that both quality and quantity of contact are important in predicting positive attitudes toward older adults (Knox et al., 1986; Schwartz & Simmons, 2001).

Personality Judgment Accuracy. Judges were randomly assigned to a condition in which they watched six, three-minute videos of targets from either the young adult, middle adult, or older adult age group (the procedures for targets are described in the following section). Judges completed other-reports for each target they observed using the BFI-2, the trait version of the PANAS, and the SWLS. Judges were informed to focus their judgments on the target, identified as the person they could see in each video.

Judge Procedures

Judges signed up for the study through the SONA system at least two hours prior to the session start-time. Participation took place in a room on the Idaho State University Pocatello and

Idaho Falls campuses. All equipment was provided and set up before the session start time, and each session accommodated up to four participants at one time.

At the start of the session, participants were prompted by the research assistant to provide their SONA ID number. Participants were seated at a desk and provided with a laptop, computer mouse, and headphones. A research assistant trained in the experimental protocol was present throughout the study to provide directions and answer questions. This room was kept quiet during the experiment to minimize distractions.

This was a between-subjects design in which participants were randomly assigned to judge either young adults, middle adults, or older adults. A between-subjects design was chosen to allow for judges to perceive more targets of a specific age-group. This made analysis more straightforward and allowed for more reliable judgments of each age group. This design was also chosen to prevent judges from figuring out that age of the targets was a primary focus of the study. The study was conducted entirely via computer software. Participants first read through a computerized consent form and agreed to participation. Next, participants watched a brief introductory video that provided general information about how to complete the study (see Appendix C). Participants then received computerized instructions informing them that they would view several videos of individuals being interviewed and that they should focus on the person they could see in each video. Each participant watched a total of six videos with each video being approximately three to four minutes in length and focused on a single individual. Videos included excerpts of each question asked of a target to keep content of the videos consistent (see Target Procedure section). Upon completion of each video, participants completed other-report versions of the BFI-2, PANAS, and SWLS to rate the personality, trait affect, and life satisfaction of the target they just observed. After observing all six targets and

completing the other-report measures, judges were asked to guess the age of each target using the same set of questions posed to the piloting participants.[17] Finally, participants completed self-report measures of the BFI-2, Ryff's PWBS, ACQ, FSA, PFAQ, AAS, PANAS, SWLS, exposure to older adults, grandparents, middle adults, and parents, and demographic information. Attention checks were embedded throughout the questionnaires to test whether participants were paying attention to the wording of the questions and answering carefully. An example of an attention check is, "Please answer 'strongly agree' for this question." Five attention checks were included in the experiment and participants needed to answer at least 80% correctly for their data to be considered usable. This study took approximately 75-120 minutes.

Accuracy Criterion

The accuracy criterion for each target was made up of multiple validation measures, including a self-report assessment and at least one other-report assessment from an acquaintance of at least six-months. This criterion was created for each item of the BFI-2, PANAS, and SWLS. This was a minimum requirement for forming the accuracy criterion and more than one other-report measures was gathered and utilized when available. For each target, the other-report assessments were averaged together first, and then averaged with the self-report rating so that each type of rating was weighted equally.

Reliabilities between acquaintance-reports for the same target and between targets' self-reports and averaged acquaintance-reports were calculated across personality trait, affect, and

[17] This aspect was initially intended to be used as a manipulation check of age. However, due to the general inaccuracy of the pilot participants in guessing target ages, this was not used. It is worth noting that judge estimates of age were similar to pilot participants estimates of age (young adult range = 18-45, *M* = 22.43, *SD* = 3.90; middle adult range = 26-72, *M* = 49.88, *SD* = 4.97, older adult range = 53-86, *M* = 71.27, *SD* = 5.44).

well-being items. Reliabilities of acquaintance-reports between two acquaintances demonstrated adequate reliability levels (n = 15 targets; α_{mean} = .74, α_{range} = .43 - .88); as did reliabilities for acquaintance-reports between three acquaintances (n = 20 targets; α_{mean} = .79, α_{range} = .60 - .93). The reliability between seven acquaintance-reports was high (n = 1 target; α = .92). Reliabilities between target self-reports and averaged acquaintance-reports were also adequate (n = 54 targets; α_{mean} = .79, α_{range} = .42 - .95).

The Social Accuracy Model

SAM (Biesanz, 2010) is a powerful analytical technique used within personality judgment accuracy research to calculate distinctive accuracy and normativity scores simultaneously. This model was used for the current study. The basic version of multilevel equations can be found in equations 1.1 and 1.2. For this study, the normative profile was calculated as the average for each item on the BFI-2, trait version of the PANAS, and SWLS across targets of a specific age group condition. The distinctive profile was calculated by subtracting the normative profile from the accuracy criterion score for each item for a target, to isolate the distinctive quality of that target-item pair.[18] This was done separately for each

[18] The target-item pair refers to how a specific target rated on a specific item for either the BFI-2, PANAS, or SWLS. It should be noted that due to the calculation required to create the distinctive profile, scores for distinctive accuracy will always be smaller compared to scores for normativity. Since the normative profile makes up such a large piece of the accuracy criterion and this piece is removed in creation of the distinctive profile, there will always be smaller relationships between the distinctive profile (compared to the normative profile) and a judge's ratings of a target.

condition.[19] The normative profile and distinctive profile were grand-mean centered to allow accuracy estimates to be interpreted as the average level of either distinctive accuracy or normativity when the other component is at the average (or 0).

$$Y_{jti} = \beta_{0jt} + \beta_{1jt}\, TCrit_{ti} + \beta_{2jt} AP_{ia} + \varepsilon_{jti} \quad (1.1)$$

$$\beta_{0jt} = \gamma_{00} + \gamma_{01} MOD_j + u_{0j} + u_{0t} \quad (1.2)$$

$$\beta_{1jt} = \gamma_{10} + \gamma_{11} MOD_j + u_{1j} + u_{1t}$$

$$\beta_{2jt} = \gamma_{20} + \gamma_{21} MOD_j + u_{2j} + u_{2t}.$$

Equation 1.1 represents the calculation for the base model. Y_{jit} is the rating for judge *j* of target *t* for item *i*. $TCrit_{ti}$ represents the criterion rating (average of self-rating and acquaintance ratings) for target *t* on item *i*. AP_{ia} represents the average profile, or the estimate of the average rating of item *i,* which is the estimation of the average person's rating for that item for a specific age group condition. β_{0jt} is the intercept and represents the average value of judge *j*'s rating of target *t* on item *i* when $TCrit_{ti}$ and AP_{ia} are held constant at the average (or 0 due to grand mean centering). β_{1jt} is the predicted value of distinctive accuracy when the estimation of the average

[19] To compare the similarity of the normative profile of each age group, profile correlations were calculated for each pair of age groups. For personality traits, the young adult profile was significantly related to the middle adult profile ($r = .89$, $p < .001$) and the older adult profile ($r = .87$, $p < .001$). In addition, the middle-adult profile was significantly related to the older-adult profile ($r = .90$, $p < .001$). For trait affect, the young adult profile was significantly related to the middle adult profile ($r = .93$, $p < .001$) and the older adult profile ($r = .97$, $p < .001$). A significant relationship was also found between the middle-adult profile and the older-adult profile ($r = .96$, $p < .001$). For life satisfaction, the young adult profile was not significantly related to the middle adult profile ($r = .51$, $p = .38$) but was significantly related to the older adult profile ($r = .98$, $p = .003$). Finally, the middle-adult profile was not significantly related to the older-adult profile ($r = .57$, $p = .32$). These correlations indicate that targets were highly similar across age groups for the domains investigated, with the exception of life satisfaction.

person on item *i* is held constant at the average. β_{2jt} represents the predicted value of normativity when the criterion value for item *i* is held constant at the average.

Equation 1.2 represents the breakdown of the base model and the calculation of the intercept, distinctive accuracy, and normativity. One of the benefits of using SAM is that the model allows for the inclusion of moderators that can be entered into the level 2 equations. This can either be done through dummy coding or effects coding when comparing groups, or with continuous variables. γ_{10} and γ_{20} represent the average intercepts for distinctive accuracy and normativity, respectively. γ_{11} and γ_{21} represent the slope of the moderator, or the relationship between the moderator and either distinctive accuracy or normativity. The residuals of the model are represented by the last two components in each line of equation 1.2. u_{0j}, u_{1j}, and u_{2j} represent the residual variance of the intercept, distinctive accuracy, and normativity of the judge, and u_{0t}, u_{1t}, and u_{2t} describe the same set of residuals for the target. Distinctive accuracy and normativity were estimated for all groups combined and for each individual condition in addition to analysis of Hypotheses 1 and 2. These estimates were already provided as part of the SAM output (in the form of the estimate for *Tcrit/AP*) and will required no extra analyses.

Hypothesis 1. The nested models for the multilevel equations for Hypothesis 1 can be found in equations 2.1 and 2.2. Hypothesis 1 predicted that accuracy would decrease as the age-discrepancy between judges and targets increases, with accuracy being the highest in the young adult condition and the lowest in the older adult condition.

These equations include the moderator of age group, which will be represented through dummy coding. This model is the same as equations 1.1 and 1.2, with the addition of the age group moderator in the second level of the equation.

$$Y_{jti} = \beta_{0jt} + \beta_{1jt}\, TCrit_{ti} + \beta_{2jt}\, AP_i + \varepsilon_{jti} \quad (2.1)$$

$$\beta_{0jt} = \gamma_{00} + \gamma_{01} conMA + \gamma_{02} conOA + u_{0j} + u_{0t} \quad (2.2)$$

$$\beta_{1jt} = \gamma_{10} + \gamma_{11} conMA + \gamma_{12}\, conOA + u_{1j} + u_{1t}$$

$$\beta_{2jt} = \gamma_{20} + \gamma_{21} conMA + \gamma_{22}\, conOA + u_{2j} + u_{2t}$$

In the example above, the two dummy coded variables were *conMA* (1=MA, 0=OA, 0=YA) and *conOA* (1=OA, 0=MA, 0=YA). The young adult condition is the comparison (or reference) group in this example and is always coded as 0. This analysis results in the regression coefficient representing the difference in accuracy between the condition coded as 1 and the condition always coded as 0, with β_{1jt} and β_{2jt} representing the differences between groups for distinctive accuracy and normativity, respectively. *Tcrit* and *AP* represent the estimated distinctive accuracy and normativity scores for the young adult or comparison condition. A positive regression coefficient indicates that the specified condition predicts greater accuracy compared to the young adult condition, while a negative regression coefficient indicates the opposite. This same analysis was done with the middle adult condition as the comparison group to compare the older adult condition with the middle adult condition.

Hypothesis 2. The nested models for the multilevel equations for Hypothesis 2 can be found in equations 3.1 and 3.2. Hypothesis 2 predicted that individual characteristics of judges will moderate differences in accuracy across age groups, with the characteristics of psychological well-being; affect balance; life satisfaction; attributional complexity; openness to experience; knowledge about aging; and quantity and quality of exposure to older adults, grandparents, middle adults, and parents as negative moderators, and the characteristics of explicit ageism and anxiety about aging as positive moderators. These equations include the

interaction term of age group and the continuous moderator. This analysis results in the examination of a 3-way interaction between either the accuracy criterion or normative profile, age group, and a continuous moderator. The moderators were tested in separate SAM equations. These models are the same as equations 2.1 and 2.2, with the addition of the interaction between age group and a continuous moderator in the second level of the equation. Comparing groups through dummy coding was achieved in the same way described in Hypothesis 1.

$$Y_{jti} = \beta_{0jt} + \beta_{1jt}\, TCrit_{ti} + \beta_{2jt}\, AP_i + \varepsilon_{jti} \quad (3.1)$$

$$\beta_{0jt} = \gamma_{00} + \gamma_{01} conMA{*}MOD_j + \gamma_{02} conOA{*}MOD_j + u_{0j} + u_{0t} \quad (3.2)$$

$$\beta_{1jt} = \gamma_{10} + \gamma_{11} conMA{*}MOD_j + \gamma_{12}\, conOA{*}MOD_j + u_{1j} + u_{1t}$$

$$\beta_{2jt} = \gamma_{20} + \gamma_{21} conMA{*}MOD_j + \gamma_{22}\, conOA{*}MOD_j + u_{2j} + u_{2t}$$

This analysis results in the regression coefficient representing the difference in either distinctive accuracy or normativity between conditions depending on the level of the continuous moderator. β_{1jt} and β_{2jt} represent the differences between two conditions with the interaction of a moderator for distinctive accuracy and normativity, respectively. *Tcrit* and *AP* represent the estimated distinctive accuracy and normativity scores for the comparison condition. A significant positive regression coefficient indicates that the specified condition (coded as 1) interacts with the continuous moderator to predict a higher level of accuracy compared to the comparison condition. This outcome indicates a positive moderation in that higher levels of the moderator are related to an increase in accuracy between the two conditions with accuracy being higher in the specified condition. A significant negative regression coefficient indicates a negative moderation, in that higher levels of the moderator are related to a decrease in accuracy between the two conditions with a higher level of accuracy in the comparison condition. Gelman's *d*

effect sizes were calculated to more fully explain the role of moderators in differences in distinctive accuracy or normativity between age group conditions. Calculating Gelman's *d* is suggested when the effect size estimate of continuous variables must be comparable to the effects of condition assignment or grouped variables. It is calculated as the amount of change in an accuracy slope for a two standard deviation change in the moderator, divided by that slope's random effect standard deviation and multiplied by two in the case of a continuous moderator (Gelman, 2008; Human & Biesanz, 2011; Letzring & Human, 2013). If a significant 3-way interaction was found between distinctive accuracy or normativity, age group, and a moderator, accuracy estimates of the moderations by individual age group were examined to dissect this 3-way interaction. These estimates were already provided as part of the SAM output (in the form of the interaction estimate between *Tcrit/AP* and the moderator) and required no extra analyses to acquire.

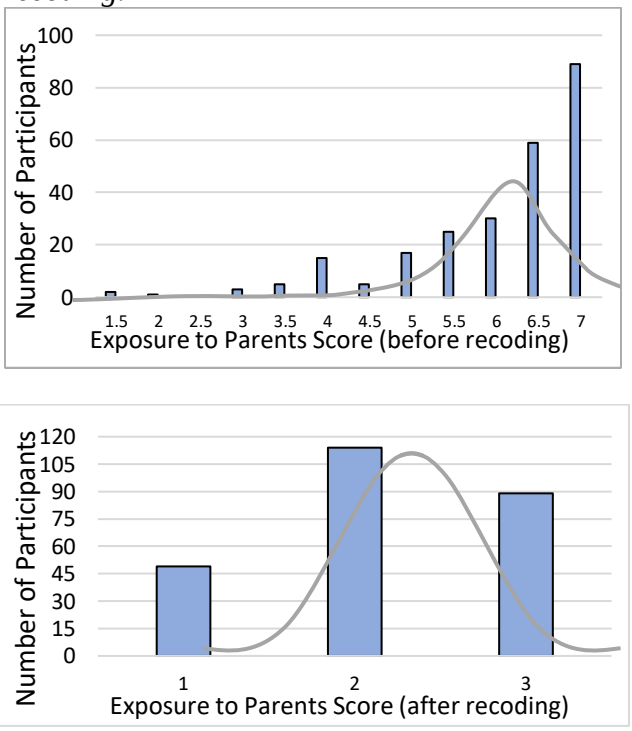
Data Preparation

All data were collected using Qualtrics, a data collection software. For multiple-choice measures, correct answers were coded as "1" while incorrect answers were coded as "0". All self-reported judge variables that were gathered to test moderations were transformed into *z*-scores to keep variability consistent and interpretation more straightforward across variables. To assess the distribution of each measure, skewness, kurtosis, histograms and q-q plots were examined. While SAM is a powerful statistical approach that can handle a fair amount of non-normality within the data, the high level of skewness and kurtosis for the variable of exposure to parents was a concern, with a value of approximately 1 being the cut-off point. Several attempts at transformation did not change the distribution, therefore, the variable was recoded in an

attempt to normalize the distribution.[20] The original distribution of this variable and the distribution after recoding can be found in Figure 1. Descriptive statistics for all judge variables can be found in Table 2. Relationships between the judges' self-report scores can be found in Table 3. Moderations and *d* effect sizes across all judges and conditions can be found in Table 4 to demonstrate how judge characteristics influence levels of accuracy when age group is not taken into account.[21]

Figure 1

Distribution of Judge Exposure to Parents with a Normal Curve, Both Before and After Recoding.



[20] Several attempts were made at recoding this variable, with the goal being to normalize the distribution as much as possible (evaluated through histograms and the number of participants in each range of values) and to reduce skewness and kurtosis to a reasonable level. For the re-coding that was utilized for the final data analysis, original scores ranging between 1 and 5 were recoded as 1; scores ranging between 5.5 and 6.5 were recoded as 2; and scores of 7 were recoded as 3. This recoding reduced skewness to -.26 and kurtosis to -1.05, which was a considerable improvement from the original variable.

[21] This analysis differs from Hypothesis 2 in that moderations are not being compared across age groups.

Table 2

Descriptive Statistics of Judge Variables.

Variable	*M* (*SD*)	Range	95% CI	Skewness	Kurtosis
PWB	4.34 (.63)	1.92-5.96	4.26-4.42	-.48	.59
SWL	4.85 (1.36)	1-7	4.68-5.02	-.63	-.17
AB	1.52 (1.10)	-2.8-3.7	1.38-1.66	-.82	.98
AC	1.09 (.58)	-.86-2.32	1.02-1.16	-.41	-.09
OM	3.79 (.68)	1.92-5	3.71-3.87	-.36	-.50
EA	1.88 (.36)	1.03-2.9	1.84-1.92	.32	-.16
KA	13.11 (3.75)	6-26	12.6-13.6	.69	.66
AA	2.13 (.44)	1.1-3.3	2.08-2.18	.10	.13
EOA	4.23 (1.74)	1-7	4.02-4.45	-.21	-1.15
EGP	4.34 (1.74)	1-7	4.13-4.55	-.37	-.99
EMA	5.63 (1.18)	1-7	5.48-5.78	-.98	.67
EP	6.07 (1.12)	1.5-7	5.93-6.21	-1.53	2.30

Note. N = 251. Descriptive statistics of all moderators were calculated prior to standardization. PWB = psychological well-being; SWL = satisfaction with life; AB = affect balance; AC = attributional complexity; OM = open mindedness; EA = explicit ageism; KA = knowledge about aging; AA = anxiety about aging; EOA = exposure to older adults; EGP = exposure to grandparents; EMA = exposure to middle adults; EP = exposure to parents.

Table 3

Relationships Between Judge Variables.

	SWL	AB	AC	EA	KA	AA	E	A	C	OM	NE	EOA	EGP	EMA	EP
PWB	.64**	.75**	.13*	-.25**	.05	-.42**	.57**	.40**	.51**	.03	-.62**	.11	.09	.21**	.14*
SWL		.56**	-.26**	-.10	-.007	-.26**	.26**	.36**	.39**	-.12	-.44**	.02	.05	.18**	.15*
AB			-.32**	-.13*	-.02	-.32**	.50**	.35**	.48**	.04	-.61**	.10	.04	.20**	.10
AC				.48**	-.06	.08	-.31**	-.38**	-.21**	.01	.32**	.08	-.22**	-.10	.12
EA					-.06	.48**	-.18**	-.37**	-.19**	-.12*	.10	-.41**	-.33**	-.20**	-.13*
KA						.06	.02	.05	.11	.03	-.04	.06	-.09	.07	-.002
AA							-.31**	-.38**	-.21**	.01	.32**	-.24**	-.22**	-.10	-.12
E								.14*	.35**	-.01	-.33**	.16*	.05	.20**	.10
A									.29*	.14*	-.32**	.20**	.20**	.10	.09
C										-.09	-.32**	.15*	.15*	.18**	.16*
OM											.11	.11	.01	-.001	-.12*
NE												.01	.008	-.03	-.02
EOA													.46**	.38**	.22**
EGP														.26**	.35**
EMA															.16**

Note. *$p < .05$; **$p < .01$. PWB = psychological well-being; SWL = satisfaction with life; AB = affect balance; AC = attributional complexity; EA = explicit ageism; KA = knowledge about aging; AA = anxiety about aging; E= Extraversion; A = agreeableness; C = conscientiousness; OM = open mindedness; NE = negative emotionality; EOA = exposure to older adults; EGP = exposure to grandparents; EMA = exposure to middle adults; EP = exposure to parents.

Table 4

Moderations of Distinctive Accuracy and Normativity for Judgments of Personality Traits, Affect, and Life Satisfaction for All Conditions Combined.

	Distinctive Accuracy		Normativity	
Accuracy of Personality Trait Judgment	*b*	*d*	*b*	*d*
Moderator				
PWB	-.002	-.02	.05**	.25
SWL	-.007	-.06	.05**	.29
AB	-.01	-.09	.06***	.35
AC	.02**	.18	.04*	.22
OM	-.001	-.009	.04*	.23
EA	-.01	-.10	-.10***	-.57
KA	-.006	-.05	.008	.04
AA	.002	.02	.05**	.30
EOA	-.0001	-.001	.07***	.38
EGP	.007	.06	.08***	.42
EMA	.01	.09	.07***	.39
EP	.006	.05	.06***	.34

	Distinctive Accuracy		Normativity	
Accuracy of Affect Judgment	*b*	*d*	*b*	*d*
Moderator				
PWB	-.02*	-.15	.04*	.23
SWL	-.03**	-.21	.05**	.30
AB	-.04**	-.22	.09***	.51
AC	.03*	.19	.01	.08
OM	.02	.12	.002	.009
EA	-.005	-.03	-.06***	-.34
KA	-.005	-.03	.004	.02

AA	.01	.08	-.04*	-.22
EOA	.004	.02	.06***	.34
EGP	.01	.07	.06***	.36
EMA	.004	.02	.06**	.33
EP	-.003	-.02	.06***	.32

	Distinctive Accuracy		Normativity	
Accuracy of Life Satisfaction Judgments	*b*	*d*	*b*	*d*
Moderator				
PWB	-.02*	-.05	.03	.11
SWL	-.04*	-.13	.02	.08
AB	-.01	-.05	.03	.13
AC	.02	.06	.07	.32
OM	.009	.03	.0007	.003
EA	.01	.03	.02	.11
KA	-.04	-.14	-.04	-.16
AA	.008	.02	.01	.05
EOA	-.02	-.06	-.01	-.07
EGP	-.02	-.06	.007	.03
EMA	-.008	-.02	-.02	-.08
EP	-.03	-.12	.004	.02

Note. N = 251. *$p < .05$, **$p < .01$, ***$p < .001$. Standard errors (not shown) were all highly similar across individual-component moderators of distinctive accuracy and normativity due to the standardization of variables prior to data analysis. *b* = coefficient from SAM, *d* = Gelman's *d*. PWB = psychological well-being; SWL = satisfaction with life; AB = affect balance; AC = attributional complexity; OM = open mindedness; EA = explicit ageism; KA = knowledge about aging; AA = anxiety about aging; EOA = exposure to older adults; EGP = exposure to grandparents; EMA = exposure to middle adults; EP = exposure to parents.

Chapter 4: Results

Hypothesis 1

Hypothesis 1 predicted that accuracy would decrease as the age-discrepancy between judges and targets increased, and that young adults would be the most accurate in judgments of young adults and the least accurate in judgments of older adults. Accuracy of judging personality traits, trait affect, and life satisfaction was assessed using the components of distinctive accuracy and normativity. Hypothesis 1 was analyzed through the use of SAM in which differences in the accuracy of judging each age group condition was assessed with dummy coding. Accuracy across conditions and by condition for each domain was also evaluated using SAM (see Table 5).

To calculate accuracy across conditions, a basic SAM equation without moderators was run that included all judges, regardless of condition. To calculate accuracy by individual condition and compare accuracy between conditions, dummy coded analyses were run. For the dummy coded analyses, distinctive accuracy and normativity estimates with no interactions represented the distinctive accuracy and normativity scores of the comparison condition (always coded as 0). The interaction terms between distinctive accuracy/normativity and the condition coded as 1 represented the differences in estimated accuracy between the comparison condition and the condition coded as 1. Using this logic, it was only necessary to run analyses with two conditions as the comparison group to calculate accuracy scores for all three conditions and to determine differences in accuracy between conditions.[22]

[22] Dummy coded analyses with the OA condition as the comparison condition were not necessary to calculate OA accuracy scores but were required to determine standard errors.

Table 5

Distinctive Accuracy and Normativity of Personality Trait, Affect, and Life Satisfaction Judgments Across Conditions and by Condition.

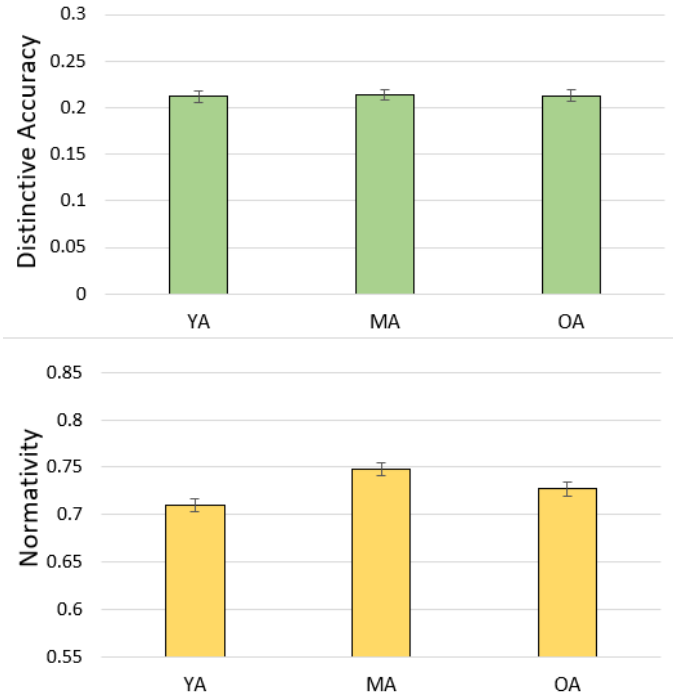
	Distinctive Accuracy		**Normativity**	
Accuracy of Personality Trait Judgments	*b*	*SE*	*b*	*SE*
Across conditions	.213**	.031	.729***	.037
Young adults	.212***	.032	.710***	.039
Middle adults	.214***	.032	.748***	.039
Older adults	.213***	.032	.727***	.039
Accuracy of Affect Judgments	*b*	*SE*	*b*	*SE*
Across conditions	.184***	.043	.806***	.037
Young adults	.185***	.044	.800***	.038
Middle adults	.173***	.044	.806***	.038
Older adults	.194***	.044	.811***	.038
Accuracy of Life Satisfaction Judgments	*b*	*SE*	*b*	*SE*
Across conditions	.109	.088	.703***	.071
Young adults	.118	.090	.752***	.082
Middle adults	.113	.090	.637***	.082
Older adults	.097	.090	.717***	.082

Note. N = 251. ***$p < .001$, **$p<.01$. *b* = coefficient from SAM, *SE* = standard error. *SE* was included in output estimates of accuracy scores by comparison condition.

For the first test of hypothesis 1, distinctive accuracy of personality trait judgments was compared across the three age group conditions of young adult, middle adult, and older adult. No difference was found between the young adult and middle adult conditions (b = .001, SE = .012, p = .90), the young adult and older adult conditions (b = .0002, SE = .012, p = .98), or the middle adult and older adult conditions (b = -.001, SE = .012, p = .92). For normativity of personality trait judgments, no difference was found between the young adult and older adult conditions (b = .017, SE = .011, p = .11). However, a significant difference was found between the young adult and middle adult conditions (b = .038, SE = .011, p < .001), as well as the middle adult and older adult conditions (b = -.021, SE = .011, p = .048). In both instances, middle adults were perceived with a significantly higher level of normativity. Differences in distinctive accuracy and normativity of personality trait judgments can be seen in Figure 2. Green bars represent levels of distinctive accuracy, while yellow bars denote levels of normativity for all bar graphs.

Figure 2

Distinctive Accuracy and Normativity of Personality Trait Judgments by Age Group.



Note. Error bars denote 95% confidence intervals.[23] Y-axes are in units of beta.

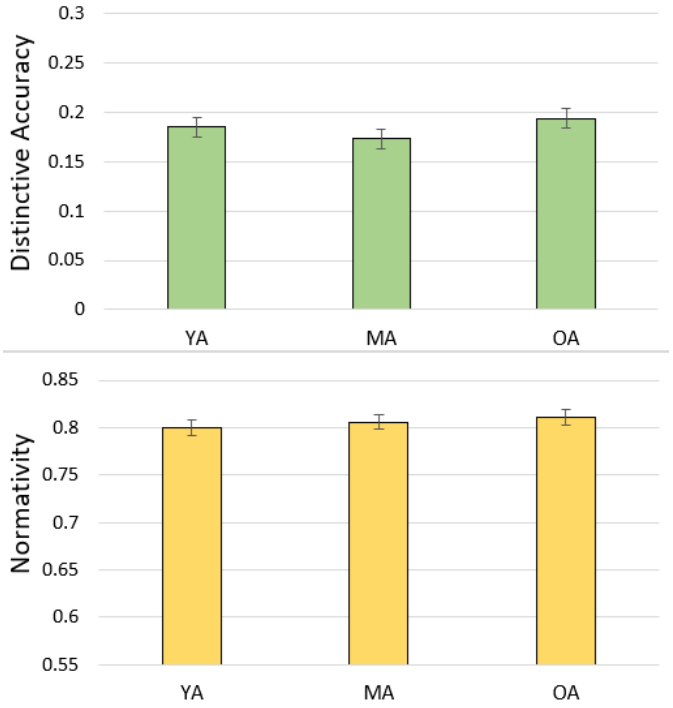
Next, distinctive accuracy of affect judgment was compared across the three age group conditions. No difference was found between the young adult and middle adult conditions (b = -.012, SE = .021, p = .56), the young adult and older adult conditions (b = .009, SE = .021, p = .65), or the middle adult and older adult conditions (b = .021, SE = .020, p = .30). For normativity of affect judgments, no difference was found between the young adult and middle

[23] To compute confidence intervals for figures, standard deviations (SDs) were calculated in Excel using standard errors (SEs) and the sample size (N) with the formula, SD = SE∗ √N. Next, an online calculator (Pierce, 2018) was used to calculate 95% confidence intervals for each figure, using means, standard deviations, and sample sizes. All figures were created in Excel.

adult conditions (b = .006, SE = .012, p = .62), the young adult and older adult conditions (b = .011, SE = .012, p = .37), or the middle adult and older adult conditions (b = .005, SE = .012, p = .68). See Figure 3 for differences in distinctive accuracy and normativity of affect judgments.

Figure 3

Distinctive Accuracy and Normativity of Affect Judgments by Age Group.



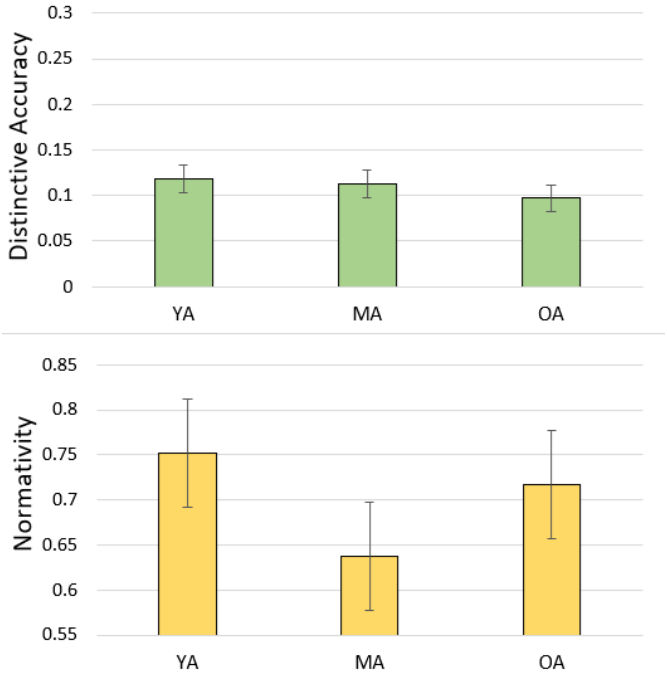
Note. Error bars denote 95% confidence intervals. Y-axes are in units of beta.

Finally, distinctive accuracy of life satisfaction judgments was compared across conditions. No difference was found between the young adult and middle adult conditions (b = -.004, SE = .031, p = .89), the young adult and older adult conditions (b = -.021, SE = .031, p = .50), or the middle adult and older adult conditions (b = -.017, SE = .030, p = .58). For normativity of life satisfaction judgments, once again no difference was found between the young adult and middle adult conditions (b = -.115, SE = .071, p = .11), the young adult and older adult conditions (b = -.034, SE = .071, p = .63), or the middle adult and older adult

conditions (b = .081, SE = .071, p = .25). Differences in distinctive accuracy and normativity of life satisfaction judgments can be seen in Figure 4.

Figure 4

Distinctive Accuracy and Normativity of Life Satisfaction Judgments by Age Group.



Note. Error bars denote 95% confidence intervals. Y-axes are in units of beta.

Hypothesis 2

Hypothesis 2 predicted that differences in distinctive accuracy and normativity between age group conditions for judgments of personality, affect, and life satisfaction would be moderated by a variety of judge characteristics. Hypothesis 2 was also analyzed using dummy coding in SAM, with the addition of a single moderator for each analysis. If a significant three-way interaction was found, estimates of moderations by individual condition were investigated. Additional analyses were not required to do this, as the interaction estimates of distinctive

accuracy/normativity and the moderator represented the moderation estimate for the comparison condition. Moderations of distinctive accuracy and normativity and *d* effect sizes for judgments of personality, affect, and life satisfaction judgments between groups can be found in Tables 6, 7, and 8, respectively. Gelman's *d* was calculated as the amount of change in an accuracy slope for a two standard deviation change in the moderator, divided by that slope's random effect standard deviation (Gelman, 2008; Human & Biesanz, 2011; Letzring & Human, 2013).

Table 6

Moderations of Distinctive Accuracy and Normativity of Personality Trait Judgment Compared Across Conditions.

	Moderator: Psychological Well-Being			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.006	.03	-.014	-.07
MA and OA	.004	.01	-.008	-.02
YA and OA	.011	.03	-.022	-.06
	Moderator: Satisfaction with Life			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.008	.04	.002	.008
MA and OA	.015	.04	-.011	-.03
YA and OA	.023	.06	-.009	-.03
	Moderator: Affect Balance			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.011	.05	-.010	-.04
MA and OA	.006	.02	-.008	-.02

YA and OA	.017	.05	-.018	-.05
	Moderator: Attributional Complexity			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	-.003	-.01	.021	.09
MA and OA	-.018	-.05	-.014	-.04
YA and OA	-.020	-.06	.007	.02
	Moderator: Open-Mindedness			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	-.012	-.05	.006	.03
MA and OA	.004	.01	.004	.01
YA and OA	.006	-.02	.010	.03
	Moderator: Explicit Ageism			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.007	.03	-.019	-.08
MA and OA	-.005	-.01	.014	.04
YA and OA	.002	.006	-.004	-.01
	Moderator: Knowledge about Aging			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	-.006	-.03	-.020	-.09
MA and OA	.018	.05	-.008	-.02
YA and OA	.012	.03	-.028	-.08
	Moderator: Aging Anxiety			
	Distinctive Accuracy		Normativity	

Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.001	.006	-.002	-.01
MA and OA	-.008	-.02	-.009	-.03
YA and OA	-.007	-.02	-.011	-.03
	Moderator: Exposure to Older Adults			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.0006	.003	-.015	-.07
MA and OA	.007	.02	.001	.003
YA and OA	.007	.02	-.014	-.04
	Moderator: Exposure to Grandparents			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.008	.04	.007	.03
MA and OA	.004	.01	-.027*	-.08
YA and OA	.012	.03	-.020	-.06
	Moderator: Exposure to Middle Adults			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	-.006	-.03	.014	.06
MA and OA	.019	.05	-.017	-.05
YA and OA	.013	.04	-.004	-.010
	Moderator: Exposure to Parents			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.007	.03	.008	.03
MA and OA	.021	.06	-.030**	-.08

YA and OA	.028*	.08	-.022*	-.06

Note. N = 251. *$p < .05$; **$p < .01$. Standard errors were highly similar due to standardization of variables prior to data analysis and were approximately .011 for estimates of distinctive accuracy and .012 for estimates of normativity.

Table 7

Moderations of Distinctive Accuracy and Normativity of Affect Judgment Compared Across Conditions.

	Moderator: Psychological Well-Being			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.018	.06	-.013	-.04
MA and OA	-.015	.04	.004	.01
YA and OA	.033	.09	-.009	-.03
	Moderator: Satisfaction with Life			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.0005	.002	-.006	-.02
MA and OA	.015	.04	.008	.02
YA and OA	.015	.04	.002	.007
	Moderator: Affect Balance			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.015	.05	-.017	-.05
MA and OA	.007	.02	-.002	-.006
YA and OA	.022	.06	-.017	-.06
	Moderator: Attributional Complexity			

	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.034	.10	-.014	-.04
MA and OA	-.027	-.08	-.0002	-.0006
YA and OA	.007	.02	-.014	-.04

Moderator: Open-Mindedness

	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.024	.07	-.011	-.03
MA and OA	-.009	-.03	.015	.04
YA and OA	-.014	.04	.004	.01

Moderator: Explicit Ageism

	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	-.030	-.09	.013	.04
MA and OA	.022	.06	.013	.04
YA and OA	-.008	-.02	.027	.08

Moderator: Knowledge about Aging

	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	-.001	-.003	.016	.05
MA and OA	-.001	-.003	-.014	-.04
YA and OA	-.002	-.007	.002	.007

Moderator: Aging Anxiety

	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	-.026	-.08	-.006	-.02

MA and OA	-.010	-.03	.007	.02
YA and OA	-.037	-.11	.002	.005
	Moderator: Exposure to Older Adults			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.012	.04	-.005	-.02
MA and OA	.007	.02	-.0004	-.001
YA and OA	.019	.05	-.005	-.02
	Moderator: Exposure to Grandparents			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	-.006	-.02	-.007	-.02
MA and OA	.017	.05	-.010	-.03
YA and OA	.010	.03	-.017	-.05
	Moderator: Exposure to Middle Adults			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.029	.09	-.009	-.03
MA and OA	-.018	-.05	.02	.07
YA and OA	.011	.03	.013	.04
	Moderator: Exposure to Parents			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	-.021	-.06	-.006	-.02
MA and OA	.018	.05	-.001	-.004
YA and OA	-.003	-.01	-.007	-.02

Note. N = 251. All *p* values are greater than .05. Standard errors were highly similar due to standardization of variables prior to data analysis and were approximately .012 for estimates of distinctive accuracy and .021 for estimates of normativity.

Table 8

Moderations of Distinctive Accuracy and Normativity of Life Satisfaction Judgment Compared Across Conditions.

	Moderator: Psychological Well-Being			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.069*	.11	-.012	-.02
MA and OA	-.051	-.11	-.073	-.16
YA and OA	.018	.04	-.084	-.18
	Moderator: Satisfaction with Life			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.034	.06	-.020	-.03
MA and OA	-.061*	-.13	.033	.07
YA and OA	-.026	-.06	.013	.03
	Moderator: Affect Balance			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.042	.07	-.010	-.16
MA and OA	-.031	.07	-.005	-.12
YA and OA	.012	.03	-.156*	-.34
	Moderator: Attributional Complexity			
	Distinctive Accuracy		Normativity	

Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	-.002	-.003	-.086	-.14
MA and OA	-.028	-.06	-.005	-.01
YA and OA	-.029	-.07	-.091	-.20
	Moderator: Open-Mindedness			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.014	.02	.0009	.001
MA and OA	-.016	-.03	-.074	-.16
YA and OA	-.002	-.004	-.073	-.16
	Moderator: Explicit Ageism			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.030	.05	-.002	-.003
MA and OA	.022	.05	.070	.15
YA and OA	.052	.11	.068	.15
	Moderator: Knowledge about Aging			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.001	.002	.10	.16
MA and OA	-.030	-.07	-.006	-.01
YA and OA	-.029	-.06	.096	.21
	Moderator: Aging Anxiety			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	-.039	-.06	.047	.07
MA and OA	.043	.10	.051	.11

YA and OA	.004	.01	.097	.22
	Moderator: Exposure to Older Adults			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.010	.02	-.007	-.01
MA and OA	-.021	-.05	-.071	-.16
YA and OA	-.011	-.02	-.079	-.17
	Moderator: Exposure to Grandparents			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	-.024	-.04	-.055	-.09
MA and OA	.008	.02	-.049	-.11
YA and OA	-.016	-.04	-.10	-.23
	Moderator: Exposure to Middle Adults			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.048	.08	.052	.08
MA and OA	-.015	-.03	-.16	-.34
YA and OA	.033	.07	-.11	-.23
	Moderator: Exposure to Parents			
	Distinctive Accuracy		Normativity	
Comparison Groups	*b*	*d*	*b*	*d*
YA and MA	.0002	.0003	.064	.10
MA and OA	-.0007	-.001	-.039	-.08
YA and OA	-.0005	-.001	.026	.06

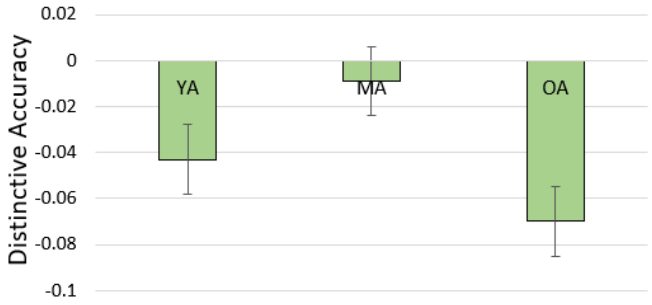
Note. N = 251. *$p < .05$. Standard errors were highly similar due to standardization of variables prior to data analysis and were approximately .072 for estimates of distinctive accuracy and .031 for estimates of normativity.

Moderations Across Conditions. Based on analyses from hypothesis 2, relatively few significant moderations across conditions were found compared to the number of tests conducted. Significant findings are described below.

Satisfaction with Life. Satisfaction with life was a significant moderator of differences in distinctive accuracy (but not normativity) of judging life satisfaction between the middle adult and older adult conditions (b = -.061, SE = .003, p = .04, d = .13). To interpret this finding, moderations of distinctive accuracy for each individual age group were examined. Satisfaction with life did not significantly predict distinctive accuracy for judgments of middle adults (b = -.009, SE = .03, p = .73), but did significantly predict lower distinctive accuracy scores for judgments of older adults (b = -.070, SE = .02, p = .008). According to estimates of b, judge life satisfaction predicted the greatest decrease in distinctive accuracy for judgments of older adults. Moderation estimates of life satisfaction for distinctive accuracy by age group can be found in Figure 5. Judge satisfaction with life was not a significant moderator of differences in distinctive accuracy or normativity across groups for judgments of personality or affect.

Figure 5

Judge Life Satisfaction as a Moderator of Distinctive Accuracy of Judging Life Satisfaction by Age Group.

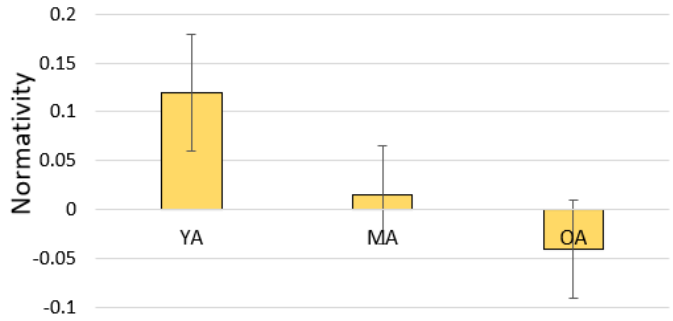


Note. Error bars denote 95% confidence intervals. Y-axis is in units of beta.

Affect Balance. Judge affect balance was a significant moderator of differences in normativity (but not distinctive accuracy) of judging life satisfaction between the young adult and older adult conditions (b = -.156, SE = .07, p = .04, d = -.34). Affect balance did not significantly predict normativity for judgments of young adults (b = .117, SE = .06, p = .07), or older adults (b = -.04, SE = .06, p = .50). According to estimates of b, this moderator predicted the strongest increase in normativity for judgments of young adults and predicted a *decrease* in normativity for judgments of older adults. Moderation estimates of affect balance for normativity by age group can be found in Figure 6. Judge affect balance was not a significant moderator of differences in distinctive accuracy or normativity across groups for judgments of personality or affect.

Figure 6

Judge Affect Balance as a Moderator of Normativity of Judging Life Satisfaction by Age Group.



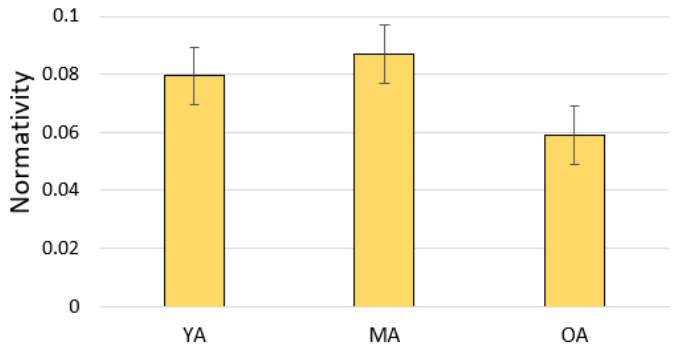
Note. Error bars denote 95% confidence intervals. Y-axis is in units of beta.

Exposure to Grandparents. Judge exposure to grandparents was a significant moderator of normativity (but not distinctive accuracy) of judging personality between the middle adult and older adult conditions (b = -.027, SE = .01, p = .01, d = -.08). Exposure to grandparents was a significant predictor of higher normativity scores for judgments of middle adults (b = .087, SE = .03, p < .001) and older adults (b = .059, SE = .01, p = .001). According to estimates of b, this

moderator predicted the strongest increase in normativity for judgments of middle adults. Moderation estimates of exposure to grandparents for normativity estimates by age group can be found in Figure 7. Judge exposure to grandparents was not a significant moderator of differences in distinctive accuracy or normativity across groups for judgments of affect or life satisfaction.

Figure 7

Judge Exposure to Grandparents as a Moderator of Normativity of Judging Personality by Age Group.

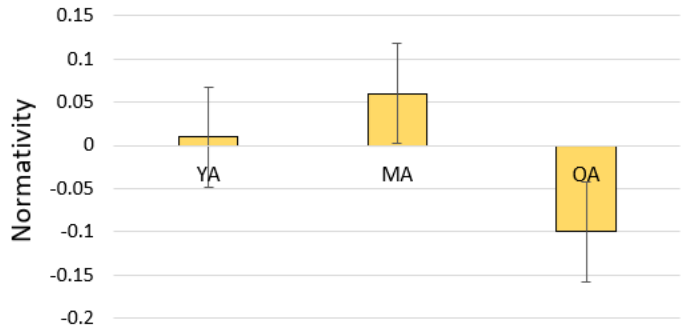


Note. Error bars denote 95% confidence intervals. Y-axis is in units of beta.

Exposure to Middle Adults. Exposure to middle adults was a significant moderator of differences in normativity (but not distinctive accuracy) of judging life satisfaction between the middle adult and older adult conditions (b = -.165, SE = .07, p = .02, d = -.34). This moderator did not significantly predict distinctive accuracy for judgments of middle adults (b = .063, SE = .06, p = .30) or older adults (b = -.101, SE = .06, p = .07). According to estimates of b, judge exposure to middle adults predicted an increase in normativity for judgments of middle adults and predicted a *decrease* in normativity for judgments of older adults. Moderation estimates of exposure to middle adults for normativity by age group can be found in Figure 8. Judge exposure to middle adults was not a significant moderator of differences in distinctive accuracy or normativity across groups for judgments of personality or affect.

Figure 8

Judge Exposure to Middle Adults as a Moderator of Normativity of Judging Life Satisfaction by Age Group.



Note. Error bars denote 95% confidence intervals. Y-axis is in units of beta.

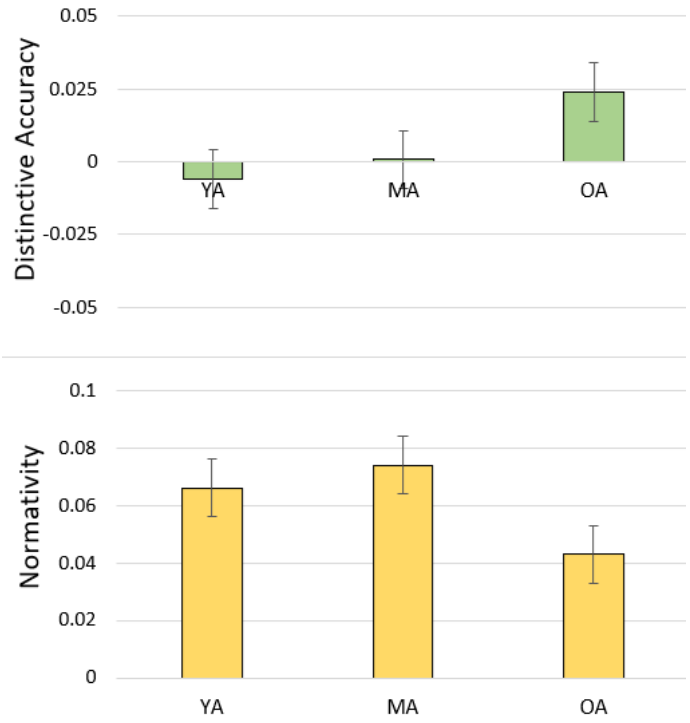
Exposure to Parents. Judge exposure to parents was a significant moderator of differences in distinctive accuracy of judging personality between the young adult and older adult conditions (b = .028, SE = .01, p = .02, d = .08). Exposure to parents did not significantly predict distinctive accuracy of judging young adults (b = -.006, SE = .01, p = .55) but did significantly predict higher levels of distinctive accuracy for judgments of older adults (b = .024, SE = .01, p = .02). According to estimates of b, this moderator predicted the strongest increase in distinctive accuracy for judgments of older adults and predicted a *decrease* in distinctive accuracy for judgments of young adults.

Judge exposure to parents was also a significant moderator of differences in normativity of judging personality between the young adult and older adult conditions (b = -.022, SE = .01, p = .04, d = -.06), as well as between the middle adult and older adult conditions (b = -.030, SE = .01, p = .005, d = -.08). This moderator significantly predicted normativity of judging young adults (b = .066, SE = .02, p < .001), middle adults (b = .074, SE = .02, p < .001), and older

adults (*b* = .043, *SE* = .02, *p* = .02). According to estimates of *b*, judge exposure to parents predicted the strongest increase in normativity for judgments of middle adults. Moderation estimates of exposure to parents for distinctive accuracy and normativity by age group can be found in Figure 9. Judge exposure to parents was not a significant moderator of differences in distinctive accuracy or normativity across groups for judgments of affect or life satisfaction.

Figure 9

Judge Exposure to Parents as a Moderator of Distinctive Accuracy and Normativity of Judging Personality by Age Group.



Note. Error bars denote 95% confidence intervals. Y-axes are in units of beta.

Other moderators. The other judge moderators investigated (psychological well-being, attributional complexity, open mindedness, explicit ageism, knowledge about aging, aging anxiety, and exposure to older adults) were not significant moderators of differences in

distinctive accuracy or normativity across groups for judgments of personality, affect, or life satisfaction.

Chapter 5: Discussion

This study aimed to identify whether young adults judge their own age group more accurately compared to older age groups, and whether individual differences of young adults judges, including well-being, attributional complexity, personality traits, and ageism play a role in the accuracy of personality trait and well-being judgments across age groups. The current study was the first to investigate the role of age in the accuracy of person perception and whether the age of judges and targets influences accuracy of judging personality traits and well-being. While the main hypotheses were largely unsupported, this research does suggest that young adults may be more adept at distinctively judging the personality traits and trait affect of targets of different ages than previously expected, and especially adept at normatively judging the personality traits, trait affect, and life satisfaction of targets of different ages. It was anticipated that young adults would be adept at accurately judging their own age group, but not necessarily older age groups. The findings suggest that young adults are capable of making accurate judgments of targets regardless of age across a variety of domains with very few differences in levels of accuracy across judgments of different age groups. Furthermore, some judge characteristics may moderate differences in the accuracy of judging personality and life satisfaction (but not affect) across target age groups.

Hypothesis 1

Hypothesis 1 predicted that distinctive accuracy and normativity would decrease as the age-discrepancy between judges and targets increased, and therefore that young adults would be

the most accurate in judgments of young adults and the least accurate in judgments of older adults. Judgment domains of interest were personality traits and two components of subjective well-being: trait affect and life satisfaction. Distinctive accuracy and normativity of judging individual age groups was investigated, as well as differences in accuracy across judgments of different age groups. Hypothesis 1 was largely unsupported in that accuracy did not differ across judgments of different age groups, with the single exception being normativity of personality trait judgments. More specifically, young adults made significantly more normative judgments of middle adults compared to both young adults and older adults. This may indicate that young adults perceive middle adults more favorably (given the oftentimes high association between the normative profile and a socially desirable profile; Biesanz, 2010), and/or that young adults are simply relying more heavily on information about what the average middle adult is like to make judgments of this age group.

Examining this finding through the lens of the RAM (Funder, 1995; 1999; 2012), it is possible that middle adult targets are presenting more relevant and available cues that are coming across as more likable. Young adult judges are detecting and utilizing these cues in a way that leads to perceptions of middle adults that are more normative, or favorable. It is noteworthy that young adult judges in the current study had more quality and quantity of exposure to middle adults than previous research has suggested should be the case (Kalavar, 2001, Knapp & Stubbfield, 2000). Therefore it is possible that given this greater exposure, the young adult judges in this study had a more favorable impression of middle adults to begin with, and were more knowledgeable about what the average middle adult is like (Luo et al., 2013).

Despite the fact that few differences were found in accuracy across age conditions, it is important to note that young adult judges were able to judge targets at a significant level of

normativity, regardless of the target's age group or the domain that was judged. This indicates that young adult judges are skilled in utilizing information about what the average person in an age group is like in their judgments of various domains. Young adult judges were also able to judge targets' personality traits and trait affect at a significant level of distinctive accuracy regardless of age group, which suggests that young adult judges are able to perceive the unique characteristics of a target's personality and affect, even when the target is of a vastly different age compared to the judge. These findings were surprising given previous research that has suggested that young adults' perceptions of older age groups tend to be biased and reliant on negative stereotypes (Chan et al., 2012; Harwood et al., 1996). It is important to note that while previous work has relied on constructed targets through manipulated demographic information (Chan & Mendelsohn, 2010; Correll et al., 2007), or simply had judges rate the average person within an age group without actually observing or encountering a target beforehand (Chan et al., 2012), the current study used targets who were real human beings that young adult judges observed before making perceptions. Therefore, it is possible that observing an actual person is a powerful tool that serves to help lessen the use of bias in judgments. Future research will need to examine both accuracy of judgments and patterns of perceptions using different target stimulus materials to help uncover reasons for this finding.

In terms of the RAM (Funder, 1995; 1999; 2012), these findings may also reflect characteristics of the target interviews, in that targets of all age groups may have been especially adept at revealing distinctive cues relevant to personality traits and trait affect (but not life satisfaction). In addition, targets of all ages were adept at revealing relevant cues that promoted more favorable judgements of what they were like across all judgement domains investigated. Young adult judges did not achieve significant levels of distinctive accuracy for judgments of

life satisfaction regardless of age group, indicating that this trait may not have been as readily expressed by targets under the guidelines of the target interviews and may be more difficult to distinctively judge through 3-4 minute video observations (see Appendix B for a list of questions posed to targets). More research needs to investigate the accuracy of judging life satisfaction to more fully understand how and under what conditions judges are able to make more accurate perceptions of this trait. Overall, these results indicate that young adults are capable of making accurate judgments of targets across several domains, regardless of age.

Hypothesis 2

Hypothesis 2 predicted that differences in distinctive accuracy and normativity between age group conditions for judgments of personality, affect, and life satisfaction would be moderated by a variety of judge characteristics. Hypothesis 2 was largely unsupported, in that no significant moderations were found across age group conditions for judgments of trait affect, and relatively few moderations were found for judgments of personality traits and life satisfaction across judgments of different age groups.

Judgments of Personality. Judge *exposure to grandparents* was a significant moderator for differences in normativity between the middle adult and older adult conditions. This suggests that judges with more exposure to grandparents were better able to detect and utilize cues that promoted a more favorable and normative perception of both middle adults and older adults (Funder, 2012), but the effects of this exposure was the most pronounced for judgments of middle adults. Given that the trends in normativity across age groups fit with the same pattern found for the other *exposure* moderations (with these variables being related to more accurate judgments of middle adults, followed by young adults, and lastly older adults), it is also possible

that exposure to older age groups is not quite as beneficial for normative/favorability judgments of older adults compared to judgments of other age groups.

Judge *exposure to parents* was a significant moderator for differences in distinctive accuracy between the young adult and older adult conditions. Judges with more exposure to parents were more adept at detecting and utilizing distinctive cues provided by older adult targets (Funder, 2012), but not young adult or middle adult targets. This finding demonstrates that exposure to parents has a positive relationship with accurate judgments made about older adults, and that there may be something about the parent-young adult relationship that promotes better detection and utilization of cues provided by older adult targets specifically. It is interesting to note, however, that exposure to parents was not a significant moderator for judgments of middle adults, despite this connection being possible. This supports previous research that has suggested that quality and quantity of exposure to family members of older age groups does not necessarily translate to perceptions of that general age group (Hoogland & Hoogland, 2018). It is also possible that parents of judges were older on average than what this study anticipated, although parent age was not something that was measured within the current study and thus it is not possible to confirm this.

Judge *exposure to parents* was also found to be a significant moderator for differences in normativity between the older adult condition and the other two age groups. Judges with more exposure to parents were better able to detect and utilize normative and favorable cues when judging all three age groups (Funder, 2012), but the effect of this exposure was the most pronounced for judgments of middle adults and the lowest for judgments of older adults. Like other trends involving *exposure* moderators, this may reflect exposure to parents being related to less benefit for normative judgments made about older adults compared to other age groups.

Judgments of Life Satisfaction. Judge *life satisfaction* was a significant moderator for differences in distinctive accuracy between the middle adult and older adult conditions. While this moderator was related to less skill in detecting and utilizing distinctive cues for judgments of all three age groups (Funder, 2012), this judge characteristic was only significantly negatively related to judgments of older adults. This could be a reflection of young adult judges having less experience with this age group and finding it more difficult to identify and utilize relevant cues (Hoogland & Hoogland, 2018; Knapp & Stubbfield, 2000). It is interesting that judges with higher life satisfaction were less skilled in identifying the distinctive qualities of older adult targets' life satisfaction. This may be reflective of judges high in life satisfaction not critically evaluating possible cues provided by this age group. It is also possible that judges with higher life satisfaction simply feel uncomfortable making perceptions of something that could be considered quite personal, and therefore pay less attention to these cues.

Judge *affect balance* was a significant moderator of differences in normativity between the young adult and older adult conditions. Judge affect balance was significantly positively related to judgments of young adults, but not older adults. This moderator was related to *more* normative judgments of young adults and *less* normative judgments of older adults, indicating that young adult judges high in affect balance were more adept at detecting and utilizing normative cues provided by young adults compared to older adults (Funder, 2012).

Judge *exposure to middle adults* was a significant moderator for differences in normativity between the middle adult and older adult conditions. Judge exposure to middle adults was not related to normativity when judging either age group. However, this moderator was related to *more* normative judgments of middle adults and *less* normative judgments of older adults, indicating that young adult judges with more exposure to middle adults are more skilled

at detecting and utilizing cues provided by middle adults compared to older adults (Funder, 2012). This suggests that older adults are judged less normatively when considering this moderator, similar to the pattern seen with the other *exposure* moderations.

While Hypothesis 2 proposed that certain judge moderators should lessen the differences in distinctive accuracy and normativity seen across judgements of age groups, this expectation was reliant on support for Hypothesis 1 and finding the original expected differences in accuracy across judgments of different age groups. Therefore, these results cannot be interpreted under the expectations stated for Hypothesis 2. While most judge characteristics did not influence accuracy differently based on the age group of the targets, these findings suggest that a few judge characteristics may increase differences in accuracy across judgments of different age groups. For each judge characteristics in which significant differences between accuracy of judging different age groups were found, trends indicated less benefit for judgments of older adults compared to other age groups (with the one exception being exposure to parents as a moderator for distinctive accuracy of judging personality). In fact, some moderators that related to *more accurate* judgments of young adults and middle adults were, in turn, related to *less accurate* judgments of older adults.

These significant moderations between age groups should be interpreted with some level of caution, given the number of tests conducted. It is possible that some findings may be due to chance. The current research suggests that the judge characteristics investigated do not moderate differences in levels of accuracy for judgment of *trait affect* between target age groups. However, the findings do suggest that there are certain judge characteristics that moderate differences in accuracy across age groups for judgments of *personality traits* and *life satisfaction*. Since this was only the first study to test this concept, replications will need to be conducted to

confirm these findings. There may be judge characteristics (or target characteristics) that were not investigated in the current study that are important to understanding differences in accuracy of judging different age groups, and certain judge characteristics may only be influential under certain circumstances (such as in face-to-face interactions as opposed to video observations, or within specific situational parameters).

Limitations

There were several limitations with the current study that should be addressed. Firstly, Type I Error may be of some concern with the number of tests required to test both hypotheses, despite the use of a powerful multilevel model approach. As this was the first study to investigate the role of age in accuracy of person perception, it is unknown how these findings would or would not replicate. Future research utilizing more focused research questions may alleviate concerns over the number of tests required and Type I Error.

Another concern was the variability of recruitment methods used to identify targets for the current study. While young adults were recruited from a convenience sample of social and behavioral science classes in which participation in research studies (or some other form of exposure to research) is a mandatory requirement, middle adults and older adults were recruited from the general community on an entirely voluntary basis. Therefore, motivation to participate may have differed across age groups, in that young adults may have viewed research participation as a requirement to pass a class, rather than something that they would choose to do otherwise. This potential difference in motivation may have affected the quality of the target interviews and thus influenced the findings. Targets who are more motivated to participate may be better targets and be more willing to express *relevant* information about themselves that made open and *available* to others (see the Realistic Accuracy Model section; Funder, 1995; 2012).

While content of the target interviews was not coded, middle adult and older adult targets anecdotally came across as more open and talkative during interviews while young adult targets seemed more uncomfortable speaking and less willing to share personal information. It would be possible to code these interviews as part of future research questions by evaluating each statement made by a target for the *type* of information provided (Letzring & Human, 2013).

Another issue related to the targets was the potential quality of the targets utilized. While it can certainly be said that the target sample size was a strength of the current study and promoted a greater level of generalizability to judgments of other targets, the quality of a target was not a prerequisite for inclusion within the current study. Previous research has suggested that differences in judge accuracy are best detected with the use of high-quality targets that are more open with their thoughts, feelings, and behaviors, who are better at producing a large number of relevant cues related to the trait being judged, and thus are more accurately perceived across judges (Rogers & Biesanz, 2019). It is possible that a greater number of judge differences in accuracy across judgments of different age groups were not detected because of potential issues with target quality, and future research should aim to explore the role of age in the accuracy of person perception specifically with the use of high quality targets that tend to be more accurately perceived across judges.

Another potential limitation with the current study was the compromise in external generalizability through the use of video observations as the stimuli for target ratings. It is unknown how these findings would generalize to face-to-face interactions in which the judge has a direct impact on their conversations. With this being said, the use of structured video-recorded interviews could also be viewed as a potential strength that improves internal validity and reduces bias, as there was much greater control across conditions. Since judges and targets did

not interact face-to-face, this reduced a potential confound between individual judge qualities and the information provided by targets, as all judges were exposed to the same sets of target interviews.

Fatigue may have been an issue for judge participants, as this study ran anywhere from 75 minutes to over 2 hours. While a short break was offered to judge participants at the mid-way point of the study (immediately following the videos and ratings of targets), this was not strictly enforced with many judge participants choosing to complete the entire study without pausing, potentially fatiguing themselves in the process. This may have made participants more likely to rush toward the end during the self-report sections, as these were completed after the half-way point of the study. While it is less likely that this issue affected the quality of the target ratings, which were completed first and happened to be the main focus of this study, there a chance that judges were more fatigued when rating targets that came later in the lineup. Since this was a between-subjects design that focused on qualities of the good judge, this issue would have affected all conditions about equally and therefore is unlikely to have altered the patterns found.

Finally, with the exception of target gender, there was a general lack of diversity within the sample for both judges and targets. Judge participants mostly identified as White and female, while targets (regardless of age group) largely identified as White. Given the sample characteristics of targets and judges, these results are likely to generalize very well to less racially diverse societies with similarities to Western culture. However, these findings may not generalize well to more racially diverse populations or non-Western cultures, as cultural factors may play an important role in understanding the effects of age on the accuracy of person perception. It is possible that different patterns may emerge in populations in which the elderly are more respected or in which people of different ages are more likely to regularly interact.

Implications and Future Directions

The current study provided insight into how the age of judges and targets influences accuracy of person perception across the domains of personality traits, trait affect, and life satisfaction. Surprisingly, the findings indicated that young adults are capable of making accurate judgments of targets of different age groups across these domains, with only one difference found across judgments of different age groups (specifically normativity of judging personality in which middle adults were judged more normatively compared to young adults and middle adults). This is in contrast to previous research that has found young adult judgments of older adults to be biased (Chan et al., 2012; Harwood et al., 1996). When judge moderators were taken into account, significant moderations across judgments of different age groups indicated that certain judge characteristics may increase differences between judgments of different age groups, with older adults being judged less accurately. Future research should continue to address the role of age in the accuracy of person perception to determine if (and under what conditions) age of judges and targets plays a role, as well as the types of moderators that influence this accuracy.

The current study investigated the role of age in the accuracy of person perception by manipulating the age of targets, while judges were limited to a single age category. A possible next step for this line of research involves the question of whether judges of different ages can make accurate perceptions of different age groups. Most accuracy research has relied on the use of convenience sampling for recruiting judges, which is quite limiting for recruiting a diverse sample that includes individuals of varying ages. Given that there are natural changes that occur over the lifespan, it is unclear whether accuracy would increase, decrease, or stay the same as a person ages, or whether different skills or traits drive higher levels of accuracy depending on a judge's age group. Personality changes that we see with greater age include increases in

agreeableness, conscientiousness and emotional stability and decreases in open mindedness (Harris et al., 2016). While cognitive ability naturally declines over time (Harada et al., 2013), life experience should increase. These changes over time may work together to influence accuracy in some way.

Future research should expand this line of questioning to include broader age categories, potentially looking at the age or either judges or targets as a continuous variable as opposed to restricted age-categories. Along a similar line, accuracy research has also not yet investigated children as either judges or targets, and how the accuracy of person perception changes as a child develops. This is an area rich for potential research and should not be ignored in furthering our understanding of how age is related to accuracy.

Future research should also conduct similar work with the use of other interpersonal mediums, including face-to-face interactions, text-based interactions, or social media platforms. It is possible that differences in accuracy across judgments of different age groups may be more pronounced under certain contexts when accurate perceptions are more difficult to make (such as with very limited information or in specific situations). Future work should also investigate the accuracy of judging different age groups broken down by individual trait, as differences in the accuracy of judging different age groups may differ depending on the specific personality trait or subcategory being judged. While several perceptual domains were chosen for the current study (personality, trait affect, and life satisfaction), these were investigated as whole constructs and were not broken down into their subcategories (as in the case of personality traits) for further investigation. Future research should continue to investigate perceptions of characteristics that have received extremely little attention, such as life satisfaction, as well as additional characteristics worthy of study including personal values and state affect, to name just a few.

These are just a handful of examples of how the role of age in the accuracy of person perception could be investigated within future work, as the current study was only the first to investigate this type of question.

Conclusion

Our society is continually growing older. Currently 15% of American society falls into the category of 65 years and older, and this number is expected to keep growing (Howden & Meyer, 2010). Ageism is one of the most prevalent forms of prejudice within American culture, but despite this issue, there is a general lack of research investigating the role of age in the accuracy of person perception (Harwood et al., 1996; Kimuna et al., 2005). We interact with people of various ages every day through a variety of mediums, therefore understanding the factors involved in making accurate judgments of different age groups is of vital importance. Young adults working in health care, customer service, and business may find it especially important to be able to accurately judge a wide variety of characteristics of targets of varying ages, as their interpersonal perceptions may have important influence for targets' well-being and the opportunities they are presented with. The current study was the first to investigate the role of age in the accuracy of person perception, with the findings suggesting that young adults are actually quite skilled in judging targets of various ages for the domains of personality and affect. Various judge moderators including life satisfaction, affect balance, exposure to grandparents, exposure to parents, and exposure to middle adults may heighten differences in the accuracy of judging different age groups, with older adults generally being judged less accurately compared to other age groups once these judge characteristics are considered. There are still many unanswered questions regarding the role of age in accuracy, with this study being only the first to explore this concept. Future research should aim to build on the current findings to understand

how to improve accuracy of judging different age groups, especially those in which judges tend to have more limited quality exposure.

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Appendix A

Measures

Psychological Well-Being Scale: 84-item version

Please select how strongly you agree or disagree with the following statements, in regards to your own life:

1 - Strongly Disagree	2 - Moderately Disagree	3 - Slightly Disagree
4 - Slightly Agree	5 - Moderately Agree	6 – Strongly Agree

Autonomy:

1. Sometimes I change the way I act or think to be more like those around me.
2. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.
3. My decisions are not usually influenced by what everyone else is doing.
4. I tend to worry about what other people think of me.
5. Being happy with myself is more important to me than having others approve of me.
6. I tend to be influenced by people with strong opinions.
7. People rarely talk me into doing things I don't want to do.
8. It is more important to me to "fit in" with others than to stand alone on my principles.
9. I have confidence in my opinions, even if they are contrary to the general consensus.
10. It's difficult for me to voice my own opinions on controversial matters.
11. I often change my mind about decisions if my friends or family disagree.
12. I am not the kind of person who gives in to social pressures to think or act in certain ways.
13. I am concerned about how other people evaluate the choices I have made in my life.
14. I judge myself by what I think is important, not by the values of what others think is important.

Environmental Mastery:

1. In general, I feel I am in charge of the situation in which I live.
2. The demands of everyday life often get me down.
3. I do not fit very well with the people and the community around me.
4. I am quite good at managing the many responsibilities of my daily life.
5. I often feel overwhelmed by my responsibilities.
6. If I were unhappy with my living situation, I would take effective steps to change it.
7. I generally do a good job of taking care of my personal finances and affairs.
8. I find it stressful that I can't keep up with all of the things I have to do each day.
9. I am good at juggling my time so that I can fit everything in that needs to get done.
10. My daily life is busy, but I derive a sense of satisfaction from keeping up with everything.
11. I get frustrated when trying to plan my daily activities because I never accomplish the things I set out to do.
12. My efforts to find the kinds of activities and relationships that I need have been quite successful.
13. I have difficulty arranging my life in a way that is satisfying to me.
14. I have been able to build a home and a lifestyle for myself that is much to my liking.

Personal Growth:

1. I am not interested in activities that will expand my horizons.
2. In general, I feel that I continue to learn more about myself as time goes by.
3. I am the kind of person who likes to give new things a try.
4. I don't want to try new ways of doing things--my life is fine the way it is.
5. I think it is important to have new experiences that challenge how you think about yourself and the world.

6. When I think about it, I haven't really improved much as a person over the years.
7. In my view, people of every age are able to continue growing and developing.
8. With time, I have gained a lot of insight about life that has made me a stronger, more capable person.
9. I have the sense that I have developed a lot as a person over time.
10. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.
11. For me, life has been a continuous process of learning, changing, and growth.
12. I enjoy seeing how my views have changed and matured over the years.
13. I gave up trying to make big improvements or changes in my life a long time ago.
14. There is truth to the saying you can't teach an old dog new tricks.

Positive Relations with Others:

1. Most people see me as loving and affectionate.
2. Maintaining close relationships has been difficult and frustrating for me
3. I often feel lonely because I have few close friends with whom to share my concerns.
4. I enjoy personal and mutual conversations with family members or friends.
5. It is important to me to be a good listener when close friends talk to me about their problems.
6. I don't have many people who want to listen when I need to talk.
7. I feel like I get a lot out of my friendships.
8. It seems to me that most other people have more friends than I do.
9. People would describe me as a giving person, willing to share my time with others.
10. I have not experienced many warm and trusting relationships with others.
11. I often feel like I'm on the outside looking in when it comes to friendships.

12. I know that I can trust my friends, and they know they can trust me.
13. I find it difficult to really open up when I talk with others.
14. My friends and I sympathize with each other's problems.

Purpose in Life:

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1. I feel good when I think of what I've done in the past and what I hope to do in the future.
2. I live life one day at a time and don't really think about the future.
3. I tend to focus on the present, because the future nearly always brings me problems.
4. I have a sense of direction and purpose in life.
5. My daily activities often seem trivial and unimportant to me.
6. I don't have a good sense of what it is I'm trying to accomplish in life.
7. I used to set goals for myself, but that now seems like a waste of time.
8. I enjoy making plans for the future and working to make them a reality.
9. I am an active person in carrying out the plans I set for myself.
10. Some people wander aimlessly through life, but I am not one of them.
11. I sometimes feel as if I've done all there is to do in life.
12. My aims in life have been more a source of satisfaction than frustration to me.
13. I find it satisfying to think about what I have accomplished in life.
14. In the final analysis, I'm not so sure that my life adds up to much.

Self-Acceptance:

1. When I look at the story of my life, I am pleased with how things have turned out.
2. In general, I feel confident and positive about myself.
3. I feel like many of the people I know have gotten more out of life than I have.

4. Given the opportunity, there are many things about myself that I would change.

5. I like most aspects of my personality.

6. I made some mistakes in the past, but I feel that all in all everything has worked out for the best.

7. In many ways, I feel disappointed about my achievements in life.

8. For the most part, I am proud of who I am and the life I lead.

9. I envy many people for the lives they lead.

10. My attitude about myself is probably not as positive as most people feel about themselves.

11. Many days I wake up feeling discouraged about how I have lived my life.

12. The past had its ups and downs, but in general, I wouldn't want to change it.

13. When I compare myself to friends and acquaintances, it makes me feel good about who I am.

14. Everyone has their weaknesses, but I seem to have more than my share.

Reverse coded items:

Autonomy – 1, 4, 6, 8, 10, 11, and 13

Environmental Mastery – 2, 3, 5, 8, 11, and 13

Personal Growth – 1, 4, 6, 10, 13, and 14

Positive Relations with Others - 2, 3, 6, 8, 10, 11, and 13

Purpose in Life – 2, 3, 5, 6, 7, 11, and 14

Self-Acceptance – 3, 4, 7, 9, 10, 11 and 14

Items will be presented in a randomized order, with the same order for each participant.

Positive and Negative Affect Schedule

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. Indicate to what extent you feel this way on average, in your day-to-day life.

1 - Very Slightly 2 - A Little 3 - Moderately 4 - Quite a Bit 5 – Extremely

1. Interested
2. Distressed
3. Excited
4. Upset
5. Strong
6. Guilty
7. Scared
8. Hostile
9. Enthusiastic
10. Proud
11. Irritable
12. Alert
13. Ashamed
14. Inspired
15. Nervous
16. Determined
17. Attentive
18. Jittery
19. Active
20. Afraid

Satisfaction with Life Scale

Instructions: Below are five statements that you may agree or disagree with. Indicate your agreement with each item by selecting the appropriate number. Please be open and honest in your responding.

7 - Strongly agree 6 – Agree 5 - Slightly agree 4 - Neither agree nor disagree

3 - Slightly disagree 2 – Disagree 1 - Strongly disagree

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

Attributional Complexity Scale

For each of the items below, select a number to indicate how much you agree with the item, according to the following scale:

-3 – Strongly Disagree
-2
-1
0 – Neither Agree nor Disagree
+1
+2
+3 – Strongly Agree

1. I don't usually bother to analyze and explain people's behavior.
2. Once I have figured out a single cause for a person's behavior I don't usually go any further.
3. I believe it is important to analyze and understand our own thinking processes.
4. I think a lot about the influence that I have on people's behavior.
5. I have found that relationships between a person's attitudes, beliefs, and character traits are usually simple and straightforward.
6. If I see people behaving in a really strange or unusual manner, I usually put it down to the fact that they are strange or unusual people and don't bother to explain it any further.
7. I have thought a lot about the family background and personal history of people who are close to me, in order to understand why they are the sort of people they are.
8. I don't enjoy getting into discussions where the causes for people's behavior are being talked about.
9. I have found that the causes for people's behavior are usually complex rather than simple.
10. I am very interested in understanding how my own thinking works when I make judgments about people or attach causes to their behavior.
11. I think very little about the different ways that people influence each other.
12. To understand a person's personality/behavior I have found it is important to know how that person's attitudes, beliefs, and character traits fit together.
13. When I try to explain other people's behavior I concentrate on the other person and don't worry too much about all the existing external factors that might be affecting them.
14. I have often found that the basic cause for a person's behavior is located far back in time.
15. I really enjoy analyzing the reasons or causes for people's behavior.
16. I usually find that complicated explanations for people's behavior are confusing rather than helpful.
17. I give little thought to how my thinking works in the process of understanding or explaining people's behavior.
18. I think very little about the influence that other people have on my behavior.
19. I have thought a lot about the way that different parts of my personality influence other parts (e.g., beliefs affecting attitudes or attitudes affecting character traits).
20. I think a lot about the influence that society has on other people.
21. When I analyze a person's behavior I often find the causes form a chain that goes back in time, sometimes for years.
22. I am not really curious about human behavior.

23. I prefer simple rather than complex explanations for people's behavior.
24. When the reasons I give for my own behavior are different from someone else's, this often makes me think about the thinking processes that lead to my explanations.
25. I believe that to understand a person you need to understand the people who that person has close contact with.
26. I tend to take people's behavior at face value and not worry about the inner causes for their behavior (e.g., attitudes, beliefs, etc.).
27. I think a lot about the influence that society has on my behavior and personality.
28. I have thought very little about my own family background and personal history in order to understand why I am the sort of person I am.

Scoring instructions:
Average the items. Higher scores represent a more complex response.

R denotes reverse scored.

Big Five Inventory-2

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please choose a number for each statement to indicate the extent to which you agree or disagree with that statement.

1 – Disagree strongly 2 – Disagree a little 3 - Neutral; no opinion

4 -Agree a little 5 - Agree strongly

I am someone who...

1. Is outgoing, sociable.

2. Is compassionate, has a soft heart.

3. Tends to be disorganized.

4. Is relaxed, handles stress well.

5. Has few artistic interests.

6. Has an assertive personality.

7. Is respectful, treats others with respect.

8. Tends to be lazy.

9. Stays optimistic after experiencing a setback.

10. Is curious about many different things.

11. Rarely feels excited or eager.

12. Tends to find fault with others.
13. Is dependable, steady.
14. Is moody, has up and down mood swings.
15. Is inventive, finds clever ways to do things.
16. Tends to be quiet.
17. Feels little sympathy for others.
18. Is systematic, likes to keep things in order.
19. Can be tense.
20. Is fascinated by art, music, or literature.
21. Is dominant, acts as a leader.
22. Starts arguments with others.
23. Has difficulty getting started on tasks.
24. Feels secure, comfortable with self.
25. Avoids intellectual, philosophical discussions.
26. Is less active than other people.
27. Has a forgiving nature.
28. Can be somewhat careless.
29. Is emotionally stable, not easily upset.
30. Has little creativity.
31. Is sometimes shy, introverted.
32. Is helpful and unselfish with others.
33. Keeps things neat and tidy.
34. Worries a lot.
35. Values art and beauty.
36. Finds it hard to influence people.
37. Is sometimes rude to others.
38. Is efficient, gets things done.
39. Often feels sad.
40. Is complex, a deep thinker.
41. Is full of energy.

42. Is suspicious of others' intentions.
43. Is reliable, can always be counted on.
44. Keeps their emotions under control.
45. Has difficulty imagining things.
46. Is talkative.
47. Can be cold and uncaring.
48. Leaves a mess, doesn't clean up.
49. Rarely feels anxious or afraid.
50. Thinks poetry and plays are boring.
51. Prefers to have others take charge.
52. Is polite, courteous to others.
53. Is persistent, works until the task is finished.
54. Tends to feel depressed, blue.
55. Has little interest in abstract ideas.
56. Shows a lot of enthusiasm.
57. Assumes the best about people.
58. Sometimes behaves irresponsibly.
59. Is temperamental, gets emotional easily.
60. Is original, comes up with new ideas.

Scoring Key for Domain Scales:

Extraversion: 1, 6, 11R, 16R, 21, 26R, 31R, 36R, 41, 46, 51R, 56

Agreeableness: 2, 7, 12R, 17R, 22R, 27, 32, 37R, 42R, 47R, 52, 57

Conscientiousness: 3R, 8R, 13, 18, 23R, 28R, 33, 38, 43, 48R, 53, 58R

Negative Emotionality: 4R, 9R, 14, 19, 24R, 29R, 34, 39, 44R, 49R, 54, 59

Open-Mindedness: 5R, 10, 15, 20, 25R, 30R, 35, 40, 45R, 50R, 55R, 60

R denotes reverse scored.

The Fraboni Scale of Ageism

Next to each item, place the number that best describes your answer based on the following scale:

1- Strongly Disagree 2 – Disagree 3 – Agree 4 - Strongly Agree

* Items are reverse-scored.

1. Teenage suicide is more tragic than suicide among the old.

2. There should be special clubs set aside within sports facilities so that old people can compete at their own

level.

3. Many old people are stingy and hoard their money and possessions.

4. Many old people are not interested in making new friends preferring instead the circle of friends they have

had for years.

5. Many old people just live in the past.

6. I sometimes avoid eye contact with old people when I see them.

7. I don't like it when old people try to make conversation with me.

*8. Old people deserve the same rights and freedoms as do other members of our society.

9. Complex and interesting conversation cannot be expected from most old people.

10. Feeling depressed when around old people is probably a common feeling.

11. Old people should find friends their own age.

*12. Old people should feel welcome at the social gatherings of young people.

13. I would prefer not to go to an open house at a senior's club, if invited.

*14. Old people can be very creative.

15. I personally would not want to spend much time with an old person.

16. Most old people should not be allowed to renew their driver's licenses.

17. Old people don't really need to use our community sports facilities.

18. Most old people should not be trusted to take care of infants.

19. Many old people are happiest when they are with people their own age.

20. It is best that old people live where they won't bother anyone.

*21. The company of most old people is quite enjoyable.

*22. It is sad to hear about the plight of the old in our society these days.

*23. Old people should be encouraged to speak out politically.

*24. Most old people are interesting, individualistic people.

25. Most old people would be considered to have poor personal hygiene.

26. I would prefer not to live with an old person.

27. Most old people can be intimidating because they tell the same stories over and over

28. Old people complain more than other people do.

29. Old people do not need much money to meet their needs.

Palmore's Facts on Aging Quiz

The following questions will test your knowledge of old age. Please answer these questions to the best of your ability.

* correct answer

+ positive bias

— negative bias

0 neutral

1. The proportion of people over 65 who are senile (have impaired memory, disorientation, or dementia) is:

a. about 1 in 100 +

b. about 1 in 10 *

c. about 1 in 2 -

d. the majority -

2. The senses that tend to weaken in old age are:

a. sight and hearing +

b. taste and smell +

c. sight, hearing, and touch +

d. all five senses *

3. The majority of old couples:

a. have little or no interest in sex -

b. are not able to have sexual relations -

c. continue to enjoy sexual relations *

d. think sex is only for the young -

4. Lung vital capacity in old age:

a. tends to decline *

b. stays about the same among non-smokers +

c. tends to increase among healthy old people +

d. is unrelated to age +

5. Happiness among old people is:

a. rare -

b. less common than among younger people -

c. about as common as among younger people *

d. more common than among younger people +

6. Physical strength:

a. tends to decline with age *

b. tends to remain the same among healthy old people +

c. tends to increase among healthy old people +

d. is unrelated to age +

7. The percentage of people over 65 in long-stay institutions (such as nursing homes, mental hospitals, and homes for the aged) is about:

a. 5% *

b. 10%

c. 25%

d. 50%

8. The accident rate per driver over age 65 is:

a. higher than for those under 65 -

b. about the same as for those under 65 -

c. lower than for those under 65 *

d. unknown 0

9. Most workers over 65:

a. work less effectively than younger workers -

b. work as effectively as younger workers *

c. work more effectively than younger workers +

d. are preferred by most employers +

10. The proportion of people over 65 who are able to do their normal activities is about:

a. one-tenth -

b. one-quarter -

c. one-half -

d. three-fourths *

11. Adaptability to change among people over 65 is:

a. rare -

b. present among about half -

c. present among most *

d. more common than among younger people +

12. As for old people learning new things:

a. most are unable to learn at any speed -

b. most are able to learn, but at a slower speed *

c. most are able to learn as fast as younger people +

d. learning speed is unrelated to age +

13. Depression is more frequent among:

a. people over 65 -

b. adults under 65 *

c. young people 0

d. children 0

14. Old people tend to react:

a. slower than younger people *

b. at about the same speed as younger people +

c. faster than younger people +

d. slower or faster than younger people, depending on the type of test +

15. Old people tend to be:

a. more alike than younger people -

b. the same as younger people in terms of alikeness 0

c. less alike than younger people 0

d. more alike in some respects and less alike in others *

16. Most old people say:

a. they are seldom bored *

b. they are sometimes bored -

c. they are often bored -

d. life is monotonous -

17. The proportion of old people who are socially isolated is:

a. almost all -

b. about half -

c. less than a fourth *

d. almost none -

18. The accident rate among workers over 65 tends to be:

a. higher than among younger workers -

b. about the same as among younger workers -

c. lower than among younger workers *

d. unknown because there are so few workers over 65 -

19. The proportion of the U.S. population now age 65 or over is:

a. 3% 0

b. 15% *

c. 23% 0

d. 33% 0

20. Medical practitioners tend to give older patients:

a. lower priority than younger patients *

b. the same priority as younger patients +

c. higher priority than younger patients +

d. higher priority if they have Medicaid +

21. The poverty rate (as defined by the federal government) among old people is:

a. higher than among children under age 18 -

b. higher than among all persons under 65 -

c. about the same as among persons under 65 -

d. lower than among persons under 65 *

22. Most old people are:

a. employed +

b. employed or would like to be employed +

c. employed, do housework or volunteer work, or would like to do

some kind of work *

d. not interested in any work -

23. Religiosity tends to:

a. increase in old age 0

b. decrease in old age 0

c. be greater in the older generation than in the younger generations *

d. be unrelated to age 0

24. Most old people:

a. are seldom angry *

b. are often angry -

c. are often grouchy -

d. often lose their tempers -

25. The health and economic status of old people (compared to younger people) is:

a. increasing over time *

b. not changing over time -

c. decreasing over time -

d. not showing a consistent trend -

Anxiety about Aging Scale

Please indicate how much you agree or disagree with each of the following items.

1- Strongly Disagree 2 – Disagree 3 – Agree 4 - Strongly Agree

1. I enjoy being around old people.
2. I fear that when I am old all my friends will be gone.
3. I like to go visit my older relatives.
4. I have never lied about my age in order to appear younger.

5. I fear it will be very hard for me to find contentment in old age.
6. The older I become, the more I worry about my health.
7. I will have plenty to occupy my time when I am old.
8. I get nervous when I think about someone else making decisions for me when I am old.
9. It doesn't bother me at all to imagine myself as being old.
10. I enjoy talking with old people.
11. I expect to feel good about life when I am old.
12. I have never dreaded the day I would look in the mirror and see gray hairs.
13. I feel very comfortable when I am around an old person.
14. I worry that people will ignore me when I am old.
15. I have never dreaded looking old.
16. I believe that I will still be able to do most things for myself when I am old.
17. I am afraid that there will be no meaning in life when I am old.
18. I expect to feel good about myself when I am old.
19. I enjoy doing things for old people.
20. When I look in the mirror, it bothers me to see how my looks have changed with age.

Exposure to Older Adults, Grandparents, Middle Adults, and Parents

Please answer the following questions using the following scale.

1 2 3 4 5 6 7 8 9 10

Almost never Extremely often

1. How often do you have interactions with older adults (70 – 80 years and not including your grandparents)?
2. How often do you find these interactions meaningful?
3. How often do you have interactions with your grandparents?
4. How often do you find these interactions meaningful?

5. How often do you have interactions with middle-aged adults (between the ages of 45-55 and not including your parents)?
6. How often do you find these interactions meaningful?
7. How often do you have interactions with your parents?
8. How often do you find these interactions meaningful?

Demographics

Please answer the following questions for classification purposes.

1. What is your ethnicity/race?
   a. White/Caucasian
   b. Black/African American
   c. Asian
   d. Hispanic
   e. Biracial
   f. Other
2. What is your age? Please type in a whole number (no decimals).

   (Open-ended question)
3. What is your gender?
   a. Male
   b. Female
   c. Other
4. What is your current class standing?
   a. Freshman
   b. Sophomore
   c. Junior
   d. Senior
   e. Other
5. What is your cumulative GPA?

   (Open-ended question)

Appendix B

Target Questions

This interview will follow a semi-structured format. All major questions listed will be asked across interviews, but the follow-up questions are only examples and may differ across interviews depending on the specific conversation. This interview will be kept to around 5-10 minutes.

1. Tell me a little bit about yourself.
    - How would you describe yourself to someone who has never met you?
2. What kind of work do you do for a living?[24]
    - What do you enjoy about it?
    - What is challenging about it?
3. What are some of your hobbies or activities you enjoy doing?
    - Why do you think you enjoy these types of activities?
    - What hobbies do you see yourself pursuing in the future?
4. What is a goal you are currently working toward?
    - What success have you had with this goal so far?
    - What challenges have you had with this goal so far?
5. What was an especially meaningful moment in your life?
    - What made this moment meaningful to you?
    - How did this moment impact your life?
6. What is a challenge or conflict you are currently facing?
    - How do you feel about it?
    - What are you doing to deal with it?
7. Describe a meaningful relationship in your life and why it is important to you.
    - Why did you choose to describe this relationship over others?

[24] Targets that indicate they are retired and not working will be asked about the last occupation they held.

Appendix C

Transcript of Judge Instructions

Judges will hear an audio version of these instructions after viewing the consent form and before beginning the study. The purpose of these audio instructions is to keep the procedure as consistent as possible across judge participants.

"Welcome to the study and thank you for coming into our lab today! For this experiment you will watch 6 videos of individuals interacting with another person who is not on camera. After watching each video you will answer some questions about the person you watched. The videos are each around 3 to 4 minutes in length. After watching all of the videos and answering questions about the people you watch, you will answer some questions about yourself. The entire experiment is expected to take between 60 and 90 minutes. During the experiment, there will be a research assistant present in the room who can answer questions about the procedures, but not about the content of the videos. When the videos are playing please do your best to pay attention to the person you can see in the video in order to properly answer the questions that follow about that person. If you recognize or know the people in any of the videos, please let the research assistant know. While this does not affect your participation in the experiment, they do need to note it in our records.

We check responses carefully in order to make sure that people have read the instructions for the tasks and responded carefully. We can only use data from participants who clearly demonstrate that they have read and understood the questionnaires and tasks. Because of this, there will be some very simple questions embedded throughout the experiment that test whether you are reading the instructions, paying attention, and responding carefully. Please be sure to answer these questions correctly.

If there is an issue with the audio or if you have any questions throughout the experiment, please let the research assistant know. When you are ready to begin, please move to the next screen where you will be given further instructions. Please make sure your phone is on silent throughout the experiment. When you have completed the study, please let the research assistant know."